

2005-2006

**HOUSE
SCIENCE &
TECHNOLOGY**

**COMMITTEE
MINUTES**

House Committee on
Science and Technology

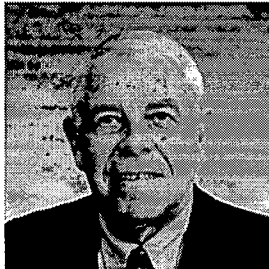
2005-2006 Biennium

Book 1 of 1

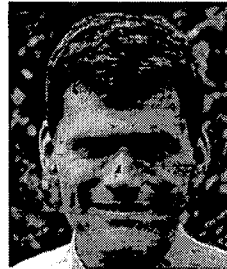
**NORTH CAROLINA GENERAL ASSEMBLY
COMMITTEE ON SCIENCE AND TECHNOLOGY
2005 – 2006 SESSION**



**Rep. Paul Miller
Chair**



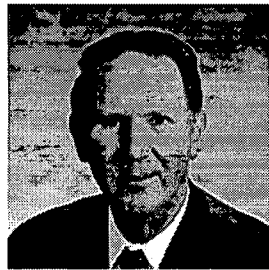
**Rep. Joe Tolson
Vice chair**



**Rep. Grier Martin
Vice Chair**



Rep. W. Robert Grady



Rep. Jim Gulley



Rep. Pricey Harrison



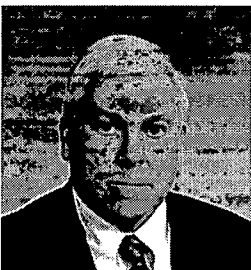
Rep. Mark Hollo



Rep. Earl Jones



Rep. Trudi Walend



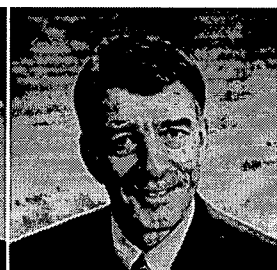
**Rep. Culpepper
Ex-officio**



**Rep. Cunningham
Ex-officio**



**Rep. Eddins
Ex-officio**



**Rep. Hackney
Ex-officio**

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

CONTACT LIST

MEMBER	ASSISTANT	PHONE	OFFICE
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Rep. Joe Tolson, Vice-Chair	Shirley Phillips	5-3024	402 LOB
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Rep. W. Robert Grady	Neta Grady	5-9644	302 LOB
Rep. Jim Gulley	Suzanne Gulley	3-5800	1319 LB
Rep. Pricey Harrison	Anne Wilson	3-5771	2119 LB
Rep. Mark Hollo	Martha Hoover	5-3009	418-B LOB
Rep. Earl Jones	Mia Bailey	3-5825	536 LOB
Rep. Trudi Walend	Ken Walend	5-4466	1015 LB

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Peter Capriglione, Information Systems	3-6834
Brenda Carter, Committee Counsel	3-2578
Phyllis Pickett, Bill Drafting	3-6660

SCIENCE AND TECHNOLOGY

(Name of Committee)

[illegible]

North Carolina General Assembly
Through House Committee on
Science and Technology

Date: 09/29/2005
Time: 20:48
Page: 001 of 001
Leg. Day: H-125/S-126

2005-2006 Biennium

Bill	Introducer	Short Title	Latest Action	In Date	Out Date
H0051	Michaux	IT SECURITY ASSESSMENTS.	H Ref To Com On Science and Technology	02-03-05	
H0633	Tolson	ELECTRONIC COURT FILING.-AB	H Re-ref Com On Appropriations Subcommittee on Justice and Public Safety	03-15-05	04-06-05
\$ H0639	Miller	TRAVELING SCIENCE AND TECHNOLOGY FUNDS.	H Re-ref Com On Appropriations Subcommittee on Education	03-15-05	03-31-05
H0640	Miller	TRACK STUDENTS THROUGHOUT THEIR EDUCATION.	H Ref to the Com on Science and Technology and, if favorable, to the Com on Education	03-15-05	
H0641	Miller	NANOTECHNOLOGY/ECONOMIC DEVELOPMENT STUDY.	*H Re-ref Com On Rules, Calendar, and Operations of the House	03-15-05	03-24-05
H0642	Miller	STUDY/USE OF SOCIAL SERVICES STATEWIDE.	H Ref to the Com on Science and Technology and, if favorable, to the Com on Appropriations Subcommittee on Health and Human Services	03-15-05	
\$ H0830=	Tolson	E-NC VOTING MEMBERS/ JOB CREATION FUNDS.	*H Re-ref Com On Appropriations	03-22-05	04-27-05

'\$' indicates the bill is an appropriation bill.

A bold line indicates the bill is an appropriation bill.

'*' indicates that the text of the original bill was changed by some action.

'=' indicates that the original bill is identical to another bill.

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

March 2, 2005

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Presentations:

E-Textbooks for Students

By Jaimie McBride (2003) House Bill 940 Originator

Genetics

By Dr. Jim Evans, Associate Professor of Genetics and of Medicine

Traffic Simulation Model Visualization

By Dr. Nagui M. Rouphail, Director Institute for Transportation Research
and Education, NCSU

Discussion (Questions and Answers)

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

March 2, 2005

The House Committee on Science and Technology met on Wednesday, March 2, 2005, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson and Martin, Vice-Chairs; Gulley, Harrison, Hollo, Jones and Walend.

Representative Miller called the meeting to order and asked the members and staff to introduce themselves. There were 3 presentations given. Dr. Jim Evans was introduced to discuss Genetics (See Attachment A). In the presentation, Dr. Evans addressed the benefits of genetic-specific screening to determine individuals who might have a propensity for certain diseases.

After the presentation and before questions, Representative Miller introduced the Sergeant-At-Arms, Dusty Rhodes and Willie Dixon, and asked the other members and the invited senator to introduce themselves. Questions were then entertained for discussion.

Rep. Jones asked in what way aging is defined as a disease and what measures are being taken to manage the aging process. Dr. Evans responded that, in our lifetime, there will plausibly be pharmacologic manipulations that could appreciably extend life. Senator Kay Hagen asked how he came up with the figure of 40, 000 deaths a year attributed to prescription problems and how can that be addressed. The Institute of Medicine, he answered, and the figure stated may be low. Preventive measures include, at UNC-CH, doctors are no longer allowed to write abbreviations as pharmacists can easily misconstrue them. Otherwise, some of the deaths are unpreventable in that many people have very different reactions to the same drug. Rep. Walend asked if the fact that so many doctors are walking around with small computers was helpful in preventing the system errors. Dr. Evans agreed. Rep. Gulley asked about research in Parkinson's Disease and how it relates to Genetics. Dr. Evans admitted that technology seems to be one step behind, however, that issue is at the top of genetic research for eradication.

Rep. Miller introduced the second presenter, Jaimie McBride, to discuss her proposal to make electronic textbooks available online or in CD format for ease in secondary education (see Attachment B). Ms. McBride is the originator of Session 2003 House Bill 940 (see Attachment C).

Rep. Miller introduced the third and final presenter, Dr. Nagui M. Roupail, Director of the Institute for Transportation Research and Education (ITRE) at North Carolina State University. Dr. Roupail spoke about Traffic Simulation Software and how advances in

technology have aided in the anticipation of various traffic patterns (see Attachments D and E).

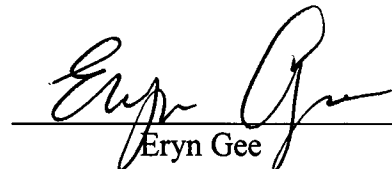
Following the presentation, Rep. Jones asked if ITRE has done any analysis on the effectiveness of red light cameras. Dr. Rouphail stated that a report has been done and can be found on their website; according to the report, the cameras do work.

With the time having expired, the meeting was adjourned.

Respectfully submitted,



Representative Paul Miller
Chairman



Eryn Gee
Committee Assistant

House Committee on Science & Technology

March 2005

James P. Evans MD, Ph.D
University of North Carolina at Chapel Hill

Common Diseases With a Confirmed Genetic Component

- Htn
- DM I/II
- Alzheimer Disease
- Infectious Diseases
- Cancer
- Osteoporosis
- Cirrhosis
- Psoriasis
- Glaucoma
- CVD
- Age related Hearing Loss
- Head Trauma Outcome!
- Schizophrenia
- Bipolar Disease
- Depression

“Why did I get sick?”

- “Smoking causes cancer”
 - True, *but* ...
 - Only 15% of long-time smokers develop lung cancer
- “Drinking causes cirrhosis of the liver”
 - True, *but*...
 - Only 15% of long-time drinkers develop cirrhosis
- “Exposure to TB causes tuberculosis”
 - True, *but*...
 - Only about 10% of individuals exposed to the TB organism develop tuberculosis

• ***Modern genetics is beginning to give us the tools to identify these differing susceptibilities to disease***

February 28, 1953

The Eagle Pub; Cambridge, England

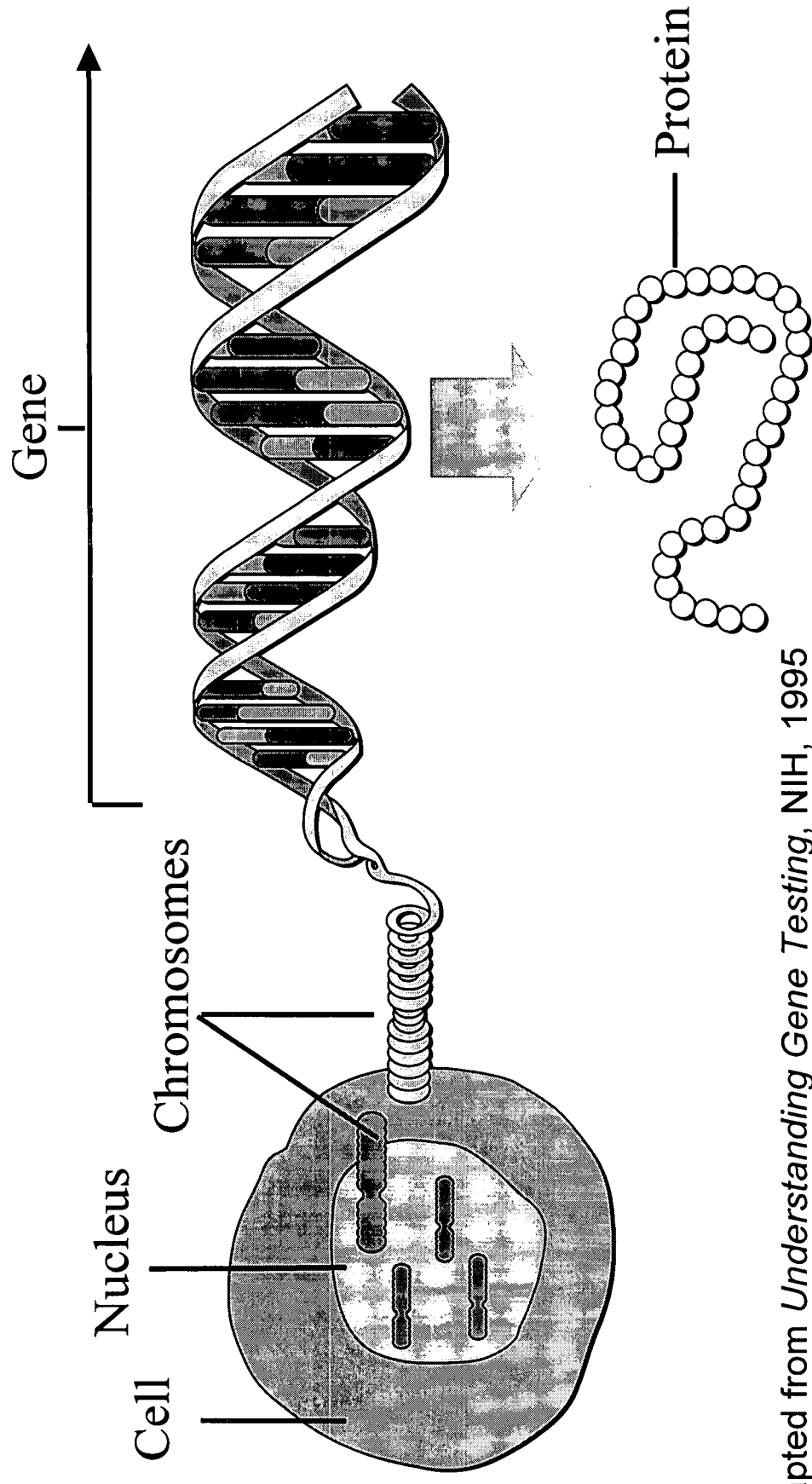


James Watson & Francis Crick



“We have discovered the secret of life”

Chromosomes, DNA, and Genes



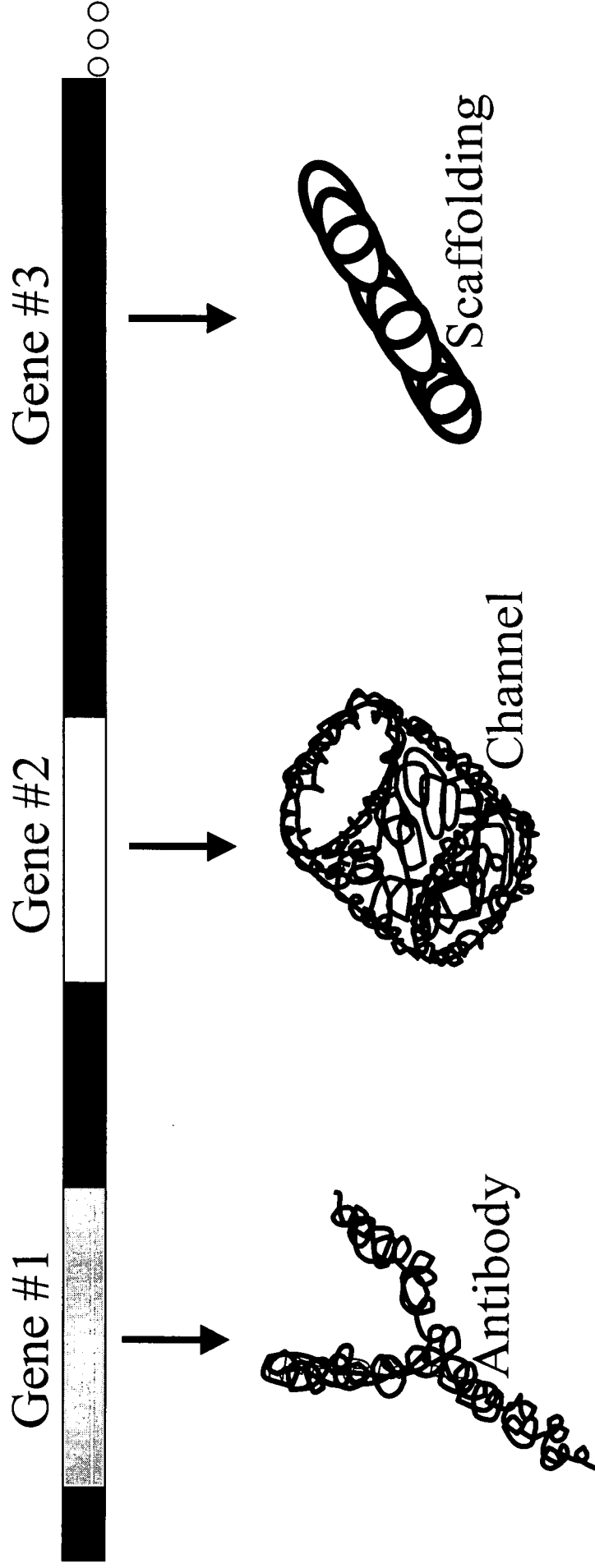
Adapted from *Understanding Gene Testing*, NIH, 1995

ASCO



Each of our genes can be thought of as the instructions for making a single protein

Proteins are the tiny machines that do the work in our cells



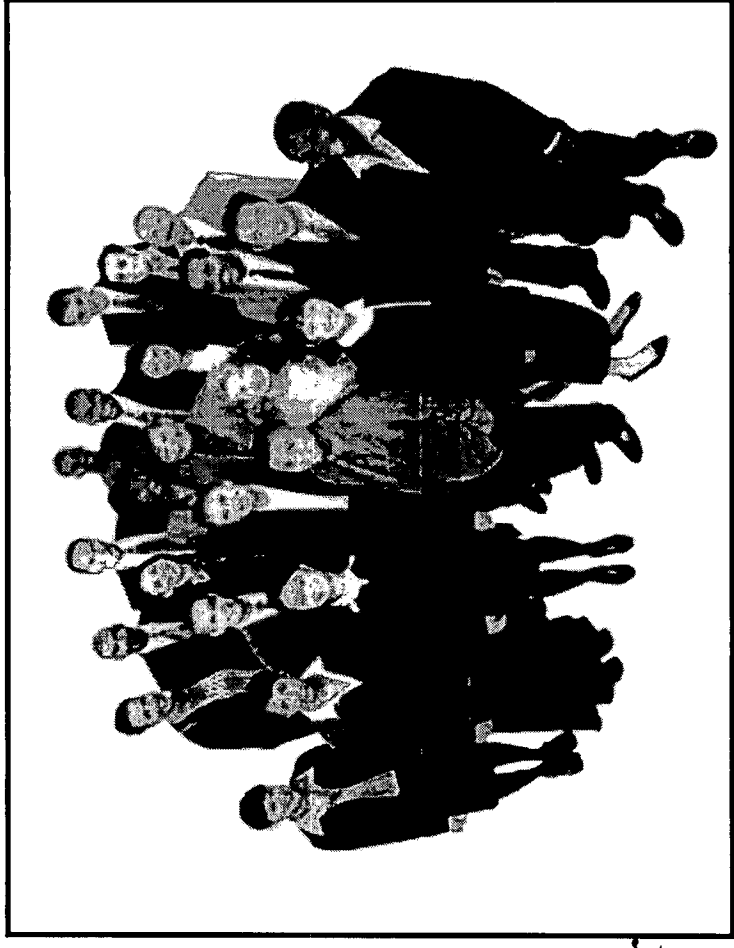
Genome

- A Genome is the total DNA of an organism which directs synthesis of all of its proteins
 - The genome is the “instruction book” that contains all of the individual instructions in the cell
- The human genome consists of 3 billion pairs of nucleotides
 - now sequenced
 - 20-50,000 genes
- A single change can result in disease or disease susceptibility

Genetic Polymorphisms

A Key to Human Individuality

- Polymorphisms are subtle differences in our genome
- Such differences affect our appearance, our behavior and our susceptibility to disease
- Each human has a polymorphism about every 500-1000 base pairs
- Thus, we differ from each other by about 3-6 million differences in our genetic code
- *Some of these differences make us more or less susceptible to certain diseases*



Genes and Probability of Disease

- “Why should I quit smoking? My Grandpa smoked his whole life and died at 95 bungee jumping” ...
- Only about 15% of individuals who smoke for decades develop lung cancer
- The answer to whom will get sick given a certain exposure lies at least partially in polymorphisms...

Polymorphisms and Probability of Disease

- If I have a “fast” version of an enzyme that normally acts to breakdown cancer causing chemicals found in cigarette smoke, then I will be less likely to develop cancer if I smoke
- These polymorphisms are typically subtle in their effects
 - only predisposing (or protecting) slightly
- We know little about such genes thus far

A New Era of Medicine

*The tools of modern genetics now
offer a way to truly understand
disease causation and usher in a new
era of individualized medicine*

Individualized Medicine

Predisposition and Screening

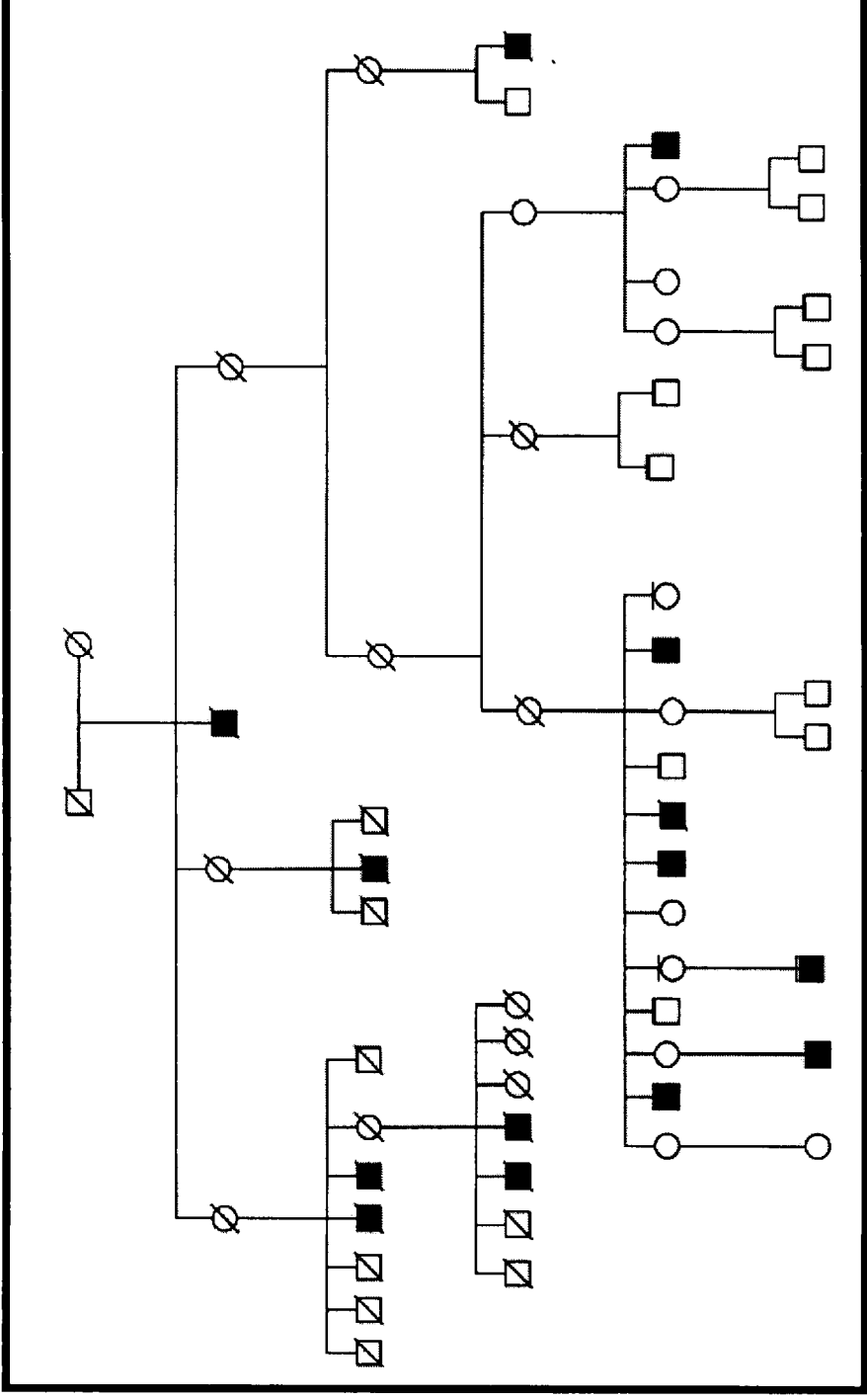
- The current status of disease screening in medicine
 - Relatively little benefit
 - Actual harm to some
 - Tremendous waste of resources
- Genetically guided screening
 - Prevent disease in those susceptible
 - Early detection
 - Rational use of society's limited resources

Individualized Medicine

Rational Treatment

- Current drug therapy in medicine
 - Efficacy varies widely
 - Wasted resources and time
 - Adverse effects are common *and unpredictable*
 - Sub-therapeutic treatment
 - Complications and deaths
- Genetically guided therapy
 - Direct treatment in an individualized manner

● Don't Attend this Family Reunion ●



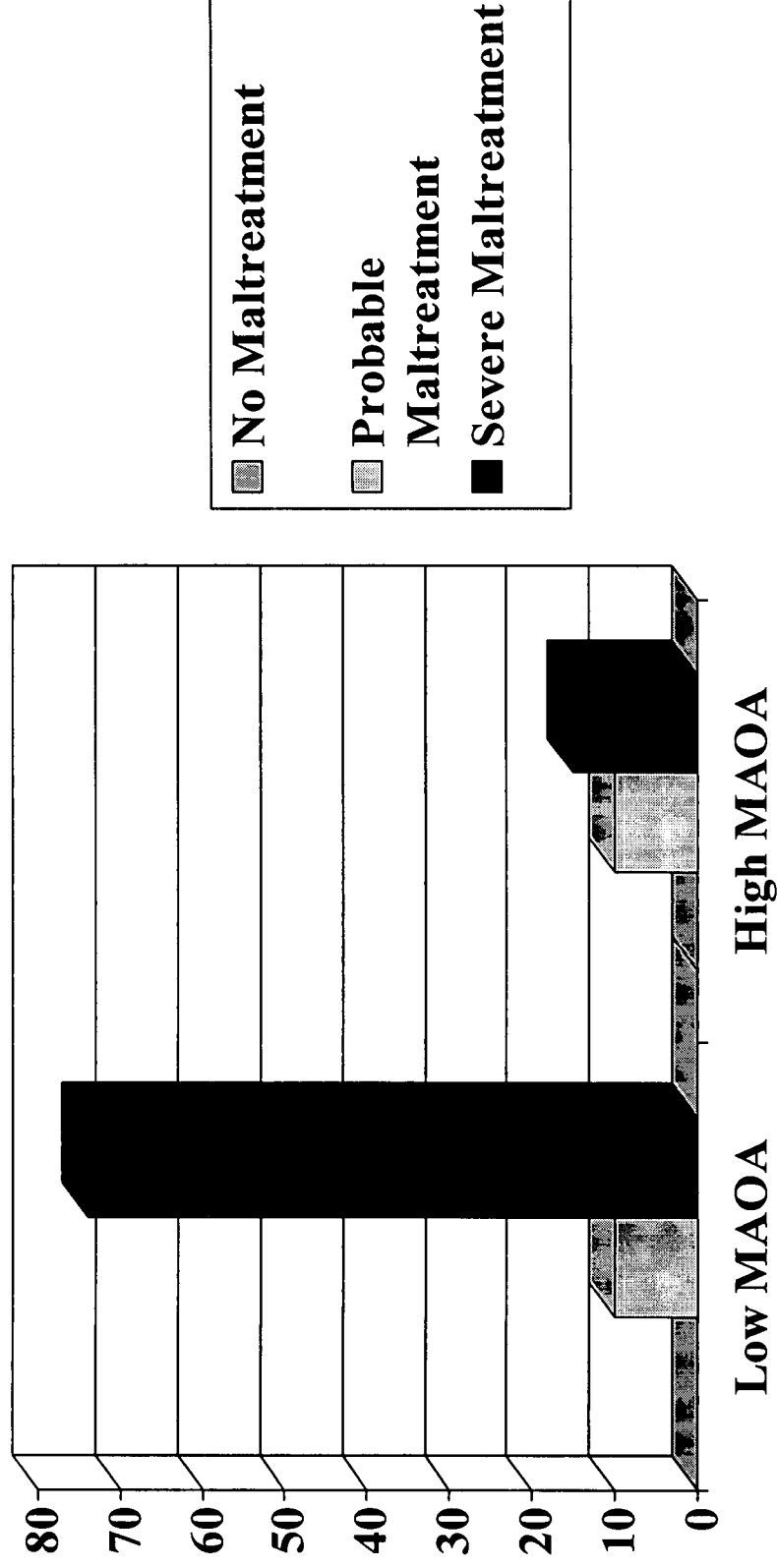
- Filled squares represent males convicted of serious violent crimes by age 24
- All were found to have a mutation in the MAOA gene
- MAOA controls the levels of many neurotransmitters in the brain

Genetics, The Environment, and

Violent Behavior - I

- Caspi *et al.* examined the role of MAOA polymorphisms & susceptibility to the effects of childhood maltreatment
- A longitudinal sample of 1037 children followed from birth to 26 years of age
- They assessed 4 outcomes:
 - Adolescent conduct disorder (DSM-IV)
 - Convictions for violent crimes
 - Personality disposition towards violence
 - Symptoms of antisocial personality disorder

Disposition Towards Violence



● Genetics, The Environment, and ●

Violent Behavior - IV

- The MAOA “low” polymorphism acts as a factor which increases susceptibility to the ill effects of maltreatment
- If one carries the ‘low’ MAOA polymorphism and is maltreated:
 - the odds of developing conduct disorder are 2.8 fold higher
 - the odds of being convicted of a violent crime are 9.8 fold higher
 - 85% of males having low MAOA genotype who were severely maltreated developed some form of antisocial behavior
- Inheriting a “high activity” MAOA gene is protective from the effects of maltreatment

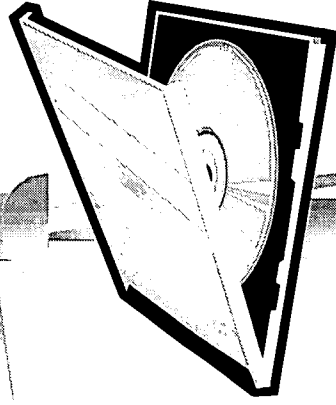
Personal Responsibility, Genetics, and Free Will...

- Will we someday be able to detect “violence alleles” (genes) that predispose to heinous acts and
 - “correct” them?
 - influence their expression with medications?
 - we already treat individuals that have anti-social psychiatric illnesses with medications
- A slippery slope....
 - designer babies?
 - stigma of genetically labeling an individual
 - unintended consequences of genetic manipulation
 - where does a “trait” end and a disease begin?
- Genetic determinism is an invalid concept
 - We are far more than just a collection of genes

DNA Banking

- The establishment of high-quality DNA banks could
 - Further scientific research and our understanding of disease
 - Enhance the health of our population
 - Stimulate the biotechnology industry in NC
- But if done, it must be done carefully
 - Privacy must be closely guarded
 - Access must be carefully defined
 - Oversight and security must be established
 - Scientific utility must be considered from the inception
 - For example, which medical records will be included?

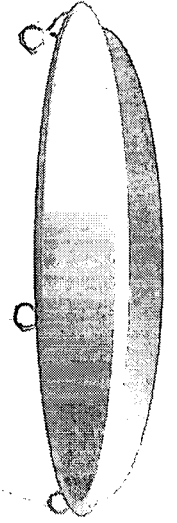
Make E-Textbooks Available to Students



V.S

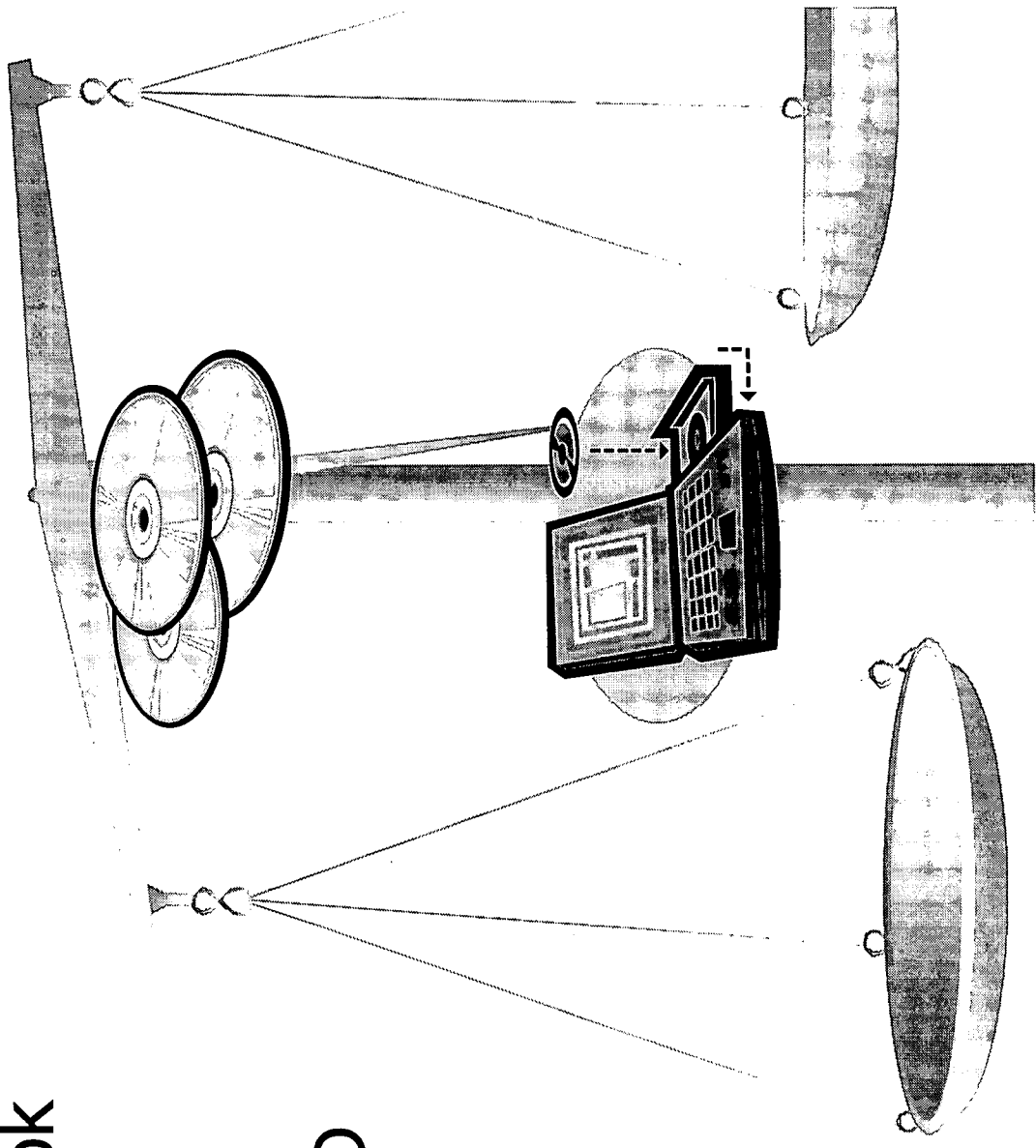
NC House of Representatives
Science & Technology Committee
March 2, 2005

Attachment B



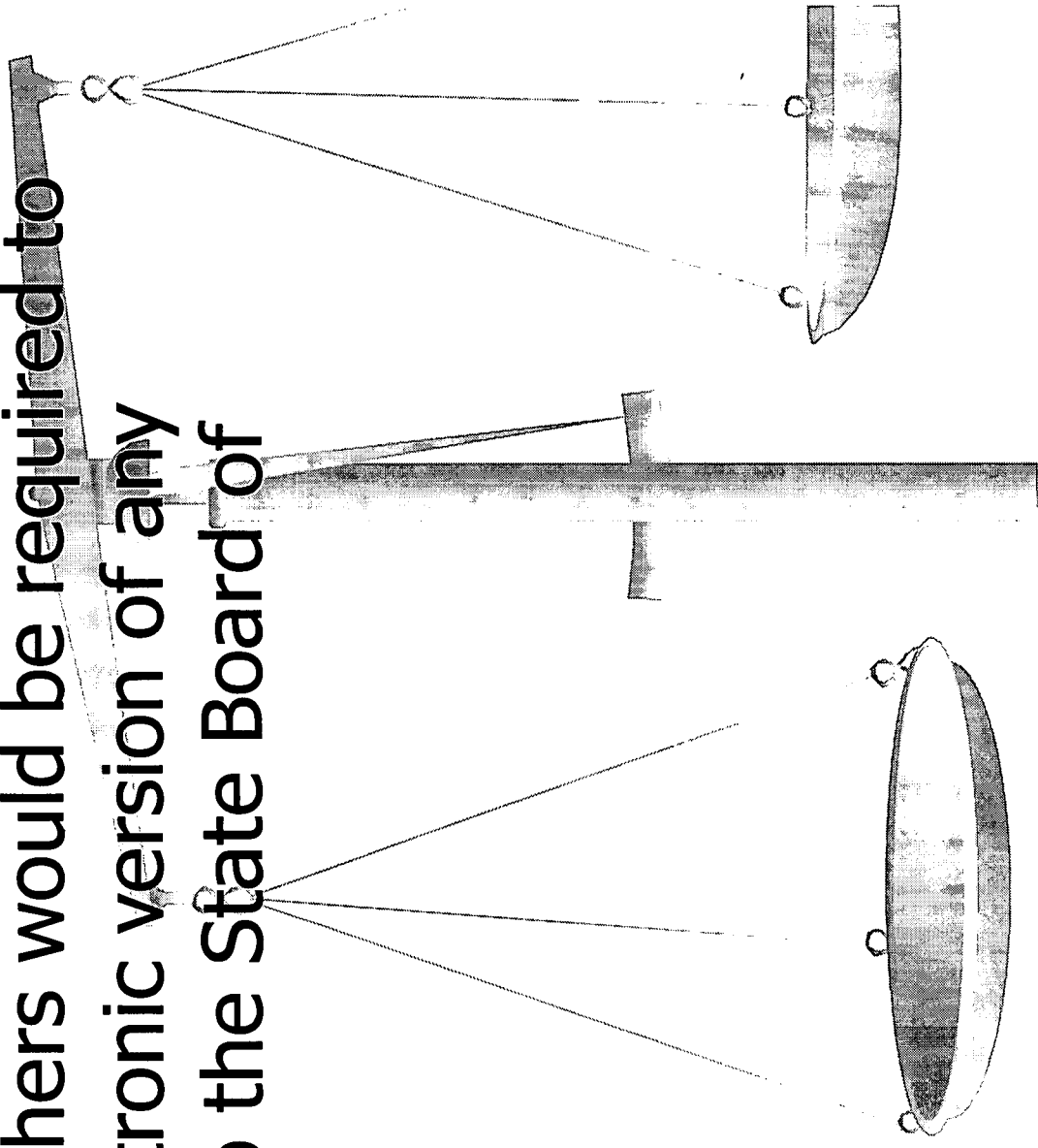
E-textbooks?

- Electronic Textbook
- On-line or CD/DVD



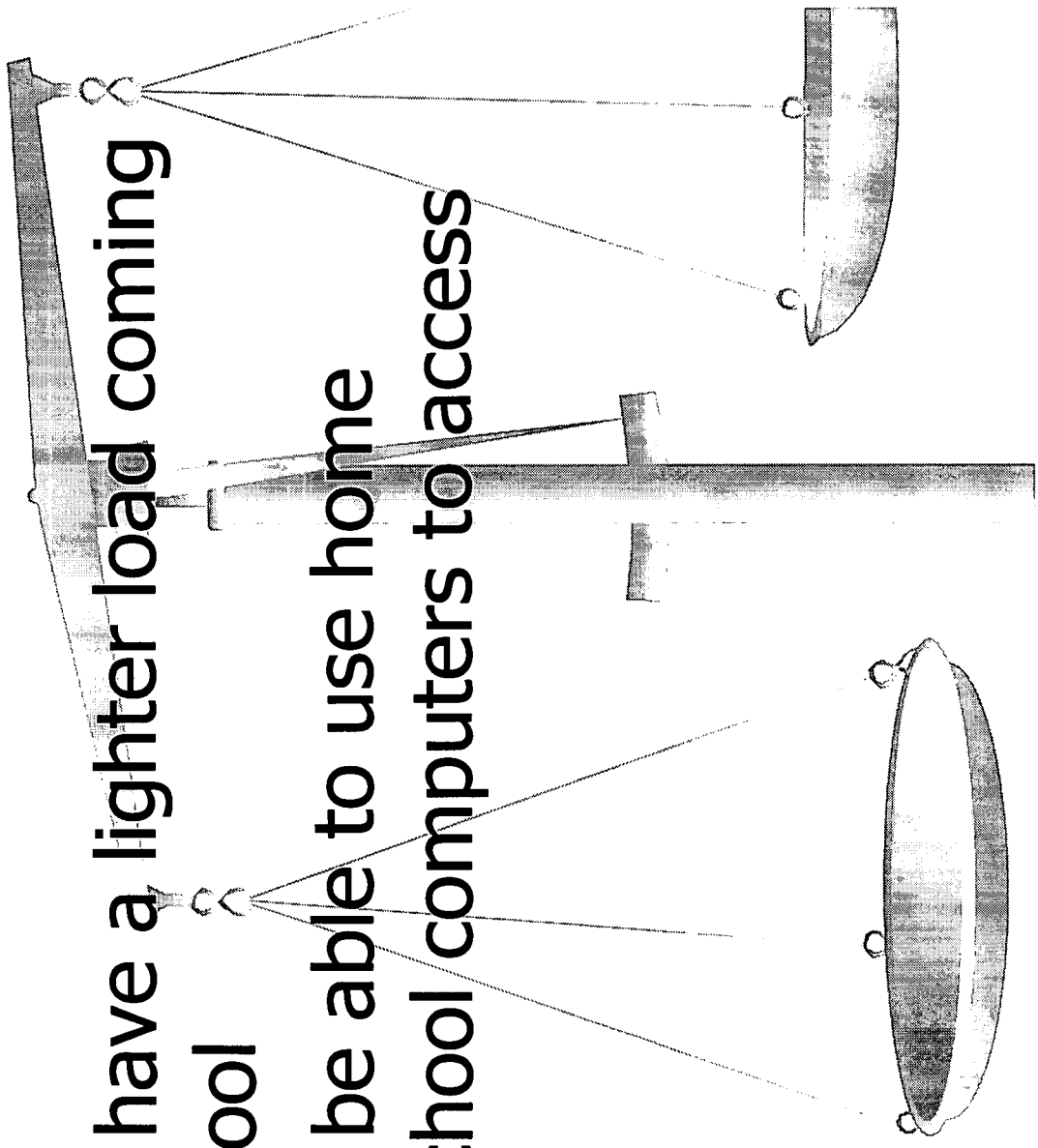
What Would Be Required?

- Textbook publishers would be required to provide an electronic version of any textbook sold to the State Board of Education



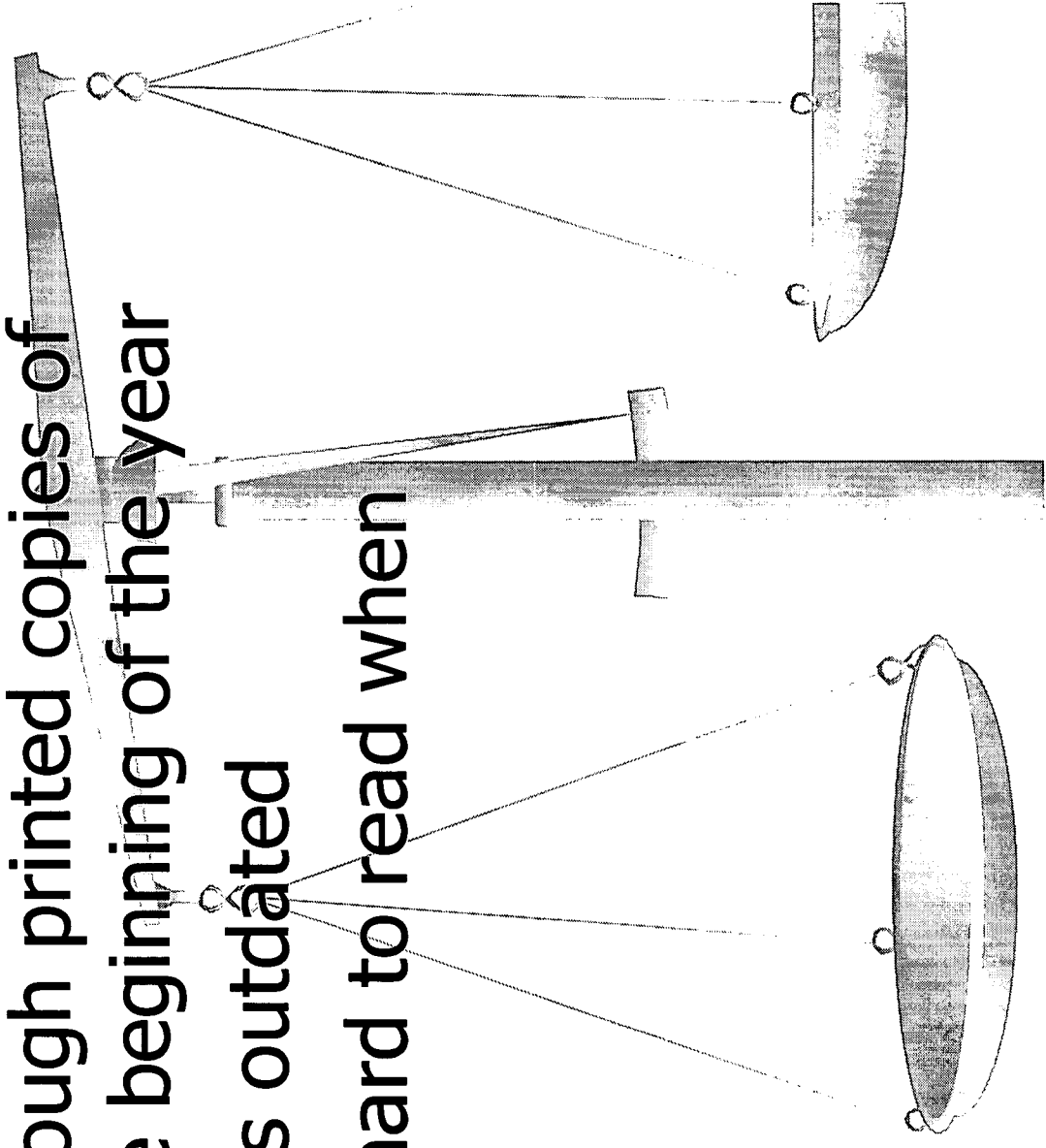
- How would students benefit from this?

- Students would have a lighter load coming to and from school
- Students would be able to use home computers or school computers to access the material



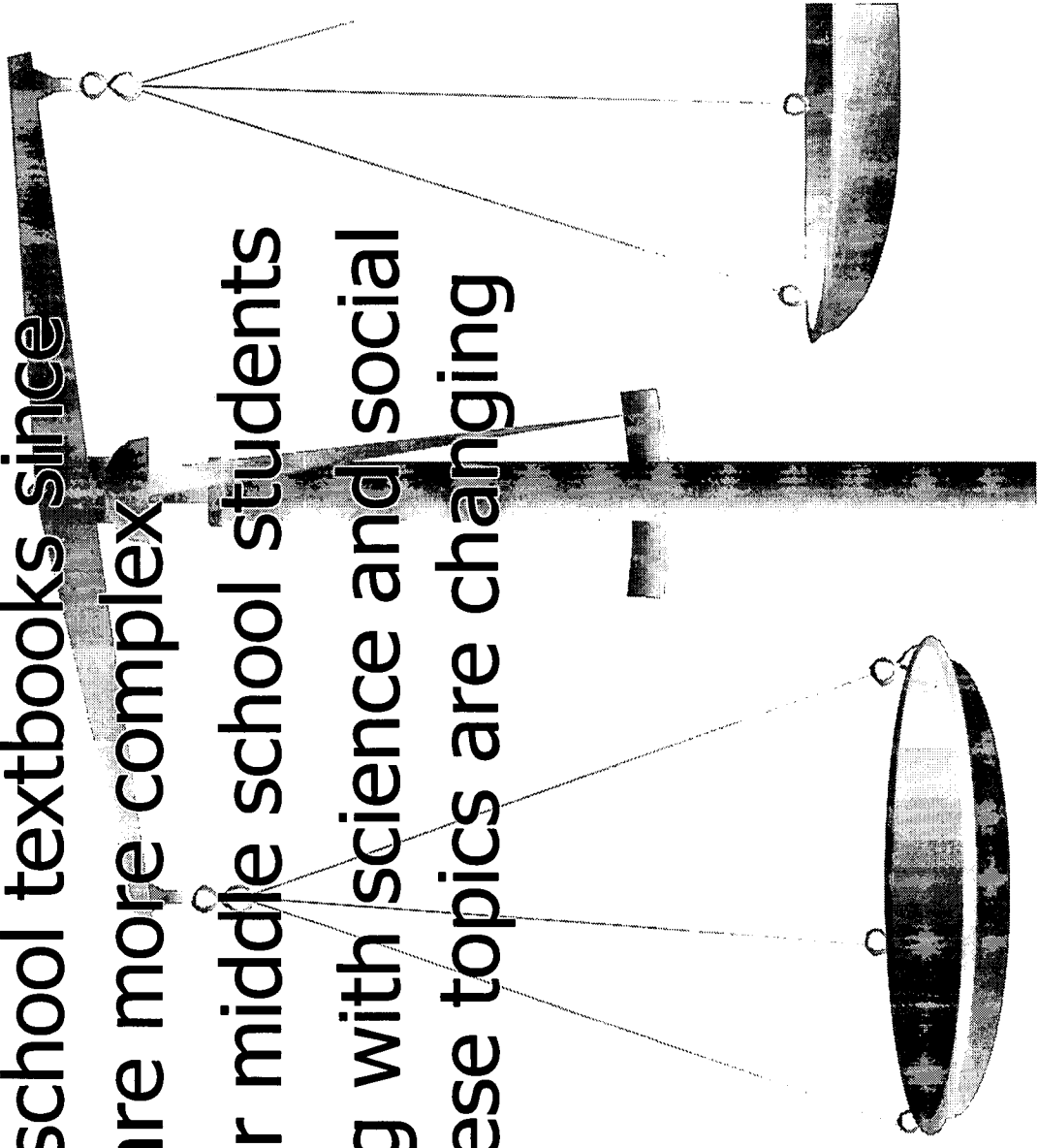
Why Are E-Textbooks needed?

- There aren't enough printed copies of textbooks in the beginning of the year
- Some material is outdated
- Textbooks are hard to read when vandalized

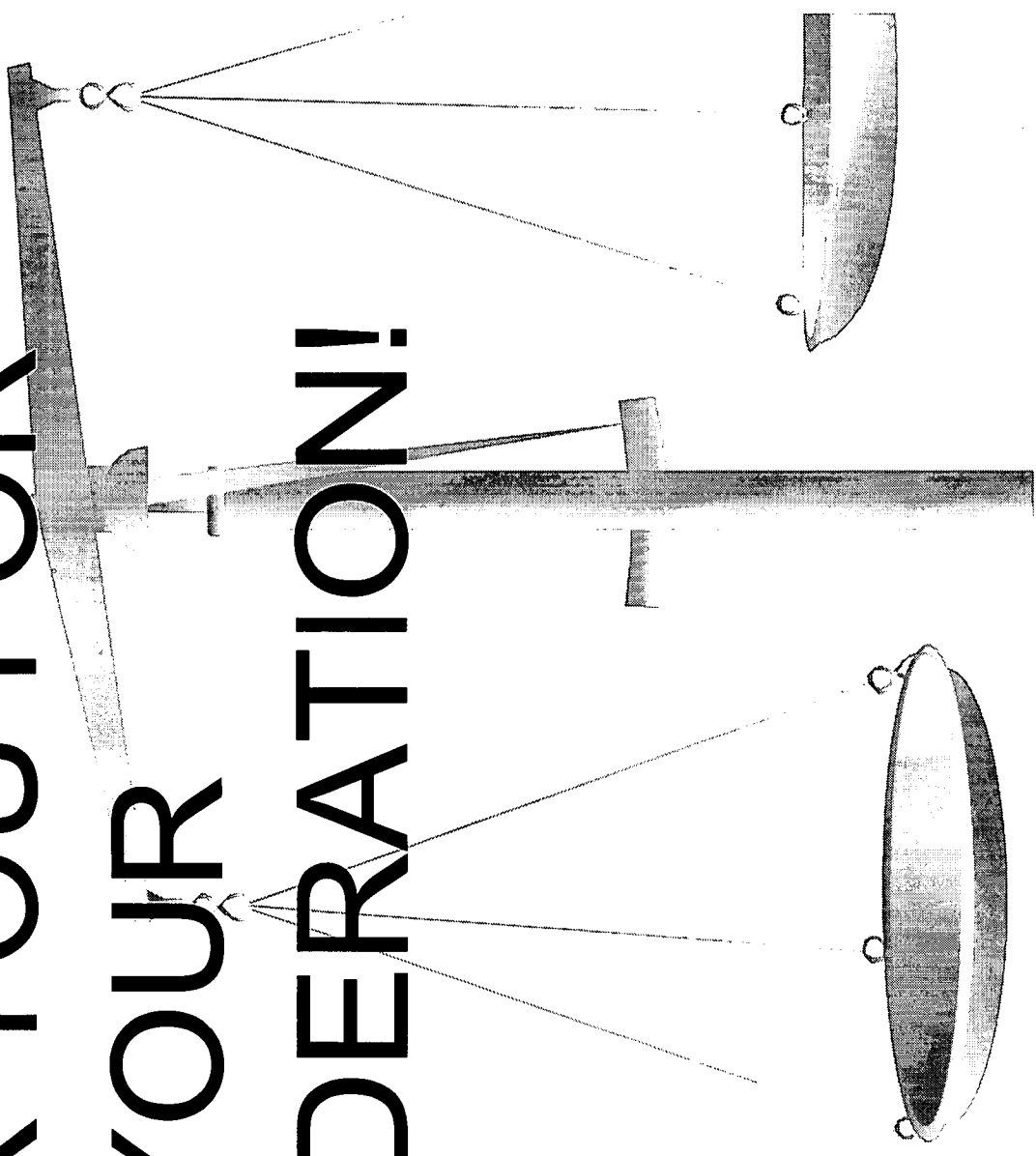


Implementation

- Start with high school textbooks since these subjects are more complex
- Then provide for middle school students
- Subjects starting with science and social studies since these topics are changing quickly



THANK YOU FOR
YOUR
CONSIDERATION!



GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2003

H

2

HOUSE BILL 940
Committee Substitute Favorable 4/30/03

Short Title: Make E-Textbooks Available to Students.

(Public)

Sponsors:

Referred to:

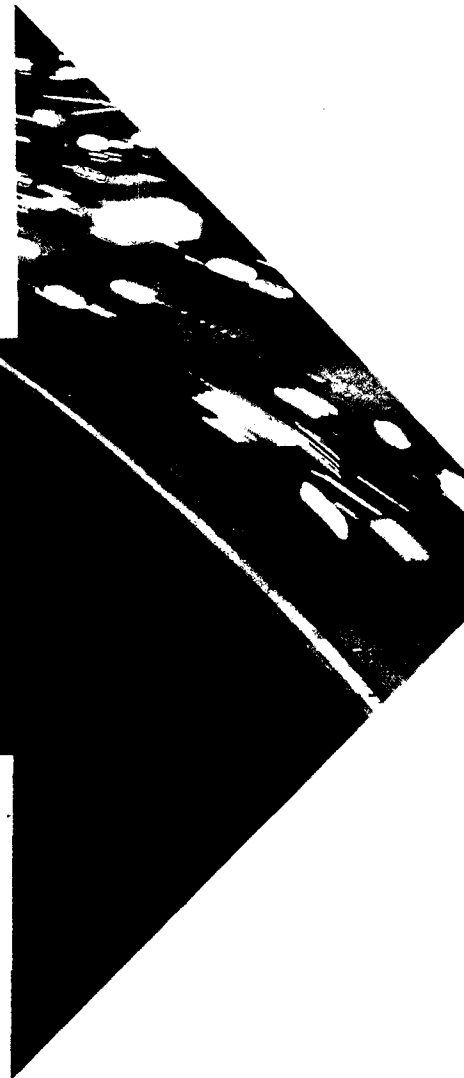
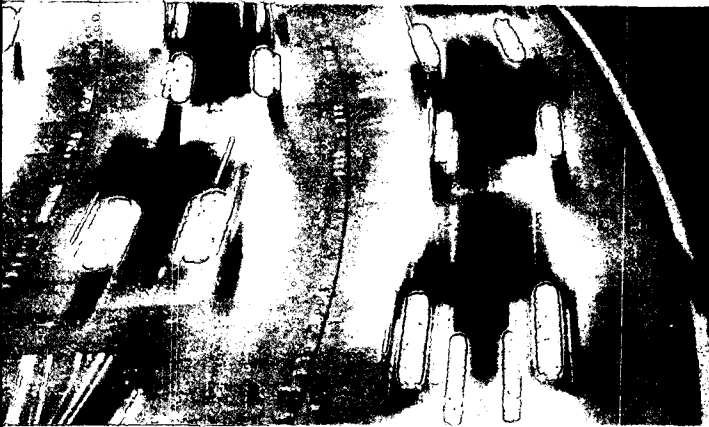
April 8, 2003

1 A BILL TO BE ENTITLED
2 AN ACT AUTHORIZING THE LEGISLATIVE RESEARCH COMMISSION TO
3 CONDUCT A STUDY REGARDING THE AVAILABILITY AND USE OF
4 ELECTRONIC COPIES OF TEXTBOOKS FOR PUBLIC SCHOOL STUDENTS.
5 The General Assembly of North Carolina enacts:
6 **SECTION 1.** The Legislative Research Commission shall study issues
7 related to the availability and use of electronic copies of textbooks for public school
8 students. As part of the study, the Commission shall consider the feasibility of requiring
9 that all textbook contracts include a clause requiring publishers to provide an electronic
10 version of the textbook with any printed textbook they sell to the State Board of
11 Education. The Department of Public Instruction shall provide the Commission any
12 information it requires to conduct this study. The Commission shall make a report of
13 the results of its study and any recommendations to the 2004 Regular Session of the
14 2003 General Assembly.
15 **SECTION 2.** This act is effective when it becomes law.

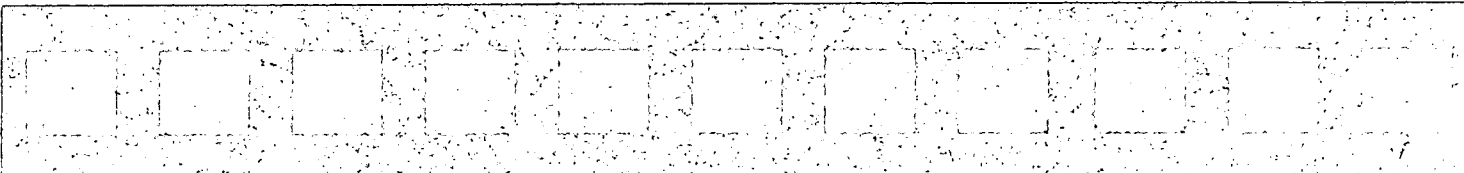


ITRE

**Institute for Transportation
Research and Education**



Exploring and advancing
transportation systems
through research,
education, and
technical assistance





The Institute for Transportation Research and Education (ITRE) is an academic and professional organization of the University of North Carolina system housed at North Carolina State University. With annual expenditures in excess of 6 million dollars, ITRE conducts research, education, and related technical assistance and technology development to solve transportation problems and to create new products, better services, and a workforce ready to meet the challenges of the 21st Century.

Research

ITRE staff members are involved in research projects supported by students and faculty at numerous State and National universities sponsored by such organizations as:

- Transportation Research Board of the National Academy of Sciences
- Federal Highway Administration
- Federal Transit Administration
- National Science Foundation
- National Eye Institute
- N.C. Department of Transportation
- N.C. Department of Public Instruction
- Institute of Transportation Engineers

Education

ITRE offers between 200 and 300 courses, training seminars, and workshops in any given year. Topics range from context sensitive solutions and professional engineering review courses to basic work zone safety training, GIS, and leadership development seminars. The Roads Scholar and Advanced Roads Scholar programs at ITRE are heavily attended and much sought-after. These training sessions are aimed at improving today's transportation professionals at the local and state level.

Technical Assistance

ITRE provides quality end products and technical support which improve the transportation systems of the region and nation. ITRE plays a leading role in helping government agencies assess and apply new transportation technologies through a broad spectrum of technical activities such as:

- Development and implementation of travel demand forecasting models
- Implementation of school bus routing and scheduling
- Development of customized GIS technical applications
- Assistance with transportation related conferences and seminars
- Facilitation of high-tech forums and national satellite broadcasts
- Preparation of specifications for vehicles and advanced Intelligent Transportation Systems (ITS)
- Implementation of mathematical models for improving decision-making in educational institutions and in state and local governmental agencies

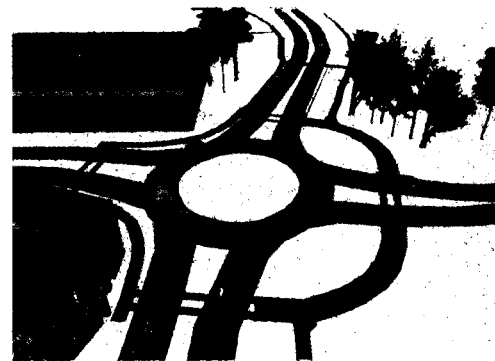


Since its inception in 1978, ITRE has become a national leader in surface transportation research, education, and technical services. Along with many programs, ITRE is home to the **Center for Transportation and the Environment**, established in 1992 as the first national university transportation center focused on the environment; the **Pupil Transportation Group** which was the first in the nation to implement a statewide computer-assisted school bus routing and scheduling system and the first to address multi-modal school transportation issues; and the **Public Transportation Group**, which has the distinction of long-standing working partnerships with NCDOT's Public Transportation Division and Division of Bicycle and Pedestrian Transportation, one of the oldest comprehensive bike programs in the country.

Working in partnership with other universities, federal and state agencies, and the private sector, ITRE addresses the nation's critical transportation issues and has made landmark strides in the area of transportation education. ITRE's services to the transportation community are enriched by North Carolina State University's network of resources and ITRE's strategic alliances with other governmental, academic, and private entities. Its location on the NC State University campus has enabled a strong collaboration with university professors, researchers, and students in research and education efforts.

Through its unique blend of professional partnerships, and its dynamic and motivated staff, ITRE has evolved as a national force in shaping and supporting the transportation world for the 21st century and beyond.

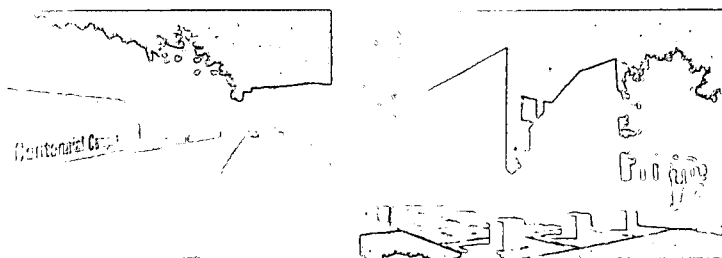
Extending the
boundaries
and the way
we think
of transportation



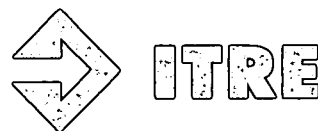
The Institute for Transportation Research and Education (ITRE) is a university-based institute committed to leadership in the study of surface transportation issues through fostering analytical thinking, integrating technology in education and research, serving as a catalyst for problem solving, and cultivating professionals and students dedicated to excellence in transportation.

ITRE conducts research, education, and technical assistance projects on a wide variety of surface transportation issues. These projects include extensive work with municipal and state departments of transportation throughout the nation.

Contact ITRE today for more information on any of our transportation related activities.



ITRE is an inter-institutional center serving all 16 UNC campuses and located on North Carolina State University Centennial Campus



Institute for Transportation Research and Education
North Carolina State University
Box 8601
Raleigh, NC 27695-8601
(919) 515-8899
www.itre.ncsu.edu

EXPERIENCE AND DEMONSTRATION OF TRAFFIC SIMULATION MODELS

INSTITUTE FOR TRANSPORTATION RESEARCH AND EDUCATION

Nagui M. Rouphail, Ph.D. Director
Presentation at the NC House
Science and Technology Committee

March 2, 2005

ITRE INFORMATION

- Institute for Transportation Research and Education: <http://itre.ncsu.edu>
 - ⇒ Established by the State Legislature in 1978
 - ⇒ Located on the NC State Centennial Campus
 - ⇒ Over 50 full time staff and 20 students
 - ⇒ Major activities
 - Workforce development and training of professionals
 - National and state funded research
 - Technical assistance for several state agencies (DOT, DPI), MPO's and local governments
 - ⇒ Annual expenditures in excess of \$7M/ year

Why use Traffic Models ?

- Testing new concepts without the cost of trial and error implementation on the street
- Allows us to do “what-if” scenarios
- Only tool available if you do long range planning and projections
- User interface is a convenient way to inform non-technical, decision makers on the ‘look and feel’ of proposed designs and improvements

Traffic Models at ITRE

- Large scale travel demand model for the entire Triangle Region (multi-county) through our Triangle Regional Model Service Bureau (TRM)
- School bus routing and scheduling model for all school districts in eastern NC (TIMS)
- *Traffic simulation models for intersection and corridor-level analyses (VISSIM; CORSIM, SIDRA)*

● **Simulation Case Studies** ●

- TTA Train signal pre-emption @ NC 54 and Carpenter/Morrisville, Cary
- Pullen Stinson roundabout details on NCSU Campus
- Proposed System of roundabouts on Hillsboro street, Raleigh

VISITOR REGISTRATION SHEET

Science & Technology
Name of Committee

Name of Committee

3/2/05
Date

Date _____

VISITORS: PLEASE SIGN BELOW AND RETURN TO COMMITTEE ASSISTANT

NAME

FIRM OR AGENCY

MIKE MURHEARD

NC 28 I

Lolie Butchelor

Nc Osc

Nancy Reen

SELF

Caroline Kazmiercki

NCTA

Pax Westcott

Spirit

David McCall

TE K systems

TAMES L. FORTE

OS/A

Dennis PATTERSON

05A

Chris Mitchell

Nortel

Angie Harris

15. Маурі (супер)

Vickie Miller

Irish Sign

SBE/ ΔPI

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

March 9, 2005

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Presentations:

Economic Impacts and Opportunities of Nanotechnology

By Dr. Robert K. McMahan, Senior Advisor to the Governor for
Science and Technology and Executive Director of the NC Board
of Science and Technology

Discussion (Questions and Answers)

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

March 9, 2005

The House Committee on Science and Technology met on Wednesday, March 9, 2005, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson and Martin, Vice-Chairs; Gulley, Harrison, Hollo, Jones and Walend.

Representative Miller called the meeting to order and introduced the pages; Kevin Cotter and Emily Winslett both from Wake County and sponsored by Rep. Rick Eddins. Rep. Miller also recognized the Sergeant-At-Arms, Willie Dixon and Paul Curry. After that he introduced Dr. Robert McMahan, the Senior Advisor to the Governor on Science and Technology and the Executive Director of the NC Board of Science and Technology.

Dr. McMahan addressed the basic innovation capacity of the State, the history of science and technology-based economic policy, and touched on nanotechnology (See Attachment F).

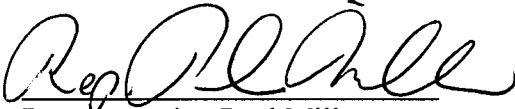
Following the presentation, Representative Jones asked where North Carolina stands in the integration of micro-genetic research using nanotechnology. Dr. McMahan answered that the capacity exists within the universities but they are not coordinated to pull the research together like biotechnology has been done. Representative Walend asked if the problem of bringing research to the market and bringing products and jobs to the state is a need for a new model or strategy. Dr. McMahan responded that the private sector is an extremely important component and we need to pay attention on how to grow that sector. Representative Tolson asked why the Commerce Department is not the vehicle in making these companies happen in North Carolina. Dr. McMahan stated the Commerce Department is working to address the issue with small companies and earlier staged companies. Representative Tolson followed up with asking if the Commerce Department is equipped to handle nanotechnology. Dr. McMahan replied that the answer is a long one and he would be happy to discuss this with Representative Tolson at length, but the opportunity exists. Representative Harrison asked if the billion dollars in federal money was in this year's budget. Yes, he replied, it flows through a variety of agencies, while most of it flows through the NSF.

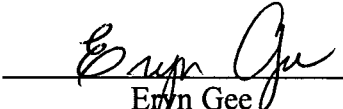
At the conclusion of discussion, Representative Miller covered various issues including what to expect in the next few meetings in regards to taking up bills and additional presentations. He also invited recommendations for future presenters from the committee.

Representative Miller asked if there were any announcement from committee members, or the audience and Caroline Kazmierski from North Carolina Technologies Association, (NCTA) invited the committee to a breakfast on March 10th, to meet with members of NCTA.

With there being no further business, the meeting was adjourned.

Respectfully submitted,


Representative Paul Miller
Chairman


Eryn Gee
Committee Assistant

VISITOR REGISTRATION SHEET

Science & Technology

Name of Committee

3/9/05

Date _____

VISITORS: PLEASE SIGN BELOW AND RETURN TO COMMITTEE ASSISTANT

NAME

FIRM OR AGENCY

Ein Kinn

NL Construction Network

DOH MART

NC Do

John Hardin

NC Board of Science & Tech.

Caroline Kazmiercki

NCTA

David McCall

TEKsystems

Dawn Trembath

NC Board of Science & Tech

Babara Hoof

NCR 22

Charlene Carey

Elon University student

Ken me / for

D. O. R.

Malawi

NCAWD B

Mike Janner

Progress Energy

Kathy Francis

Protons energy

NC's Innovation Capacity & The Economy: NanoTech, Science & Technology Based Economic Development Policy

Robert McMahan, Ph.D.

*Senior Advisor to the Governor for Science and Technology
Executive Director, NC Board of Science and Technology*

Background

- Nature and importance of TBED
- How Nano and directed initiatives fit
- NC's history and current performance
- Priority issues, activities and policy agenda/proposals
- NT Landscape

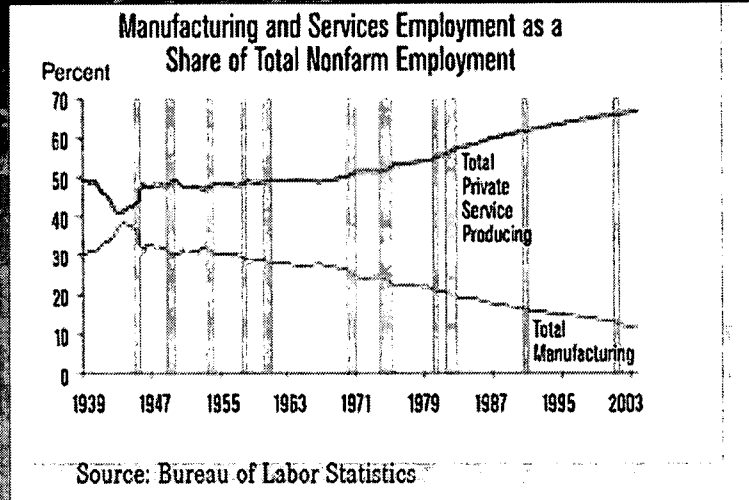
Context

- Knowledge-based economies raise new policy challenges
 - Economic activity is becoming increasingly knowledge-based
 - jobs are shifting from low to high-skilled workers
 - productivity and employment growth depend on the conditions for economy-wide diffusion of new products and processes.
- Technology policy must be an integral part of a broader economic development policy agenda

Why Technology Policy?

- Lesser-skilled, lower wage manufacturing jobs are being outsourced overseas
- Technology industries pay higher wages (2001)
 - High Tech Jobs - \$58,090
 - US Average - \$34,669
 - *This is true even in distressed areas*
- + Growing technology-intensity of all industry
 - citizens' success is increasingly dependent on their ability to learn, adapt, and contribute to innovation
 - Preparation for all career paths

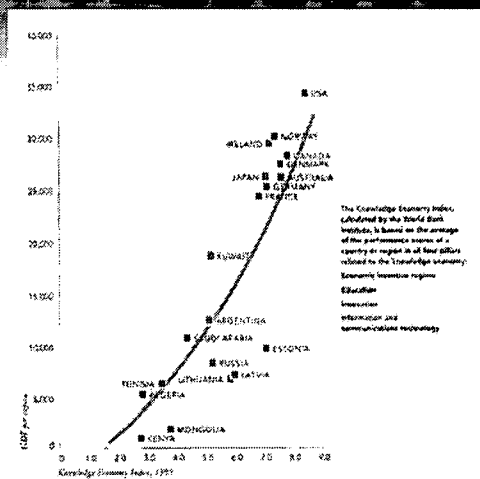
The Mix of jobs is changing



<http://www.frbst.org/csip/analysisEssay1.pdf>

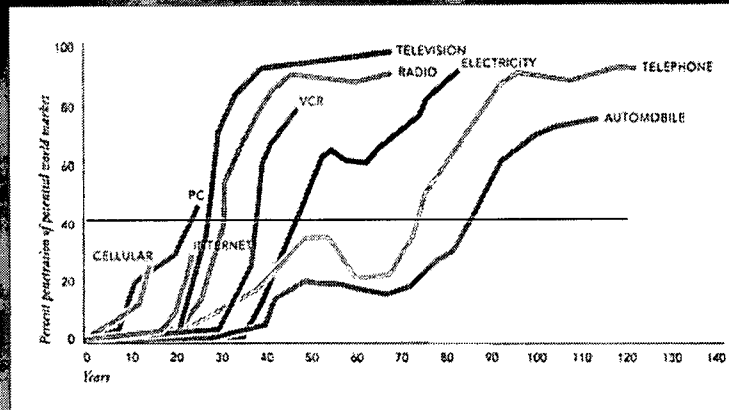
Knowledge-based Economies...

GDP/Capita
Growth
correlates with
the size of the
Knowledge
Economy.



Source: Global Innovation Outlook, 2004 & the World Bank Institute

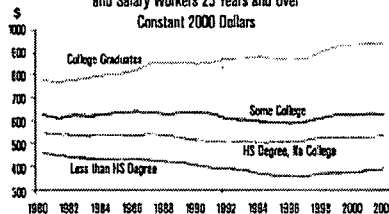
are evolving ever faster



Source: Global Innovation Outlook, 2004 & the World Bank Institute

As Is the Premium on
education

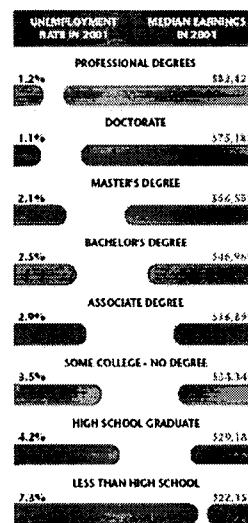
Rise in Premium on Higher Education
Median Usual Weekly Earnings of Full-Time Wage
and Salary Workers 25 Years and Over
Constant 2000 Dollars



Source: Bureau of Labor Statistics

<http://www.frbsf.org/csip/analysisEssay1.pdf>

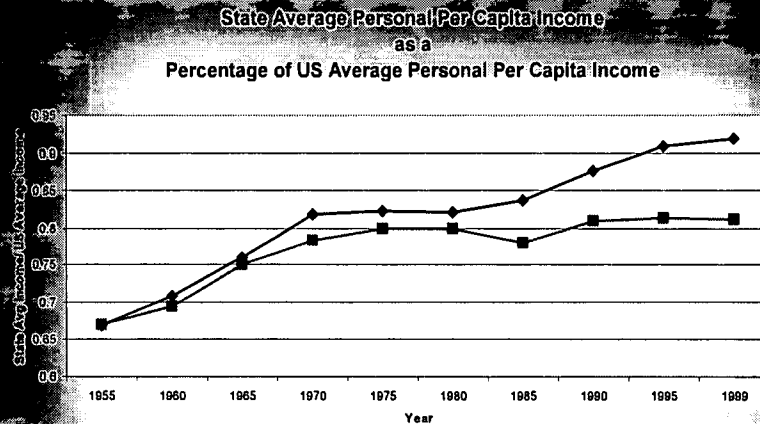
**Earnings and Unemployment
Rate by Education Level**



Source: Postsecondary Education Opportunity
www.postsecondary.org

http://www.collegeforme.com/action_plan.pdf

Why Technology-based ED?



Long term commitment produces results

TBED Strategy

Science, technology and knowledge-driven innovation are critical to job and wealth creation.

TBED:

- Address economic transition.
- Capture the benefits of investments in research and development, higher education.
- Build "entrepreneurial cultures."
- Help existing industries modernize.
- Diversify economy.

TBED – The NC Board of Science & Technology

In 1963, the North Carolina General Assembly established the North Carolina Board of Science and Technology to encourage, promote, and support scientific, engineering, and industrial research applications in North Carolina. (NCGS §143B-472.81)

Hallmarks

Initiated

- MCNC
- NC Information Highway
- NC School of Science and Mathematics
- NC Biotechnology Center

Produced

- Vision 2030 – comprehensive "real-options" planning effort to strengthen the competitiveness of NC's workforce and industry by taking advantage of science and technology

NC Board of Science & Technology

Has Helped to Create Initiatives That Have
Made NC an International Model

- e.g. Biopharma / Biotechnology
- ...and works to to identify the next:
 - Emerging Industries – Nonwoven Textiles
 - Grid Computing
 - Advanced Materials / Manufacturing / Nanotechnology
 - Fuel Cells

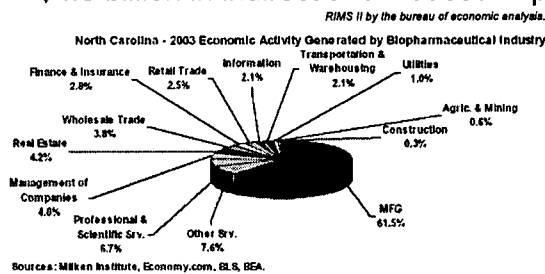
In fact, Biopharma is a lesson

Due to coordinated efforts of public & private sector:

- NC is home to a powerful and growing biopharmaceutical industry.
- It is a major driver of NC economy and high-wage employment.
- NC is now home to many of the world's largest biotech and pharmaceutical facilities.
- More than 25,000 employees with skill sets ranging from bioprocess technicians to Ph.D.'S are employed in this industry group.

In 2003 -

- Each job created in Biopharma in NC created an additional four jobs in other sectors of the state's economy.
- Total output ~ \$9.4 billion.
 - \$4.5 billion in direct output,
 - \$4.8 billion in indirect and induced impacts.



Biopharma

- Industry employment is projected to increase from
 - 24,790 in 2004 to
 - 32,040 in 2014, with \$7.8 billion in direct real output.
- With multiplier, the industry will account for a total of **160,540** jobs in NC in 2014.

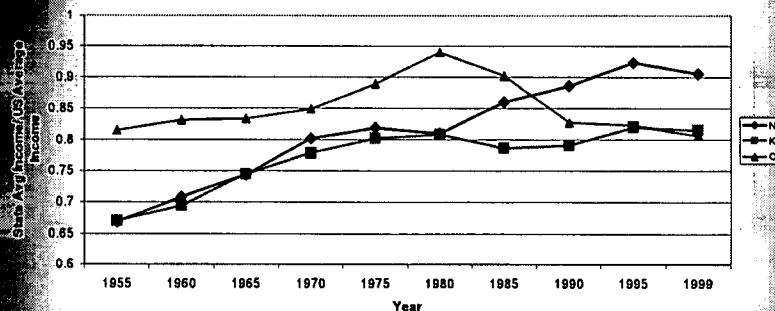
Biopharma Impact on State

The result of a successful TBED strategy

- o Action based on:
 - Understanding of needs, capabilities, and gaps
 - Filling gaps to encourage change in private sector behavior
 - Long term commitment = impact
- o Committed high-level leadership that understood:
 - Economic impact further down the road than other approaches
 - Research does not always succeed
 - Significant cultural differences between actors

But Diversification is Key Element

State Avg Per Capita Personal Income as a Percentage of US Per Capita Personal Income
Source: Bureau of Economic Analysis, US DoC



NC is still below the national average – one/two strong clusters are not enough to boost state overall.

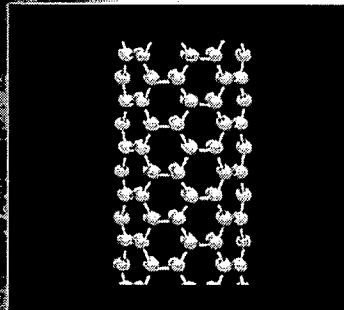
Diversification – Nanotechnology?

Nano is poised to become a critical driver of economic growth and development for the first half of the 21st century

- There is clearly basic nano-capability emerging in North Carolina
 - Builds upon a base of strong university research
 - A few manufacturing companies have located in the state.
 - Our current response: No coordinated activity – “Delay”
- Impact of delay on emerging and traditional industries?

Why the Fuss?

Fabrication atom by atom → e.g.
Carbon Nanotubes



Properties:

- 100x more rigid than steel
- 6x lighter than steel
- 10x stiffer than conventional graphite
- 50,000x thinner than a human hair
- Extremely resistant and highly responsive

The Next Industrial Revolution

Nanotechnology will affect almost every aspect of our lives

– including the medicines we take; computers we use;
energy supplies we require; food we eat; cars we drive;
buildings we live in; and clothes we wear

- For every area of impact we can imagine, there will be others not yet dreamed of – new capabilities, new products, and new markets
- Nanotechnology is an ENABLING TECHNOLOGY
- It is not a stand alone industry
- It's impact is that it makes existing industries better

How Big?

Impact of nanotechnology on the global economy

- \$300B electronics
- \$340B materials
- \$180B pharmaceuticals
- \$100B chemical manufacture
- \$70B aerospace
- \$20B tools
- \$30B improved healthcare
- \$45B sustainability

Market size predictions: \$1 trillion over next 10-12 years US

National Science Foundation

3M Motorola DUPONT hp IBM BOEING
 Ford Pfizer TEXAS INSTRUMENTS GE Kodak
 ConocoPhillips intel.
 GM Agilent Technologies Honeywell
 CORNING SIEMENS
 DOW BASF
 MITSUBISHI Lucent Technologies
Bell Labs Innovations

- Nearly every manufacturing company in the Fortune 500 is already active in the nanotech field
- Globally, corporations spent over \$1 billion on nanotech in 2004 – investing, planning, and R&D
- US corporations account for 60%

"We believe that nanotech is the next great technology wave, the nexus of scientific innovation that revolutionizes most industries and indirectly affects the fabric of society. Historians will look back on the upcoming epoch with no less portent than the Industrial Revolution."

***Steve Jurvetson, Partner, Draper Fisher
Jurvetson***

In the next 5 to 10 years...

Current Manufacturing Methods will reach their limits

- Si circuits will become unreliable at scale
- Nano-material based devices will become widely available
- In electronics, the Nanotechnology revolution will take root.
 - New plants and processes
 - Significant advances in disease prevention, diagnosis and control
 - Smart, adaptive materials
- Working at the molecular level will become a basic scientific skill.
- Nanotech's impact will become impossible to ignore.

In the next 5 to 10 years...

Nanotechnology clusters will form – in the US and internationally.

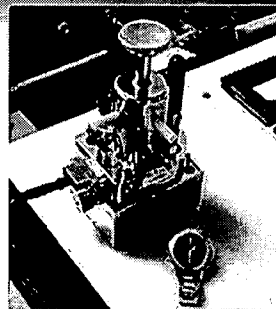
- And mature industry clusters will ultimately form around them.
- Areas with broad based competencies in biotechnology, semiconductor, and software technologies will have significant competitive advantage.
 - But - high costs and barriers to entry will increase the challenges of development and commercialization.
- Workforce preparation will be gating, and we will face severe shortages of qualified workers

In the next 5 to 10 years...

- NT will need substantial policy development
 - Scientific, ethical, social – lags scientific developments
 - Societal Impact centers as relevant as basic research?
- NT will become a core component of defense R&D

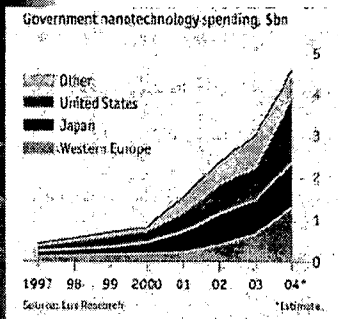
This will change industries broadly

- The growth of nano patenting and scientific activity is at least the same order of magnitude as biotechnology
 - At a similar stage of development
 - Recombinant DNA in '73 vs. AFM in '86
- The primary effects of nano will be to:
 - Enhance current major industries
 - Enable the creation of entirely new industries



And Federal Funding reflects it

- Largest single research funding stream at the federal level.
- Nanotechnology is the highest priority funded science and technology effort since the space race.



• 2005 budget authority for US NNI is nearly \$1 billion, more than doubling the funding in 2001 (first year of NNI)

• Private industry invests at least as much as the government

But - Previous Technology Waves are Poor Guides for Nanotechnology

	Cross-industry relevance	Toolkit diversity	Dependence on breakthrough science	Mix of evolutionary and revolutionary technologies	Opportunity for cross-pollination
Biotechnology	Low	Medium	High	Low	Medium
The Internet	High	Medium	Low	Medium	High
Manufacturing automation	High	Low	Low	Low	Low
Nanotechnology	High	High	High	High	High
Challenge for companies	Neither become mired in "analysis paralysis" of every potential application nor miss an important one due to lack of attention.	Keep track of the sheer volume of developments at a dizzying number of academic institutions, startups, competitors, and internal research labs.	Manage a portfolio of products and processes under development that have a high degree of uncertainty surrounding their viability.	Balance investment across incremental innovations viable in the short term and breakthroughs that lie many years away.	Get stuff across organizational boundaries - who may communicate rarely if ever - to shake ideas, external relationships, best practices, and facilities.

Because the economy will be broadly effected

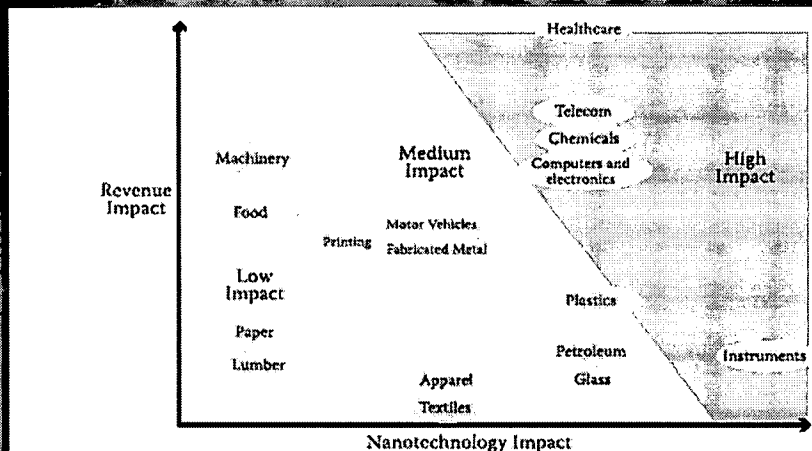


Figure 5.1: Nanotechnology's Probable Business Impact in 2007
Source: Larta, 2003

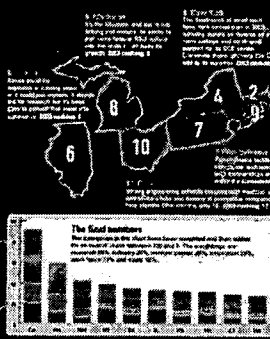
Economic Patterns: US & NC

Smalltimes Media labels NC a "place to watch" for small tech R&D;
"Too much of NC's stellar research seems to languish in labs, but that could change"

Places to watch

- Research** - Smalltimes Media labels NC a "place to watch" for small tech R&D. Too much of NC's stellar research seems to languish in labs, but that could change.
- Industry** - Smalltimes Media labels NC a "place to watch" for small tech R&D. Too much of NC's stellar research seems to languish in labs, but that could change.
- Venture Capital** - Smalltimes Media labels NC a "place to watch" for small tech R&D. Too much of NC's stellar research seems to languish in labs, but that could change.
- Work Force** - Smalltimes Media labels NC a "place to watch" for small tech R&D. Too much of NC's stellar research seems to languish in labs, but that could change.
- Costs** - Smalltimes Media labels NC a "place to watch" for small tech R&D. Too much of NC's stellar research seems to languish in labs, but that could change.

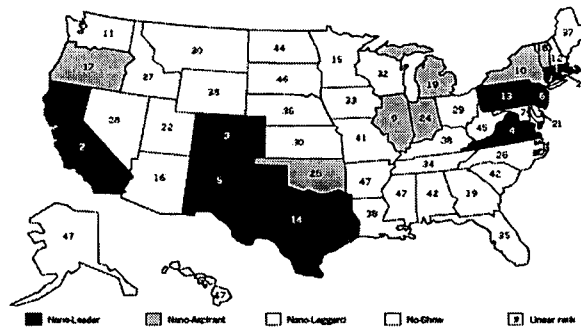
Top 10: Small tech's hot spots



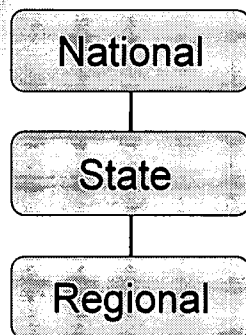
Economic Patterns: US & NC

Lux Research ranks NC 26th in developing its economy through nanotech; NC "scores low both on nanotech activity and tech development strength."

• Focused efforts on both fronts is required



To begin in context, Let's look at how we are going broadly ... groundtruth!



Performance

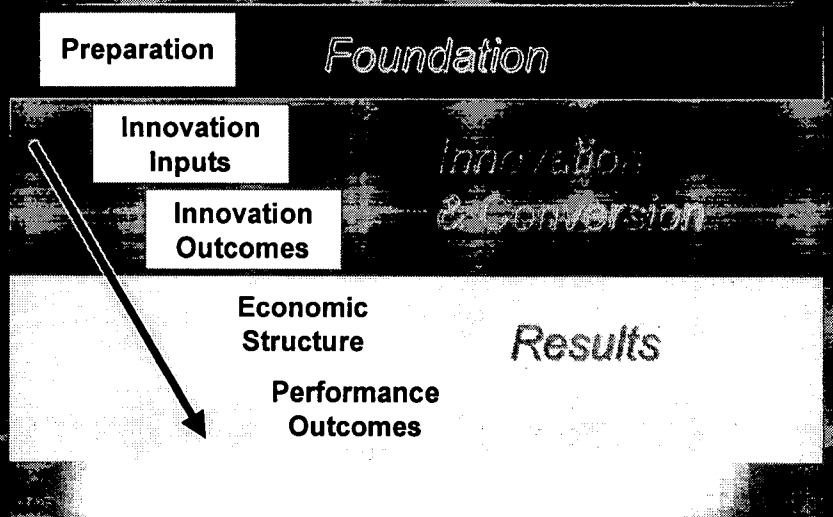
Not NT Specific

Build on TBED Foundations -

National Indices

- **National Science Board**
Science and Engineering Indicators (2004) – 24 indicators
- **U.S. Technology Administration**
The Dynamics of Technology-based Economic Development: State Science & Technology Indicators (2004) – 38 indicators
- **Milken Institute**
State Technology and Science Index: Enduring Lessons for the Intangible Economy (2004) – 75 indicators
- **NC Board of Science and Technology**
Tracking Innovation: NC Innovation Index (2003) – 56 indicators

Common Economic Model



Milken Institute

- The index uses 75 indicators in 5 categories
- Broad measure of how well a state performs/ will perform in today's knowledge-based economy.
- The five composite categories are:
 - Research and development inputs;
 - Risk capital and entrepreneurial infrastructure;
 - Human capital investment;
 - Technology and science workforce; and
 - Technology concentration and dynamism.

<http://www.milkeninstitute.org>

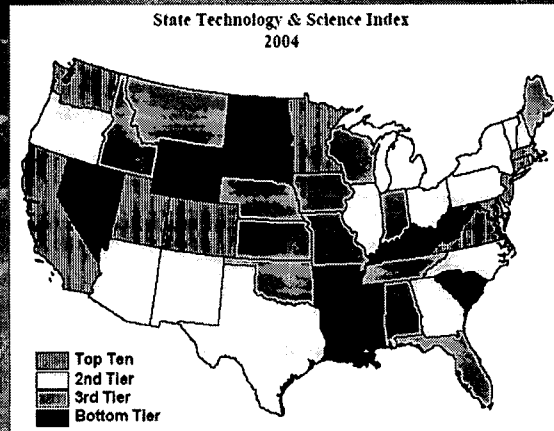
Milken: Summary Findings

National State Technology & Science Index
Overall Index, 2004

State	Rank (2004)	Rank (2002)	Rank Change	Score (2004)
Massachusetts	1	1	0	84.55
California	2	3	1	78.80
Colorado	3	2	-1	78.77
Maryland	4	4	0	78.19
Virginia	5	5	0	72.27
Washington	6	6	0	69.47
New Jersey	7	7	0	68.03
Minnesota	8	10	2	67.99
Utah	9	9	0	66.89
Connecticut	10	8	-2	66.38
Rhode Island	11	21	10	64.01
New Hampshire	12	18	6	63.43
Delaware	13	11	-2	63.31
New Mexico	14	20	6	61.23
New York	15	12	-3	60.68
Pennsylvania	16	14	-2	60.54
Arizona	17	13	-4	58.67
Georgia	18	15	-3	58.10
Oregon	19	22	3	57.54
North Carolina	20	17	-3	57.28
Illinois	21	19	-2	56.79
Vermont	22	11	9	56.00
Texas	23	14	9	54.93
Ohio	24	27	3	54.18
Maine	25	24	-1	54.01
Kansas	26	22	4	53.12
Wisconsin	27	23	-4	53.06
Nebraska	28	32	4	50.01
Indiana	29	30	1	50.07
Idaho	30	26	-4	49.03
Missouri	31	28	-3	48.11
Florida	32	29	-3	47.47
Alaska	33	40	7	47.12
Tennessee	34	40	6	46.77
Oklahoma	35	37	2	42.65
Alabama	36	33	-3	42.36
Iowa	37	35	-2	41.80
Montana	38	44	6	40.03
Hawaii	39	43	4	40.05
Arkansas	40	36	-4	39.91
Wyoming	41	24	-5	39.28
Louisiana	42	44	2	38.60
Nevada	43	42	-1	38.09
South Carolina	44	41	-3	35.04
North Dakota	45	45	0	34.55
West Virginia	46	48	2	33.65
South Dakota	47	47	0	33.31
Kentucky	48	46	-2	33.01
Alaska	49	50	1	29.43
Mississippi	50	49	-1	27.84
Mean				57.41

Milken Institute: State Technology and Science Index: Enduring Lessons for the Intangible Economy (2004)

Summary of National Position

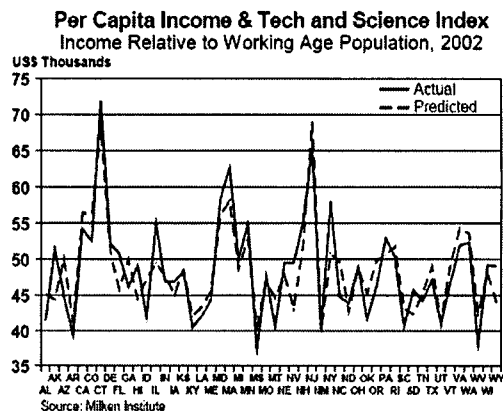


NC ranks in
the 2nd tier of
innovative
states

Milken Institute: State Technology and Science Index: Enduring Lessons for the Intangible Economy (2004)

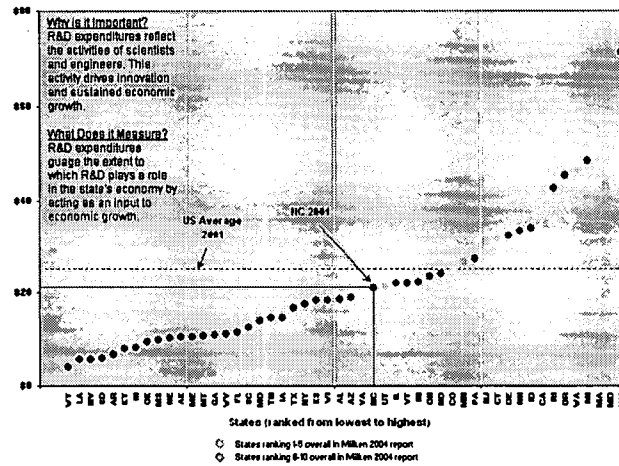
How does this relate to jobs & income?

Explains 75%
of the
variations in
per capita
income of the
working age
population
across states



Total R&D

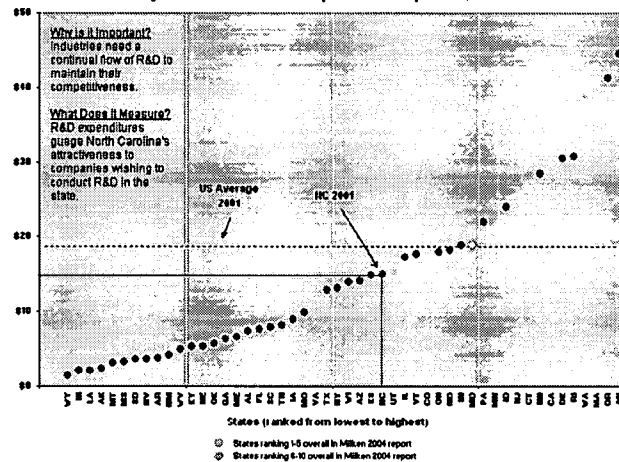
Expenditures for Total R&D Performed per \$1000 of GSP



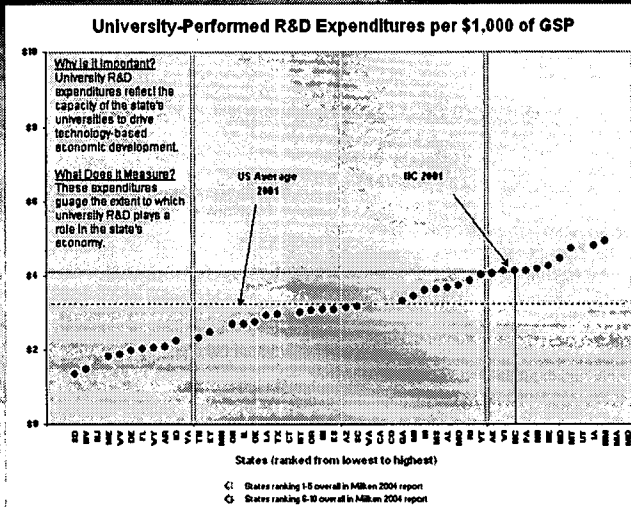
Milken Institute: State Technology and Science Index: Enduring Lessons for the Intangible Economy (2004)

Industrial R&D

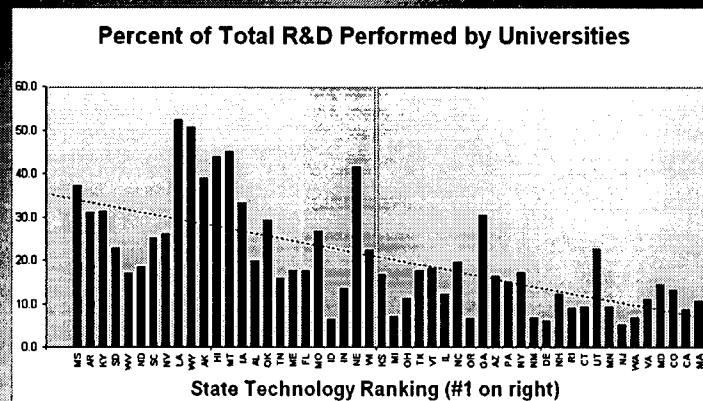
Industry-Performed R&D Expenditures per \$1,000 of GSP



University R&D



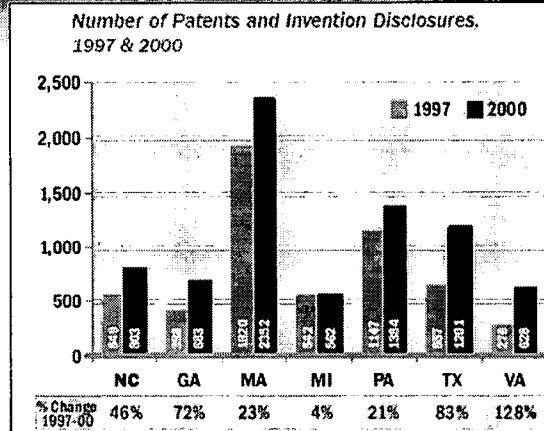
Relationship



Industry funds and conducts more R&D than all other sectors combined.

Results – IP Generation

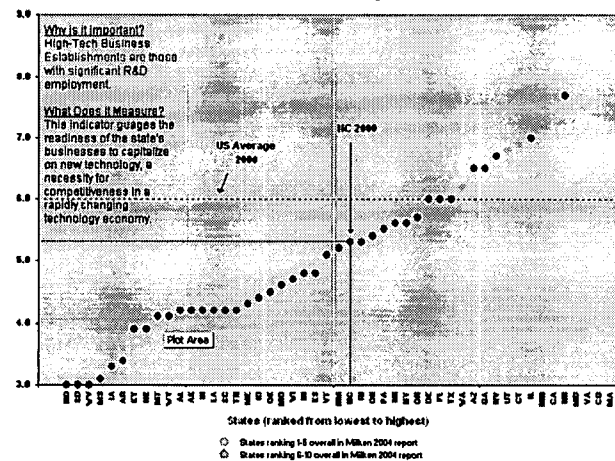
NC's number and growth rate of patent applications & invention disclosures rank in middle of comparison states.



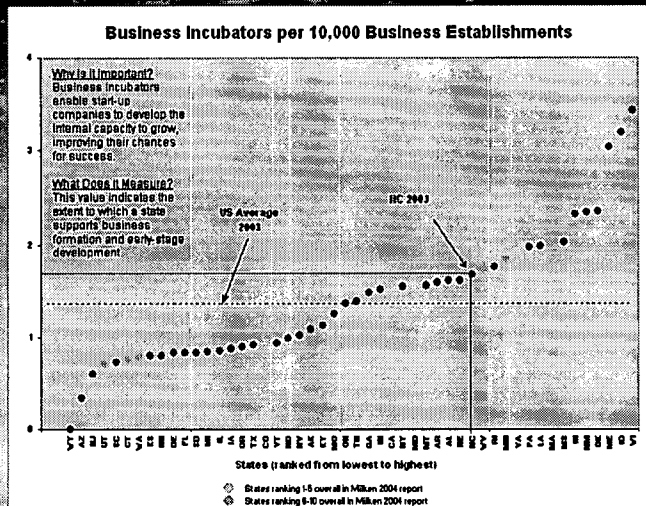
Note: When scaled to # of business in state, NC ranks 25th among US states in patents issued

High-Tech Economy

% Business Establishments in High-Tech NAICS Codes

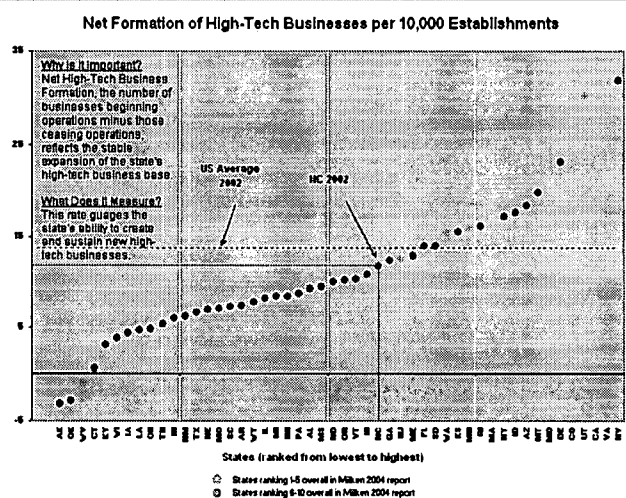


Incubation Rates



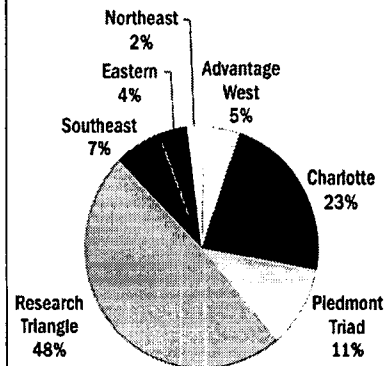
Net Tech

RDU is 48th out of the top 50 MSA's in Gazelle Job % of total employment



Tech-Intensive Job Growth

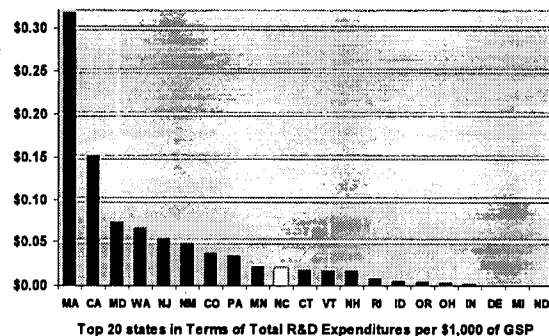
Distribution of Growth in Technology-Intensive Jobs in North Carolina by Region, 1989-2002



Early Stage

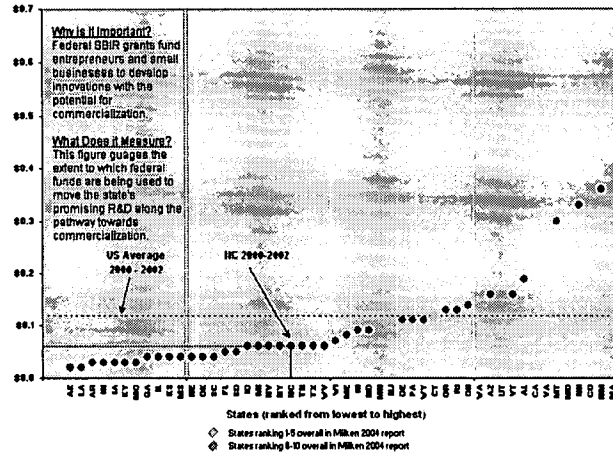
NC's rate of seed capital per \$1,000 of GSP is 16 times smaller than that of the lead state

Amount of Seed Capital Funds Invested per \$1,000 of GSP, 2001-2003



SBIR

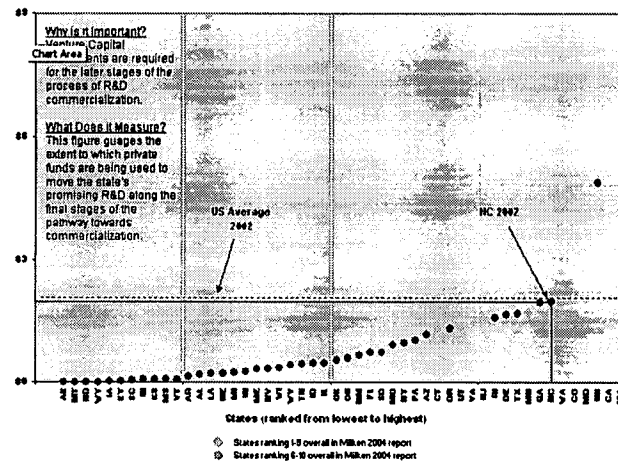
Average Annual SBIR Dollars per \$1,000 of GSP



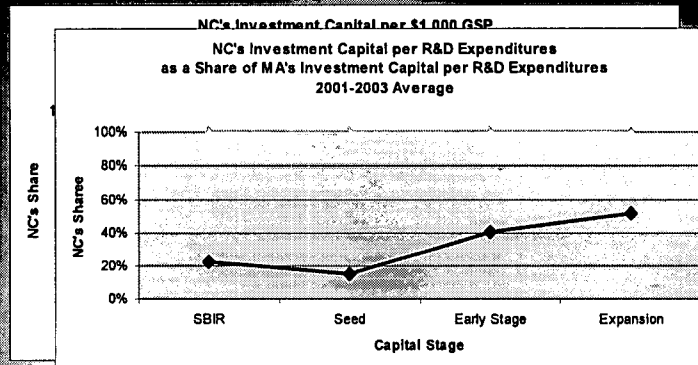
- The amount of SBIR dollars flowing into a state correlates strongly with the overall health of the state's technology based economy.
- SBIR rates are a good proxy for the level of critical technology commercialization activity within the state.

VC Investment Rates

Venture Capital Funds Invested per \$1,000 of GSP



Compared to MA



Seed capital (<\$500k) – financing before there is a real product or company organized

Early-stage capital (\$500k-\$2,000k) – financing to a start-up company in its first or second stages of development

Expansion capital (>\$2,000k) – financing to help a company grown beyond a critical mass to become more successful

K12 Workforce Prep

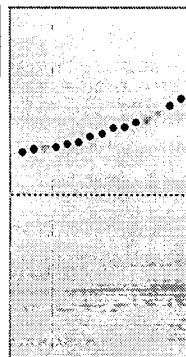
Percent of the Population Graduated from High School

Table 2: Ranking of Graduation Rates by State

State	Ranking	Graduation Rate
Georgia	51	54%
Nevada	50	58
Florida	49	59
District of Columbia	48	59
Arizona	47	59
Tennessee	46	60
South Carolina	45	62
Mississippi	44	62
Alabama	43	62
North Carolina	42	63

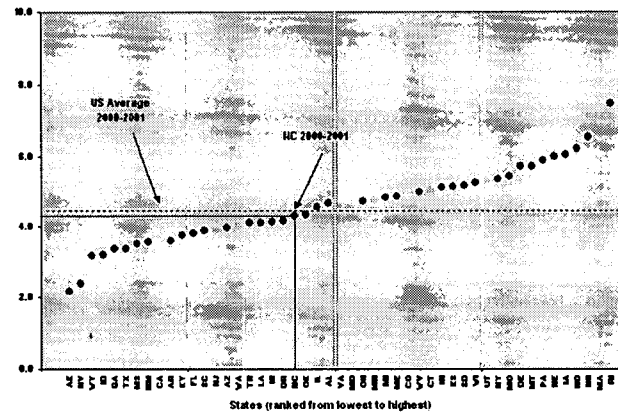
http://www.manhattan-institute.org/html/ker_baeo_t2.htm

States (ranked from lowest to highest)



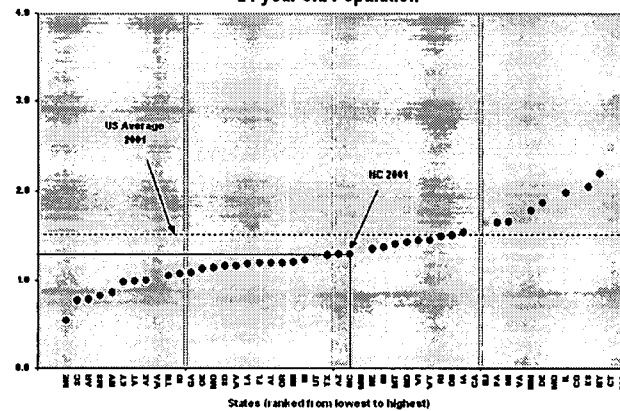
BS Degrees

BS Granted as Percentage of 18-24 year old Population



STEM Graduate Students

Science & Engineering Graduate Students as Percentage of 18-24 year old Population



What about Regional Performance?

- 50 most populated metro areas
- 16 indicators divided into five categories that best capture what is new about the New Economy

1) Knowledge Jobs.

Indicator measures jobs held by managers, professionals, and technicians; and the educational attainment of the workforce.

2) Globalization.

Indicator measures the export orientation of manufacturing.

3) Economic dynamism and competition.

Indicators in this category measure the number of fast-growing "gazelle" companies (companies with sales growth of 20 percent or more for four straight years); the rate of economic "churn" (which is a product of new business start-ups and existing business failures); and the number of initial public stock offerings (IPOs) by companies in each metro.

4) The transformation to a digital economy.

Indicators measure the percentage of adults online; the number of ".com" domain-name registrations; the share of students using computers in schools; Internet backbone capacity; and number of providers of broadband telecommunications services.

5) Technological Innovation capacity.

Indicators measure the number of high-tech jobs; the number of science and engineering graduates from area colleges and universities; the number of patents issued; expenditures on research and development at colleges and universities; and venture capital investments.

2001 - Progressive Policy Institute Metropolitan Indicators <http://neweconomyindex.org>

Rankings

METRO AREAS BY RANK

Rank	Metro Area	Score
1	San Francisco	95.6
2	Austin	77.9
3	Seattle	68.0
4	Raleigh-Durham	61.4
5	San Diego	61.4
6	Washington	60.6
7	Denver	58.1
8	Boston	54.0
9	Salt Lake City	49.8
10	Minneapolis	49.0
11	Atlanta	48.6
12	Dallas	46.0
13	Miami	45.6
14	Houston	45.3
15	Portland	42.7
16	Phoenix	41.6
17	New York	39.5
18	Philadelphia	38.3
19	Chicago	37.7
20	Los Angeles	37.4

28	Detroit	31.8
29	Indianapolis	31.0
30	Charlotte	31.0
31	Buffalo	30.9
32	Nashville	30.6
33	Cleveland	29.5
34	Cincinnati	28.9
35	Las Vegas	28.8
36	Columbus	28.5
37	Pittsburgh	27.1
38	New Orleans	27.0
39	Oklahoma City	27.0
40	Milwaukee	26.5
41	West Palm Beach	25.8
42	Dayton	25.7
43	Tampa	22.8
44	Norfolk	22.4
45	Greensboro	21.0
46	Louisville	19.8
47	Memphis	19.2
48	Jacksonville	18.7
49	San Antonio	15.0
50	Grand Rapids	13.6

Observations

- San Francisco with an impressive lead over its nearest challenger (Austin), while Austin's lead in turn over the third-ranking metro (Seattle) is also significant.
- Raleigh-Durham and Austin owe a share of their strong performance to public policy - strong support of research universities and development of research parks.
- In NC, the distance between 1st and 2nd is great.

Interestingly

Our Strength is in inputs; we are weak in conversion.

Raleigh-Durham-Chapel Hill

Aggregated Innovation Capacity	1	20.9
High-Tech Jobs <i>Jobs in electronics and high-tech electronics manufacturing, software and computer-related services, telecommunications, data processing and information services, biomedical and electromedical services as a share of total employment.</i>	3	8.0%
Degrees Granted In Science and Engineering <i>A weighted measure of the degrees granted in scientific and technical fields as a share of the workforce.</i>	1	12.9
Patents <i>The number of utility patents issued to companies or individuals per 1,000 workers.</i>	7	0.79
Academic R&D <i>A combined measure of industry investment in R&D at academic institutions and total academic R&D.</i>	1	14.5
Venture Capital <i>Venture capital invested as a share of gross metropolitan product.</i>	5	1.35%

Reflected in Outcome Based Assessments

Milken 200 "Best Performing Cities" Nov 2004

- 1 yr + 5 yr Rolling View / Outcomes Only –
 - Job creation;
 - Jobs retention;
 - Wage and salary increases;
 - Economic growth, and
 - business creation & survival
- RDU 34th among large metros (not 4th), Charlotte 50th (not 30th), Asheville 92nd, Wilmington 117th, G-WS 165th (not 45th).

Key Points:

NC has cluster strengths but we must diversify.

Industrial R&D has the Key Role – Public R&D does not

- Differences in public R&D Intensity cannot explain the differences in metro company creation rates
- Industrial R&D is much more important than Public R&D in explaining regional technology development activity!
- Industry Performs:
 - 89.1% of Technology Development
 - 64.1% of Applied Research
 - 15.5% of Basic Research in US

In Fact, the Impact of...

... Public R&D falls dramatically with Metro Size

– \$300MM in Academic R&D yields:

– 112 Innovations in Tier 1	avg. pop. 3MM
– 16 Innovations in Tier 2	avg. pop. 1MM
– 5 Innovations in Tier 3	avg. pop. 400K
– 4 Innovations in Tier 4	avg. pop. 200K

The same amount of university research expenditure yields substantially different levels of local innovation activity depending on the concentration of economic activities in the area.

Source: Attila Varga, 2000

Which suggests that ...

1. Pure university-based regional economic development policies are not effective enough to "upgrade" localities to a higher tier of innovative activities alone.
2. The presence of a "critical mass" of agglomeration in the area surrounding the university is required in order to expect substantial local economic effects of academic research.

For NC, the Bottom Line

Successes:

- Strong innovation capacity
- Cluster-based investments & initiatives – e.G. Biopharma = big payoffs

• Key focus:

- Attention to interfaces / relationships between private and public sector
- We must grow the intensity and diversity of private sector R&D

Opportunity

Commercialization of innovation

- **Entrepreneurial capacity** and behavior are prime drivers of economic growth and job creation
 - Pure university-based regional economic development policies or single cluster initiatives are not effective enough to "upgrade" localities to a higher tier of innovative activities alone.
 - **Regional economic dynamism is epitomized by fast- growing, entrepreneurial companies**

Key Job Creator in Knowledge Economy - Entrepreneurship

Innovation is necessary but not a sufficient condition for maximizing regional economic growth.

- As much as **80%** of the jobs that R&D investment ultimately creates comes through new firm formation by entrepreneurs.
- As much as **90%** of the jobs that patents ultimately create come through new firm formation by entrepreneurs.

Entrepreneurship leverages innovation for increased economic gain

Entrepreneurship accounts for:

- **75%** of the differences in total employment between U.S. regions
- **36%** of the differences in productivity between U.S. regions
- Nearly **50%** of the differences in wages between U.S. regions
- More than **50%** of the differences in income between U.S. regions

Fortune 500 companies have lost more than 5 million jobs since 1980, more than 34 million new jobs have been added to the economy in the same period, the majority created by entrepreneurs and small businesses

The Entrepreneurial Economy

Entrepreneurial Growth Companies (EGCs) are the organisms of innovation, the agents of change.
Represent between **5%** and **15%** of all US Firms

- Innovations. EGCs account for more than **1/2** of all technological innovations.
- Jobs. EGCs create at least **2/3** of all new jobs and more (**>90%**) in economic downturns.
- Entrepreneurs ultimately propel the country's largest businesses; they do not just run small companies.
- Nationally, in 2000-2001 → <20 +1.1M, >500 -0.2M

Entrepreneurial Cultures are non-traditional

State and local economic development practice for much of the post-World War II era

- focused on manufacturing and the needs and interests of the American manufacturer.
- the toolkit of state and local economic development emphasizes “bricks and mortar” assistance, such as:
 - local and state grants for site improvements,
 - financing of buildings and equipment,
 - reduction of personal property, inventory and other business taxes, and other costs of doing business.
- An entrepreneurial economy demands
 - Shift away from products to processes
 - From individual outputs to the mechanisms that produce the outputs

The Opportunity:

Where are the gaps?
On what should we focus?
Where do we begin?

How can we do this?

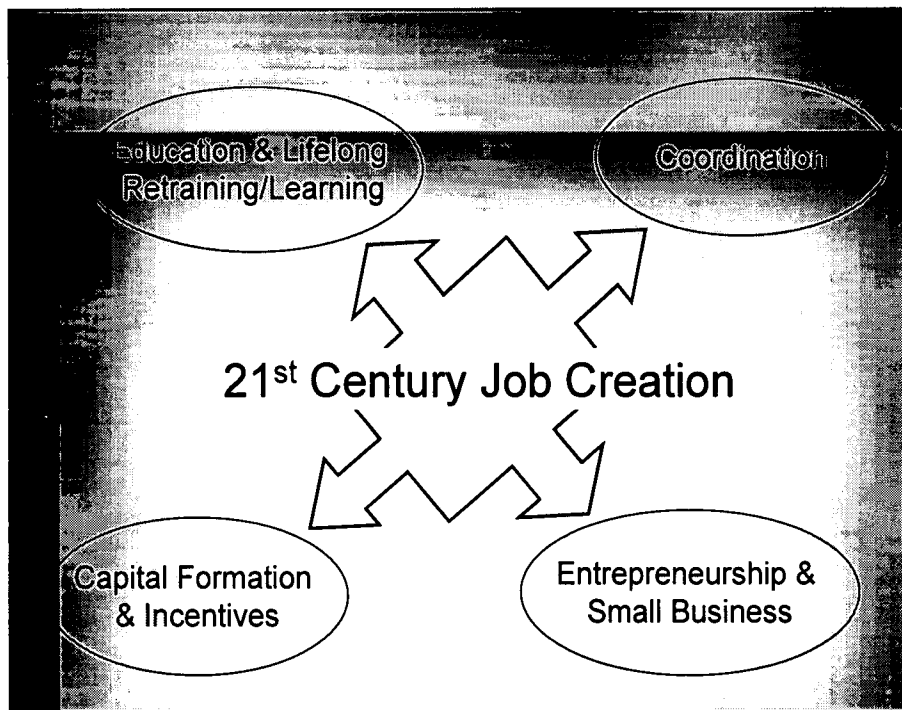
There is a strong economic argument for the public sector to fill holes in the fabric of innovative activity.

- Examples:

- PA - Ben Franklin Partnership
- VA - CIT

- We don't have this coordinated function

Designed to fill holes in in the innovation fabric of the state



Entrepreneurship

1. Explicitly integrate entrepreneurship into state economic development efforts
 - Make entrepreneurship part of the explicit mission of the state's economic development incentives (e.g. SC small business job creation act).
 - Create virtual and remote incubation options for rural regions (e.g. Technology lighthouses).
 - Review and amend the tax and incentive policies available to start, grow, and attract technology-based businesses and to improve the survival rate of start-up companies. (e.g. Sales & manufacturing tax credits for R&D, capital formation incentives)

Capital

State Government is able to mobilize capital in essential directions that are difficult or of little interest to industry

Allocate select public funds (e.g. the escheats fund) for the purpose to grow and diversify private and venture investment across the state, to support new-company creation (not just science and technology) and new jobs in NC and

2. Promote the creation and growth of small technology companies in NC by creating a two-phase matching funds program for federal SBIR (Small business Innovation Research) grant recipients.

- Phase I Incentive Funding would reimburse Phase I applicants for a portion of the costs of preparing and submitting a Phase I SBIR proposal.
- Phase II Matching Funds would sustain small businesses through the funding gap that occurs between completion of the Phase I grant and initiation of the Phase II award.

Coordination

1. Create a mechanism within state government that provides coordination and assistance to existing public and private sector science and technology resources.

- To make the best use of state resources for advancing economic development and job growth throughout the state.
- And to create a continuing initiative to promote jobs and economic growth in NC through the identification and development of emerging technologies.

Education

- We must improve the high-school completion rate
- Support the development of a comprehensive K-12 science and engineering education initiative.
- The level of education of our general workforce is not acceptable for developing high-tech industries such as nanotechnology

Thank you.

- Board of Science and Technology
 - <http://www.ncscienceandtechnology.com/>
- S&T Goal of the EDB Strategic Plan document:
 - http://www.ncscienceandtechnology.com/pdf/2004/2004_EDB_Goal_2.pdf
 - Tracking Innovation
<http://www.ncscienceandtechnology.com/PDF/2003/TrackingInnovation2003.pdf>
- Milken Institute
 - <http://www.milkeninstitute.org/>
- NSF 2004 Science and Engineering Indicators
 - <http://www.nsf.gov/sbe/srs/seind04/start.htm>

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

March 16, 2005

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Presentations:

**Legacy Applications Assessment: How Outdated and Vulnerable are
the State Government's Critical Business Applications?**
By George Bakolia, Chief Information Officer, State of North Carolina

Discussion (Questions and Answers)

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

March 16, 2005

The House Committee on Science and Technology met on Wednesday, March 16, 2005, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson and Martin, Vice-Chairs; Gulley, Hollo, Jones and Walend.

Representative Miller called the meeting to order and introduced the pages; Danielle Carr from Wake County sponsored by Speaker Black and Shane Edwards from Rowan County sponsored by Representative Steen; and recognized the Sergeant-At-Arms, Paul Curry and Frank Prevo. After that he introduced George Bakolia, the State Chief Information Officer, for a presentation.

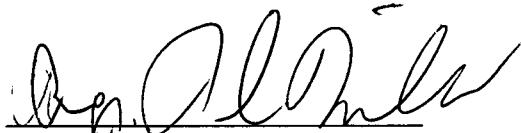
Mr. Bakolia gave a progress report on the Legacy Assessment (See Attachment G) and referred to the executive summary of the findings of "phase 2", presented to the General Assembly (See Attachment H).

Following the presentation, Representative Jones asked if or how a "paper trail" is kept when the State utilized electronic billing. Mr. Bakolia said that the data is stored on the hardware and it is just not printed, unless there is a dispute. Anyone with authorization to view the data can be granted access. Representative Miller asked if the many state agencies having own email system can be consolidate to save money. Mr. Bakolia acknowledged that it is an option and progress has been made in that direction. Representative Miller asked if there were any specific challenges or resistance from state agencies to assist in the assessment of their computer systems. Mr. Bakolia stated that while there wasn't resistance, many did not have time or resources to step back and look at the "bigger picture" and see how their environment can be redesigned to take advantage of a better system. The majority was receptive to Mr. Bakolia's input on doing that. Representative Miller asked if he could quickly explain what an enterprise system is and what it is about. Mr. Bakolia answered that it is a program that is shared by many business users. The use of this program by everyone allows him the ability to create one requirement for software or hardware. Representative Miller asked what challenges can be anticipated for the future. Mr. Bakolia responded that the biggest challenge is having various business program managers' willingness to accept change to the business process.

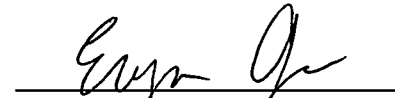
At the conclusion of discussion, Representative Miller thanked committee members active participation.

With there being no further business, the meeting was adjourned.

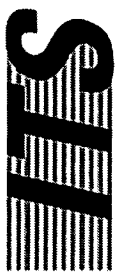
Respectfully submitted,



Representative Paul Miller
Chairman



Eryn Gee
Committee Assistant



Office of Information Technology Services

Legacy Applications Assessment

How outdated and vulnerable are
state government's critical business
applications?

*Mc*your service
www.ncgov.com

Overview

- Why do the study?
- How was it done?
- What did it find?
- What's next?
- How does this fit with the bigger plan?

Why do the study?

- Applications—computer programs that perform specific business functions—are critical to state government
- They are:
 - Essential for state operations
 - Expensive to develop and maintain
 - Create significant problems if they fail
- Last detailed information about applications compiled as part of the Y2K effort

Why do the study?

- “Horror stories” about applications in state government are widespread.
- Study designed to get a true assessment of the state’s risk, from a technical and business viewpoint

Why do the study?

Both business and technical aspects are important.

- An old application may still be adequate for the job
- A brand-new application may not be performing its business function

How was it done?

- With my full support, the General Assembly in 2003 approved HB 941, calling for assessment of the state's legacy applications.
- Survey conducted by the Office of Information Technology Services identified more than 2,400 applications and potential problems

How was it done?

- Follow-up coordinated by ITS reduced the 2,400 applications to fewer than 900
- As a result of the study, policy-makers now have current, detailed, agency level information about applications.

What did it find?

The good news (Pg. 2 of summary)

- The state's 873 applications are relatively young. Average age is 7.5 years. (Table 1)
- Three-fourths of the applications will require only routine attention or have manageable issues. (Table 2)
- One-fourth of the applications—204 of 873—present problems. (Table 2)

What did it find?

The bad (but not that bad) news (Pg. 3)

- 92 applications need attention within the next two years (Table 3)
- 55 of the 92 should be replaced. Most of those are being planned or under way. (Table 4)

What did it find?

The bad (but not that bad) news (Pg. 3)

- Roughly one-third of the applications—306 out of the 873—need attention within the next two to four years. (Table 3)
- Only 15 percent of those need replacing. The remainder can be modified or upgraded. (Table 4)

What did it find?

The caution sign

- While North Carolina is in relatively good shape now, it must address the issue.
- Without action, applications will get older, more vulnerable, more outdated and more inefficient.

What did it find?

The caution sign

- If nothing is done, the problems become bigger, more widespread and more difficult—and expensive—to fix.
- Four years from now, if we do not act, 233—more than one-fourth of the total applications—will need replacement. (Pg. 5, Table 6)

What's next?

- Additional study of the most critical needs to identify cost of remediation.
 - Planned for next fiscal year

What's next?

- Develop strategy for remediation
 - As part of the Business Infrastructure Study conducted by State Controller. Study looked at state's business applications, such as payroll.
 - As part of any consolidation recommended by State Budget Office next year
 - On an agency-by-agency basis
- Continue periodic assessment of applications

How does this fit?

- SB 991, approved by the General Assembly last year, shifted more responsibility for information technology to the State CIO.
- Passed both House and Senate by wide margins.
- Sent a strong signal that the Legislature wants better planning, budgeting and management of IT.

SB 991 Overview

- Major areas:
 - Planning, budgeting and project approval
 - Project Management
 - IT Fund
 - Procurement

How does this fit?

- Legacy study will help develop a comprehensive, systematic approach to addressing state's application needs
- Those two words – “comprehensive” and “systematic” are at the heart of SB 991 and recent initiatives.

Planning and budgeting

- SB 991 requires State CIO to develop biennial Information Technology plan “to provide a systematic process for meeting the State’s technology needs.”
- Two broad recommendations:
 - Statewide approach for common IT functions, leaving agencies to focus on their specific program needs
 - A comprehensive framework for managing IT assets, from planning to purchase to retirement

Consolidation Studies

- As part of a comprehensive approach, SB 991 required agencies to study potential areas for consolidation
- Statewide consolidation recommendations due January 1, 2006

Project Management

- SB 991 required assignment of project management assistants to all projects that require approval by State CIO
- Generally projects costing more than \$500,000
- CIO has discretion to assign project management assistant to any project.

Project Management

- Enterprise Project Management Office established within ITS
- Six people
- Thirty-one active projects being monitored with a total estimated cost of \$476 million
- Benefits:
 - Higher level of support
 - Earlier identification of potential problems

Project approval

- SB 991 gave State CIO responsibility for approving IT projects.
- ITS and the State Budget Office merged and streamlined the process for project approval and for review of expansion budget requests

IT Fund

- SB 991 created IT Fund to address statewide needs
- ITS uses of IT Fund
 - Established Enterprise Project Management Office to provide project management assistance
 - Began improving perimeter security and provided agencies with security training, two needs identified in a security assessment in 2004.

IT Fund

- ITS uses of IT fund
 - Completed latest phase of legacy study
 - Acquired and began developing software that will help agencies and the state in planning and managing IT projects
 - Provided legal support for Statewide IT Procurement

Procurement

- SB 991 clarified State CIO's responsibilities in procurement and provided some additional tools.
- Saved agencies \$1.4 million earlier this year by consolidating requisitions for desktop and laptop PCs and putting up for bid
- Anticipate similar savings from another bulk purchase before the end of the fiscal year

Savings

- Bulk purchasing and some other initiatives are the “easy” savings
- Saved agencies \$3.3 million through refunds or subscription rate cut after passage of SB 991
- Saved \$6.3 million through use of multi-year maintenance contracts

Savings (cont.)

- Saved agencies \$322,000 by implementing e-billing for telecommunications services
- Anticipate that consolidation and other initiatives will generate significant savings
- Savings will not necessarily mean less spending, but better spending for IT
- Will help state address critical needs, such as Business Infrastructure Study

Conclusion

- Legislation calling for the legacy study came a year before SB 991
- But the comprehensive and systematic approach in the legislation became key themes in SB 991
- The study will provide information crucial to the state's efforts to better plan, budget and manage information technology



State of North Carolina

Michael F. Easley, Governor

George Bakolia, State Chief Information Officer

February 1, 2005

Senator Marc Basnight
Senate President Pro Tempore
North Carolina General Assembly
Raleigh, North Carolina

Representative James B. Black
Speaker of the House
North Carolina General Assembly
Raleigh, North Carolina

Dear Senator Basnight and Speaker Black:

I am pleased to present the second phase study for the analysis of the state's legacy applications, as directed by G.S. 147-33.90. This report is a continuation of an 18-month effort to determine the accurate status of these applications. How old are the state's critical computer applications, computer programs that perform a specific business function? Which ones need to be replaced, and which ones can be upgraded to meet the demands of today more effectively and efficiently?

To answer those questions, I asked the General Assembly in 2003 to approve a study of the state's legacy applications as a follow-up to a survey conducted by the Office of Information Technology Services. The Legislature overwhelmingly approved the idea with the passage of House Bill 941. This report is a result of that legislation.

I am pleased to report that there are no indications of eminent failures, and the state's computer applications are relatively young and in generally good condition. However, there are potential problems, and the state needs to adopt a proactive mode for managing these assets. Almost 90 of those applications (10 percent of the total) need attention within the next two years. The study also shows that unless North Carolina begins addressing this problem in a systematic way, it will fall further behind. An additional 150 applications need attention in the next two to four years, and more than half need attention over the next four to six years.

The understanding and management of legacy applications is an enormous undertaking, and many states and private industries are starting to address it. My office will work with the departments to verify the status of and review their plans for the about 90 applications reported to need immediate attention. Following that review, I will be able to provide an updated report to you, including an approach and timetable to develop cost estimates.

George Bakolia
Chief Information Officer
State of North Carolina

Statewide Legacy Applications Assessment Executive Summary

December 2004

With the encouragement of the State CIO, the General Assembly enacted legislation in its 2003 Session that mandates a comprehensive assessment of the State's legacy applications and the development of a plan for agencies to progress to more modern systems. Ratified House Bill 941, codified as G.S. 147-33.90, directs the Office of Information Technology Services (ITS) to analyze the State's legacy applications in two phases. The first phase, a high-level assessment completed in March 2004, indicated that the State might face significant technology and business risks from a large number of older applications, or computer programs designed to carry out a specific task. These findings initiated the second phase of the assessment that called for a more detailed analysis of needs and a timeframe for modernizing agency IT application assets.

A partnership of Keane, Inc. and Gartner, Inc. was selected from a competitive bidding process to complete a six-month assessment project that finished in December 2004. The study covered 24 executive department agencies and almost 900 individual applications. Although the consultants organized the effort, developed data items, and analyzed the information, the data was supplied by the agencies as a self-assessment exercise. The following questions were addressed for each application:

- What is the application's status?
 - Business perspective.
 - Technical perspective.
- What is the application's remediation strategy?
 - Functional enhancement/remediation.
 - Technical enhancement/remediation.
 - Replace.
 - Normal, on-going operations and maintenance.
- What is the application's remediation timeframe?
 - Immediate (0 to 2 years).
 - Near-term (2 to 4 years).
 - Long-term (4 to 6 years).

Data from a proceeding survey by ITS indicated that over 2,400 applications would be involved. Closer scrutiny reduced this number to fewer than 900 applications. The number shrank due to the elimination of duplications and retirements in inventory listings, removal of commercial IT infrastructure tools, and the grouping of separate applications to better reflect department organizations. Costs for remediation were beyond the scope of the assessment, as these will be addressed in a succeeding study.

Summary Findings

Major findings of the legacy applications assessment are:

1. The statewide portfolio is relatively young, with an average age of 7.5 years.

<u>Age Range (In Years)</u>	<u>Number of Applications</u>	<u>Percent of Total</u>
12 plus	177	20%
9 to 12	81	9%
4 to 8	281	32%
0 to 4	260	30%
Unknown	74	9%
Portfolio Totals	873	100%

2. The overall posture of the State's portfolio of 873 legacy applications is generally good, with only about 25% presenting problems:

<u>Status Description</u>	<u>Number of Applications</u>	<u>Percent of Total Portfolio</u>
Functional Issues	56	6%
Technical Issues	91	10%
Functional and Technical Issues	57	7%
Remediation Totals	204	23%
Healthy (continue on-going, normal operations and maintenance)	238	27%
Manageable (healthy with manageable issues)	431	50%
Portfolio Totals	873	100%

3. Approximately 11% (92 applications) of the legacy portfolio requires action in the immediate future (within the next 2 years):

<u>Remediation Timeframe</u>	<u>Number of Applications</u>	<u>Percent of Total Portfolio</u>
Immediate (0 to 2 years)	92	11%
Near-Term (2 to 4 years)	306	35%
Long-Term (4 to 6 years)	475	54%
Portfolio Totals	873	100%

4. While a majority of the applications requiring action in the immediate future should be replaced, most of those needing action in the near-term future can be modified or upgraded:

	<u>Immediate Timeframe</u>		<u>Near-Term Timeframe</u>	
<u>Remediation Strategy</u>	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Replacement	55 In Process - 24 In Planning - 17 No Activity - 14	60%	46 In Process - 4 In Planning - 18 No Activity - 24	15%
Functional Enhancement	12 In Process - 3 In Planning - 2 No Activity - 7	13%	48 In Process - 4 In Planning - 10 No Activity - 24	16%
Technical Enhancement	25 In Process - 4 In Planning - 6 No Activity - 15	27%	64 In Process - 3 In Planning - 14 No Activity - 47	21%
Subtotal - - Action Required	92	100%	158	52%
Regular Support	0	0%	148	48%
Totals	92	100%	306	100%

5. Many applications are experiencing common business, technical, and, support problems:

<u>Common Problem</u>	<u>Number of Applications</u>	<u>Percent of Portfolio</u>
Business Perspective		
Inability to meet current business requirements	97	11%
Inability to meet future business requirements	166	19%
Inability to meet reporting needs	139	16%
Dependency on limited business knowledge	145	17%
Technical Perspective		
Stability/reliability shortcomings	132	15%
Scalability (expandability) constraints	124	14%
Adaptability (changeability) restrictions	215	25%
Capacity constraints	90	10%
Software support issues	207	24%
Dependency on limited technical knowledge	118	14%

6. Although the immediate needs of the portfolio appear to be manageable, projections of its future status if no remediation actions are taken indicate an increasingly deteriorating condition as the applications age:

<u>Remediation Strategy</u>	<u>Current</u>		<u>Plus 2 Years</u>		<u>Plus 4 Years</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Replacement	55	6%	118	14%	233	27%
Functional Enhancement	56	7%	62	7%	26	3%
Technical Enhancement	91	10%	221	25%	332	38%
On-Going, Normal Operations and Maintenance	671	77%	472	54%	282	32%
Portfolio Totals	873	100%	873	100%	873	100%

Key Recommendations

1. There are several opportunities for employing enterprise initiatives or approaches for the remediation/replacement of legacy applications that could address common issues in a more cost-effective manner by taking advantage of economies of scale and the leveraging of fiscal and staffing resources. These should be considered in succeeding studies and plans. Examples include:

- Mainframe strategy - Common strategies and tools for improving the functional capabilities and technical sustainability.
- Computer language upgrade - Develop common migration approaches, and define enterprise products and platforms.
- Older versions of software - Employ enterprise licenses for upgrades.
- Desktop applications - Establish criteria/guidelines for use, and employ enterprise licenses for software and database products.
- Reporting needs - Develop enterprise approach, including use of warehouse(s), tools, etc.
- Skills leveraging - To the greatest practical extent, employ common staff on an enterprise scale (using the centers of excellence concept) for addressing the same or similar issues.

2. Establish the organization, tools, and disciplines for performing the analysis of agency applications as a periodic (at least annual) recurring process performed by state staff. Specifically, the State should:

- Implement a process of ongoing review of existing IT applications – Departments should periodically evaluate the posture of applications from business and technical perspectives to maximize value, identify required investments, ensure technical sustainability, and plan for retirement/replacement.
- Coordinate IT applications reviews with business and IT planning efforts – Link IT plans closer to the accomplishment of department missions and business strategies. Incorporate insights of applications analyses for managing legacy applications to improve governmental program results or transform business processes through the renovation or replacement of IT assets.
- Optimize IT investments on department and statewide levels – Employ planning and budgeting concepts, investment management practices, and portfolio management disciplines to optimize department and statewide investments for in-process projects, in-place applications and infrastructure assets, and new investments.

A more strategic approach is required for dealing with aging applications, especially to optimize costs and benefits over lifetimes. Key principles of a legacy modernization strategy are:

- Leverage opportunities for the need to improve business or program value to trigger investments in replacement or consolidation of older applications.
- Systematically abandon older technologies that do not fit into the department or statewide infrastructure, become error prone or labor intensive, are nearing the end of vendor support, or limit the productivity of business/program or IT staff.
- Maximize reuse of investments for common or statewide solutions to make the best use of fiscal resources.
- Rationalize the applications portfolio and reduce the number of applications to increase manageability and reduce costs.

Immediate Next Step

Through a succession of surveys and studies, the scope of interest in the number of legacy applications has narrowed from over 2,400 expected total portfolio to 873 actual total portfolio to less than 100 requiring action in the immediate (within the next 2 years) time period. Succeeding work activities should cover the immediate applications and address the following objectives regarding them:

- Determine the position of each application regarding replacement or remediation, including a) confirming the assessment of need and priority b) identifying the strategy for accomplishing replacement or remediation, c) accessing actual progress against plans, and d) determining the status of conformance with the State CIO's project approval and reporting process.
- Ensure linkage with State CIO's IT Plan and department's business and IT plans for priority, timing, and type of remediation.
- Determine the status of available/committed funding for replacement or remediation.
- Determine best approaches for estimating costs for replacement or remediation projects for which funding is not available or committed.
- Identify opportunities for achieving cost-efficiencies in replacement/remediation projects by employing enterprise concepts that take advantage of economies of scale (including volume procurements and statewide licenses) in using common approaches and tools and the leveraging of staffing resources.

Longer-Term Next Step

Longer-term next steps should implement the second recommendation above. The recently purchased portfolio management tool will be used to analyze and assist in managing the state's applications inventory on a frequently recurring basis.

Ties to State CIO's IT Plan

The management of the state's significant investment in its legacy applications is a critical success factor for IT management. Therefore, key initiatives of the State CIO's IT Plan for the 2005-2007 biennium address the two recommendations and the next steps above.

Science and Technology

Date _____

NAME

[illegible]

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

March 23, 2005

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Bills to be Discussed:

House Bill 641 - Nanotechnology/Economic Development Study
Rep. Miller

Other Business

Adjournment

MINUTES
HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY
March 23, 2005

The House Committee on Science and Technology met in Room 425, Legislative Building, on March 23, 2005. Representative Miller, Chair, called the meeting to order at 11:00 a.m. The following members were present: Representatives Martin and Tolson, Vice-Chairs; Representatives Gulley, Harrison, Hollo, Jones and Walend. Pages serving the committee today were Ashley Hilton from Forsyth County and Nicole Green from Wake County. Paul Curry from the House Sergeant-at-Arms office was assigned to staff the committee.

The only bill on the agenda was House Bill 641 – Nanotechnology/Economic Development Study. Chairman Miller was the bill sponsor and relinquished the chair to Representative Martin, Vice Chair, to conduct the meeting. Representative Miller was recognized to explain House Bill 641. The bill creates a 14-member legislative study commission to study and develop a plan to promote economic growth in the State through the promotion of emerging nanotechnologies.

Dr. Robert K. McMahan, Senior Advisor to the Governor for Science and Technology and the Executive Director of the North Carolina Board of Science and Technology, was invited to speak a second time to the Science and Technology Committee on the subject of nanotechnology. He began the PowerPoint presentation by acknowledging the difficulty in explaining nanotechnology because it is very detailed and has many dimensions. Nanotechnology is a broad interdisciplinary field of science and technology. It is not an industry. It is the science of dealing with things at the atomic level. It is how you can make materials and structures atom by atom; building things from the bottom up not from the top down. Dr. McMahan continued that this is a fundamental shift; it is nothing less than a new industrial revolution and it is beginning now.

Dr. McMahan told the committee that nanotechnology began with Richard P. Feynman, one of the most famous physicists of the last century. Dr. Feynman gave a speech in 1959 to the American Physicists Society in California and this is where the concept of nanotechnology got its start. The name of the speech was “There is Plenty of Room at the Bottom.” Dr. Feynman began his speech with the supposition that if he wanted to write the entire twenty-four volume Encyclopedia Britannica on the head of a pen, what would he need to do? That’s the thinking that started the revolution in nanotechnology.

Nanotechnology used in the processing of textiles, plastics, paints and coatings, pharmaceuticals and many more will dramatically affect a variety of products in North Carolina. It is a process that can be used to enhance existing materials as well as create new ones.

Committee discussion followed Dr. McMahan’s presentation. Representative Harrison expressed concern that regulations had not kept pace with the growth of nanotechnology and asked if the legislative study would address this issue. Representative Harrison

offered an amendment that would require the commission to examine and consider policy and regulatory issues related to the application and use of nanotechnology. The bill sponsor had no objection to the amendment and it was adopted.

Representative Tolson asked about the science of bugs being developed in laboratories for the purpose of performing certain biological actions. He asked if this was a part of nanotechnology. For example he cited an experiment that would develop a bug that is capable of producing a biodegradable solution that could destroy anthrax. Dr. McMahan responded that technology crosses many fields and that is one of the areas that nanotechnology touches.

Representative Jones asked if policies are in place to protect the product from international competition. Dr. McMahan said these types of technologies are not as great a risk simply because they are sophisticated technologies and require sophisticated equipment and universities that do sophisticated research in order to support their development

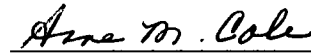
Representative Miller moved that the amendment be rolled into a committee substitute and be given a favorable report, an unfavorable to the original bill. Motion carried.

There being no further business, the meeting adjourned at 11:40 a.m.

Respectfully submitted,



Representative Paul Miller, Chair



Anne M. Cole

Acting Committee Assistant

Attachments:

Committee Notice

Agenda

House Bill 641

Amendment

Committee Substitute for House Bill 641

Committee Report

Bill Analysis

Visitor Registration Sheet

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005

H

1

HOUSE BILL 641

Short Title: Nanotechnology/Economic Development Study.

(Public)

Sponsors: Representatives Miller; and Faison.

Referred to: Science and Technology.

March 15, 2005

A BILL TO BE ENTITLED
AN ACT CREATING THE LEGISLATIVE STUDY COMMISSION ON
NANOTECHNOLOGY.

The General Assembly of North Carolina enacts:

SECTION 1.(a) The General Assembly finds that development of a coordinated response to the challenges and opportunities presented by emerging nanotechnologies would greatly expand opportunities for all North Carolinians to obtain and retain challenging and economically rewarding employment and would provide key assistance to the State's traditional industries by making them more competitive in the global economy of the future. To that end, there is created the Legislative Study Commission on Nanotechnology ("Commission"). The Commission shall consist of 14 members appointed as follows:

(1) Seven members appointed by the Speaker of the House of Representatives, to include:

- a. Four members of the House of Representatives.
- b. One person from a private emerging technology business or firm employing 200 or more employees in this State.
- c. One person employed by a college or university in this State who is an expert or researcher in nanotechnology or a related emerging technology.
- d. One member of the general public.

(2) Seven members appointed by the President Pro Tempore of the Senate, to include:

- a. Four members of the Senate.
- b. One person from a private emerging technology business or firm employing fewer than 200 employees in this State.
- c. One person employed by a college or university in this State who is an expert or researcher in nanotechnology or a related emerging technology.

d. One member of the general public.

SECTION 1.(b) The Commission shall study and develop a coordinated approach to promoting economic growth in North Carolina through the promotion of emerging nanotechnologies, the science of the very small. In particular, the Commission shall examine, and make recommendations concerning, the following:

(1) The promotion and development of a critical mass of coordinated nano-capabilities in North Carolina.

(2) The development and exploitation of leading-edge nanotechnologies.

(3) The promotion of industries and economic development centered on these new engineering, materials, and biological technologies.

SECTION 2. The Speaker of the House of Representatives and the President Pro Tempore of the Senate shall each appoint a cochair for the Commission. The Commission may contract for consultant services as provided by G.S. 120-32.02. Upon approval of the Legislative Services Commission, the Legislative Services Officer shall assign professional and clerical staff to assist in the work of the Commission. Clerical staff shall be furnished to the Commission through the offices of the House of Representatives and the Senate Directors of Legislative Assistants. The Commission may meet in the Legislative Building or the Legislative Office Building upon the approval of the Legislative Services Commission. Members of the Commission shall receive per diem, subsistence, and travel allowances at the rate established in G.S. 120-3.1. The appointing authority shall fill vacancies.

The Commission, while in the discharge of its official duties, may exercise all the powers provided under the provisions of G.S. 120-19 through G.S. 120-19.4, including the power to request all officers, agents, agencies, and departments of the State to provide any information, data, or documents within their possession, ascertainable from their records, or otherwise available to them, and the power to subpoena witnesses.

SECTION 3. The Commission's interim and final reports shall include the results of the Commission's study as well as recommendations, legislative and otherwise. The Commission shall submit an interim report to the 2006 Regular Session of the 2005 General Assembly. The Commission shall make a final report to the 2007 General Assembly and shall terminate upon filing its final report.

SECTION 4. There is appropriated from the General Fund to the General Assembly the sum of twenty-five thousand dollars (\$25,000) for the 2005-2006 fiscal year and the sum of twenty-five thousand dollars (\$25,000) for the 2006-2007 fiscal year to fund the work of the Commission.

SECTION 5. This act becomes effective July 1, 2005.

NORTH CAROLINA GENERAL ASSEMBLY AMENDMENT

(Please type or use ballpoint pen)

EDITION No. _____

H. B. No. 241

DATE _____

S. B. No. _____

Amendment No. _____

(to be filled in by
Principal Clerk)

COMMITTEE SUBSTITUTE _____

Rep.) Harrison
Sen.) _____

1 moves to amend the bill on page 2, line 10 - 11

2 () WHICH CHANGES THE TITLE

3 by inserting between those lines the
4 following:

5 "Section 1. (c). The Commission shall
6 examine and consider policy and regulatory
7 issues related to the application and
8 use of nanotechnology"

9 _____

10 _____

11 _____

12 _____

13 _____

14 _____

15 _____

16 _____

17 _____

18 _____

19 _____

SIGNED _____

ADOPTED _____ FAILED _____ TABLED _____

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005**

H

D

**HOUSE BILL 641
PROPOSED COMMITTEE SUBSTITUTE H641-PCS30122-RV-1**

Short Title: Nanotechnology/Economic Development Study.

(Public)

Sponsors:

Referred to:

March 15, 2005

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- c. One person employed by a college or university in this State who is an expert or researcher in nanotechnology or a related emerging technology.
- d. One member of the general public.

(2) Seven members appointed by the President Pro Tempore of the Senate, to include:

- a. Four members of the Senate.
- b. One person from a private emerging technology business or firm employing fewer than 200 employees in this State.

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SECTION 5. This act becomes effective July 1, 2005.

**2005 COMMITTEE REPORT
HOUSE OF REPRESENTATIVES**

The following report(s) from standing committee(s) is/are presented:

By Representative **Miller** (Chair) for the Committee on **SCIENCE AND TECHNOLOGY**.

☐ Committee Substitute for

H.B. 641 A BILL TO BE ENTITLED AN ACT CREATING THE LEGISLATIVE STUDY
COMMISSION ON NANOTECHNOLOGY.

☐ With a favorable report.

☐ With a favorable report and recommendation that the bill be re-referred to the Committee on
Appropriations ☐ Finance ☐ ☐.

☐ With a favorable report, as amended.

☐ With a favorable report, as amended, and recommendation that the bill be re-referred to the
Committee on Appropriations ☐ Finance ☐ ☐.

☒ With a favorable report as to the committee substitute bill title, unfavorable as to the original
bill.

☐ With a favorable report as to House committee substitute bill (#), ☐ which changes
the title, unfavorable as to Senate committee substitute bill.

☐ With an unfavorable report.

☐ With recommendation that the House concur.

☐ With recommendation that the House do not concur.

☐ With recommendation that the House do not concur; request conferees.

☐ With recommendation that the House concur; committee believes bill to be material.

☐ With an unfavorable report, with a Minority Report attached.

☐ Without prejudice.

☐ With an indefinite postponement report.

☐ With an indefinite postponement report, with a Minority Report attached.

☐ With recommendation that it be adopted. (HOUSE RESOLUTION ONLY)

03/19/03



HOUSE BILL 641: Nanotechnology/Economic Dev. Study

BILL ANALYSIS

Committee: House Science & Technology
Date: March 23, 2005
Version: 1st Edition

Introduced by: Rep. Miller
Summary by: Brenda J. Carter
Committee Counsel

SUMMARY: *House Bill 641 creates a 14-member legislative study commission to examine the promotion of economic growth through nanotechnologies.*

BACKGROUND: The word "nanotechnology" comprises any technological developments on the nanometer scale, usually 0.1 to 100 nm. (One nanometer equals one thousandth of a micrometer or one millionth of a millimeter.) The term sometimes applies to any microscopic technology. Nanotechnology is the projected ability to make things from the bottom up, using techniques and tools that are being developed today to place every atom and molecule in a desired place.

BILL ANALYSIS: House Bill 641 creates a 14-member study commission that would include 8 members of the legislature (4 Senate, 4 House), 2 persons from private technology firms, 2 university experts/researchers in nanotechnology or related technology, 2 members of the general public. All appointments are made by the President Pro Tempore of the Senate and by the Speaker of the House of Representatives. The commission would study and develop a plan to promote economic growth in this State through the promotion of emerging nanotechnologies. The commission would be required to make an interim report to the 2006 Session, and a final report to the 2007 General Assembly. The bill appropriates \$50,000 for the study. The bill would become effective July 1, 2005.

VISITOR REGISTRATION SHEET

Sci. + Tech Rep Miller Chain

3/23/05

Name of Committee

Date _____

VISITORS: PLEASE SIGN BELOW AND RETURN TO COMMITTEE ASSISTANT

NAME

FIRM OR AGENCY

Dawn Trembath

NC Board of Science & Tech

John Hardin

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David McCall

TEKsystems

DEIN KURANT

14C 15C 16C

Patrick Butcher

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Alice Garland

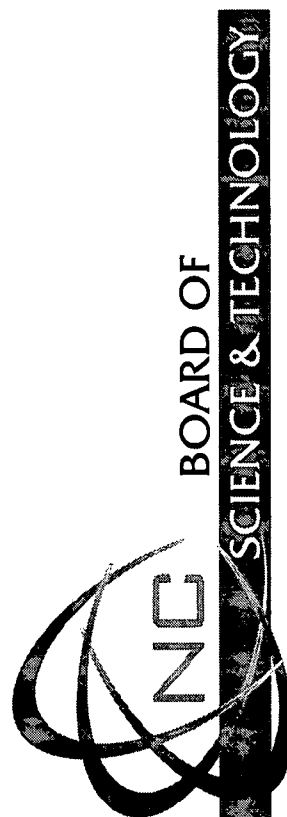
NC DOC

CAROLINE KAZMIERSKI

NCTA

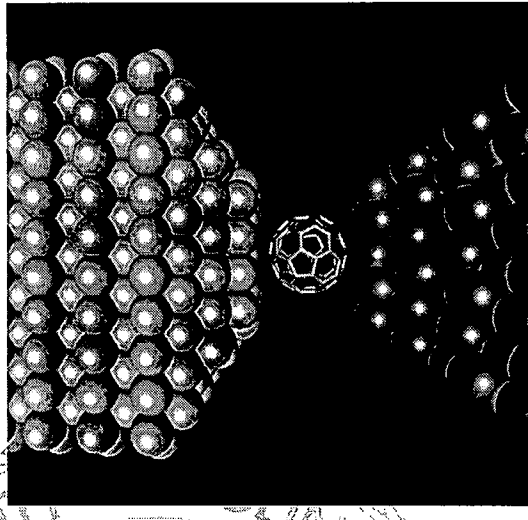
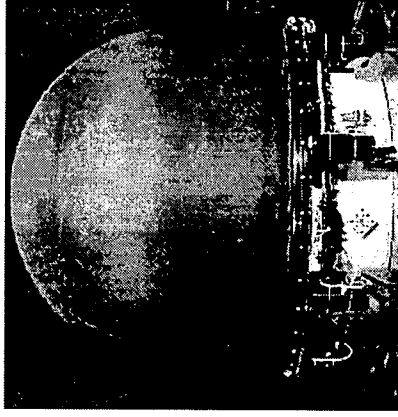
Nanotechnology

An Introduction



Nanotechnology

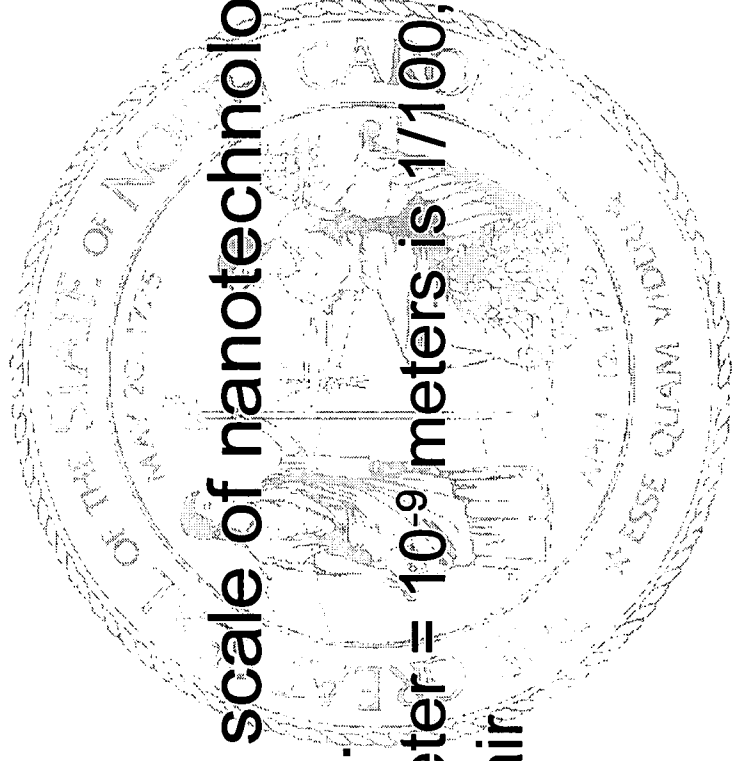
- A new interdisciplinary field of science
- The study of systems at the nanoscale
- The use of tools at the nanoscale
- Building and applying structures that are constructed atom by atom



What is it?

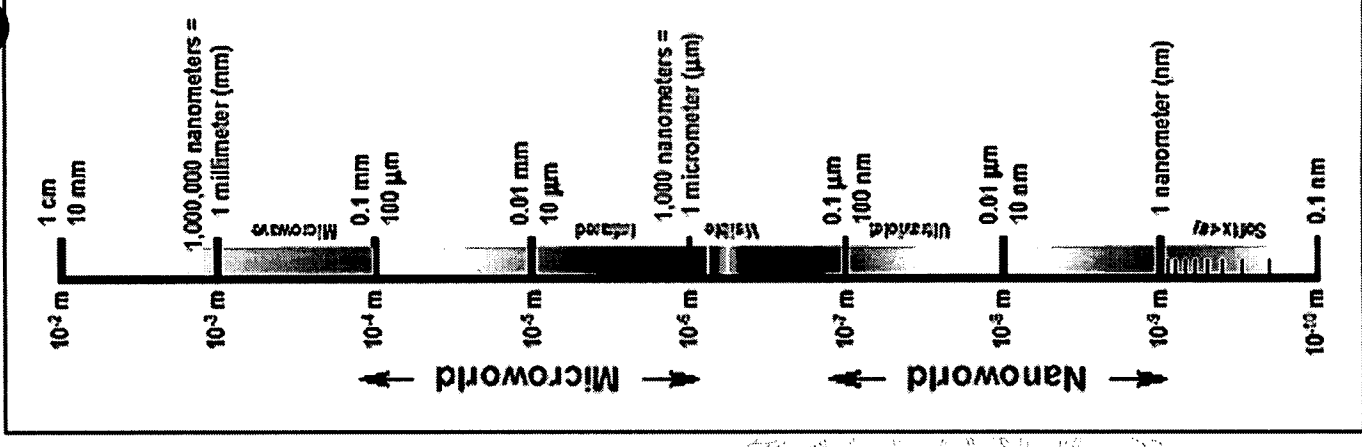
Simply:

- The ability to do things – measure, see, predict and make – on the scale of atoms and molecules.
- The length scale of nanotechnology is the nanometer.
 - 1 nanometer = 10^{-9} meters is 1/100, 000 width of a human hair

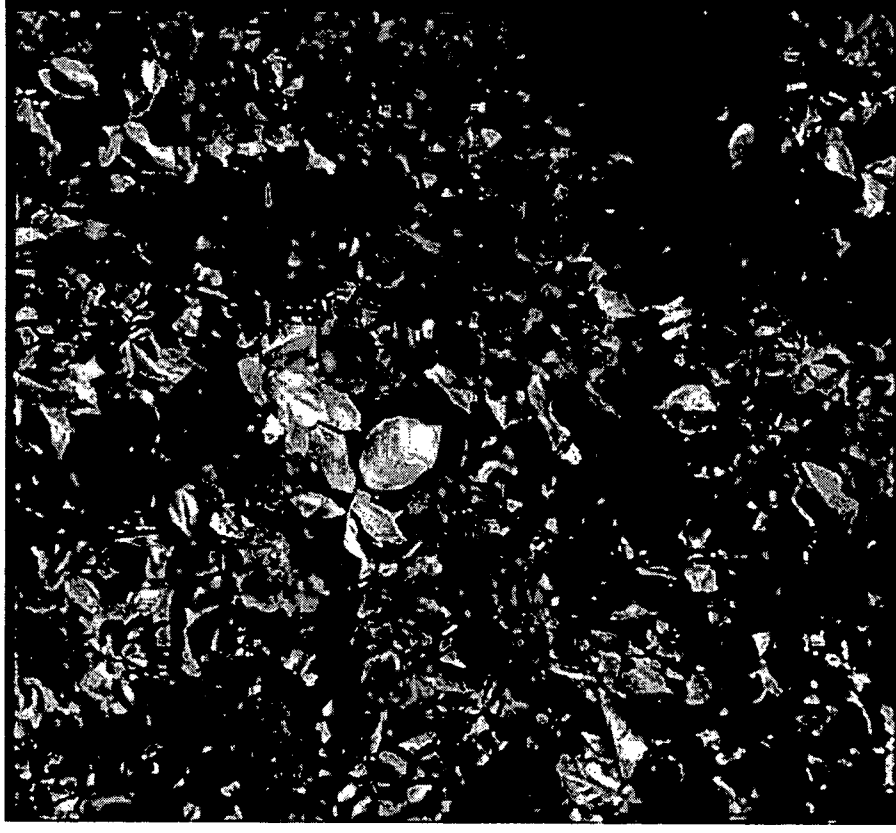


Understanding Size

How big (small) are we talking about?



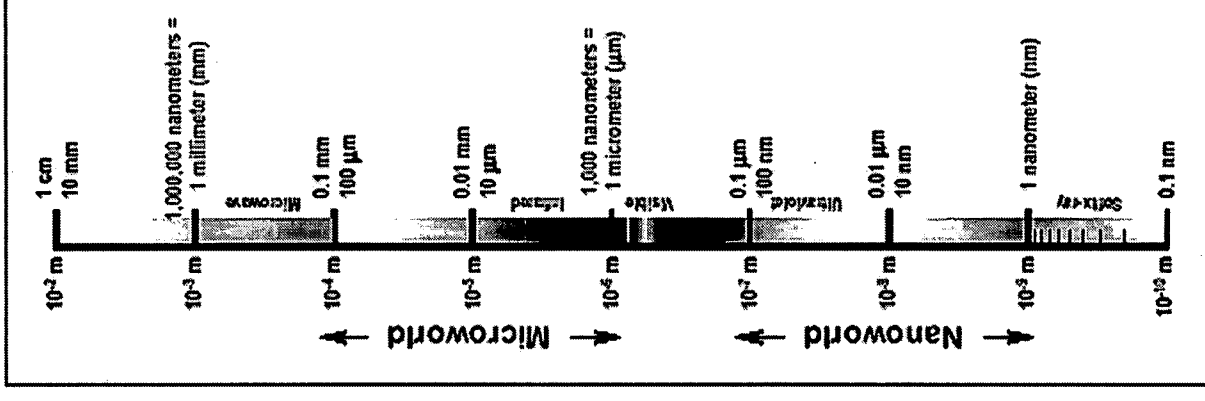
Understanding Size



• 1 meter



source: CERN
<http://microcosm.web.cern.ch/microcosm>



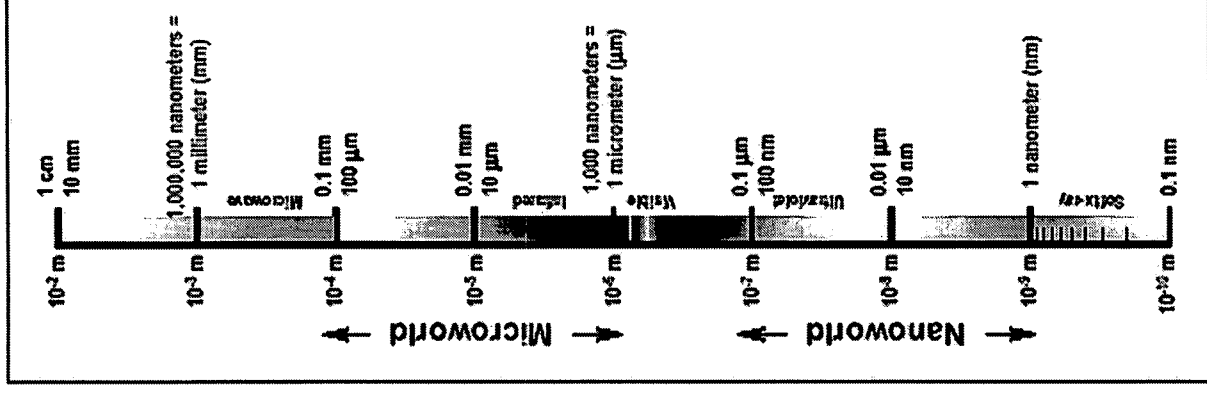
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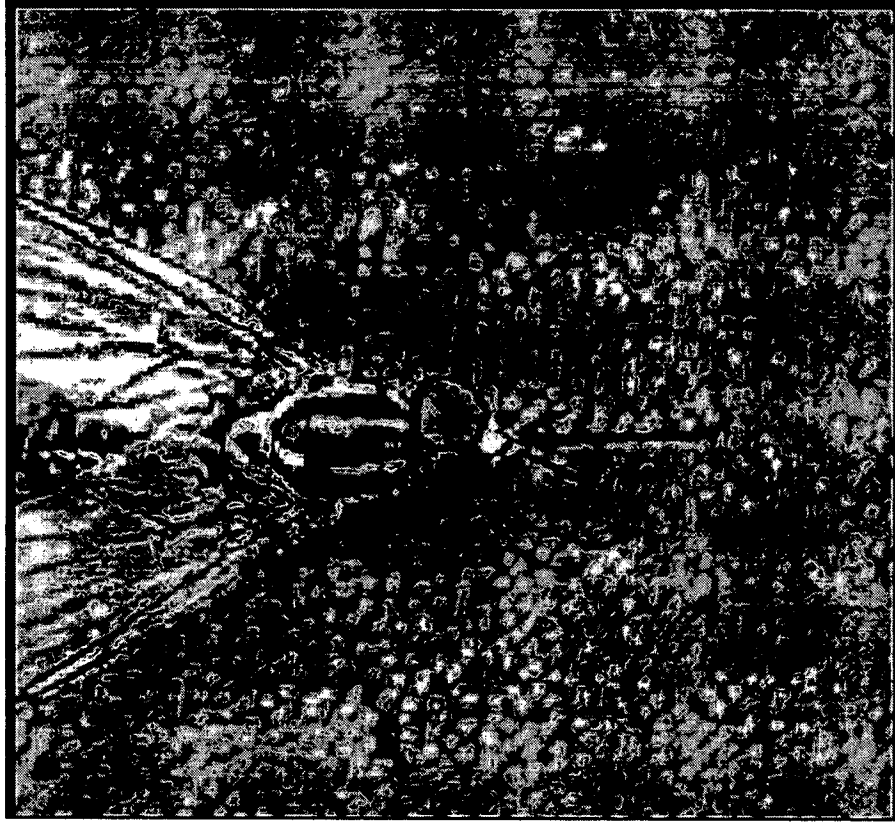
• 10 centimeters



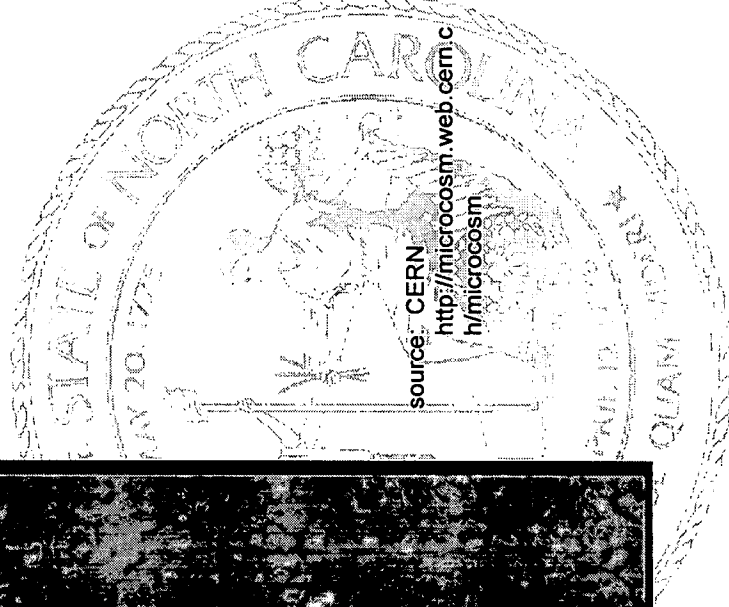
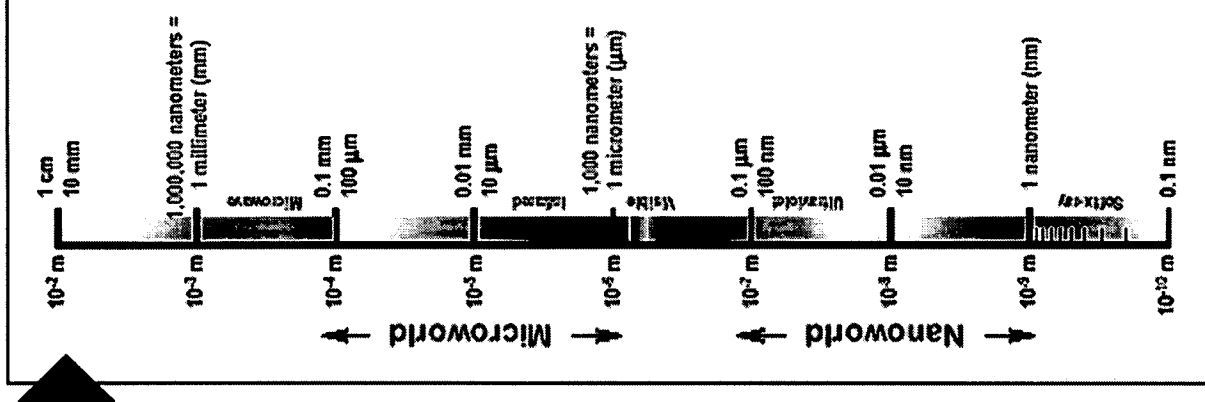
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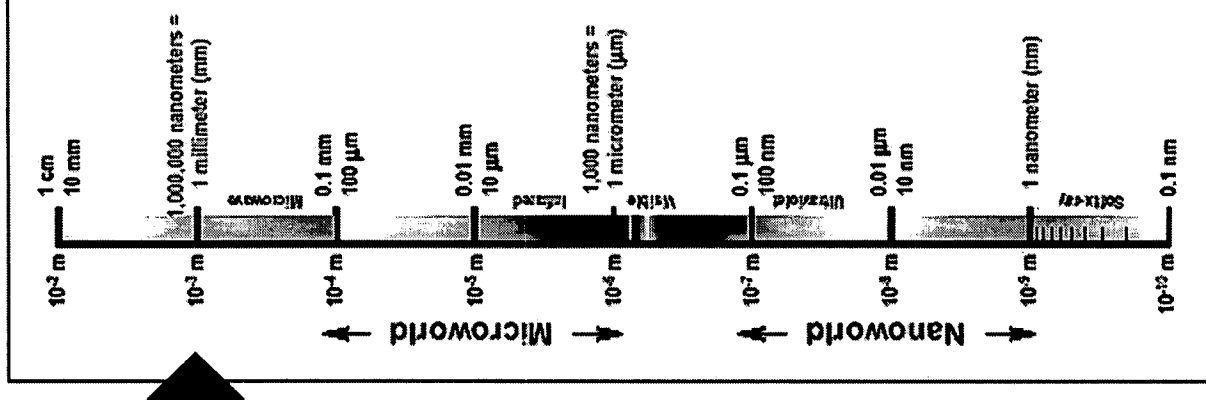
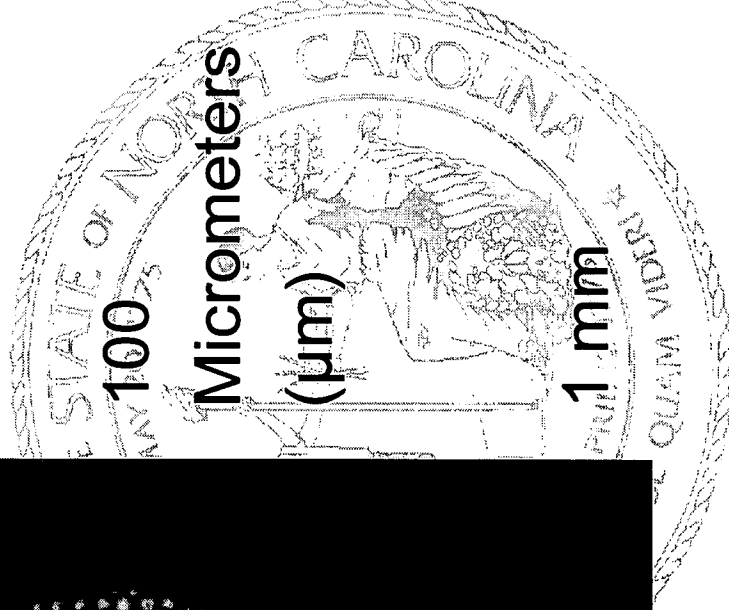
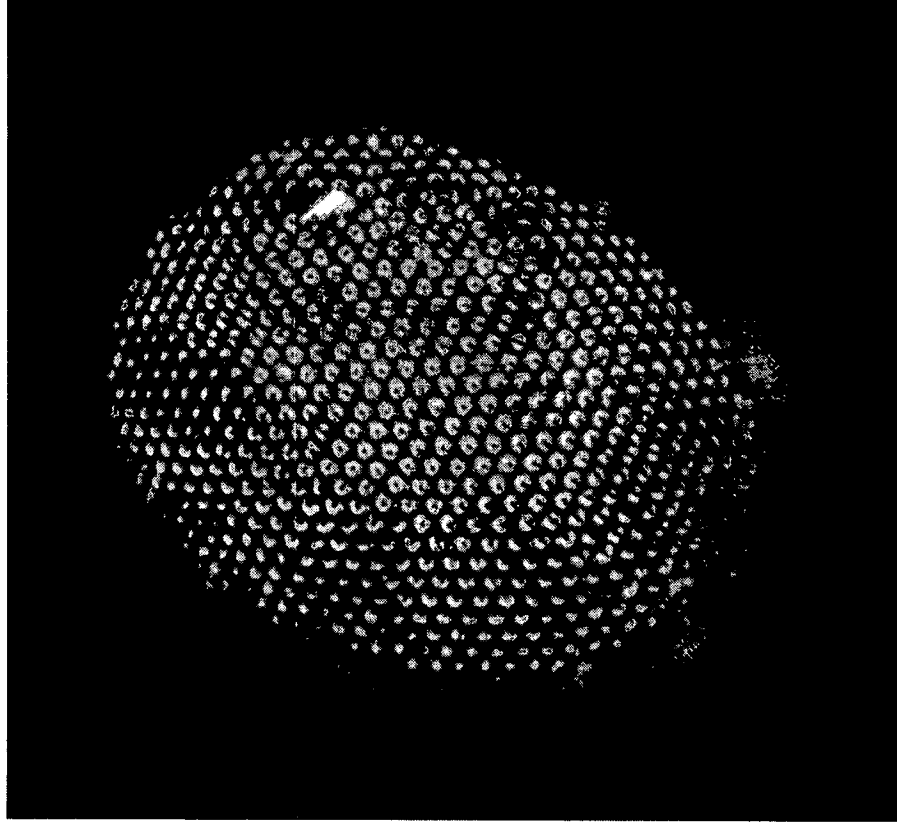


1 centimeter



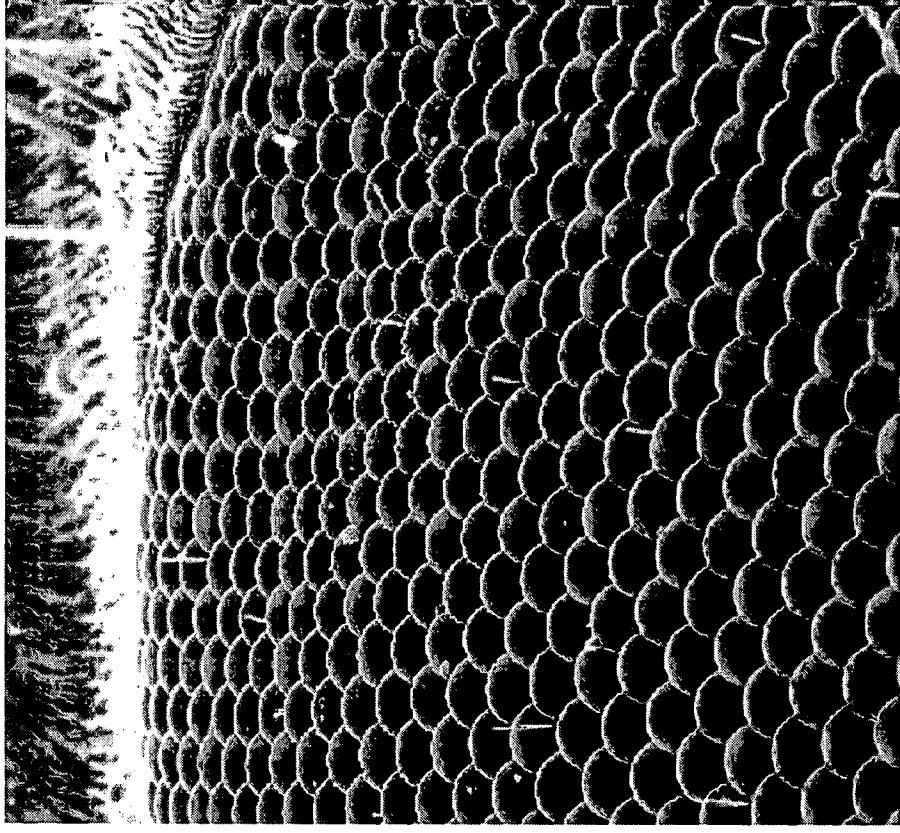
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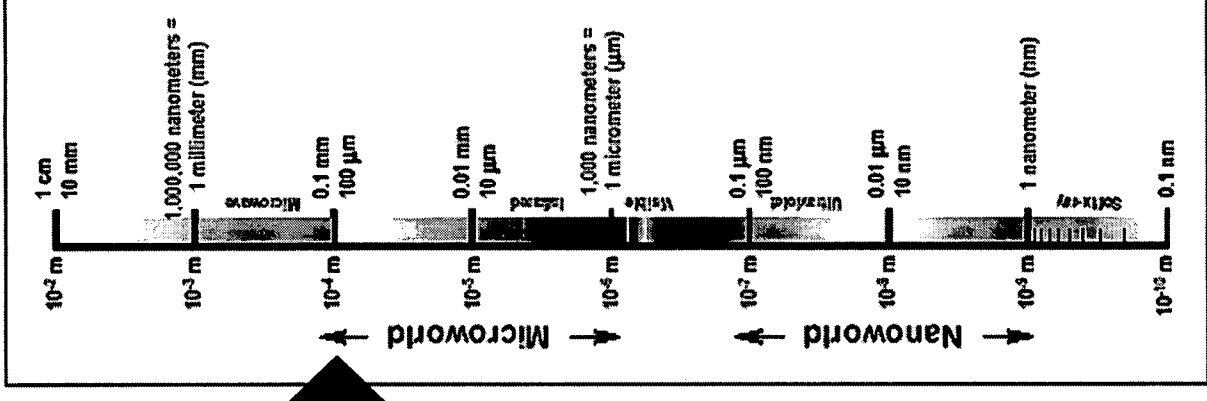
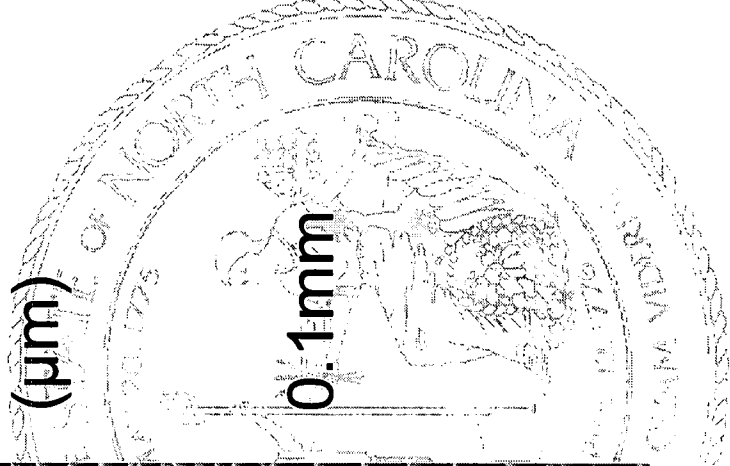


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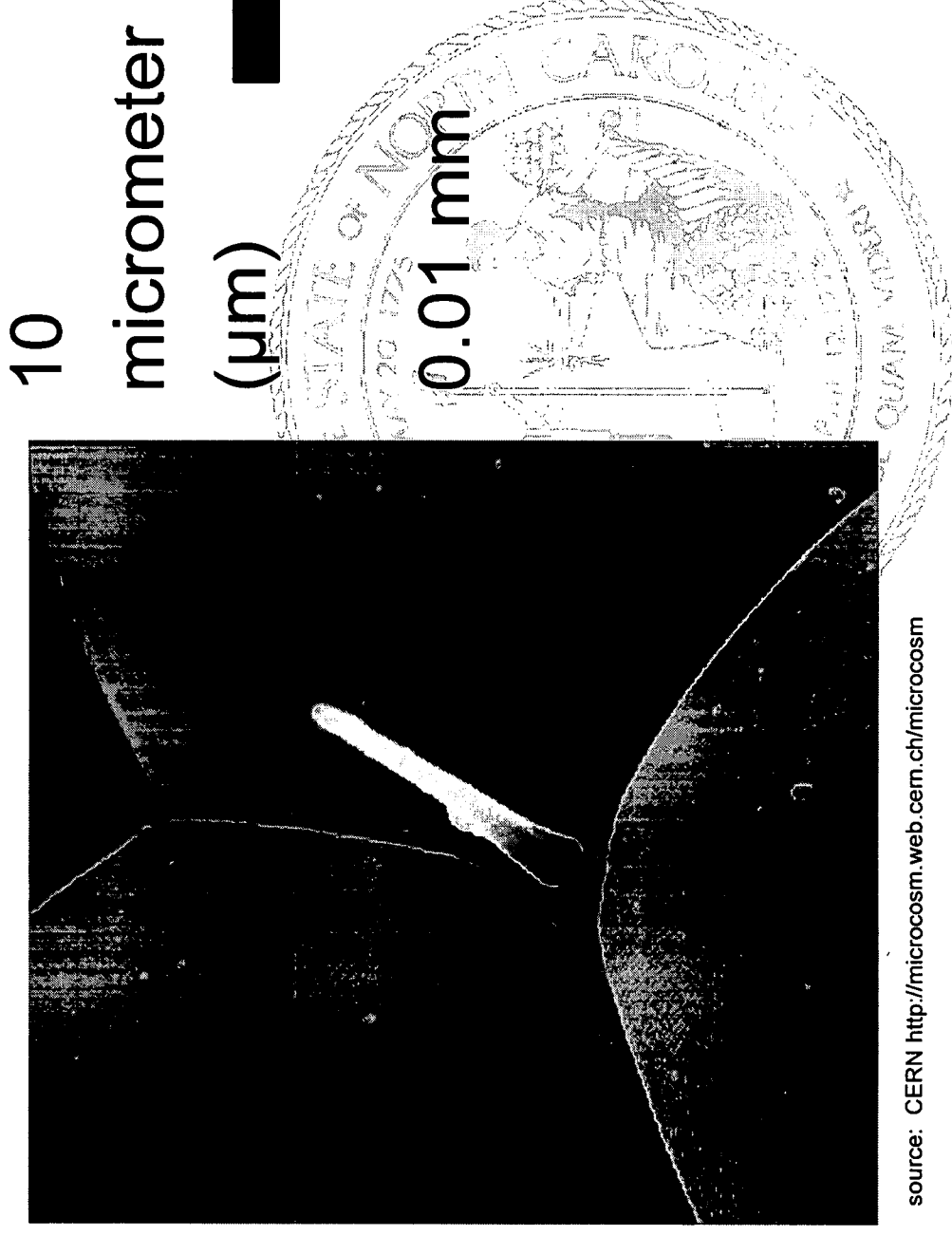


100
micrometers
(μm)

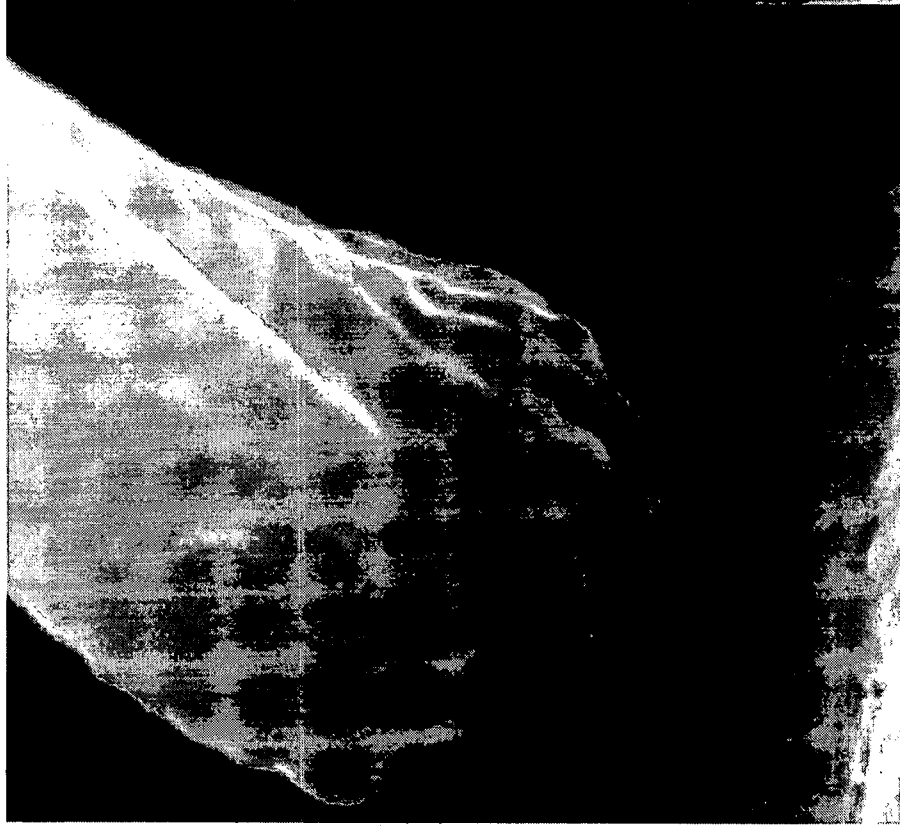


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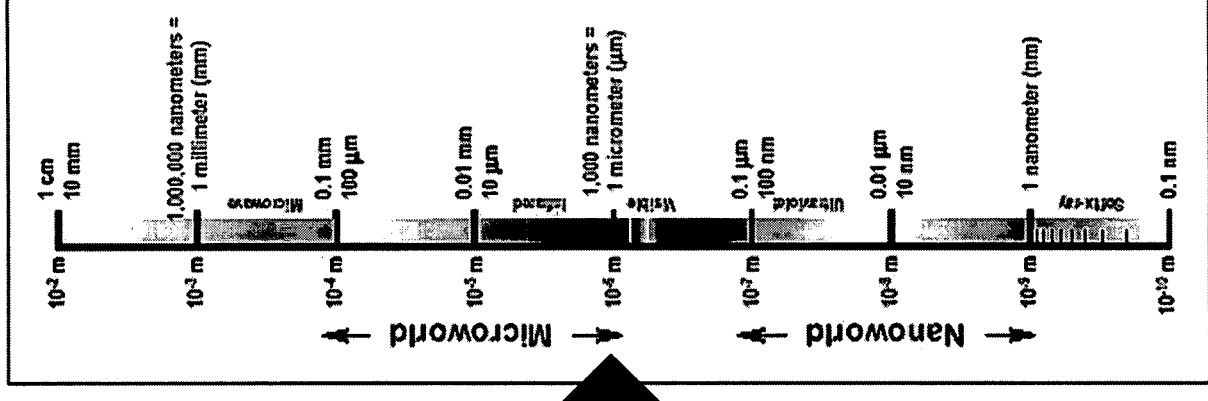


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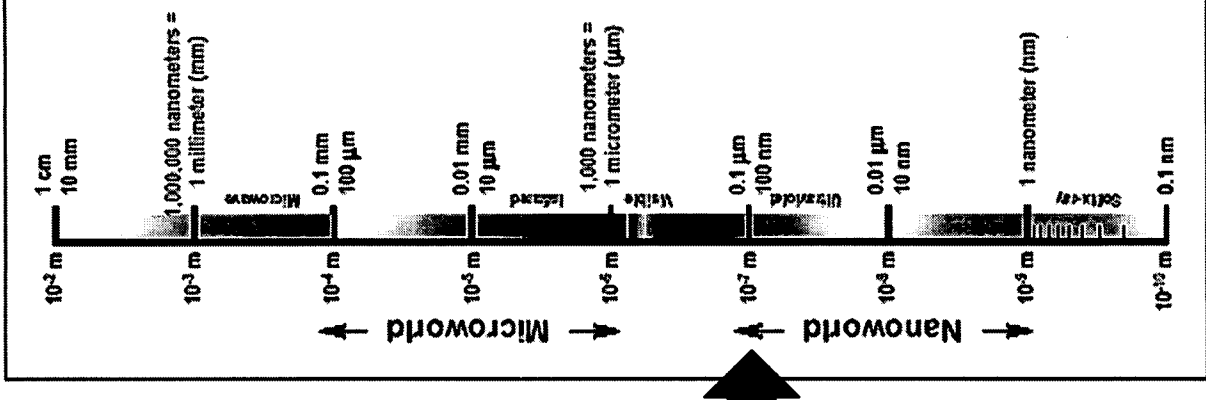
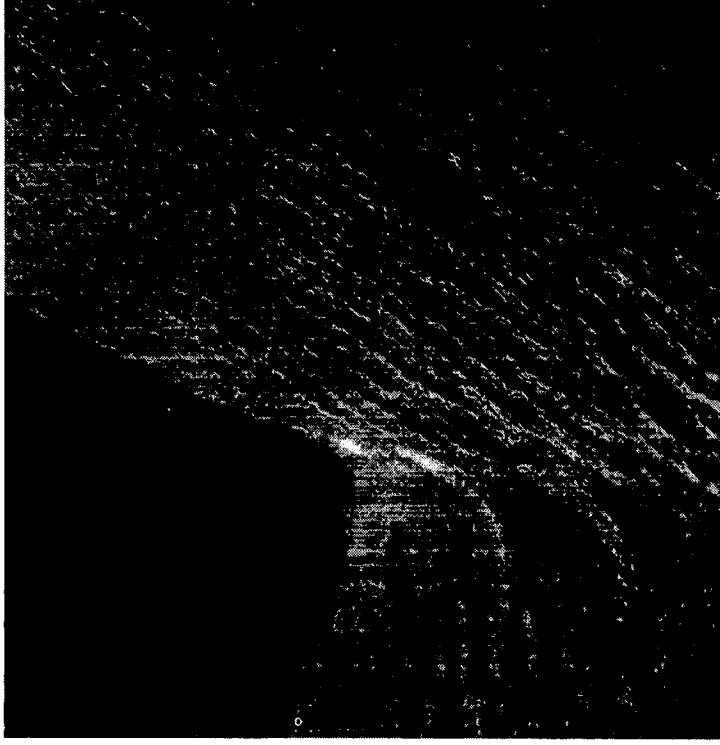
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1000
Nanometers



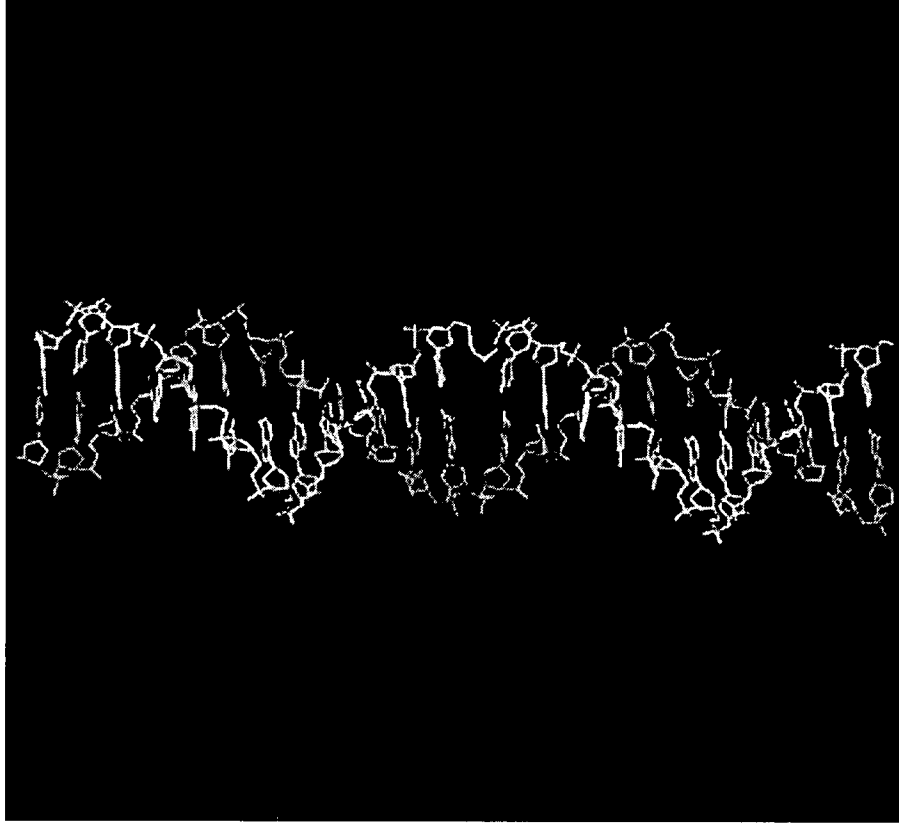
Understanding Size

100
nanometers



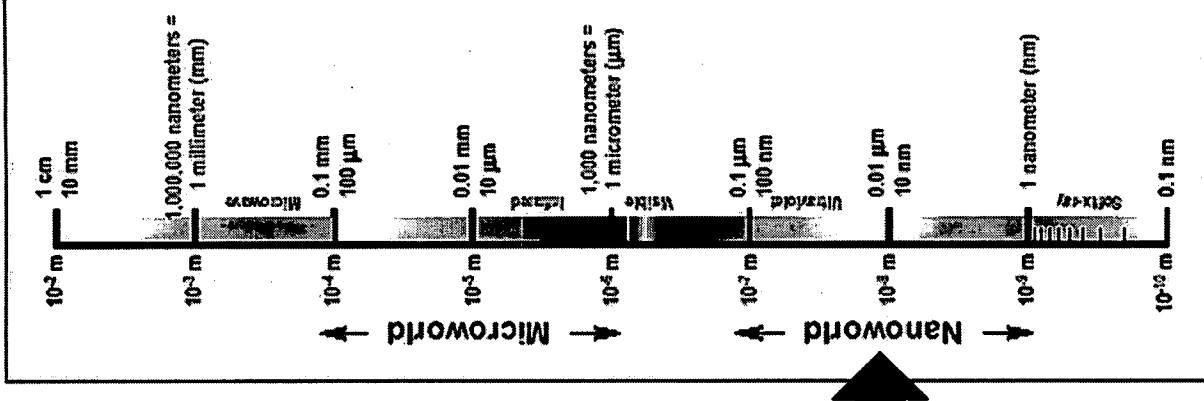
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Understanding Size



source: CERN <http://microcosm.web.cern.ch/microcosm>

10
nanometers



.....



14



Size Matters

Physical processes do not scale uniformly

- Gravity
- Friction
- Combustion
- Electrostatic
- Van der Waals
- Brownian
- Quantum



Richard P. Feynman



A Nanotechnology Can Exist

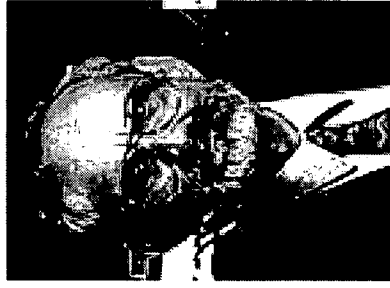
There's Plenty of Room at the Bottom

December 29th 1959

- Manipulating and controlling things on a small scale
- Write the Encyclopedia Britannica on the head of a pin
 - How do we write small?
 - Information on a small scale
 - Better electron microscopes
- The marvelous biological system
- Miniaturizing the computer
- Miniaturization by evaporation
- Problems of lubrication
- A hundred tiny hands
- Rearranging the atoms
- Atoms in a small world



Fullerenes – 1985 (1996)



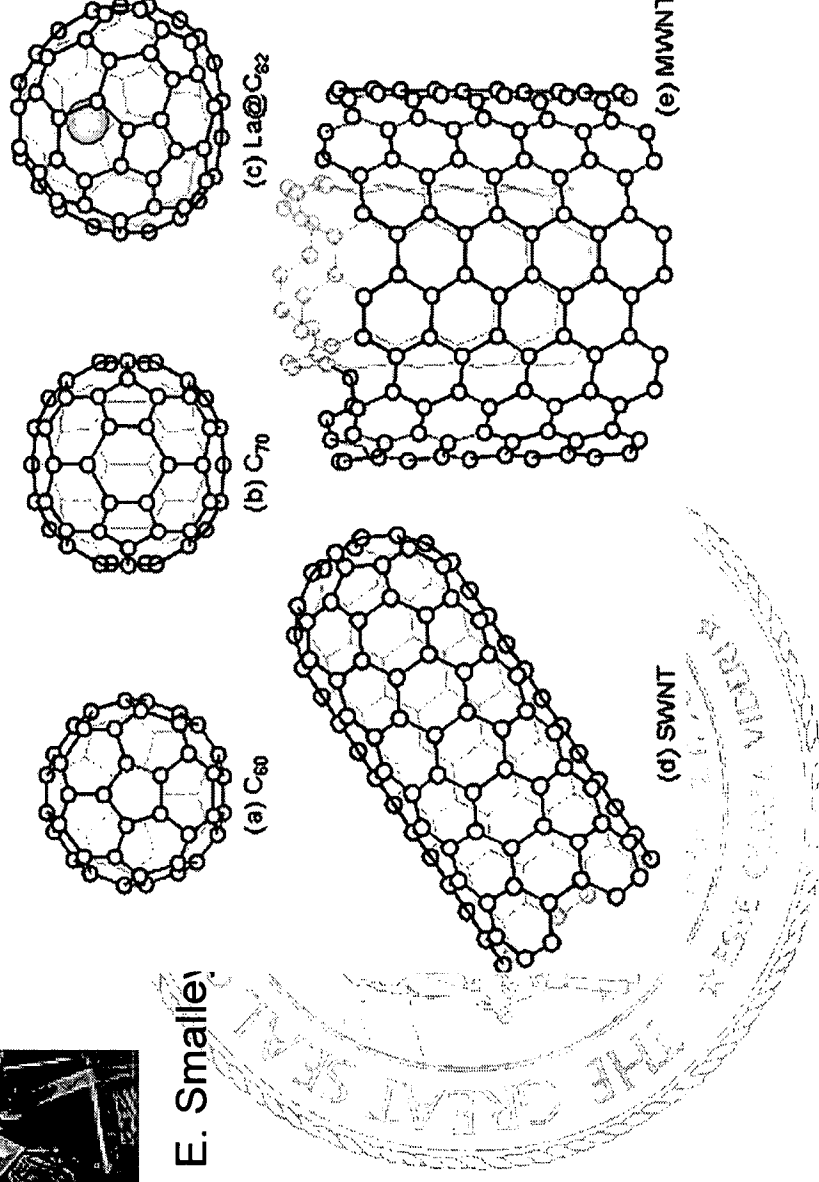
Robert F. Curl Jr.



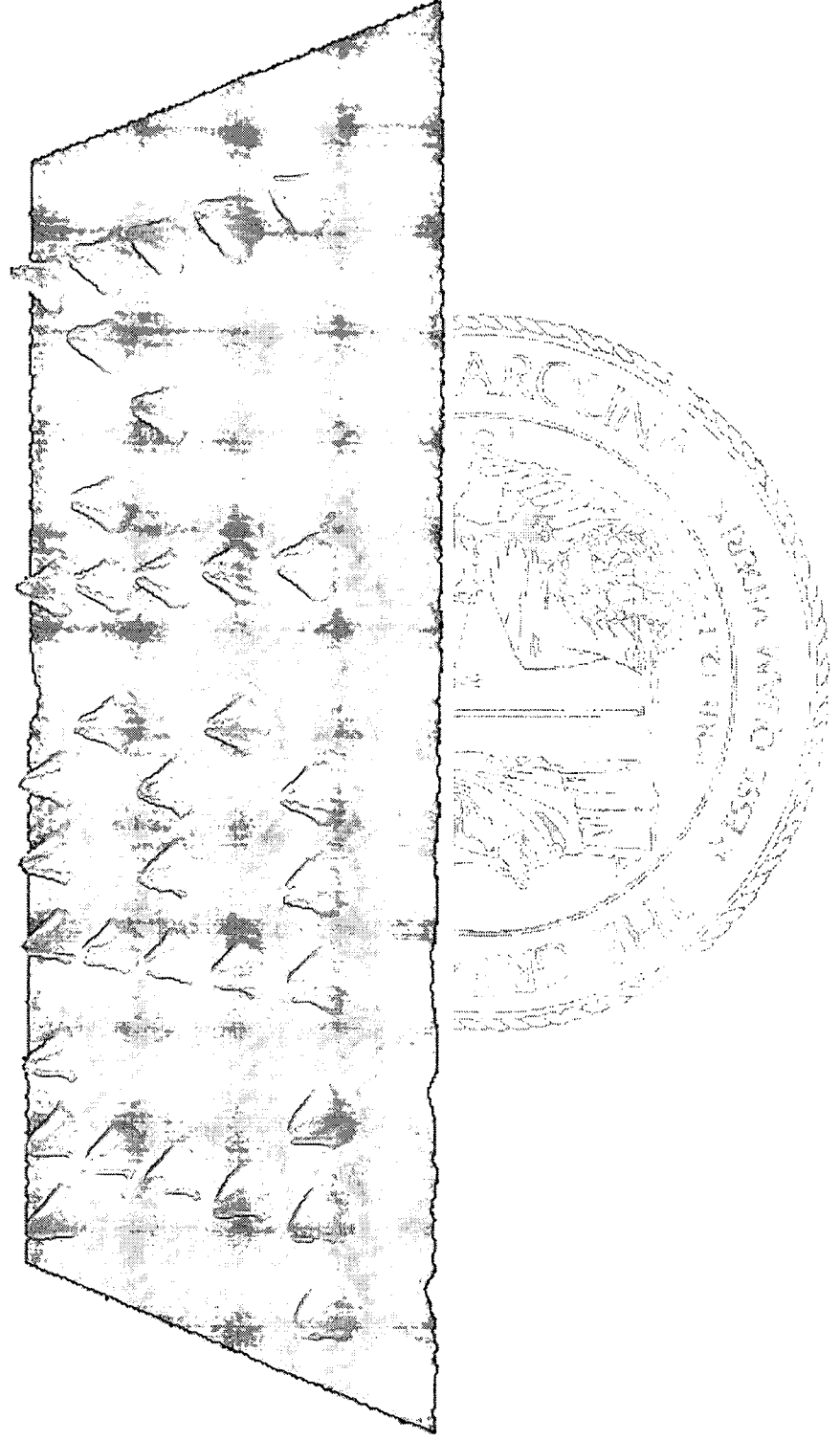
Richard E. Smalley



Sir Harold W. Kroto

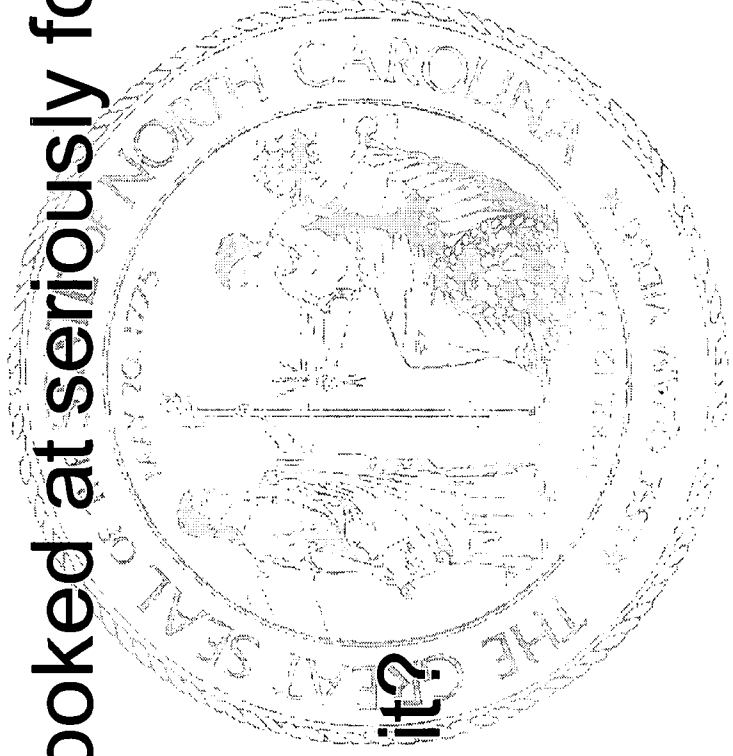


IBM - 1985



Nanotechnology

- Has a long history
- Has a solid theoretical basis
- Has been looked at seriously for nearly 30 years
- So, what is it?



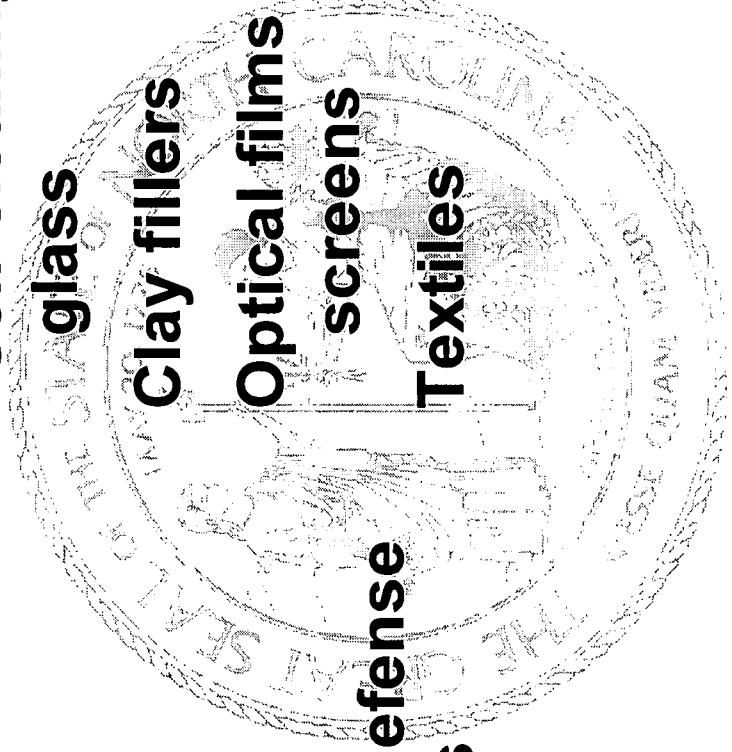
● Nanotechnology Is Not a Single Industry ●

Consumers will choose among products and services enhanced by nanotechnology from virtually all current industries.



Current Products on the Market

Ceramics	Optical components
Paints and Coatings	Anti-microbials
Catalysts	“Self-cleaning” window
UV protectant	glass
cosmetics	Clay fillers
Automotive	Optical films for pc
component	screens
Materials for defense	Textiles
applications	



Currently Marketed Value-Added Products

- Wrinkle- and stain-resistant fabrics courtesy of Nano-Tex, now found at Eddie Bauer, The Gap, and Old Navy
- Ski jackets from German Franz Ziener GmbH using Nano-Tex enhancements to make them windproof, waterproof, breathable, and grime-resistant
- Babolat tennis rackets lightened and strengthened with Nanoleedge nanotubes, and Wilson Double Core tennis balls containing InMat nanomaterials to lock in air

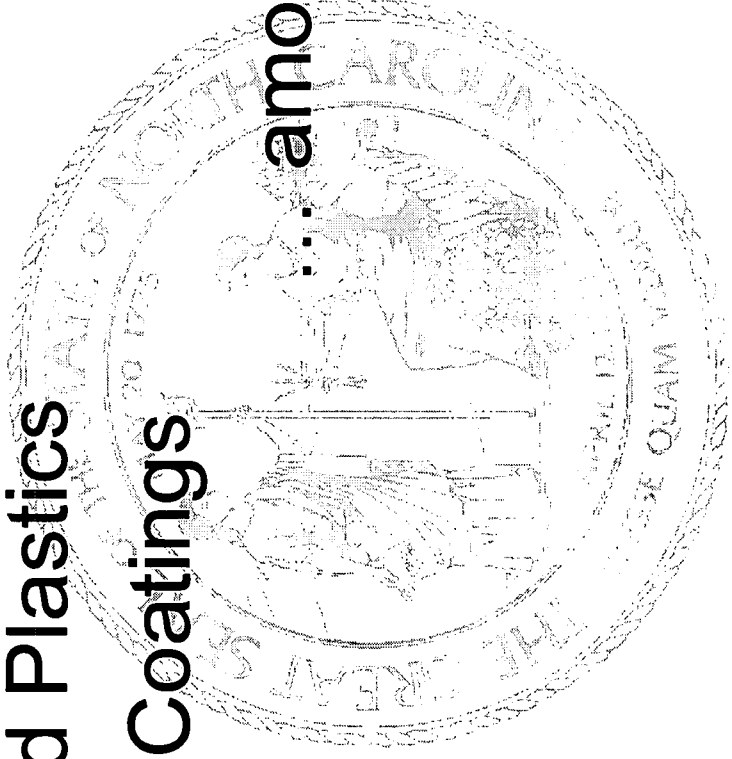
Currently Marketed Value-Added Products

- Nanostructured ceramic coatings from Inframat that add durability and toughness to Navy ship hulls
- Antimicrobial bandages from NuCryst using nanocrystalline silver to kill microbes; more than 100 of the 120 major burn treatment centers in North America use these bandages to treat life threatening burns
- Duravit sinks and toilets with an easy-clean nanocoating from Nanogate

● ●

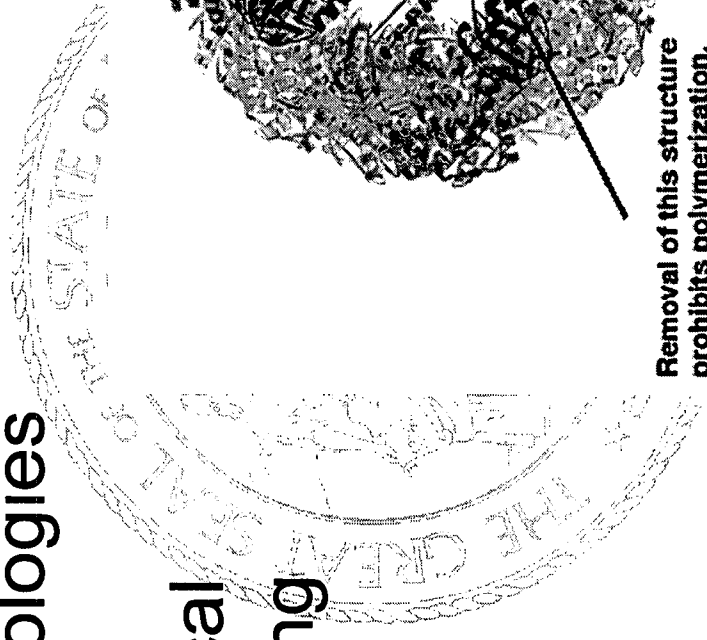
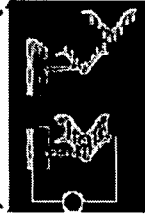
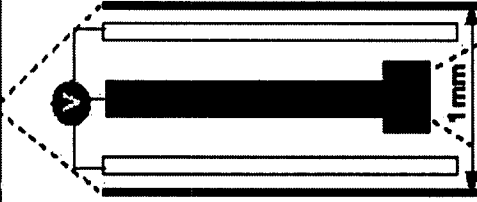
NC Products that will be dramatically effected

- Biotechnology and Pharmaceuticals
 - Textiles and Plastics
 - Paints and Coatings
- ... among others



Biotechnology and Pharmaceuticals

- Highly focused, noninvasive technologies for medical imaging
- Nanodevices for targeted medical detection and delivery

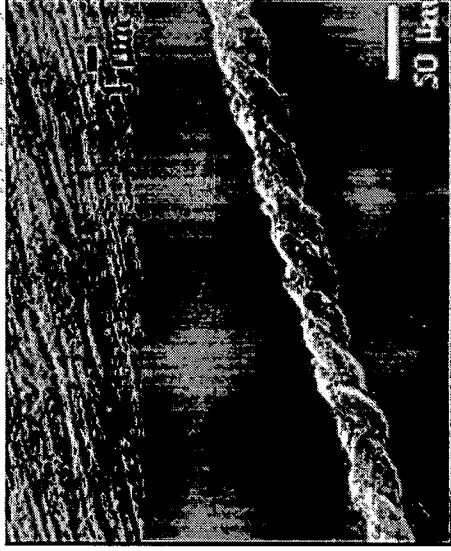


Removal of this structure prohibits polymerization, creating a hollow barrel.

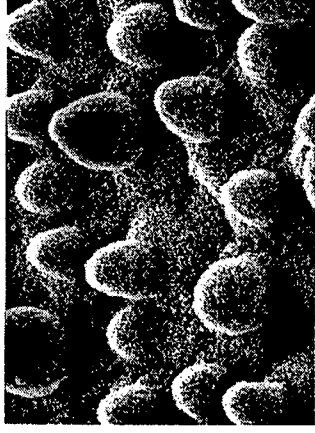
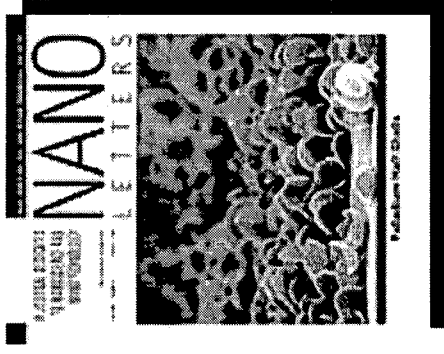
Textiles and Plastics



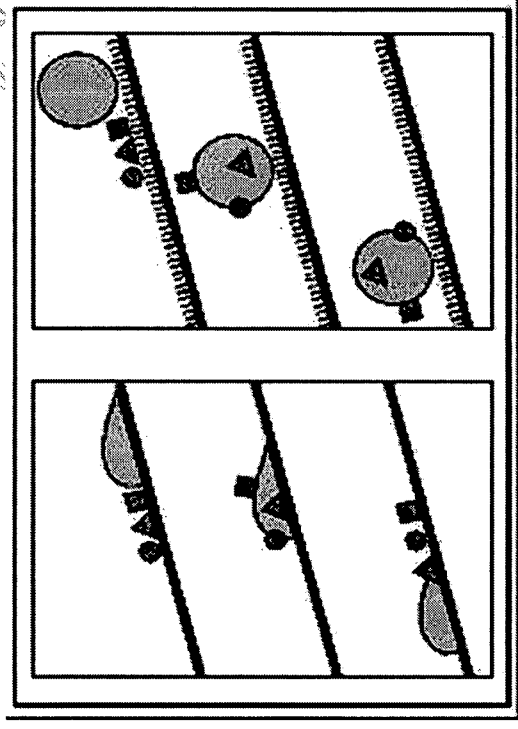
- Membrane and filtering technologies for chemical separation
- Fiber and film technologies for enhanced durability



Paints and Coatings



- Light and temperature activated pigments



- Anti-microbial, Anticorrosion, and Anti-stain agents

Oops.

• Oops.



AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

March 30, 2005

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Presentation:

Destiny Program in Action

by Dr. Skip Bollenbacher, Director of the Institute for Science
Learning, UNC-CH

Bills to be discussed:

**House Bill 639 - Traveling Science and Technology Funds -
Reps. Miller, Walend, Tolson and Jeffus**

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

March 30, 2005

The House Committee on Science and Technology met on Wednesday, March 30, 2005, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson and Martin, Vice-Chairs; Gulley, Harrison, Hollo, Jones and Walend.

Representative Miller called the meeting to order. The pages serving the committee were Amanda Brown from Orange County sponsored by Representative Hackney and Richard Pridgen from Wayne County sponsored by Representative Pate. Walter Spell and Frank Prevo were the assigned Sergeant-At-Arms.

The bill to be discussed is House Bill 639, Traveling Science and Technology Funds sponsored by Representative Miller. Dr. Walter Bollenbacher was introduced to give a presentation pertaining to the need for this fund.

Dr. Bollenbacher started a project of trying to understand why science education in North Carolina and the nation has been in decline. He began a program seven years ago to engender interest of students, promote understanding and advance them into science careers with the understanding that science and technology are the future for economic prosperity. Dr. Bollenbacher's project developed into the Destiny Bus, which is a mobile laboratory that travels the State to give students hands on use of state-of-the-art equipment. He also ran a short video describing the Destiny Bus program.

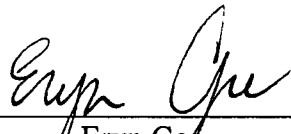
Following the presentation, Representative Harrison asked if funding would run out at the end of the year. Dr. Bollenbacher responded that funding by GlaxoSmithKline has been renewed but for lesser money; all of the funding is through temporary grants. Concluding questions, Representative Miller as sponsor of House Bill 639 turned the meeting over to Vice-Chair Martin. Representative Martin opened the floor for discussion. Representative Jones moved for a favorable report of the bill. Representatives Walend, Jones and Tolson all spoke in favor of the bill. Upon Representative Miller reminding, Representative Jones amended his motion for a favorable report and be re-referred to the Committee on Appropriations, subcommittee on Education. The motion passed.

With there being no further business, the meeting was adjourned.

Respectfully submitted,



Representative Paul Miller
Chairman



Eryn Gee
Committee Assistant

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005

H

1

HOUSE BILL 639

Short Title: Traveling Science and Technology Funds. (Public)

Sponsors: Representatives Miller, Walend, Tolson, Jeffus (Primary Sponsors);
Hackney, Hunter, Insko, Jones, Luebke, Michaux, Pierce, Stiller,
Wainwright, Warren, and Womble.

Referred to: Science and Technology, if favorable, Appropriations Subcommittee on
Education.

March 15, 2005

A BILL TO BE ENTITLED

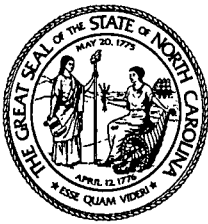
AN ACT TO APPROPRIATE FUNDS FOR THE TRAVELING SCIENCE AND
TECHNOLOGY EDUCATION PROGRAM AT THE UNIVERSITY OF NORTH
CAROLINA AT CHAPEL HILL.

The General Assembly of North Carolina enacts:

SECTION 1. There is appropriated from the General Fund to the Board of
Governors of The University of North Carolina the sum of one million dollars
(\$1,000,000) for the 2005-2006 fiscal year and the sum of one million dollars
(\$1,000,000) for the 2006-2007 fiscal year to expand and maintain the University of
North Carolina at Chapel Hill's innovative Traveling Science and Technology
Education Program, which uses a bus as a mobile laboratory to take science education
to school systems across the State. These funds shall be allocated as follows:

- (1) \$400,000 for the 2005-2006 fiscal year to purchase and equip a bus for
use as an additional mobile laboratory.
- (2) \$600,000 for the 2005-2006 fiscal year to provide partial funding for
operations of the Program.
- (3) \$1,000,000 for the 2006-2007 fiscal year to maintain the additional bus
and to provide partial funding for the Program.

SECTION 2. This act becomes effective July 1, 2005.



HOUSE BILL 639: Traveling Science and Technology Funds

BILL ANALYSIS

Committee: House Science & Technology
Date: March 29, 2005
Version: 1st Edition

Introduced by: Reps. Miller, Walend, Tolson,
Jeffus
Summary by: Brenda J. Carter,
Committee Counsel

SUMMARY: *House Bill 639 appropriates \$2 million from the General Fund to the UNC Board of Governors to expand and maintain the Traveling Science and Technology Education Program based at UNC-CH.*

BILL ANALYSIS: The bill appropriates funds to support a program that currently utilizes a 40-foot traveling science laboratory, named Destiny, which allows secondary students the opportunity to become more engaged in the sciences through hands-on experiments and assists in professional development of teachers. The bill appropriates \$1 million in the 2005-2006 fiscal year to purchase and equip a bus for use as an additional mobile laboratory and to provide partial funding for program operations. The bill also appropriates \$1 million in the 2006-2007 fiscal year to maintain the additional bus and provide partial funding for the program. The bill would become effective July 1, 2005.

BACKGROUND: The custom-built 40-foot, 26,000-pound bus currently used by the Traveling Science and Technology Education Program is full of state-of-the-art science and technology equipment for wet laboratory experiments, Internet exploration and carefully honed curriculum materials. When launched in 2000, the project was among the first of its kind nationwide.

The science bus grew from the work of the Partnership for Minority Advancement in the Biomolecular Sciences, a consortium begun more than a decade ago by UNC-CH that includes seven historically minority universities. The UNC-CH-based consortium introduces biomolecular science into public school and college classrooms across the state in response to growing national concerns about a science teacher shortage, a decline in the number of Americans pursuing graduate degrees in science and a lack of diversity within the science professions.

Glaxo Wellcome Inc. awarded the university a five-year, \$1.6 million grant to build the bus, equip it and support operations. (Source: *Carolina News Services*, April 6, 2000 -- No. 206)

**2005 COMMITTEE REPORT
HOUSE OF REPRESENTATIVES**

The following report(s) from standing committee(s) is/are presented:

By Representative **Miller** (Chair) for the Committee on **SCIENCE AND TECHNOLOGY**.

☐ Committee Substitute for

H.B. 639 A BILL TO BE ENTITLED AN ACT TO APPROPRIATE FUNDS FOR THE TRAVELING SCIENCE AND TECHNOLOGY EDUCATION PROGRAM AT THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL.

☐ With a favorable report.

☒ With a favorable report and recommendation that the bill be re-referred to the Committee on Appropriations ☐ Finance ☐ Subcommittee on Education ☒.

☐ With a favorable report, as amended.

☐ With a favorable report, as amended, and recommendation that the bill be re-referred to the Committee on Appropriations ☐ Finance ☐ ☐.

☐ With a favorable report as to the committee substitute bill (#), ☐ which changes the title, unfavorable as to (the original bill) (Committee Substitute Bill #), (and recommendation that the committee substitute bill #) be re-referred to the Committee on .)

☐ With a favorable report as to House committee substitute bill (#), ☐ which changes the title, unfavorable as to Senate committee substitute bill.

☐ With an unfavorable report.

☐ With recommendation that the House concur.

☐ With recommendation that the House do not concur.

☐ With recommendation that the House do not concur; request conferees.

☐ With recommendation that the House concur; committee believes bill to be material.

☐ With an unfavorable report, with a Minority Report attached.

☐ Without prejudice.

☐ With an indefinite postponement report.

☐ With an indefinite postponement report, with a Minority Report attached.

☐ With recommendation that it be adopted. (HOUSE RESOLUTION ONLY)

03/19/03

VISITOR REGISTRATION SHEET

Science and Technology
Name of Committee

3-30-05
Date

VISITORS: PLEASE SIGN BELOW AND RETURN TO COMMITTEE ASSISTANT

NAME

FIRM OR AGENCY

Mark Fung

University

Kevin Fiksdal

UNC CHAPEL HILL

BEN McLANNHORN

OSC

Dorin Baumhauer

Appalachian State U.

Toni Cooper

UNC Chapel Hill

Betty W. Brown

unc-Chapel Hill

Patricia Johnson

Cathedral Day Care

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

April 6, 2005

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Bills to be Discussed:

House Bill 633 - Electronic Court Filing - Rep. Tolson

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

April 6, 2005

The House Committee on Science and Technology met on Wednesday, April 6, 2005, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson and Martin, Vice-Chairs; Gulley, Hollo, Jones and Walend.

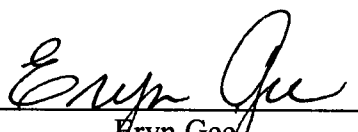
Representative Miller called the meeting to order. The pages serving the committee were Martin Gonzales of Wake County and Dennis Foos of Cumberland County, sponsored by Representative Dickson. Earl Coker and Frank Prevo were the assigned Sergeant-At-Arms.

Representative Tolson was recognized to discuss House Bill 633, Electronic Court Filing. This bill allows an additional way to file court papers and brings the court system into the electronic age provide cost savings. Additionally, Gregg Stahl from the Administrative Office of the Courts spoke, from the audience, in favor of the bill stating that this process was requested and is considered an efficiency move that will aid the Clerks [of Court] offices and allow the State to move into the 21st Century, he also expects the it to be self-funding. Doug Heron, Legislative Counsel to the North Carolina Bar Association was recognized and stated that the entire membership is in support of the measure. Representative Jones was recognized and he moved that the bill be given a favorable report and re-referred to the Committee on Appropriations, Subcommittee on Justice and Public Safety. The motion passed.

With there being no further business, the meeting was adjourned.

Respectfully submitted,


Representative Paul Miller
Chairman


Bryn Gee
Committee Assistant

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005

H

1

HOUSE BILL 633

Short Title: Electronic Court Filing.-AB

(Public)

Sponsors: Representatives Tolson; and Faison.

Referred to: Science and Technology, if favorable, Appropriations Subcommittee on Justice and Public Safety.

March 15, 2005

A BILL TO BE ENTITLED
AN ACT TO AUTHORIZE THE USE OF ELECTRONIC FILING IN THE TRIAL
COURTS OF NORTH CAROLINA.

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 1A-1, Rule 5(e), reads as rewritten:

"(e) (1) Filing with the court defined. – The filing of pleadings and other papers with the court as required by these rules shall be made by filing them with the clerk of the court, except that the judge may permit the papers to be filed with him, in which event he shall note thereon the filing date and forthwith transmit them to the office of the clerk.

(2) Filing by ~~telefacsimile transmission~~ electronic means. – If, pursuant to G.S. 7A-34 and G.S. 7A-343, the Supreme Court and the Administrative Officer of the Courts establish uniform rules, regulations, costs, procedures and specifications for the filing of pleadings or other court papers by ~~telefacsimile transmission~~, electronic means, filing may be made by the ~~transmission~~ electronic means when, in the manner, and to the extent provided therein."

SECTION 2. G.S. 7A-343(9a) reads as rewritten:

"(9a) Establish and operate systems and services that provide for electronic filing in the court system and further provide electronic transaction processing and access to court information systems pursuant to G.S. 7A-343.2; and".

SECTION 3. Article 7 of Chapter 7A of the General Statutes is amended by adding a new section to read:

"§ 7A-49.5. Statewide electronic filing in courts.

(a) The General Assembly finds that the electronic filing of pleadings and other documents required to be filed with the courts may be a more economical, efficient, and satisfactory procedure to handle the volumes of paperwork routinely filed with, handled

1 by, and disseminated by the courts of this State, and therefore authorizes the use of
2 electronic filing in the courts of this State.

3 (b) The Supreme Court may adopt rules governing this process and associated
4 costs and may supervise its implementation and operation through the Administrative
5 Office of the Courts. The rules adopted under this section shall address the waiver of
6 electronic fees for indigents.

7 (c) The Administrative Office of the Courts may contract with a vendor to
8 provide electronic filing in the courts, provided that the costs for the hardware and
9 software are not paid using State funds.

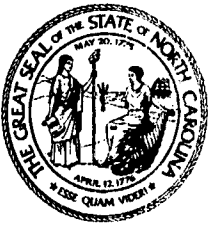
10 (d) Any funds received by the Administrative Office of the Courts from the
11 vendor selected pursuant to subsection (c) of this section, other than applicable statutory
12 court costs, as a result of electronic filing, shall be deposited in the Court Technology
13 Fund in accordance with G.S. 7A-343.2."

14 **SECTION 4.** G.S. 7A-343.2 reads as rewritten:

15 **"§ 7A-343.2. Court Information Technology Fund.**

16 The Court Information Technology Fund is established within the Judicial
17 Department as a nonreverting, interest-bearing special revenue account. Accordingly,
18 revenue in the Fund at the end of a fiscal year does not revert and interest and other
19 investment income earned by the Fund shall be credited to it. All moneys collected by
20 the Director pursuant to G.S. 7A-109(d) and G.S. 7A-49.5 shall be remitted to the State
21 Treasurer and held in this Fund. Moneys in the Fund shall be used to supplement funds
22 otherwise available to the Judicial Department for court information technology and
23 office automation needs. The Director shall report by August 1 and February 1 of each
24 year to the Joint Legislative Commission on Governmental Operations, the Chairs of the
25 Senate and House Appropriations Committees, and the Chairs of the Senate and House
26 Appropriations Subcommittees on Justice and Public Safety on all moneys collected and
27 deposited in the Fund and on the proposed expenditure of those funds collected during
28 the preceding six months."

29 **SECTION 5.** This act is effective when it becomes law and applies to all
30 matters filed with the courts on or after the date that the Supreme Court adopts rules for
31 electronic filing as authorized by this act.



HOUSE BILL 633: Electronic Court Filing

BILL ANALYSIS

Committee: House Science & Technology
Date: April 6, 2005
Version: 1st Edition

Introduced by: Rep. Tolson
Summary by: Brenda J. Carter
Committee Counsel

SUMMARY: *House Bill 633 authorizes the use of electronic filing in the trial courts of this State.*

CURRENT LAW: North Carolina's Rules of Civil Procedure currently authorize the filing of pleadings or other court papers by fax.

BILL ANALYSIS: House Bill 633 would provide for the filing of court papers by electronic means, in addition to filing by fax. The Supreme Court is authorized to adopt rules governing electronic filing, including the waiver of electronic fees for indigents. The bill amends the duties of the Director of the Administrative Office of the Courts (AOC) to establish and operate systems and services that provide for electronic filing in the courts. AOC is authorized to contract with a vendor to provide electronic filing, provided that the costs for the hardware and software are not paid using State funds. Any funds received by AOC from the vendor as a result of electronic filing, other than statutory court costs, would be deposited in the Court Technology Fund. The Court Technology Fund is used to supplement funds otherwise available to AOC for court information technology and office automation needs.

The bill would be effective when it becomes law, and apply to matters filed with the courts on or after the date that the Supreme Court adopts rules for electronic filing.

**2005 COMMITTEE REPORT
HOUSE OF REPRESENTATIVES**

The following report(s) from standing committee(s) is/are presented:

By Representative **Miller** (Chair) for the Committee on **SCIENCE AND TECHNOLOGY**.

☐ Committee Substitute for

H.B. 633 A BILL TO BE ENTITLED AN ACT TO AUTHORIZE THE USE OF
ELECTRONIC FILING IN THE TRIAL COURTS OF NORTH CAROLINA.

☐ With a favorable report.

☒ With a favorable report and recommendation that the bill be re-referred to the Committee on
Appropriations ☐ Finance ☐ Subcommittee on Justice and Public Safety ☒.

☐ With a favorable report, as amended.

☐ With a favorable report, as amended, and recommendation that the bill be re-referred to the
Committee on Appropriations ☐ Finance ☐ ☐.

☐ With a favorable report as to the committee substitute bill (#), ☐ which changes the
title, unfavorable as to (the original bill) (Committee Substitute Bill #), (and
recommendation that the committee substitute bill #) be re-referred to the Committee
on .)

☐ With a favorable report as to House committee substitute bill (#), ☐ which changes
the title, unfavorable as to Senate committee substitute bill.

☐ With an unfavorable report.

☐ With recommendation that the House concur.

☐ With recommendation that the House do not concur.

☐ With recommendation that the House do not concur; request conferees.

☐ With recommendation that the House concur; committee believes bill to be material.

☐ With an unfavorable report, with a Minority Report attached.

☐ Without prejudice.

☐ With an indefinite postponement report.

☐ With an indefinite postponement report, with a Minority Report attached.

☐ With recommendation that it be adopted. (HOUSE RESOLUTION ONLY)

03/19/03

VISITOR REGISTRATION SHEET

Science AND Technology

Name of Committee

4-6-05
Date

Date _____

VISITORS: PLEASE SIGN BELOW AND RETURN TO COMMITTEE ASSISTANT

NAME

FIRM OR AGENCY

BEN McLAWHORN	OSC
GREG STOKER	AOC
JENNIFER O'BRIEN	AOC
Doug HARRIS	NC BAR ASSOC
CAROL VIGOR	AOC
Marianne Carruth	Homeschool Education

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

April 20, 2005

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Presentation:

By Oppie Jordan, Chair of e-NC Authority

Bills to be Discussed:

House Bill 830 - e-NC Voting Members/Job Creation Funds
Rep. Tolson

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

April 20, 2005

The House Committee on Science and Technology met on Wednesday, April 20, 2005, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson and Martin, Vice-Chairs; Gulley, Hollo, Jones and Walend.

Representative Miller called the meeting to order. The pages serving the committee were Kayloni Witherspoon from Mecklenburg County sponsored by Speaker Black and Christi Thompson from Wake County sponsored by Representative Capps. James Womack and Frank Prevo were the assigned Sergeant-At-Arms.

Representative Miller permitted Oppie Jordan, Chair of the e-NC Authority, to speak about the organization and elaborate on its function (See Attachment J). The goals of the association are to offer affordable high-speed Internet access in North Carolina particularly in rural areas, and promote job creation. One of the objectives of House Bill 830, e-NC Voting Members/Job Creation Funds, to be discussed today, is allowing all members of the e-NC Board voting rights.

Following the presentation, Representative Jones asked if there were any African-Americans serving on the Board. Ms. Jordan answered yes, Curtis Wynn, the president of North Carolina Roanoke Cooperative in Halifax County, a female African-American represented by the North Carolina Justice, the secretary of Commerce and herself.

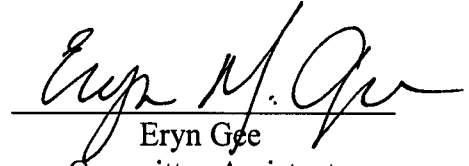
Representative Walend is supportive of the bill, and questions what will occur with funding when it extends beyond the sunset of the organization. Representative Tolson replied that the intention would be to extend the sunset of the Board. Representative Walend suggested extending the sunset by six months. Representative Jones offered that the extension be more than six months or repealed. Representative Walend moves to amend the bill to extend the organization from December 2006 to June 30, 2007, to coincide with funding for fiscal year 2006-2007, and that the amendment be engrossed and the bill be re-referred to the committee on Appropriations. The motion passed.

With there being no further business, the meeting was adjourned.

Respectfully submitted,

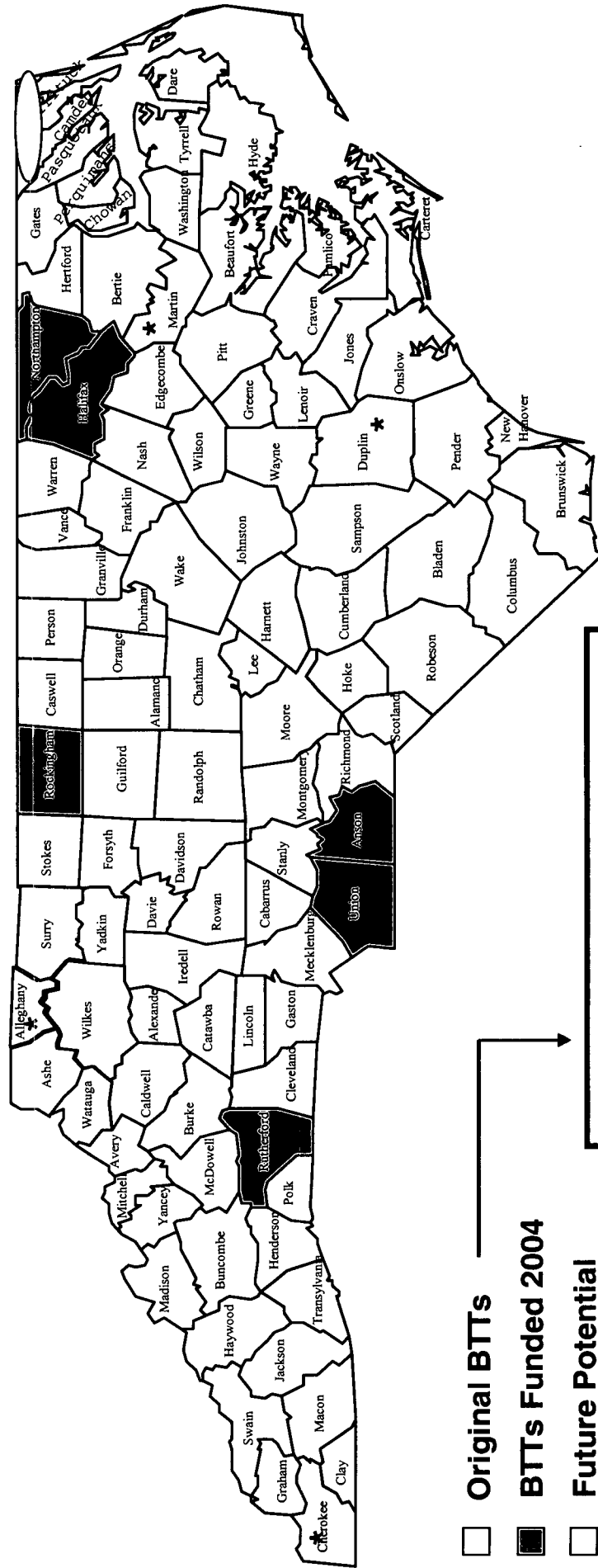
A handwritten signature in dark ink, appearing to read "Rep. Paul Miller", written over a horizontal line.

Representative Paul Miller
Chairman

A handwritten signature in dark ink, appearing to read "Eryn M. Gee", written over a horizontal line.

Eryn Gee
Committee Assistant

e-NC Business and Technology Telecenters



**488 jobs created
since 2001**

**17,753 Technology/Business
Service Clients**



Connecting
North Carolina
to a Better Future

April 14, 2005

<http://www.e-nc.org>

Attachment J

e-NC Business and Technology Telecenters

PERFORMANCE METRICS

2001-2003:

	Jobs Created	Tenants	Public Access Visits	Tech/Bus. Service Clients	\$ Leveraged by e-NC \$
Total 4 BTTs:	199	23	50,977	1080	\$5,710,574

2004:

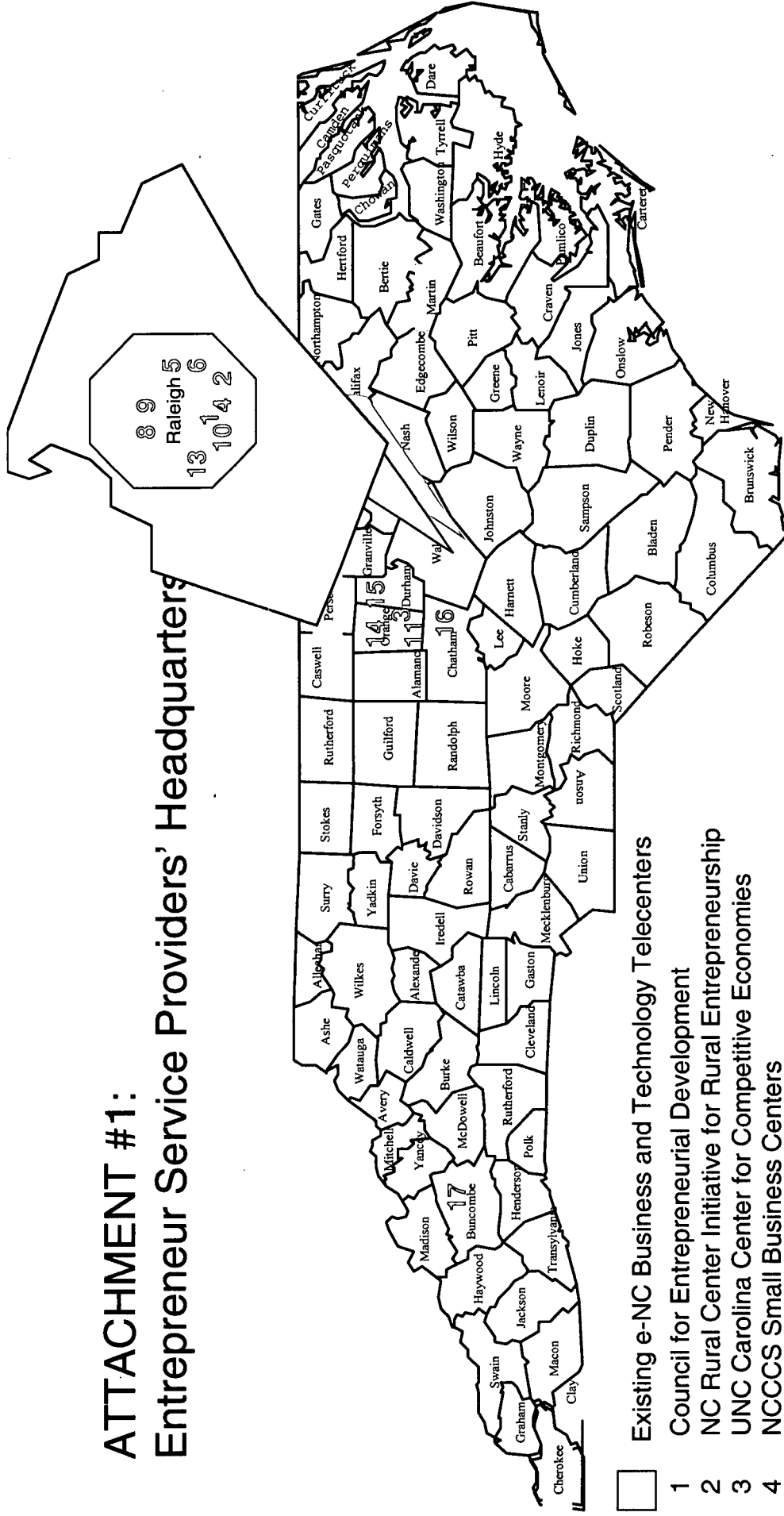
BTT	Jobs Created	Tenants	Public Access Visits	Tech/Bus. Service Clients	\$ Leveraged by e-NC \$
Alleghany	71	14	1,476	79	\$1,561,020
Cherokee	115	0	18,473	727	\$ 257,778
Duplin	15	4	18,704	12	\$ 129,170
Martin	88	15	7,385	15,855	\$1,026,779
Total 4 BTTs:	289	33	46,038	16,673	\$2,974,747

TOTALS 2001-2004

	Jobs Created	Tenants	Public Access Visits	Tech/Bus. Service Clients	\$ Leveraged by e-NC \$
TOTAL:	488	56	97,015	17,753	\$8,685,321

ATTACHMENT #1:

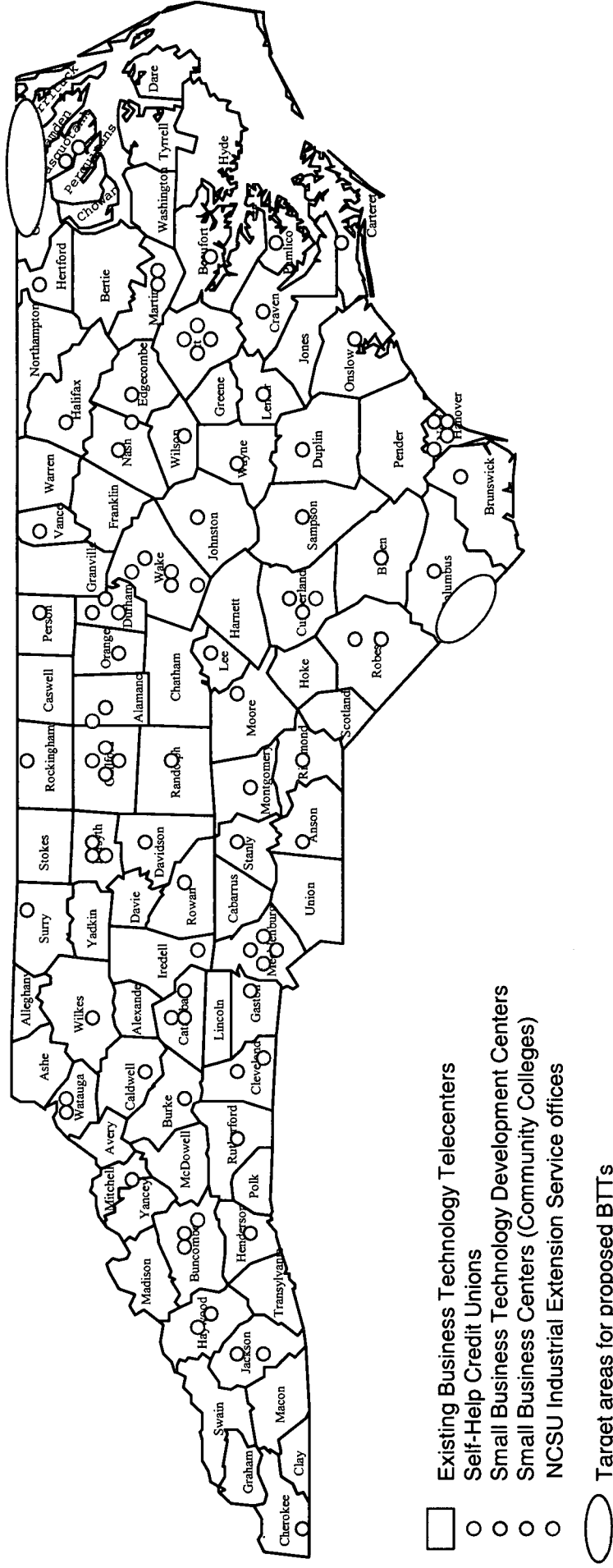
Entrepreneur Service Providers' Headquarters



Existing e-NC Business and Technology Telecenters

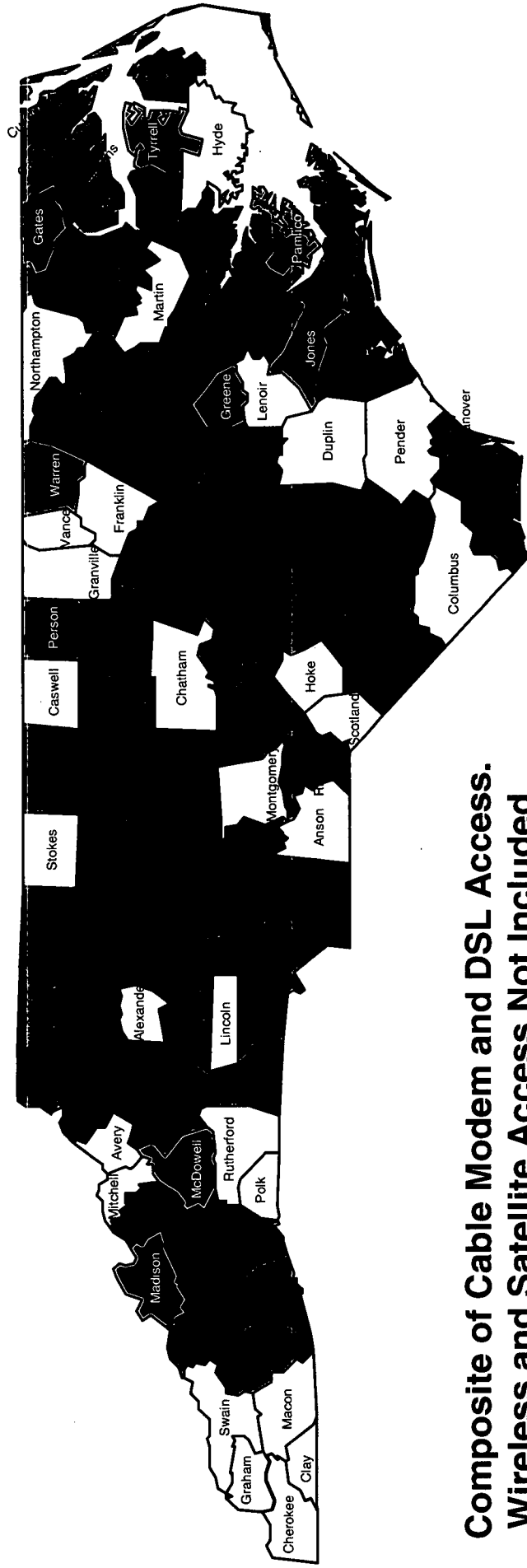
- 1 Council for Entrepreneurial Development
- 2 NC Rural Center Initiative for Rural Entrepreneurship
- 3 UNC Carolina Center for Competitive Economies
- 4 NCCCS Small Business Centers
- 5 NC Rural Center's Capital Access Program
- 6 NC Rural Center's Microenterprise Loan Program
- 7 Self-Help Credit Union – Durham, NC
- 8 North Carolina Indian Economic Development Initiative
- 9 NC Citizens for Business and Industry
- 10 Department of Commerce's 21st Century Communities Program
- 11 UNC Small Business and Technology Development Centers
- 12 CEDS (Comprehensive Economic Development Strategies) Program – Washington DC, EDA
- 13 NCSU Industrial Extension Service/Manufacturing Extension Partnership
- 14 MDC Program for the Rural Carolinas
- 15 NC REAL Enterprises
- 16 Central Carolina Community College's Sustainable Farming Program
- 17 AdvantageWest NC Blue Ridge Entrepreneurial Council

ATTACHMENT #2: Entrepreneur Service Providers' Distributed Offices



82.33% of All NC Households Have Access to High-Speed Internet Service

74.84% of all rural households / 89.91% of all urban households



Composite of Cable Modem and DSL Access.
Wireless and Satellite Access Not Included.

- 0 – 49.9% High-Speed Access
- 50 – 69.9% High-Speed Access
- 70 – 100% High-Speed Access

Only 9 counties have less than 50% access to high-speed Internet service compared with 17 counties in 2003 and 25 counties in 2002.

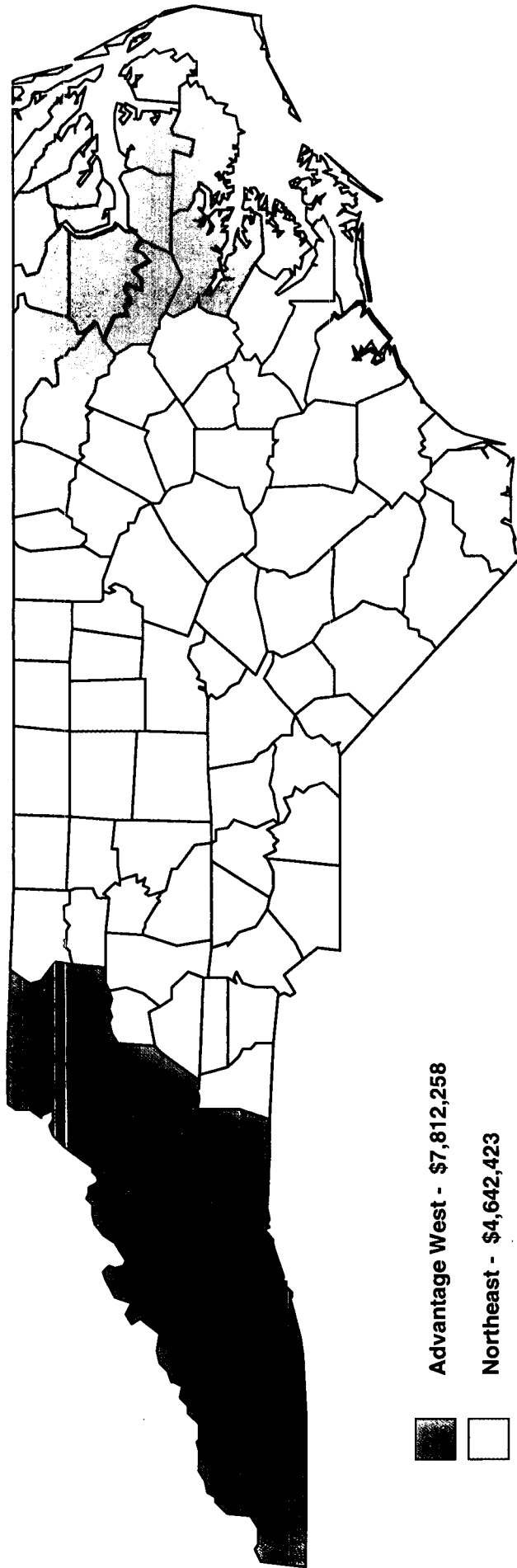
December 31, 2004



Connecting
North Carolina
to a Better Future

<http://www.e-nc.org>

e-NC/RIAA Grant Money Awarded by Economic Development Partnership Regions



	Advantage West - \$7,812,258
	Northeast - \$4,642,423
	Eastern - \$3,775,966
	Charlotte - \$1,089,814
	Research Triangle - \$938,769
	Piedmont Triad - \$760,786
	Southeast - \$688,467

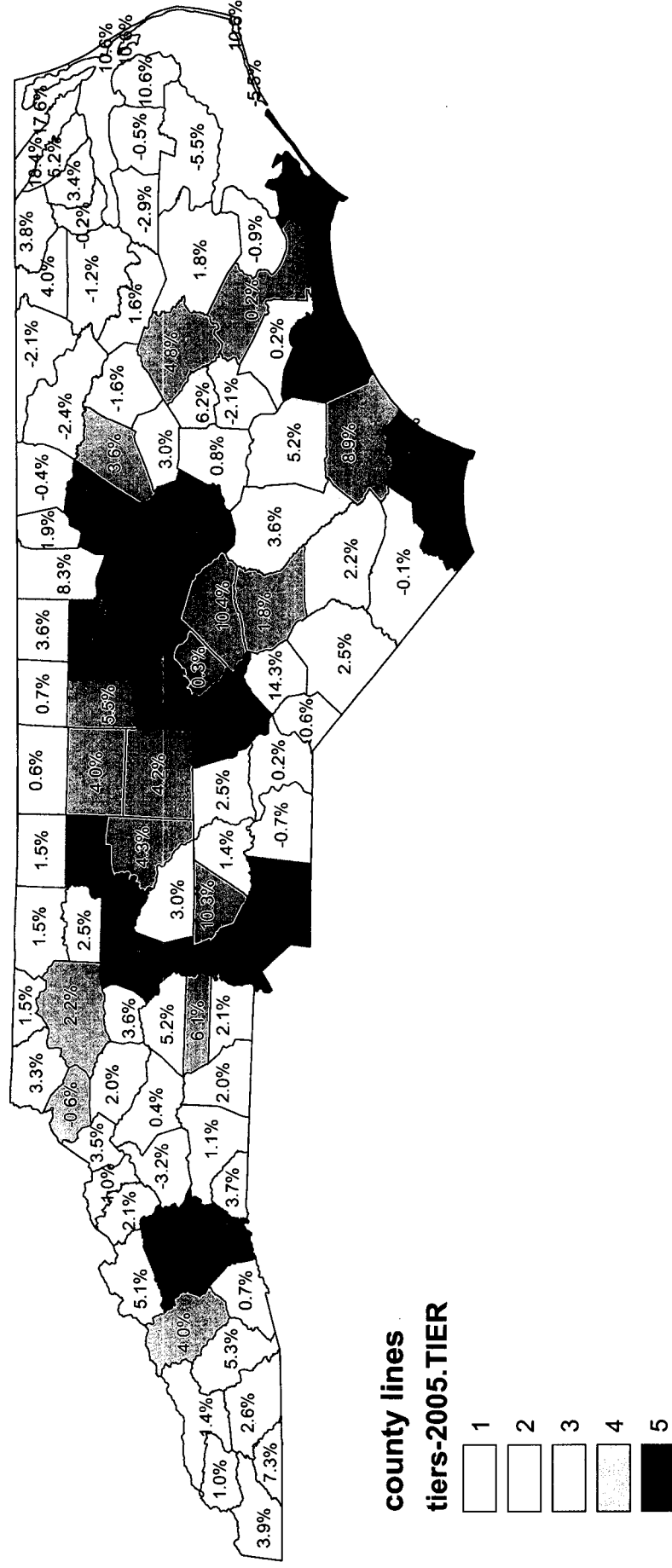
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 DRY>>

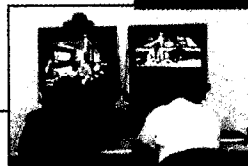
Multi-Regional and Statewide grants not represented - \$4,190,750

Total grant awards to date: \$20,210,483

12/09/04

2005 Tiers with Estimated Population Change 2000-2004





2004 Annual Report

ENC Connecting
North Carolina
to a better future

TIMELINE:

- Aug '03: NC General Assembly creates e-NC Authority
- Jan '04: e-NC commences operation
- Feb '04: First e-NC Commission meeting
- Feb '04: 27 new projects initiated to take local governments online
- July '04: NC General Assembly allocates funds for telecenters
- Sept '04: Telecenter creation grants awarded to Rockingham & Rutherford counties
- Dec '04: Telecenter creation grants awarded to Anson, and Northampton counties

2004 Highlights

On Jan. 1, 2004, the e-NC Authority commenced operations. The group carried on the charge of its predecessor, the NC Rural Internet Access Authority, to increase affordable high-speed Internet access in North Carolina.

Created by the NC General Assembly, the e-NC Authority immediately organized itself and began educating stakeholders. The group created and/or assumed oversight of dozens of technology infrastructure and education projects across North Carolina.

The NC General Assembly tasked e-NC with promoting job creation through technology-based economic development. To meet this charge, e-NC enhanced the state's high-speed infrastructure,

creating additional pathways for modern business transactions and opportunities for workers. The authority also explored new ways of applying technology to business and government processes.

The new authority expanded the e-NC Business & Technology Telecenters program. Telecenters offer advanced resources to small businesses and nonprofits. Eight now exist or are under development across the state.

The NC General Assembly asked the new authority to expand its focus from rural areas to include distressed urban areas. In 2004, e-NC conducted preliminary research on connectivity in distressed urban areas. In 2005, e-NC will initiate a series of

focus groups with a report expected by mid-year.

As well, e-NC was charged with creating regional technology partnerships as a way of promoting overall job growth. The authority is collaborating with a number of NC organizations on worker training and on creating links with information hubs in Georgia, South Carolina, Tennessee, Virginia, and Washington, DC.

The successful completion of these directives depends on local support. In 2004, the e-NC Authority also continued financial support of its grassroots e-communities program, which involves citizens in bringing high-speed Internet services to their areas.

e-NC Business & Technology Telecenters

Located in the most economically distressed parts of the state, e-NC Business & Technology Telecenters provide entrepreneurs, small businesses, local governments and community organizations with the most current technology and business services.

"Creating jobs in our most distressed areas is the work of the e-NC telecenters," said e-NC Chair Oppie N. Jordan.

In 2004, the e-NC Authority utilized funds contributed by the NC General Assembly to provide grants for the creation of new telecenters, which will be located in Anson/ Union, Northampton/ Halifax, Rockingham and Rutherford counties.

These new telecenters join the four existing ones in Alleghany, Cherokee, Duplin and Martin counties. During

2004, these four existing telecenters created 289 jobs. Since their inceptions, they have created 488 jobs overall.

In 2004, the four existing telecenters provided technology and business services to 16,673 clients, and housed 33 companies which benefited from high-speed networks.

The fee-based services provided by the existing telecenters enabled them to provide free, on-site Internet access to their communities. By fall 2004, they had served a combined total of 46,038 local patrons.



Blue Ridge Business Development Center in Alleghany County

2005 GOALS

Increase High-speed Internet Access and Infrastructure

With the support of telecommunications companies, the e-NC Authority continues to identify areas still in need of affordable high-speed Internet services.

The authority ranks counties' access in its annual *100 County Report*, which often provides the impetus for local change.

Creating jobs

in our most

distressed

areas is the

work of the

e-NC Business

& Technology

Telecenters.

- Oppie Jordan

Chair, e-NC Authority

e-NC Business & Technology Telecenters

With eight telecenters in existence or on the way, this dynamic program continues to assist local entrepreneurs and nonprofits in the state's most distressed areas by providing them with up-to-date business and technology services.

In 2005, e-NC will seek funds to create two additional telecenters.

Due to the program's success, the e-NC Authority has been able to step down its financial support of individual telecenters each year.

The e-NC Authority currently is designing a telecenter certification process that will assist other organizations in North Carolina and across the country with replicating the program.

E-communities

Launched in 2001, the e-communities program is an outreach effort to galvanize local support for and

This popular public Internet access site is located in the Caswell Senior Center.

involvement in bringing high-speed Internet access and training to all areas of the state.

For the first three years, e-NC provided training and funding to help counties document and address technology issues in their area. Local "e-champions" led technology needs assessments and planning efforts. Some areas needed infrastructure or classes. Others needed a public Internet access site where citizens could check e-mail and work on computers for free.

Now in the second phase of the program, e-NC is working to provide additional technological training to local communities. The e-NC Authority also will help e-champions learn about fundraising so they can support efforts on their own.

LEG-UP for Public Services

In early 2003, e-NC kicked off the Local E-government Utilization Program or LEG-UP. The program is designed to improve the delivery of public services.

By 2004, 55 LEG-UP counties and municipalities had joined the program. Many created a municipal Web site for the first time, constructing a modern face for their community. All received training, equipment and funds to bring transactional e-government services to local citizens and businesses. Ser-



Terry Stroud of Southern Pipeline & Utilities Inc. and Ken Rossen of e-Polk Inc. hang cable funded by e-NC from telephone poles in Columbus, NC.

vices include online utility billing and bill-pay, access to various permits and applications, and admittance to title and deed records, as well as other customized applications.

Cross-borders Initiative

The e-NC Authority has begun to work in North Carolina's border counties to assist them with starting new companies and receiving high-speed services. Starting a new business in a border town carries additional complications and expenses that often preclude small businesses from operating in neighboring states, even when customers for their services can be found in those areas.

By partnering with other states on technology infrastructure, e-NC hopes to ease some of the barriers to cross-border commerce, create additional jobs, and increase access to potential customers for NC small businesses.



2004 Financial Statement

e-NC Authority Statement of Financial Position December 31, 2004

Assets:	
Cash and cash equivalents	\$ 4,698,517
Accounts receivable	117,674
Prepaid expenses and other assets	34,489
Total assets	\$ 4,850,680
Liabilities and net assets:	
Liabilities:	
Accounts payable	\$ 57,089
Accrued leave	33,741
Deferred revenue	4,729,849
Total liabilities	4,820,679
Net assets:	
Unrestricted	30,000
Total net assets	30,000
Total liabilities and net assets:	\$ 4,850,679

Viola Johnson (foreground) joins others in Perquimans County for a course on Internet literacy.



e-NC Authority Statement of Activities Year Ended December 31, 2004

Revenues:	
Contract revenue recognized	\$ 5,311,584
Federal grant funding	177,727
Foundation grant funding	30,000
Interest Income	16,102
Other Income	25,870
Total revenues	5,561,283
Expenses:	
Programs:	
Grant programs	3,997,735
Other	537,716
	4,535,451
Management and general	995,832
Total expenses	5,531,283
Change in net assets	30,000
Net Assets:	
Beginning	-
Ending	\$ 30,000

Contributors

In 2004, e-NC received financial support from the NC General Assembly, US Department of Commerce, MCNC, Golden LEAF Foundation and Z. Smith Reynolds Foundation.

The NC General Assembly was responsible for e-NC and the NC Rural Economic Development Center receiving \$1,992,500 for technology purposes, including the establishment of four additional e-NC Business & Technology Telecenters.

The US Department of Commerce continued its support of the Local E-government Utilization Pro-

gram or LEG-UP. Overall, the multi-year grant is for \$700,000.

Nonprofit MCNC provided e-NC with \$6.1 million for technology-based economic development efforts and the enhancement of the state's high-speed Internet infrastructure.

Golden LEAF awarded e-NC \$2 million for the APEC Eastern North Carolina Technology Initiative, an e-learning project involving 50 schools east of I-95.

Golden LEAF also awarded e-NC \$150,000 for Technology-Enabled Entrepreneurship - Opportunities Fueling

the Future or TEE-OFF. In partnership with NC REAL and the Blue Ridge Business Development Center in Alleghany County, e-NC will create a model for taking telecenters to the next level in their development as regional technology resources.

Z. Smith Reynolds awarded e-NC \$30,000 to identify and address impediments to economic development that are specific to the distressed counties at the geographic border of North Carolina and neighboring states, such as South Carolina and Virginia.

These volunteers are building PineLink, a nonprofit wireless Internet service provider serving Pamlico County.



A Message from the Chair



Oppie N. Jordan,
e-NC Authority Chair

its predecessor, the Rural Internet Access Authority. Through e-NC, North Carolina is connecting to the Internet and a better future.

The e-NC Authority has enhanced North Carolina's technology infrastructure, enabling modern commerce to traverse our Internet highways. In 2004, e-NC funded more than a dozen infrastructure projects across the state — filling gaps between networks and making our infrastructure more robust.

This expanded infrastructure is necessary for and increasingly vital to the next wave of commerce: grid computing. Grid computing, also called utility computing, allows many computers in disparate locations to link together, thereby forming a giant computer capable of solving problems by aggregating computer processing power.

North Carolina has established itself as a national leader in this area. To maintain this position, we must continue to expand and improve our technology infrastructure statewide.

The e-NC Authority has created a national model for business and technology telecenters. These technology hubs bring vital instruction and resources to our state's entrepreneurs and small businesses, the backbone of North Carolina's commerce.

In 2005, the e-NC Authority pledges to continue its push for technology-based economic development, and to enhancing the broadband Internet infrastructure necessary for its success. We encourage you to join us in our quest for innovation, improvement and job creation by championing the availability and use of high-speed Internet services.

Join us in our quest for innovation, improvement and job creation by championing the availability and use of high-speed Internet services.

When the new e-NC Authority began work in January 2004, it carried on a North Carolina tradition: the quest for innovation and improvement.

I am proud to be from a state filled with tenacious, hardworking people. Knocked by the economic downturn, we brushed ourselves off and looked for the next opportunity.

North Carolina's commitment to creating jobs and that next opportunity can be seen in the work of the e-NC Authority and

Staff

Jane Smith Patterson
Executive Director

Angie Bailey
Senior Associate, Programs & Operations

Charlie Pittman
Senior Director, Telecommunications

Donna Sullivan
Senior Associate, Programs & Outreach

Deborah Watts
Senior Director, Research & Development

Joanna Wright
Senior Director, Programs & Planning

Commission Members

Oppie N. Jordan, Chair
Rocky Mount

George Bakolia
Raleigh

John Bardo
Cullowhee

Herb Crenshaw
Raleigh

Jim Fain
Raleigh

Craig Fowler
Hickory

Billy Ray Hall
Raleigh

Jon R. Hamm
Wake Forest

Lewis C. Hoggard
Windsor

Joseph Hurd
Shelby

Lee Mandell
Raleigh

Bo McNeill
Lake Waccamaw

Rhonda Raney
Raleigh

Rebecca Troutman
Raleigh

Curtis Wynn
Rich Square

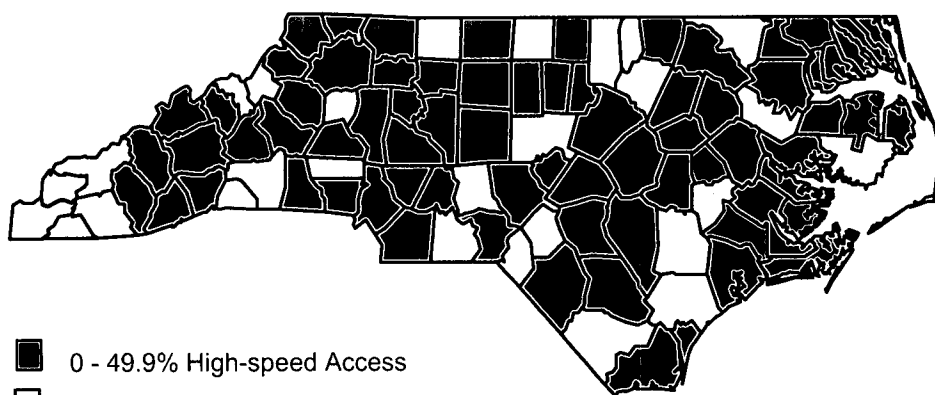


Commission and staff thank Senator Walter Dalton and Representative Joe Tolson (third and fourth from left) for their support of e-NC.

Households with High-speed Internet Access

Each year, the e-NC Authority conducts a *100 County Report of High-speed Internet Access in North Carolina*. The report ranks each county in terms of the percentage of households with access to high-speed Internet services. The full 2004 report will be released in May 2005.

The map below documents the percent of North Carolina households with access to high-speed Internet services as of December 31, 2004. The map is a composite of cable modem and DSL access, but does not include wireless and satellite communications.



- 0 - 49.9% High-speed Access
- 50 - 69.9% High-speed Access
- 70 - 100% High-speed Access

By the end of 2004:

- 82.33% of all households had access to high-speed Internet services vs. 80.11% in 2003.
- Only 9 counties have less than 50% high-speed access vs. 17 counties with less than 50% access in 2003.
- 74.89% of all rural households and 89.91% of all urban households have access to high-speed Internet services vs. 71.94% of rural and 88.97% of urban households in 2003.



The e-NC Authority

The e-NC Authority is housed by legislative mandate in the NC Rural Economic Development Center.

4021 Carya Drive
Raleigh, NC 27610
Toll Free: 866.627.8725
Phone: 919.250.4314
Fax: 919.250.4325
E-mail: info@e-nc.org

www.e-nc.org

About the e-NC Authority:

Devoted to connecting people to the Internet and a better future, the e-NC Authority works with all 100 of North Carolina's counties with a focus on rural and distressed urban areas.

The authority is dedicated to increasing prosperity for North Carolina citizens and businesses by creating jobs through technology-based economic development, which requires a broadband Internet platform for success.

The e-NC Authority builds on the work of its predecessor, the Rural Internet Access Authority, which was created by the NC General Assembly in 2000. Operating statewide from a base in Raleigh, N.C., the e-NC Authority is supported through contributions from public and private entities.

Chair: Oppie N. Jordan

Executive Director: Jane Smith Patterson

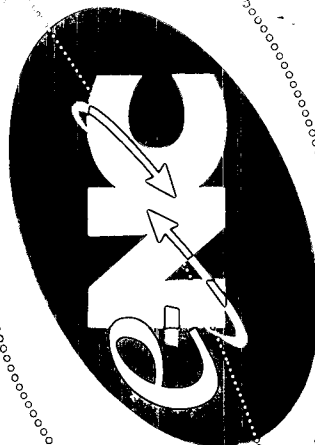
About the e-NC Authority

Devoted to connecting people to the Internet and a better future, the e-NC Authority works with all 100 of North Carolina's counties with a focus on rural and distressed urban areas. The e-NC Authority is dedicated to increasing prosperity for North Carolina citizens and businesses through technology-led economic development, which requires an Internet platform for success. The authority builds on the work of its predecessor, the Rural Internet Access Authority, which was created by the N.C. General Assembly in 2000. Operating statewide from a base in Raleigh, N.C., e-NC is supported through contributions from public and private entities. For more information, visit www.e-nc.org or call 1-866-627-6725.

Author: Dr. Ed Feser, University of Illinois-Urbana
Special Note: Research Data collected by Dr. Kenneth Wilson of East Carolina University-Greenville, NC
Dr. Wilson oversaw all data collection and has authored reports on the various polls.
(Report can be accessed at www.e-nc.org) Questions: Please address these to j.patterson@e-nc.org.

North Carolinians Online

Trends from the
Citizen Surveys
1999-2004



The Internet may be increasingly ubiquitous in commerce, education, health care, and government, but it is not universally accessible. Tapping into it requires capable technology (hardware and software), an affordable connection with necessary bandwidth, and the know-how to utilize web content and services. Since January 2001, e-NC has worked with state and local public- and private sector partners to ensure that as many North Carolina households and businesses as possible—in all regions and at all levels of income—have the technologies, infrastructure and skills they need to go online.

As part of that effort, e-NC closely monitors trends in online connectivity, broadband infrastructure deployment, computer technology usage and digital literacy. This report, using data from extensive household telephone surveys conducted by East Carolina University in 1999, 2002 and 2004, shows that North Carolinians are using the Internet in record numbers, that location is no longer a significant barrier to basic online connectivity, and that non-metro home Internet users in North Carolina are switching to broadband at a pace exceeding the national trend. As infrastructure and services continue to expand and improve, insufficient income and basic digital literacy are emerging as the chief remaining barriers to widespread Internet adoption and use.

The following are specific findings from the report:

- * **Gap in household computer ownership between whites and African Americans has narrowed substantially in last five years.** In 1999, there was a 30 percentage point difference in home computer ownership in African American and white households (31 versus 61 percent). By early 2004, the gap had narrowed to 5 percentage points (63 versus 68 percent).
- * **Overall Internet penetration in North Carolina exceeds the national average.** In early 2004, 71 percent of North Carolina adults reported using the Internet at home, work or elsewhere, compared to 64 percent of adults nationwide. The penetration rate was 65 percent in North Carolina in mid-2002, compared to 58 percent nationwide.
- * **Internet penetration in non-metro North Carolina also exceeds the national average.** Approximately 66 percent of adults in non-metro North Carolina counties were Internet users in early 2004, compared to 55 percent of non-metro adults nationwide.
- * **Home Internet use has increased dramatically in North Carolina in the last five years, with the fastest increases in rural (and non-metro) counties.** In early 2004, 58 percent of all North Carolina adults reported using dialup or broadband service from home, up from 36 percent in 1999. The household Internet penetration rate increased fastest in 85 counties designated as rural—from 27 to 51 percent, a 24 percentage point gain. The increase in 60 non-metro counties was 29 percentage points, from 23 to 52 percent.

* **In most of North Carolina, location is no longer a significant barrier to basic home Internet access.** Eighty-nine percent of North Carolina households that own a computer now access the Internet from home with at least a dial-up connection, a share that is nearly identical in rural and urban counties (and metro and non-metro counties). In early 2004, less than 2 percent of non-metro home Internet users reported making a long distance call to connect to an Internet Service Provider, down from 5 percent in mid-2002. It should be noted that local, non-toll access is available across the entire state now.

* **Home use of broadband is growing rapidly in North Carolina, in parallel with national trends.** In mid-2002, 19 percent of home Internet users in North Carolina utilized a broadband connection (e.g., DSL, cable, or ISDN), compared to 22 percent nationwide. By early 2004, 40 percent of North Carolina home Internet users had a broadband connection, compared to 39 percent nationwide.

* **Non-metro North Carolina is going "high speed" faster than the rest of non-metro U.S.** In early 2004, 32 percent of home Internet users in non-metro counties of North Carolina were linked to the Internet via a broadband connection, up from 15 percent in mid-2002. Comparable U.S. non-metro household broadband take rates in 2002 and 2004 were 11 and 25 percent, respectively, according to the Pew Internet & American Life Project.

* **Among households with computers that do not have home Internet access, the principal reasons are lack of need and cost.** In 2004, 67 percent of adults with a home computer and no home Internet access indicated that the reason is that they do not have a significant need for home Internet. Approximately 27 percent of households with home computers and no Internet service cited "cost/too expensive" as the reason. These figures changed little between 2002 and 2004.

* **Demographics increasingly account for the remaining gap between the average urban and rural home Internet take rates (62 versus 51 percent).** North Carolina home Internet users are, on the whole, younger, more educated, and wealthier than non-Internet users. A predominance of older, less educated, and lower income populations in rural counties is the principle factor reducing average rural area take rates.

Introduction

Even as the Internet becomes ever more integrated into the core functions of government, education, health and business, troubling barriers to ubiquitous access and gaps in the ability to use the Internet remains. Since January 2001, e-NC has worked with state and local public- and private sector partners to ensure that as many North Carolina households and businesses as possible—in all regions and at all levels of income—have the technologies, infrastructure and skills they need to go online.

As part of that effort, e-NC closely monitors trends in online connectivity, broadband infrastructure deployment, computer technology usage and digital literacy. This report highlights trends revealed in three household telephone surveys conducted by Dr. Kenneth Wilson and the East Carolina University Survey Research Group in 1999, 2002 and 2004. The report's focus is on home Internet access and broadband use, particularly between urban and rural areas.¹ Where possible, North Carolina data are compared to national figures assembled by the Pew Internet & American Life Project.²

About the Citizen Survey Data

In 1999, a total of 522 adults in households randomly sampled from throughout the state completed an extensive telephone interview that sought information on perceptions of the role of science and technology in the North Carolina economy. The survey, which was sponsored by the North Carolina Board of Science and Technology, also included several questions on computer and Internet use.³ Two subsequent surveys, commissioned by e-NC (formerly the Rural Internet Access Authority) and completed in June 2002 and January/February 2004, focused more specifically on the use by adults of computers and the Internet at home, work, and other locations. The 2002 and 2004 surveys yielded 12,904 and 1,197 completed interviews, respectively. The 2002 sample was considerably larger in order to permit the valid calculation of detailed results for all 100 North Carolina counties.

Household telephone numbers were obtained from Survey Sampling, Inc. Unlike many other surveys that are limited to English-speaking respondents, a significant number of the interviews were conducted in Spanish using a bi-lingual interviewer. To permit generalization to the entire state, the data are weighted by the county population and the respondent's level of education.⁴

Business Internet Use and Service Deployments

e-NC also tracks Internet usage trends among businesses and the deployment of Internet access services by cable, telephone, satellite and wireless companies. A survey sponsored by e-NC and conducted by the Appalachian Regional Development Institute in early 2003 found that 63 percent of North Carolina businesses are connected to the Internet. Slightly over half of the connected businesses utilize a broadband link. Broadband usage rates are lower for small and rural firms. See *Statewide Survey of Business Internet Usage in North Carolina* by J. Paul Combs and Chilton Rogers (Boone, NC: Appalachian Regional Development Institute, Appalachian State University, June 2003), available online at <http://www.e-nc.org/pdf/statewidesurveyfinal.pdf>.

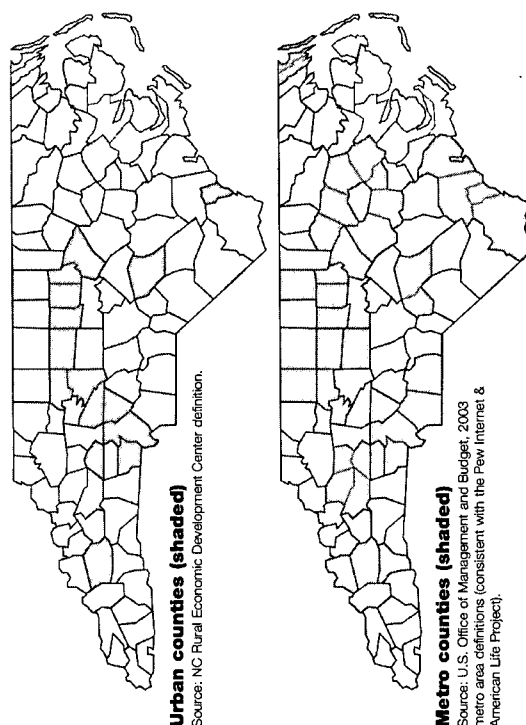
An e-NC study of Internet access providers found that 82 percent of North Carolina households had the ability to access high-speed Internet service — defined as a transmission speed of at least 384 kilobits per second in both directions — by the end of 2004 up from 75 percent of households at the end of 2002. See *High-Speed Internet Access in North Carolina* by Charles G. Pittman (Raleigh, NC: Rural Internet Access Authority, May 2005), available online at <http://www.e-nc.org/pdf/hsiaexecsummary.pdf>.

Differences in overall and rural trends are reported two ways in this report:

- * The first classifies a survey respondent as *rural* if he or she resides in one of 85 rural counties designated by the North Carolina Rural Economic Development Center (see the top panel of Figure 1);
- * The second classifies a respondent as *non-metro* if he or she resides in one of 60 counties defined as non-metropolitan by the U.S. Office of Management and Budget (OMB).⁵ In June 2003, OMB released metropolitan statistical area definitions based on Census 2000 data that identified 40 North Carolina counties as part of metropolitan areas. The non-metro figures are directly comparable to national level survey data released by the Pew Internet & American Life Project, which defines "rural" America as all non-metropolitan counties.

Figure 1

County rural/non-metro designations



Findings

The following sections highlight major findings from an analysis of trends reported in the three surveys and compared, where possible, to national trends. The focus is on computer use, Internet use, and differences in rural and urban areas.

Personal Computer Ownership Increasing & Some Gaps Narrowing

Computer ownership is a basic part of entry to the Internet. An estimated 65 percent of North Carolina adults had a personal computer in the home in the beginning of 2004, up from 53 percent in 1999 (see Table 1). Gains were particularly strong among African Americans (from 31 to 63 percent) and those with children in the home (from 64 to 81 percent).

Table 1

Home computer penetration demographics

Percent of NC adults with a computer in the home

	1999	2002	2004
Overall	53	60	65
Gender			
Men	59	65	68
Women	53	57	63
Age			
18-27	55	68	76
28-39	60	71	79
40-49	60	72	70
50-58	66	58	73
59-68	44	43	50
69+	24	28	35
Race and ethnicity			
White	61	65	68
African American	31	44	63
Native American	n/a	50	39
Hispanic	n/a	37	31
Other	n/a	65	74
Household income			
Less than \$15,000	35	34	31
\$15,000 to \$24,999	25	43	43
\$25,000 to \$29,999	37	60	64
\$30,000 to \$49,999	43	71	78
\$50,000 to \$74,999	49	79	88
\$75,000 to \$99,999	50	86	92
\$100,000 and above	66	91	97
Educational attainment			
Less than high school	20	33	36
High school graduate	47	60	65
Two year degree	65	75	78
Four year degree	76	84	87
Graduate degree	78	87	93
Children living in household			
No	49	54	55
Yes	64	69	81

Source: Citizen surveys in 1999, 2002 and 2004. n/a= data not available in given year.

North Carolina Internet Use Exceeding National Average

A comparison of North Carolina with Pew survey data for the U.S. suggests that North Carolinians are using the Internet at rates above the national average.⁶ In early 2004 roughly 71 percent of North Carolina adults reported using the Internet at home, work, or a third location (see Table 2). The Pew Internet & American Life project estimated the national Internet penetration rate among adults at 64 percent in the same period, with a margin of error of 2 percentage points.⁷ Non-metro North Carolina adults are also going online at rates above the national average: at 66 versus 55 percent.

Table 2

Internet Use

Percent of NC adults that use the Internet from home, work or elsewhere

	2002		2004	
	NC	US	NC	US
Overall	65	58	71	64
Urban	69	--	73	--
Rural (85 counties)	60	--	68	--
Urban/rural difference	9	--	5	--
Metro	69	--	73	--
Non-metro (60 counties)	59	49	66	55
Metro/non-metro difference	10	--	7	--

Source: Citizen surveys in 2002 and 2004 (NC) and Pew Internet & American Life Project (US). -- = data not available. Urban/rural: Based on North Carolina Rural Economic Development Center definition of rural counties. Metro/non-metro: Based on 2003 metropolitan statistical area definitions (US Office of Management and Budget).

The gap between non-metro and metro Internet use among adults in North Carolina narrowed slightly between 2002 and 2004 from 10 to 7 percentage points. The rural-urban gap—where 85 counties are defined as rural and 15 counties as urban—narrowed from 9 to 5 percentage points over the period.

Findings — continued

Home Internet Use Increasing Rapidly

In early 2004, 59 percent of all North Carolina adults reported using dialup or broadband service from home, up from 36 percent in 1999 (see Table 3). The household Internet penetration rate increased fastest in non-metro counties from 23 to 52 percent, a 29 percentage point gain.

Table 3

Home Internet penetration		Of all NC adults				Of adults w/computers			
Percent with home Internet access		1999	2002	2004		1999	2002	2004	
Overall		36	52	58		68	87	89	
Urban		44	57	63		74	89	90	
Rural (85 counties)		27	46	51		56	83	89	
Urban/rural difference		17	11	12		18	6	1	
Metro		37	56	60		72	89	90	
Non-metro (60 counties)		23	45	52		58	82	87	
Metro/non-metro difference		14	11	8		14	7	3	

Source: Citizen surveys in 1999, 2002 and 2004. n/a=not available in given year. Urban/rural: Based on North Carolina Rural Economic Development Center definition of rural counties. Metro/non-metro: Based on 2003 metropolitan statistical area definitions (US Office of Management and Budget).

The three rightmost columns of Table 4 report home Internet penetration rates for households with home computers, illustrating the near ubiquity of home Internet access for some demographic categories (adults in households earning over \$75,000 annually and college-educated adults). Just under 90 percent of North Carolina adults that own a personal computer now access the Internet from home with at least a dial-up connection. That share is nearly identical in metro/non-metro and rural/urban counties, indicating that location is no longer a significant barrier to basic home Internet access in most of North Carolina.

Table 4 shows that that home Internet users tend to be younger, more educated, and/or wealthier than non-home Internet users. However, differences across demographic categories are narrowing in some instances. Gains in home Internet use over the last five years were particularly strong among adults aged 50 to 68 and African Americans, for example, narrowing differences across age and race categories.

Table 4

Home Internet penetration demographics

Percent with home Internet access

	Of all NC adults				Of adults w/computers			
	1999	2002	2004		1999	2002	2004	
Overall	36	52	58		68	87	89	
Gender								
Men	41	58	61		68	88	90	
Women	35	49	55		67	86	89	
Age								
18-27	40	59	65		72	87	85	
28-39	40	63	72		69	89	91	
40-49	42	64	67		70	88	96	
50-58	49	50	65		74	87	89	
59-68	23	34	43		52	80	84	
69+	12	24	29		50	85	81	
Race and ethnicity								
White	43	57	62		69	88	91	
African American	19	34	49		61	70	78	
Native American	n/a	37	38		n/a	75	100	
Hispanic	n/a	35	22		n/a	95	74	
Other	n/a	57	67		n/a	89	90	
Household income								
Less than \$15,000	9	25	25		29	72	82	
\$15,000 to \$24,999	4	33	32		17	78	76	
\$25,000 to \$29,999	27	52	55		73	87	87	
\$30,000 to \$49,999	23	62	68		53	88	87	
\$50,000 to \$74,999	34	73	83		70	93	94	
\$75,000 to \$99,999	31	81	87		62	94	95	
\$100,000 and above	43	85	94		64	94	98	
Educational attainment								
Less than high school	2	26	28		8	79	78	
High school graduate	30	51	57		64	85	88	
Two year degree	45	65	69		67	86	89	
Four year degree	58	78	83		76	92	96	
Graduate degree	64	83	88		82	95	95	
Children living in household								
No	43	61	74		70	88	92	
Yes	34	46	48		66	85	87	

Source: Citizen surveys in 1999, 2002 and 2004. n/a=not available in given year.

A Few Conclusions

Home Broadband Use Up Significantly, Rural Growth Especially Strong

Home use of broadband is growing rapidly in North Carolina, in parallel with national trends. In mid-2002, 19 percent of home Internet users in North Carolina utilized a broadband connection (e.g., DSL, cable, or ISDN), compared to 22 percent nationwide (see Table 5). By early 2004, 40 percent of North Carolina home Internet users had a broadband connection, compared to 39 percent nationwide. The deployment of digital subscriber line (DSL) and cable modem services account for nearly all of the increase.

Table 5

Home Internet connection type	2002		2004	
	NC	US	NC	US
Overall				
Dial-up	73	78	57	61
Broadband	19	22	40	39
DSL	5	--	15	--
Cable	14	--	24	--
Other	0	--	1	--
Other/don't know	8	1	3	0
Non-metro (60 counties)				
Dial-up	75	89	62	75
Broadband	15	11	32	25
DSL	4	--	16	--
Cable	11	--	16	--
Other	0	--	0	--
Other/don't know	10	78	6	0

Source: NC citizen surveys in June 2002 and January/February 2004. US data from the Pew Internet & American Life Project (surveys conducted in March-May 2002 and February 2004; margin of error ± 2 percent). Numbers do not always sum to 100 due to rounding. -- Indicates comparable data not available. Non-metro designation is based on 2003 metropolitan statistical area definitions (US Office of Management and Budget).

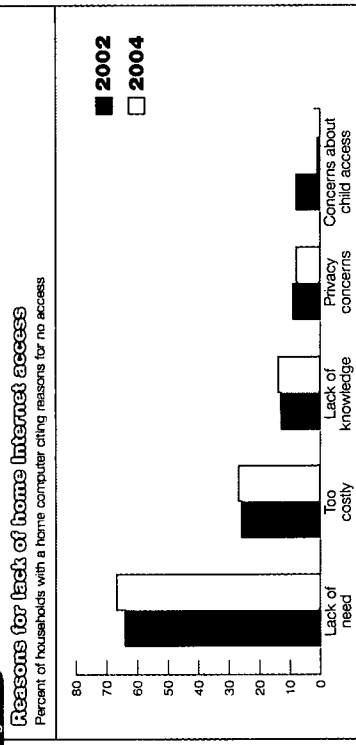
Non-metro North Carolina is going "high speed" faster than the rest of non-metro U.S. In early 2004, 32 percent of home Internet users in rural counties of North Carolina were linked to the Internet via a broadband connection, up from 15 percent in mid-2002. Comparable U.S. non-metro household broadband take rates in 2002 and 2004 were 11 and 25 percent, respectively, according to data from the Pew Internet & American Life Project.

Need and Cost Cited as Reasons for No Home Internet Access

Why some North Carolina households do not have a home Internet is a question of considerable policy interest. Reasons could include an absence of need for service (lack of demand), unavailability of service (lack of supply), the cost of terminal equipment (e.g., personal computer), lack of knowledge of the technology (digital literacy), or the cost and quality of Internet access services. Of particular focus for e-NC are differences in the cost and quality of Internet services between rural and urban areas.

Controlling for home computer ownership, the principal reason why households do not have home Internet access relates to a perceived lack of need for home Internet. But cost remains a significant barrier as well. In 2004, 11 percent of North Carolina adults with a personal computer in the home reported that they do not have home Internet access. Of those adults, 67 percent indicated that the reason is that they do not have a significant need for it.⁸ Approximately 27 percent of households with computers and no Internet service cited "cost/too expensive" as the reason. These figures changed little between 2002 and 2004 (see Figure 2).

Figure 2



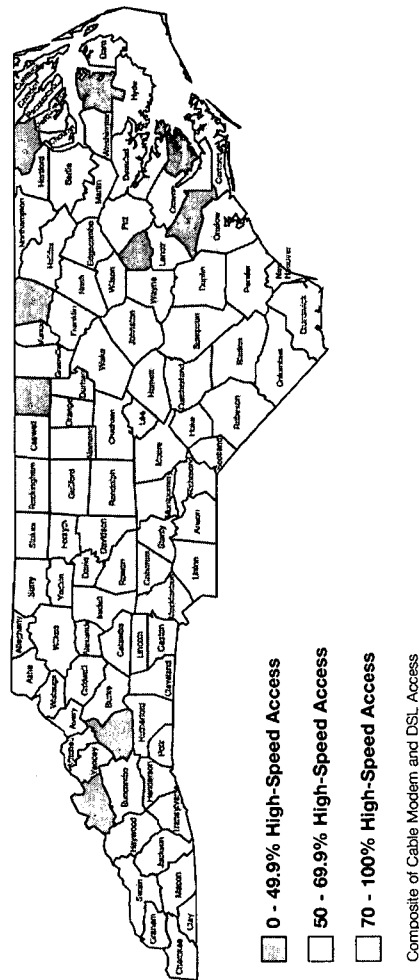
Source: North Carolina household surveys in 2002 and 2004. Note: Respondents could cite more than one reason.

Demographics Increasingly at Root of Rural-Urban Differences in Home Access

In 2002, the only survey year for which the sample size is sufficient for extended analysis, rural households earning \$25,000 or less were somewhat more likely than urban households in the same income category to cite cost as a reason why they have no home Internet access. However, urban households in the middle income category—those earning between \$25,000 and \$75,000—were more likely than rural households in the same category to cite cost as a barrier. These mixed findings suggest that rural/urban differences in the price of home access service are probably narrowing. That is to be expected as the number of access providers proliferate throughout the state and infrastructure improves as the result of private sector deployments and the activities of e-NC.

As the availability of Internet access improves, demographic differences increasingly account for the remaining gap between the average (overall) urban and rural home Internet take rates (62 versus 51 percent). North Carolina home Internet users are, on the whole, younger, more educated, and wealthier than non-Internet users. A predominance of older, less educated, and lower income populations in rural counties is the principle factor reducing average rural area take rates. More generally, improving information technology infrastructure means that the challenge of getting all North Carolinians connected will begin to shift more and more from an infrastructure supply problem to one of adequate income (to purchase a home computer and Internet access) and digital literacy.

Percentage of Households with Access to High-Speed Internet Service - 2004



- ¹ A more extensive summary of data in the three surveys is available in *Tracking Home Computers and Internet Access in North Carolina: 1999 to 2004* by Kenneth Wilson (Raleigh, NC: e-NC, June 2004).
- ² For information on the Pew Internet & American Life Project go to <http://www.pewinternet.org>.
- ³ The full report detailing the findings of the 1999 survey is available at http://www.e-nc.org/citizen_survey.asp.
- ⁴ All survey data are available by request from Dr. Kenneth Wilson, Department of Sociology, East Carolina University, Greenville, NC 27858, wilsonk@mail.ecu.edu.
- ⁵ *Rural Areas and the Internet* by Peter Bell, Pavani Reddy, and Lee Rainie (Washington, DC: Pew Internet & American Life Project, February 2004).
- ⁶ Comparisons of household Internet survey data have to be made carefully. Questionnaires may structure questions slightly differently and fairly small differences in survey dates can yield significant differences in trends, given the rapid rate at which computer and Internet use is growing. This document emphasizes only substantial differences in NC and Pew reported trends for similar survey dates and questions. Future e-NC citizen surveys should be designed to permit a broader range of comparisons with Pew's national surveys.
- ⁷ Pew trends cited in this report are from the following documents: *Rural Areas and the Internet*, *ibid*; *Broadband Adoption in Rural America* by John B. Horrigan, a presentation to the Rural Broadband Coalition (Washington, DC: Pew Internet & American Life Project, October 27, 2004); and *Trends in Internet Adoption and Use: Comparing Minority Groups* by John B. Horrigan, presentation for OTX Research (Washington, DC: Pew Internet & American Life Project, May 11, 2004).
- ⁸ Note that respondents could select more than one reason why they do not have home Internet access. Respondents could select one of four options related to need: "Can use [the Internet] somewhere else," "Not enough time to use [the Internet at home]," "[home Internet] not useful," and "Just don't need [home Internet access]. The 'lack of need' category in Figure 2 includes respondents which selected any one of those four options. The knowledge category includes respondents who selected either or both of the two following options: "[Internet] not user friendly, too difficult," or "Don't know much about [the Internet]."

FUNDsearch News

Equipment

Shopping List

✓ Air Filtration	✓ Facility Lighting	✓ Partition Walls	✓ Telephone Systems
✓ Business Software	✓ Facility AC & Htg	✓ Playground Equip	✓ Window Coverings
✓ Client Bus	✓ Staff Laptops	✓ Pool Slide	✓ Wheelchairs
✓ Desktop Computers	✓ Library Books	✓ Printers	✓ Wireless Network
✓ Conference Table	✓ Lobby Furniture	✓ Research Lab	✓
✓ Copier	✓ Medical Testing	✓ Security System	✓
✓ Daycare Edu Toys	✓ Office Chairs	✓ Staff Vehicles	✓



Caterpillar Corporate & Foundation

Caterpillar's 2004 profits were up a record 85 percent.

Forbes.com

Caterpillar Corporation primarily supports nonprofits located in communities where Caterpillar has facilities, with an emphasis on their headquarter city, Peoria, IL. They have **nine facilities in North Carolina** as shown in the table below, together with address and phone number.

Keep in mind that corporate giving is bottom up, and facility managers have great influence on corporate grants.

Caterpillar Foundation provides funding and support from a corporate perspective in the following areas:

- Art & Culture
- **Civic and Community**
 - 1. State/National/International Organizations;
 - 2. Organizations in Company Communities;
 - 3. Capital Grants to Selected Organizations.
- **Economic Development**
 - Education
 - Environment
 - Health/Human Svcs
 - Revitalization

Grants

Range: \$100—\$1 Million

Average: \$1,000—\$50,000

Total Giving: \$200 Million

Types of Support

Cash for:

- ⇒ Capital Development—*Can include Equipment*
- ⇒ Operating Support—*Can Include Equipment*
- ⇒ Special Projects—*Can Include Equipment*

In-kind contributions for such activities as:

- ⇒ Surplus Office Equipment
- ⇒ Surplus Office Products
- ⇒ Printing, Photography & Graphic-Design Services.



How to Apply—No Deadlines

1. Complete online application at <http://www.cat.com/cda/layout?m=39201&x=7..>
2. Contact closest facility manager for **both corporate and foundation grant requests**. Seek their support and facilitation of your grant request. Provide hard copy print-out of online application.

Foundation Contact

Caterpillar Foundation / Attn: Grant Review
100 N.E. Adams Street / Peoria, IL 61629-1480
Phone: 309-675-1000

Website

<http://www.cat.com/foundation>

Caterpillar Giving 2002

Foundation	\$ 11,297,890
Company	\$ 1,544,872
Total Contributions 2002	\$13,492,762
Total Cash Contributions	\$ 12,842,762
Total In-Kind Contributions	\$ 650,000

Caterpillar Contacts in NC

Cary , 27511 100 Regency Forest Dr., #300 Phone: 919-465-3426	Morganton , 28655 90 Ceramic Tile Drive Phone: 828-584-1900
Charlotte (Regional HQ), 7621 Little Ave., #202, 28226 Phone: 704-752-1300	New Bern , 28560 7970 US Hwy 70, East Phone: 252-447-5050
Clayton Contact information not available.	Sanford , 27330 5000 Womack Rd. Phone: 919-777-2000
Franklin , 28734 517 Industrial Park Rd. Phone: 828-349-8400	Smithfield , 27577 1526 S. Brightleaf Blvd. Phone: 919-938-5238
Goldsboro Contact information not available.	

Steelcase Fdn

Steelcase, Inc. manufactures steel & wood office furniture in Fletcher, NC. They also have a subsidiary in High Point, NC, Brayton International, who manufactures lounge, executive & health care seating and tables.

Steelcase corporate giving focus is in seven areas:

Arts & Culture	Economic Dev	Education	Human Svcs
Community Dev	Environment	Health	

Grants

Range: \$2,000—\$1 Million
Average: \$5,000—\$50,000
Total Giving: \$6,735,000

Types of Support How to Apply

- Building
- Equipment
- Scholarships
- Capacity Building
- Land & Property Acquisition
- Seed Money

No deadlines. Complete "Asking Steelcase Inc. for a Donation" form and mail to foundation. Go to: <http://steelcase.com>, search for "foundation", then select "Grant Procedure" from left menu.

Steelcase NC Facilities

Fletcher, NC 28732
 Steelcase Manufacturing Facility
 Cane Creek Industrial Park, Old Airport Road
 Phone: 828-684-2241

High Point, NC 27264
 Steelcase Partner—Brayton International Inc.

P.O. Box 7288
 Phone: 336-434-4151

HQ Foundation Contact

Susan Broman, Exec Dir
 Location CH-4E / P.O. Box 1967
 Grand Rapids, MI 49501-1967
 Phone: 616-246-4695



Frequently Asked Questions

<http://www.steelcase.com/na/ourcompany.aspx?f=10075&c=10112>

Website

<http://steelcase.com>

Does Steelcase donate used products?

Occasionally the company donates used or like-new furniture (*these products vary in style, quantity and condition*).

To have your non-profit organization **added to our recipient list**, please email cr@steelcase.com. Include 1) organization name 2) phone number 3) primary contact. You will be contacted when furniture is available.

Kimberly-Clark Fdn / Corp Contributions

Since 1952, Kimberly-Clark (KC) Fdn & Corporation have been supporting philanthropic organizations **communities where the corporation has operations** around the world, and in 19 states in the US, including 2 operations in North Carolina.

Corporate & Foundation Giving Focus

- Strengthen Families;
- Help Children Grow Mentally, Physically, Socially;
- Creative & Caring options for Older Relatives.



Grant Range
Average: \$500—\$25,000 **Total**
Giving: \$7,600,000

How to Apply

Contact the manager of the closest facility to begin the process.

Websites

#1
http://www.kimberly-clark.com/aboutus/comm_involvement.asp

#2
http://www.kimberly-clark.com/aboutus/kc_foundation.asp

Types of Support	Building Funds	Operating Funds
	Equipment	Seed Money
	Land Acquisition	Research

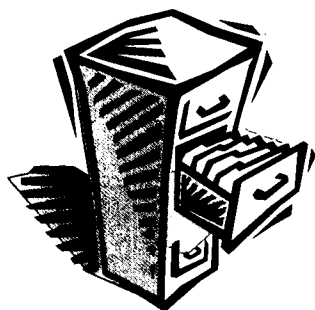
Kimberly Clark Foundation

Carolyn Montesana, VP	P.O. Box 619100 Dallas, TX 75261-9100 Phone: 972-281-1200



Kimberly-Clark in North Carolina

Charlotte	7401 Carmel Executive Pk Dr, 28226 Phone: 704-542-5082
Berkeley	???
Hendersonville	Off Finley Cove Road, 28739 Phone: 828-692-9611
Linwood / Lexington	389 Clyde Fitzgerald Road, 27299 Phone: 336-258-7300



F. M. Kirby Fdn

Deadline: Generally in **October**
Giving Focus: Seven areas, including **Civic**
Types of Support: Five areas, including **Equipment**
Locations: NC, NJ, PA
Grants: \$1,000—\$1.2 Million
Contact: S. Dillard Kirby, Exec VP / Phone: 973-538-4800
P.O. Box 151 / Morristown, NJ 07963-0151
Website: <http://www.fdncenter.org/grantmaker/kirby>

Hitachi-Business & Communities Grants

This program focuses on helping underserved people: Retain & Advance in their Jobs / Earn a Living Wage / Accumulate Savings & Assets.

Selection Criteria

- Improving the ability of economically isolated people to **work, earn living wages**, and/or accumulate assets.
- Expand work, wages, and savings/assets of **low-wage workers**. Must be compelling & clearly articulated.
- Serve **high poverty areas or communities** as evidenced by poverty rates or other indicators of need.
- Demonstrate **effective & innovative** corporate citizenship practices and/or promote learning and adoption of good practices.
- The project should represent **path-breaking work** in Hitachi areas of focus and interest.
- Expected outcomes are defined for the target populations and measure and **report impacts** over time.
- Priority consideration given to projects that: **leverage** our support with other funding sources; are **replicable** or have a model that can be brought to scale; and/or focus on small to medium sized businesses in the targeted sectors.

Grant Range
\$5,000—\$150,000

Selection Criteria

The foundation will give priority to projects that: leverage other funds; can be replicated; focus on small to medium sized businesses. Priority for partnerships.

How to Apply

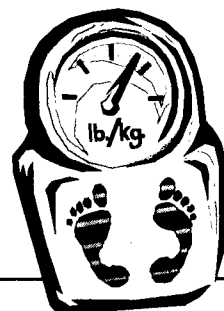
Begin process through **Online Inquiry System**. Go to: <http://awards.hitachifoundation.org/bcgregistration.nsf/Welcome>.

Contact

Barbara Dyer, President & CEO
1509 22nd St., NW
Washington, DC 20037-1073
Phone: 202-457-0588
Fax: 202-297-1098

Website

<http://www.hitachifoundation.org>



Hitachi Facilities in North Carolina

1.	Charlotte	Hitachi Metals	Providence Park 10700 Sikes Place, Suite 240 Charlotte, NC 28277	Phone: 704-321-1350
2.	Charlotte	Hitachi Data Systems	6000 Fairview Rd., Suite 1200 Charlotte, NC 28210	Phone: 704-364-3005 Phone: 704-552-3565 Fax: 704-552-3564
3.	Charlotte	Hitachi Global Storage Technologies	4732 Lebanon Rd. Charlotte, NC 28227	Phone: 704-545-4210
4.	China Grove	Hitachi Metals	1 Hitachi Metals Drive China Grove, NC 28023	Phone: 704-855-2800 Fax: 704-855-2750
5.	Durham	Hitachi Data Systems	1000 Park Forty Plaza Durham, NC 27713	Phone: 919-547-7080
6.	Greensboro	Hitachi Data Systems	7800 Airport Center Dr., Suite 401 Greensboro, NC 27409	Phone: 336-605-5821 Fax: 336-478-2399
7.	Kernersville	Deere/Hitachi Construction Machinery	1000 Deere Hitachi Rd. Kernersville, NC 27285	Phone: 336-996-8100
8.	Kernersville	Deere/Hitachi	1000 Deere Hitachi Rd. Kernersville, NC 27285	Phone: 336-996-5622
9.	Raleigh	Elpida Memory, USA, Inc.	8621 Six Forks Rd., #270 Raleigh, NC 27615	Phone: 919-645-0330 Fax: 919-645-0325
10.	Raleigh		4601 Six Forks Rd., #304 Raleigh, NC 27609	Phone: 919-781-5000 Fax: 919-781-5577

USDA—RURAL EMERGENCY RESPONDERS INITIATIVE

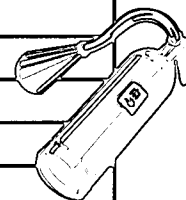
Funds may be used to **finance** buildings / **equipment** / vehicles for the following **types of projects**:

Eligible Projects	
1.	Animal Shelters
2.	Civil Defense / Early Warning Systems
3.	County Health Department Offices
4.	Emergency Responders Training Facilities
5.	Fire Protection
6.	Food Preparation Distribution Centers
7.	Healthcare Office Buildings
8.	Hospitals
9.	Law Enforcement
10.	Migrant Health Centers
11.	Mobile / Stationary Communications
12.	Outpatient Care
13.	Physician's Clinics
14.	Rescue / Ambulance



The **Community facilities program**, provides **financial assistance** to develop **essential community facilities** for public use in rural areas.

Eligible Projects	
▫	Assisted Living Facilities
▫	Childcare
▫	Community Centers
▫	Fire and Rescue Stations
▫	Hospitals
▫	Libraries
▫	Medical Clinics
▫	Police Stations
▫	Public Buildings
▫	Schools
▫	Transportation



Website

http://www.rurdev.usda.gov/rhs/cf/Emerg_Responder/rural_emergency_responders_initi.htm

USDA Rural Development Contacts in North Carolina

STATEWIDE IN NC	John Cooper State Director	4405 Bland Rd. Raleigh, NC 27609 Email: john.cooper@nc.usda.gov	Phone: 919-873-2000 Fax: 919-873-2075
ALBEMARLE AREA OFFICE (Anson, Cabarrus, Davidson, Davie, Guilford, Mecklenburg, Montgomery, Moore, Randolph, Richmond, Rockingham, Rowan, Stanley & Union counties.)	Lynn Whittington	26032-F Newt Rd., Box 10 Albemarle, NC 28001 Email: lynn.whittington@nc.usda.gov	Phone: 704-982-5114 Fax: 704-983-7921
GARNER AREA OFFICE (Chatham, Edgecombe, Harnett, Johnston, Lee, Nash, Wake & Wilson counties.)	Janet Black	Hartwell Plaza 1027 Hwy. 70 West, #219 Garner, NC 27529 Email: janet.black@nc.usda.gov	Phone: 919-779-7164 Fax: 919-779-9068
HENDERSON AREA OFFICE (Alamance, Caswell, Durham, Franklin, Granville, Halifax, Orange, Person, Vance, & Warren counties.)	Jeanette Currin	945-B W. Andrews Avenue Henderson, NC 27536 Email: jeanette.currin@nc.usda.gov	Phone: 252-438-3141 Fax: 252-438-3647
JEFFERSON AREA OFFICE (Alleghany, Alexander, Ashe, Avery, Burke, Caldwell, Catawba, Forsyth, Iredell, Stokes, Surry, Watauga, Wilkes, & Yadkin counties.)	Debbie Sexton	134 Government Circle, #201 Jefferson, NC 28640 Email: debbie.sexton@nc.usda.gov	Phone: 336-246-2885 Fax: 336-246-9173
KINSTON AREA OFFICE (Carteret, Craven, Duplin, Greene, Jones, Lenoir, Onslow, Pamlico, Sampson & Wayne counties.)	Connie Miller	2044-C Hwy 11/55 South PO Box 6189 Kinston, NC 28501 Email: connie.miller@nc.usda.gov	Phone: 252-526-9799 Fax: 252-526-9607
LUMBERTON AREA OFFICE (Bladen, Brunswick, Columbus, Cumberland, Hoke, New Hanover, Pender, Robeson, & Scotland counties.)	Judy Hunt	440-C Caton Road Lumberton, NC 28359 Email: judy.hunt@nc.usda.gov	Phone: 910-739-3349 Fax: 910-618-9444
WAYNESVILLE AREA OFFICE (Buncombe, Cherokee, Clay, Cleveland, Gaston, Graham, Haywood, Henderson, Jackson, Lincoln, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania & Yancy Counties.)	Linda Whitmire	589 Raccoon Road, Suite 202 Waynesville, NC 28786 Email: linda.whitmire@nc.usda.gov	Phone: 828-452-0319 Fax: 828-452-1644
WILLIAMSTON AREA OFFICE (Beaufort, Bertie, Camden, Chowan, Currituck, Dare, Gates, Hertford, Hyde, Martin, Northampton, Pasquotank, Perquimans, Pitt, Tyrell, & Washington counties.)	Leyta Hollis	104 Kehukee Park Road Williamston, NC 27892 Email: leyta.hollis@nc.usda.gov	Phone: 252-792-7197 Fax: 252-809-0561





Federal Grants

Broadening Participation in Computing—Alliances

CFDA #47070 / FedGrants # NS-4950-N-32 | National Science Foundation

Deadline: June 14, 2005 for Letters of Intent for Supplement Requests ONLY

2006 Funding: \$14,000,000 **Estimated Awards:** 20–25

Applicants: Broad Alliance of institutions and organizations. At least one alliance member must be a US degree-granting, academic institution of higher learning.

Description: Alliances will design and carry out comprehensive programs that address under-representation (*women, disabled, minorities*) in the computing disciplines. Alliances will join higher learning with secondary schools, government, industry, professional societies, and other not-for-profit organizations.

Contacts: Janice Cuny, jcuny@nsf.gov, 703-292-8950, Room 1175 N
Caroline Wardle, cwardle@nsf.gov, 703-292-8950, Room 1175 N
Harriet Taylor, htaylor@nsf.gov, 703-292-8950, Room 1175 N

Website: <http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf05509> or
http://www.nsf.gov/pubsys/ods/getpub.cfm?ods_key=nsf05509

Renewable Energy Systems & Efficiency Improvements

CFDA #14250 / FedGrants # FR-4950-N-34 | US Agriculture / Rural Development

Deadline: June 27, 2005 **Estimated Awards:** 200 **Estimated Grant Range:** \$2,500–\$500,000 (*grant request must not exceed 25% of the eligible project costs.*)

Estimated Funds: \$22.8 Million **Loan Guarantee Set Aside:** \$11.4 million through August 31, 2005

Eligibility: Individuals & Small Business who can demonstrate financial need.

Description: Funding to purchase renewable energy systems and make energy improvements for **agricultural producers and rural small businesses.** (*Any guaranteed loan funds not obligated by August 31, 2005, will be made available for competitive grants.*)

Contact: Cathy Glover, 202-690-2516, cathy.glover@usda.gov

Website: <http://www.rurdev.usda.gov/rbs/farmbill/2005NOFA/nofa05navigate.htm> or <http://www.fedgrants.gov/Applicants/USDA/RD/RBCS/RDRB-05-05%26%23032%3BREEEP/Grant.html>

Rural Housing & Economic Development

CFDA #14250 / FedGrants # FR-4950-N-34 | US HUD / Community Development

Deadline: May 17, 2005 **Grant Range:** \$150,000–\$400,000 **Grant Average:** \$250,000

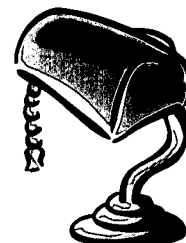
2005 Funding: \$24 Million estimated

Applicants: Nonprofits, local governments, CDC's, Tribes, HFA's, State CED Agencies who serve local rural areas.

Description: Capacity building and program support for innovative housing and economic development in rural areas.

Contact: Dorthera Yorkshire / HQ Program Analyst / 202-708-0667, x4336 / Email: Dorthera_Yorkshire@hud.gov

RFP: https://apply.grants.gov/forms_apps_idx.html



Tools on the WEB—*Equipment*

Helping.Org's Guide to Technology Funding

A directory of government, corporate, and private funders supporting technology.

<http://www.helping.org/nonprofit/grants.adp>

Free Equipment—for Emergency Responders

The refurbished equipment is provided at no cost to the first responder organizations.

<http://www.firstresponder.org/FreeEquipment.htm>

Are In-Kind Donations Really Such a Bad Idea?

"When it comes time to go shopping, whether for office supplies, furniture, or computer equipment, few nonprofits seriously consider asking the community to donate these things directly."

<http://www.nonprofitleader.org/0410/article5.html>

Farm Labor Loans & Housing Grants

Deadline: May 13, 2005. Funding of \$12 Million is available for construction of new off-farm housing and facilities for domestic farm laborers.

<http://www.rurdev.usda.gov/rd/nofas/index.html> or <http://www.rurdev.usda.gov/rd/>

RFP—Purchase of Equipment for Fire Departments

Deadline: June 30, 2005. First Responder Institute, with the support of GlaxoSmithKline, is accepting grant applications from US fire departments for the purchase of life-saving equipment. Grants range from \$2,500 to \$10,000. See FAQ. 2 Grants were made in NC in 2004.

<http://www.firstresponder.org/apply.htm>

US Surplus Equipment

Buy new, seized, surplus merchandise from the government: Vehicles / Supplies / Equipment.

<http://www.firstgov.gov/shopping/shopping.shtml>

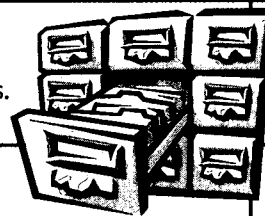
North Carolina Volunteer Fire Departments

Funding for **equipment & capital expenditures**. Contact: Office of State Fire Marshal Grants of the Dept. of Insurance / P.O. Box 26387 / Raleigh, NC 27611 / Phone: 919-733-2142

<http://www.nvfc.org/benefits/state-by-state.php?Type=Funding>

TechMarketplace from TechFoundation

Providing the nonprofit community with brand technology at affordable prices.



<http://www.techfoundation.org/index.cfm?objectid=F4F21511-0D0A-3946->

TechSoup

Donated and discounted technology products. Also, compiled free downloads, recycled hardware providers, and other software and hardware resources from around the WEB.

<http://www.techsoup.org/products/index.cfm?cg=header&sq=products>

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e-NC.ORG

Sponsored By:

e-NC.ORG

Jane Patterson, Executive Director

4021 Carya Dr.

Raleigh, NC 27610

Phone: 919-250-4314

Website: www.e-NC.org

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005

H

1

HOUSE BILL 830

Short Title: e-NC Voting Members/Job Creation Funds.

(Public)

Sponsors: Representatives Tolson; and Faison.

Referred to: Science and Technology, if favorable, Appropriations.

March 22, 2005

A BILL TO BE ENTITLED

AN ACT (1) APPROPRIATING FUNDS TO THE E-NC AUTHORITY FOR
CREATION OF JOBS AND BUSINESSES BY CONTINUATION OF E-NC
ACTIVITIES TO SUPPORT INFRASTRUCTURE DEPLOYMENT AND
TECHNOLOGY-BASED ECONOMIC DEVELOPMENT IN THE RURAL AND
DISTRESSED URBAN AREAS OF THE STATE AND FOR THE
DEVELOPMENT OF TWO ADDITIONAL E-NC BUSINESS AND
TECHNOLOGY TELECENTERS AND (2) PROVIDING THAT ALL MEMBERS
OF THE E-NC GOVERNING COMMISSION MAY VOTE.

Whereas, the gap in household computer ownership between white
Americans and black Americans has narrowed from 30 points to 5 points; and

Whereas, overall Internet penetration in North Carolina has moved from well
below the national average to above the national average; and

Whereas, Internet penetration in nonmetropolitan North Carolina now
exceeds the national average; and

Whereas, home Internet use has increased dramatically in North Carolina
with the fastest increases in rural and nonmetropolitan counties; and

Whereas, home use of broadband is growing rapidly in North Carolina; and

Whereas, nonmetropolitan North Carolina is going "high speed" faster than
the rest of the nonmetropolitan United States, with thirty-two percent (32%) of home
Internet users in nonmetro counties linked to the Internet via broadband in 2004, which
is an increase of fifteen percent (15%) from 2002; and

Whereas, the e-NC Authority (formerly the Rural Internet Access Authority)
has worked over the past four years to help North Carolinians accomplish these
technological advancements; Now, therefore,
The General Assembly of North Carolina enacts:

SECTION 1. The General Assembly finds that:

- (1) The e-NC Authority, created by the General Assembly in S.L.
2003-425 to continue the work of the Rural Internet Access Authority,

is successfully pursuing its mandated goals, increasing access to affordable high-speed Internet and creating 21st century jobs through technology-based economic development in the rural and distressed urban areas of the State.

(2) The e-NC Business and Technology Telecenters are catalyzing technology-based economic development in some of North Carolina's most distressed regions by helping to grow existing small businesses, bringing new kinds of businesses into rural communities and regions, stimulating and supporting entrepreneurship, and creating 21st century jobs. E-NC Business and Technology Telecenters have created 488 jobs in less than 30 months at an average cost of eight thousand five hundred thirty-seven dollars (\$8,537) per job.

(3) E-NC is successfully working with local governments and educational institutions to strengthen their technology capacities and services to their communities by making available to the public technology services and resources, training, and public access to computers and the Internet. Over 18 months, the initial four e-NC Business and Technology Telecenters have provided technical assistance to 1,000 public and private sector clients, technology-incubation space to 33 companies, public access to 50,000 citizens, and digital technology literacy training to 10,500 people in more than 900 classes.

(4) As found by the 2003 General Assembly, an organized effort must continue to ensure that the citizens of North Carolina keep pace with the ever faster technological changes in telecommunications and information networks in order to assure the economic competitiveness of North Carolina, with special focus on rural and urban distressed areas.

(5) As found by the 2003 General Assembly, affordable, high-speed Internet access is a key competitive factor for economic development and quality of life in the New Economy of the global marketplace.

SECTION 2. There is appropriated from the General Fund to the e-NC Authority the sum of five hundred thousand dollars (\$500,000) for the 2005-2006 fiscal year and the sum of five hundred thousand dollars (\$500,000) for the 2006-2007 fiscal year for operations of the e-NC Authority.

SECTION 3.(a) There is appropriated from the General Fund to the e-NC Authority the sum of one million dollars (\$1,000,000) for the 2005-2006 fiscal year to establish two e-NC Business and Technology Telecenters in distressed regions of the State.

SECTION 3.(b) The e-NC Authority may:

(1) Use up to five percent (5%) of the funds appropriated by this section for Business and Technology Telecenters to cover its expenses in program development and implementation of activity areas with all of the e-NC Business and Technology Telecenters.

- (2) Contract with other State agencies, The University of North Carolina, the North Carolina Community College System, and nonprofit organizations to assist with program development and the evaluation of program activities.

SECTION 4. E-NC Authority shall cooperate and work with the Department of Commerce, The University of North Carolina, the North Carolina Community College System, the local councils of government, the local chambers of commerce, the local economic developers, the North Carolina Association of County Commissioners, the North Carolina League of Municipalities, the Regional Economic Development Partnerships, and with the private and nonprofit sectors in carrying out this act.

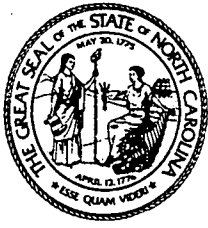
SECTION 5. G.S. 143B-437.46(b) reads as rewritten:

"(b) Commission. – The Authority shall be governed by a Commission. The Commission shall consist of ~~nine voting members and six non-voting ex officio~~ 15 voting members, as follows:

- (1) Three members appointed by the Governor.
- (2) Three members appointed by the General Assembly upon the recommendation of the President Pro Tempore of the Senate in accordance with G.S. 120-121.
- (3) Three members appointed by the General Assembly upon the recommendation of the Speaker of the House of Representatives in accordance with G.S. 120-121.
- (4) Six ~~ex officio, non-voting ex officio~~ members to include the Secretary of Commerce, the State Chief Information Officer, the President of the North Carolina Rural Economic Development Center, Inc., the Executive Director of the North Carolina Justice and Community Development Center, the Executive Director of the North Carolina League of Municipalities, the Executive Director of the North Carolina Association of County Commissioners, or their designees.

It is the intent of the General Assembly that the appointing authorities, in making appointments, shall consider members who represent the geographic, gender, and racial diversity of the State, members who represent rural counties, members who represent distressed urban areas, members who represent the regional partnerships, and members who represent the communications industry. For the purpose of this subsection, the term "communications industry" includes local telephone exchange companies, rural telephone cooperatives, Internet service providers, commercial wireless communications carriers, cable television companies, satellite companies, and other communications businesses."

SECTION 6. Sections 2 and 3 of this act become effective July 1, 2005. The remainder of this act is effective when it becomes law.



HOUSE BILL 830: e-NC Voting Members/Job Creation Funds

BILL ANALYSIS

Committee: House Science & Technology
Date: April 20, 2005
Version: 1st Edition

Introduced by: Rep. Tolsom
Summary by: Brenda J. Carter
Committee Counsel

SUMMARY: *House Bill 830 provides for 15 voting members of the e-NC Authority and appropriates \$2 million to the Authority – \$1 million for operations and \$1 million for the establishment of two e-NC Business and Technology Telecenters in distressed regions of the State.*

CURRENT LAW: The e-NC Authority (successor to the Rural Internet Access Authority) was created within the Department of Commerce to manage, oversee, promote, and monitor efforts to provide rural counties and distressed urban areas with high-speed broadband Internet access. The Authority serves as the central rural and urban distressed areas Internet access policy planning body of the State and is to communicate and coordinate with State, regional, and local agencies and private entities in order to continue the development and facilitation of a coordinated Internet access policy for the citizens of North Carolina. The Authority is governed by a Commission consisting of nine voting members and six non-voting ex officio members. In some of North Carolina's most rural areas, E-NC has established telecenters that provide free high-speed Internet service to the public and a variety of fee-based business and technology services to local nonprofits and businesses. The telecenter system offers employee training, office space, technology expertise and business advice.

BILL ANALYSIS: House Bill 830 would make the Secretary of Commerce, the State Chief Information Officer, the President of the North Carolina Rural Economic Development Center, the Executive Director of the North Carolina Justice and Community Development Center, the Executive Director of the North Carolina League of Municipalities, and the Executive Director of the North Carolina Association of County Commissioners voting members of the e-NC Authority. The bill appropriates \$500,000 from the General Fund in fiscal years 2005-2006 and 2006-2007 for operations of the e-NC Authority. The bill also appropriates \$1 million in fiscal 2005-2006 to establish two e-NC Business and Technology Telecenters in distressed regions of the State. The bill provides that the e-NC Authority may use up to \$50,000 of the funds appropriated for the telecenters to cover expenses in program development and implementation of activity areas with all of the telecenters. The Authority is authorized to contract with other State agencies, including UNC, the Community College System, and nonprofit organizations to assist with program development and evaluation. The appropriations would be effective July 1, 2005. The remainder of the bill would be effective when it becomes law.

**2005 COMMITTEE REPORT
HOUSE OF REPRESENTATIVES**

The following report(s) from standing committee(s) is/are presented:

By Representative Miller (Chair) for the Committee on SCIENCE AND TECHNOLOGY.

☐ Committee Substitute for

HB 830 A BILL TO BE ENTITLED AN ACT (1) APPROPRIATING FUNDS TO THE E-NC AUTHORITY FOR CREATION OF JOBS AND BUSINESSES BY CONTINUATION OF E-NC ACTIVITIES TO SUPPORT INFRASTRUCTURE DEPLOYMENT AND TECHNOLOGY-BASED ECONOMIC DEVELOPMENT IN THE RURAL AND DISTRESSED URBAN AREAS OF THE STATE AND FOR THE DEVELOPMENT OF TWO ADDITIONAL E-NC BUSINESS AND TECHNOLOGY TELECENTERS AND (2) PROVIDING THAT ALL MEMBERS OF THE E-NC GOVERNING COMMISSION MAY VOTE.

☒ With a favorable report as to the committee substitute bill, which changes the title, unfavorable as to the original bill, and recommendation that the committee substitute bill be re-referred to the Committee on APPROPRIATIONS.

(FOR JOURNAL USE ONLY)

_____ Pursuant to Rule 32(a), the bill/resolution is re-referred to the Committee on _____.

_____ Pursuant to Rule 36(b), the (House) committee substitute bill/(joint) resolution (No. _____) is placed on the Calendar of _____. (The original bill resolution No. _____) is placed on the Unfavorable Calendar.

_____ The (House) committee substitute bill/(joint) resolution (No. _____) is re-referred to the Committee on _____. (The original bill/resolution) (House/Senate Committee Substitute Bill/(Joint) resolution No. _____) is placed on the Unfavorable Calendar.

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 2005

H

D

HOUSE BILL 830

PROPOSED COMMITTEE SUBSTITUTE H830-PCS70397-RV-5

Short Title: e-NC Voting Members/Job Creation Funds.

(Public)

Sponsors:

Referred to:

March 22, 2005

A BILL TO BE ENTITLED

**AN ACT (1) APPROPRIATING FUNDS TO THE E-NC AUTHORITY FOR
CREATION OF JOBS AND BUSINESSES BY CONTINUATION OF E-NC
ACTIVITIES TO SUPPORT INFRASTRUCTURE DEPLOYMENT AND
TECHNOLOGY-BASED ECONOMIC DEVELOPMENT IN THE RURAL AND
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DEVELOPMENT OF TWO ADDITIONAL E-NC BUSINESS AND
TECHNOLOGY TELECENTERS; AND (2) PROVIDING THAT ALL
MEMBERS OF THE E-NC GOVERNING COMMISSION MAY VOTE; AND
EXTENDING THE DECEMBER 31, 2006, SUNSET DATE FOR THE E-NC
AUTHORITY.**

Whereas, the gap in household computer ownership between white Americans and black Americans has narrowed from 30 points to 5 points; and

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SECTION 6. Section 4 of S.L. 2003-425 reads as rewritten:

1 **"SECTION 4.** Sections 1 and 2 of this act become effective December 31, 2003,
2 with the e-NC Authority hereby designated as the successor entity of the Rural Internet
3 Access Authority that will dissolve on that date, as provided by Section 5 of S.L.
4 2000-149. The remainder of this act is effective when it becomes law. The e-NC
5 Authority created in this act is dissolved effective December 31, 2006. This act is
6 repealed effective ~~December 31, 2006.~~ June 30, 2007. Part 2F of Article 10 of Chapter
7 143B of the General Statutes and G.S. 120-123(77), as enacted by this act, are repealed
8 effective ~~December 31, 2006.~~ June 30, 2007."

9 **SECTION 7.** Sections 2 and 3 of this act become effective July 1, 2005. The
10 remainder of this act is effective when it becomes law.

Science and Technology

4-20-05

Date _____

NAME _____

FIRM OR AGENCY

DON MCCORQUODALE

SAS

Lee Hodge

100217

Misses Trench

NCA CC

Kyle Wallace

Time Warner Cable

Jane Patton

ع-ن-ك أشياء

Granna Wright

2. NE Author's

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

May 4, 2005

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Presentation:

NC FAST

By Sherry Bradsher, Deputy Director of the Division of Social Services and Angie Taylor, Senior Project Manager with the Division of Information and Resource Management, DHHS

Bills to be Discussed:

House Bill 642 Study/Use of Social Services Statewide
Rep. Miller

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

May 4, 2005

The House Committee on Science and Technology met on Wednesday, May 4, 2005, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson and Martin, Vice-Chairs; Gulley, Hollo, Jones and Walend.

Representative Miller called the meeting to order. The pages serving the committee were Juan Tusét from Wake County sponsored by Representative Miller and, Shari Henderson and Shannon Power both from Granville and sponsored by Representative Crawford. Frank Prevo and Toussaint Avent were the assigned Sergeant-At-Arms.

The bill for today's discussion is House Bill 642, Study/Use of Social Services Statewide, sponsored by Representative Miller. Representative Miller stated that after speaking with the Department of Health and Human Services, the Department has a handle on tracking how Social Services is being used by individuals, a potential problem lies in funding. Therefore, this meeting will cover a presentation on NC FAST by Sherry Bradsher, Deputy Director of the Division of Social Services and Angie Taylor, Senior Project Manager with the Division of Information and Resource Management, DHHS. The purpose of the program is to improve the way county departments of social service provide services to families (See Attachment K).

Following the presentation, Representative Tolson asked how much money has been invested in the program to date. Ms. Taylor stated she does not know the answer; the total estimate to be spent is \$65 million over a 4-year period. He asked where they are in the stages of development. Ms. Taylor stated that there are different phases, and three different subprojects. The online verification has been implemented, as of October, the second is the service delivery interface, is due out in the third quarter of this year. The next phase is to bring in vendors to create the case management. Representative Walend asked if they are still looking for more funding. Yes, they are looking for the continued support that has been promised the project. Representative Walend followed up with the question of what the break down is on the federal, state and local level. Ms. Taylor stated that the both the federal and state are providing funds for the next biennium. The federal providing \$26 million and the State providing \$26.5, summarily the federal government will provide approximately half of all of the funding. Representative Walend asked if they would have access to public health records. Ms. Taylor replied that some of the other initiatives will include that type of access. Representative Jones asked if there has been any cost savings by determining clients that are not eligible for benefits. The online verification is to validate a person's income. The biggest savings has been in terms of time consumed by the caseworkers. Representative Jones clarified his question by asking

if any fraud has been detected. Ms. Bradsher acknowledges that workers already have access to various systems and the NC FAST project expedites that process, but case management will have the opportunity to find overlapping in benefits. Representative Jones recommended ways to talk to government officials by stating that cost savings exist. Representative Miller asked if they have a report on the savings. Ms. Bradsher stated that there are not hard numbers but savings in time and help in follow through for better quality assistance. Representative Miller inquired if the federal funding will be cut for this project. Ms. Bradsher responded that the cuts will be unlikely, however she is concerned about the TANF block grant funding given to the State by the federal government. Representative Tolson questioned if the RFP is for the case management program. Ms. Taylor said that the online verification is the first piece and they are developing pieces at a time. Representative Jones commented that the project is a good one and will save money, time, and provide overall better service to constituents.

At the conclusion, Representative Miller thanked Ms. Bradsher and Ms. Taylor and with there being no further business, the meeting was adjourned.

Respectfully submitted,



Representative Paul Miller
Chairman



Eryn Gee
Committee Assistant

NC Families Accessing Services through Technology (NC FAST)

NC FAST Case Management

The Future of Human Services Delivery

May 4, 2005

NC FAST

■ Purpose:

- Families Accessing Services through Technology (NC FAST) is a DHHS initiative designed to improve the way the county departments of social service provide services to families.
- Provide family-centered services by means of an automated, seamless service delivery process

NC FAST – cont'd

■ **Benefiting Programs:**

- Work First – Cash Assistance and Employment Services
- Food Stamps
- Child Welfare – Child Protective Services, Foster Care Services for Children, Adoption Services for Families and Children, Preventive and Family Support Services
- Emergency Assistance – Crisis Intervention, Energy Assistance
- Medicaid – For Children, Adults, and Adults with Disabilities
- North Carolina Health Choice for Children
- Child Care Subsidy Program
- Adult and Family Services – Adult Protective Services, Guardianship, Preventive and Family Support Services
- Child Support Enforcement
- Special Assistance – Out of Home Placements for Adults

NC FAST – cont'd

- **Benefiting Partners** (not limited to this list)
 - Public Schools
 - Community Based Service Providers
 - Mental Health
 - Public Health
 - Homeless Programs
 - Local Employment Agencies
 - Domestic Violence Programs
 - Emergency Service Providers

NC FAST – cont'd

■ How do I know:

- What are the goals for this family ?
- What services are clients receiving ?
- What services has this family received in the past ?
- Are clients receiving correct benefits and services ?
- Are services and benefits being administered correctly ?
- Are client services appropriately coordinated ?
- Are children and adults protected and safe ?
- What are services are most effective ?
- How will I know when the goals are achieved ?

NC FAST – cont'd

- **Business Benefits:**
 - Family-centric service delivery
 - Tracking clients across programs
 - Shared information
 - Improved communications
 - Time savings
 - Outcome measurements

NC FAST – cont'd

- **What Has Been accomplished to date**
 - Advisory council established
 - Initial state and federal approvals obtained
 - Funding secured
 - Stakeholder commitment
 - Web-based online manuals
 - Web-based online verifications
 - Business processes reengineering documented
 - Case management tool selection evaluation
 - County and state workgroups formed

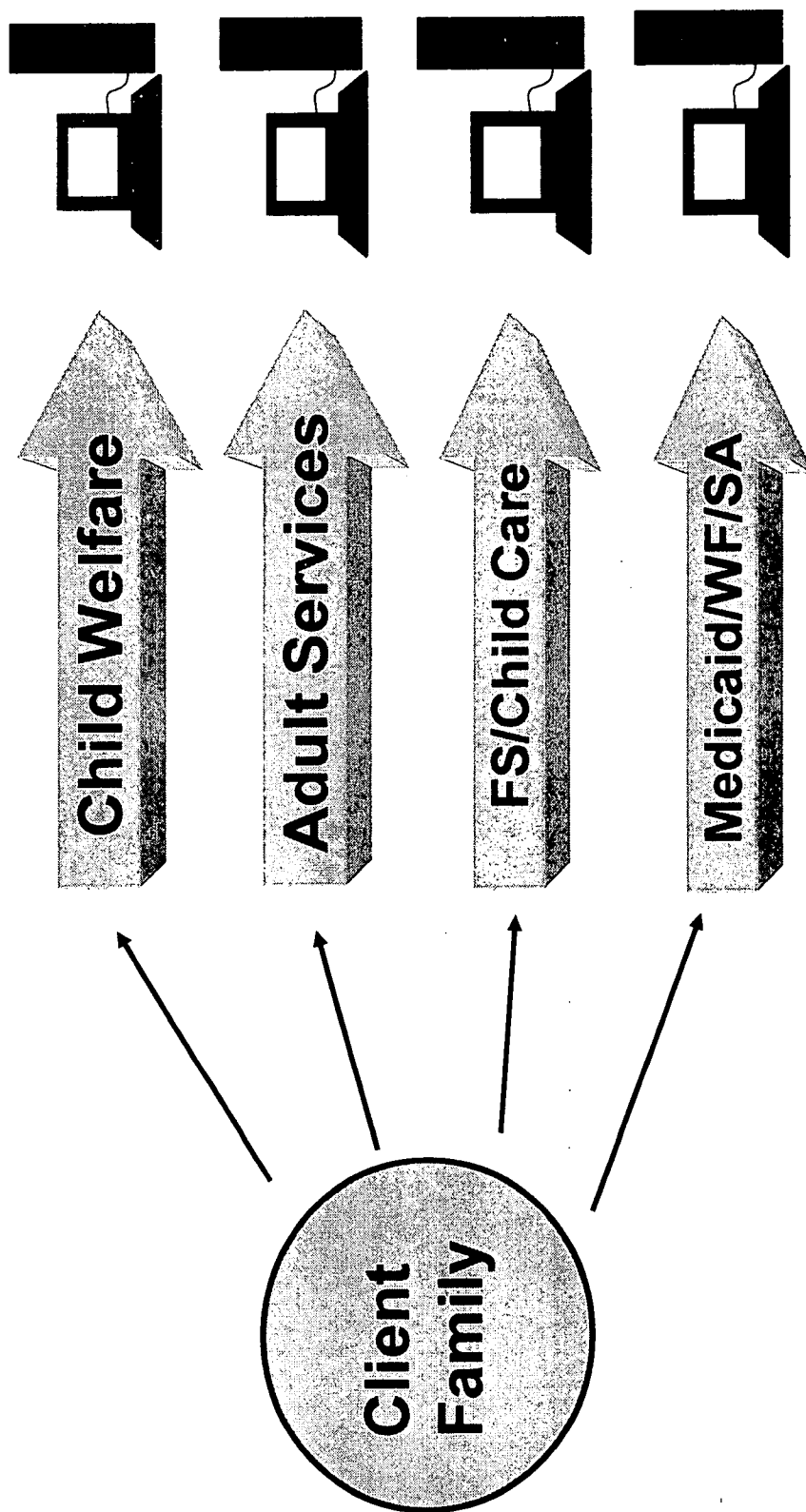
NC FAST On Line Verification

877-666-6342 (toll-free)
X-5-1

NC FAST Legacy Technology

- **DHHS operates more than 14 legacy systems**
- **Antiquated technology**
- **Costly Maintenance**
- **Inability to provide 24/7 access**
- **Unable to share real time information across systems**
- **Duplicative data entry**

NC FAST - Past Technology

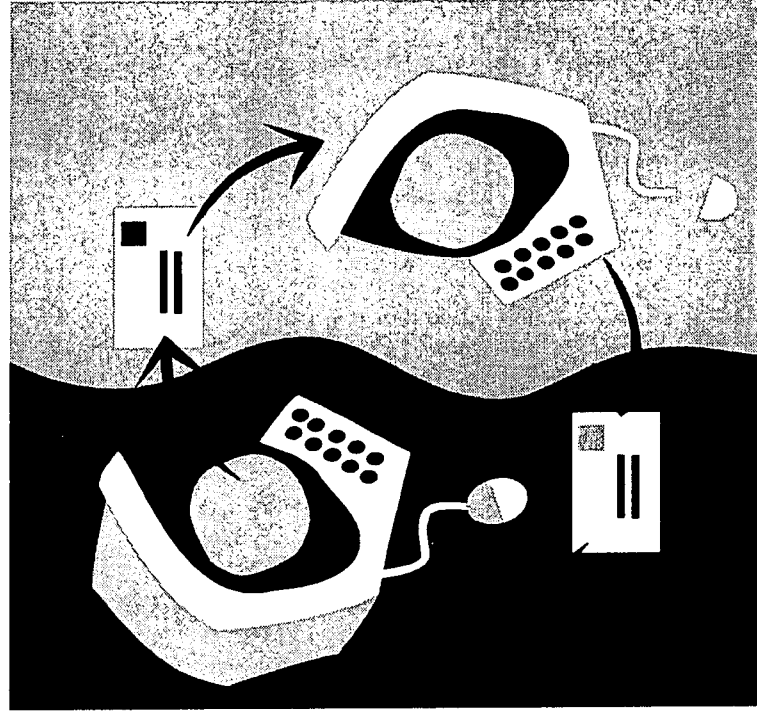
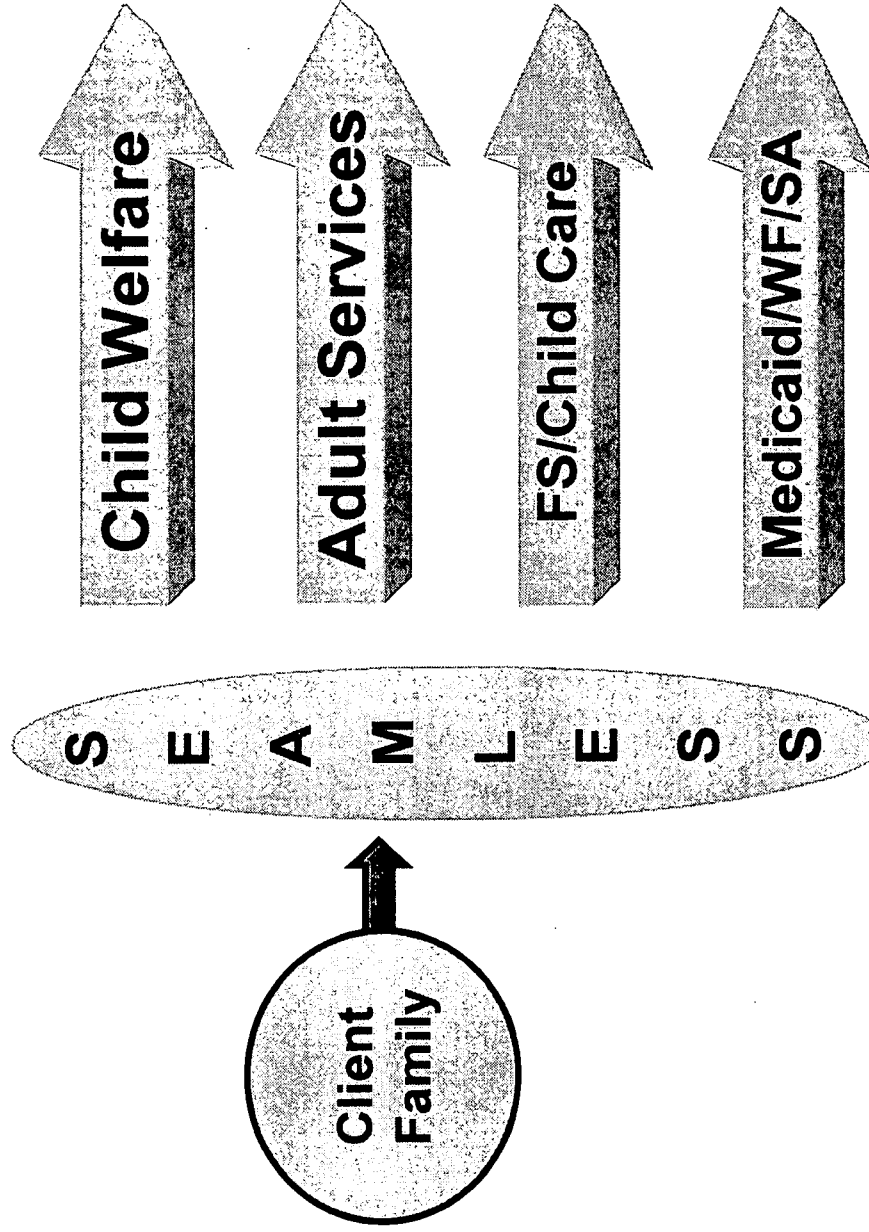


Silo Information Systems

NC FAST – Modern Tech

- **N-Tier System Architecture**
- **Advantages of Web Based Application**
- **Business process driven technical solutions**
- **Enterprise view of clients**
- **24/7 availability**
- **Cost Reduction for Maintenance and Support**

NC FAST - New Technology



Integrated Information Systems Providing

Seamless Service Delivery

NC FAST – Other States’ Initiatives

- Washington - *Washington State Combined Application Program (WASHCAP)*
- Pennsylvania – *Commonwealth of Pennsylvania Access to Social Services (COMPASS)*
- Massachusetts – *BEACON*
- Wyoming – *FAMIS*
- Ohio – *CRIS-E*
- Maine – *Automated Client Eligibility System (ACES)*
- Georgia - *Systems & Methods, Inc. (SMI)*
- Louisiana - *A Comprehensive Enterprise Social Services System (ACCESS)*
- Minnesota – *Social Services Information System (SSIS)*
- New Mexico - *State System Applicant Links to Services for Assistance (SSALSA)*
- Rhode Island - *Rhode Island Children’s Information System (RICHIST)*
- West Virginia - *Families and Children Tracking System (FACTS)*
- Wisconsin – *eWiSACWIS*
- Colorado - *Trails*

eWisACWIS - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Links

Address http://mchhs63.dhhs.state.nc.us:9080/eWisacwis/LOGON.do

Google [] Search Web [] Search Web [] Blocking popups

eWisACWIS Create Maintain Utilities Adoption Search Help

☒ Date Restricted ☐ Participant View

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Cases

- ☐ **Anderson, Cathy (9221020)** Actions
CPS Family 02/04/2003 Conn, Conn Dane - CCB , WI
- ☐ **Daily, Martha (9221019)** Actions
CPS Family 02/04/2003 Conn, Conn (Supervisor) Dane - CCB , WI
- ☐ Assignment
- ☐ Income/Eligibility
- ☐ Narrative
- ☐ Placement/Services
- ☒ **Out of Home Placement**
01/06/2001 Fernald, Mike Daily, Roger Milwaukee Pending
- ☐ **Montana, Jane (20282)** Actions
CPS Family 08/02/2000 Benana, Brendt Milwaukee-Site 1 120 Cake Street Madison, WI 53701
- ☐ **Samparas, Sally (20258)** Actions
CPS Family 07/31/2000 Benana, Brendt Milwaukee-Site 1 111 Even Street Milwaukee, WI 53295
- ☐ **Tanson, Tanya (9221023)** Actions
CPS Family 02/04/2003 Conn, Conn (Supervisor) Milwaukee-Out of Home Care , WI
- ☐ **Walker, Wendy (20232)** Actions
CPS Family 07/28/2000 Fir, Fran Milwaukee-Site 1 123 Main Street Milwaukee, WI 53201 FSL: Low

Providers

Workers

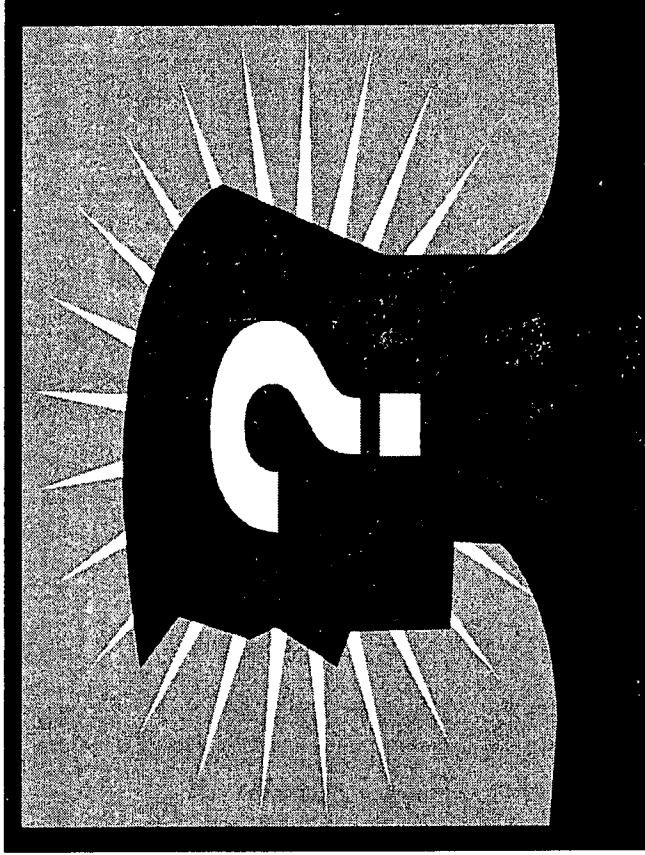
Approvals

Intakes

NC FAST – cont'd

- **Without NC FAST:**
 - No universal tracking system for clients
 - Continued risk of tragedies for children, the elderly, and families due to limited access of information
 - No real time information to support planning for families
 - Limited data availability which hampers federal and state reporting requirements
 - Inability to coordinated goals across programs
 - Limited or delayed communications across programs
 - Continued support for legacy applications

Questions and Answers



GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 2005

H

1

HOUSE BILL 642

Short Title: Study/Use of Social Services Statewide.

(Public)

Sponsors: Representative Miller.

Referred to: Science and Technology, if favorable, Appropriations Subcommittee on Health and Human Services.

March 15, 2005

- 1 A BILL TO BE ENTITLED
2 AN ACT TO ESTABLISH A COMMISSION TO STUDY THE TRACKING OF
3 PERSONS USING SOCIAL SERVICES IN THIS STATE.
4 The General Assembly of North Carolina enacts:
5 SECTION 1.(a) Commission Established. – There is established a
6 Legislative Study Commission on the Use of Social Services.
7 SECTION 1.(b) Membership. – The Commission shall consist of eight
8 members as follows:
9 (1) Four members of the House of Representatives appointed by the
10 Speaker of the House of Representatives.
11 (2) Four members of the Senate appointed by the President Pro Tempore
12 of the Senate.
13 SECTION 1.(c) Duties of the Commission. – The Commission shall study
14 the tracking of persons using social services in this State at the city, county, and State
15 level, such as those programs created under G.S. 108A-25. In conducting the study, the
16 Commission shall:
17 (1) Review how persons using social services are currently tracked.
18 (2) Consider the feasibility of improving IT systems to better track
19 persons using social services in this State.
20 (3) Consider the cost of establishing and maintaining an improved IT
21 tracking system.
22 All city, county, and State departments and agencies shall cooperate with the
23 Commission and, upon request, furnish to the Commission and its staff any information
24 in their possession or available to them.
25 SECTION 1.(d) Vacancies. – A vacancy shall be filled by the officer who
26 made the original appointment.
27 SECTION 1.(e) Cochairs. – The Speaker of the House of Representatives
28 and the President Pro Tempore of the Senate shall designate cochairs of the

1 Commission from among their respective appointees. The Commission shall meet upon
2 the call of the cochair. A quorum of the Commission shall be four members.

3 **SECTION 1.(f) Expenses of Members.** – Members of the Commission shall
4 receive per diem, subsistence, and travel allowances in accordance with G.S. 120-3.1,
5 138-5, or 138-6, as appropriate.

6 **SECTION 1.(g) Staff.** – The Legislative Services Commission, through the
7 Legislative Services Officer, shall assign professional staff to assist the Commission in
8 its work. The House of Representatives' and the Senate's Supervisors of Clerks shall
9 assign clerical staff to the Commission, and the expenses related to the clerical
10 employees shall be borne by the Commission.

11 **SECTION 1.(h) Consultants.** – The Commission may employ consultants to
12 assist with the study as provided in G.S. 120-32.02. Before expending any funds for a
13 consultant, the Commission shall report to the Joint Legislative Commission on
14 Governmental Operations on the consultant selected, the work products to be provided
15 by the consultant, and the cost of the contract, including an itemization of the cost
16 components.

17 **SECTION 1.(i) Meetings During Legislative Session.** – The Commission
18 may meet during a regular or extra session of the General Assembly, subject to approval
19 of the Speaker of the House of Representatives and the President Pro Tempore of the
20 Senate.

21 **SECTION 1.(j) Meeting Location.** – Subject to the approval of the
22 Legislative Services Commission, the Commission may meet in the State Legislative
23 Building or the Legislative Office Building.

24 **SECTION 1.(k) Report.** – The Commission shall submit a final report of its
25 findings and recommendations to the 2005 General Assembly no later than April 1,
26 2006. Upon the filing of its final report, the Commission shall terminate.

27 **SECTION 1.(l) Funds.** – Of the funds appropriated to the General
28 Assembly, the Legislative Services Commission shall allocate funds to implement the
29 provisions of this section.

30 **SECTION 2.** This act is effective when it becomes law.

VISITOR REGISTRATION SHEET

Science and Technology
Name of Committee

Name of Committee

5-4-05

Date _____

VISITORS: PLEASE SIGN BELOW AND RETURN TO COMMITTEE ASSISTANT

NAME

FIRM OR AGENCY

BILL COX

DATASTAFF INC.

Karen George

NCACDSS

Judy Pelt

Wayne Co. DSS

Julie Batchelor

05c

Dr. Ar Wentzy

Director, DSS, Northampton Co.

Stella McKenna

NC DHHS

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

May 11, 2005

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Presentation:

NC WISE
By Bob Bellamy, Department of Public Instruction

Bills to be Discussed:

House Bill 640 Track Student Throughout Their Education
Rep. Miller

Other Business

Adjournment

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005

H

1

HOUSE BILL 640

Short Title: Track Students Throughout Their Education.

(Public)

Sponsors: Representative Miller.

Referred to: Science and Technology, if favorable, Education.

March 15, 2005

A BILL TO BE ENTITLED

AN ACT DIRECTING THE JOINT LEGISLATIVE EDUCATION OVERSIGHT
COMMITTEE TO STUDY THE FEASIBILITY OF TRACKING STUDENTS
UNTIL THEY COMPLETE THEIR EDUCATION.

The General Assembly of North Carolina enacts:

SECTION 1. The Joint Legislative Education Oversight Committee shall study the feasibility of tracking students who enter the public schools as they move from one school system to another, drop out and return to school, take community college and university courses, and earn postsecondary certificates and degrees. In the course of the study, the Committee shall consider: (i) the privacy rights of students; and (ii) impediments to collecting the information under the current administrative practices of the public schools, the community colleges, proprietary schools, the constituent institutions of The University of North Carolina, and private colleges and universities.

The Committee shall report the results of its study to the 2006 Regular Session of the 2005 General Assembly.

SECTION 2. This act becomes effective July 1, 2005.

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

May 11, 2005

The House Committee on Science and Technology met on Wednesday, May 11, 2005, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson and Martin, Vice-Chairs; Gulley, Harrison, Hollo, Jones and Walend.

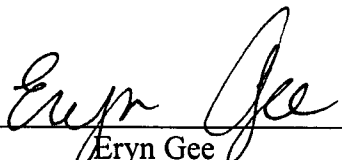
Representative Miller called the meeting to order. The pages serving the committee were Matthew Knight of Durham County sponsored by Representative Wilkins and Amber Henline from Mitchell County sponsored by Representative Frye. Frank Prevo and Jay Calloway were the assigned Sergeant-At-Arms.

The bill for today's discussion is House Bill 640, Track Students Throughout Their Education sponsored by Representative Miller, however it will not be voted on. Representative Miller introduced Bob Bellamy from the Department of Public Instruction to give a presentation on NC WISE (See Attachments L and M).

At the conclusion of the presentation with the time having expired, the meeting was adjourned.

Respectfully submitted,

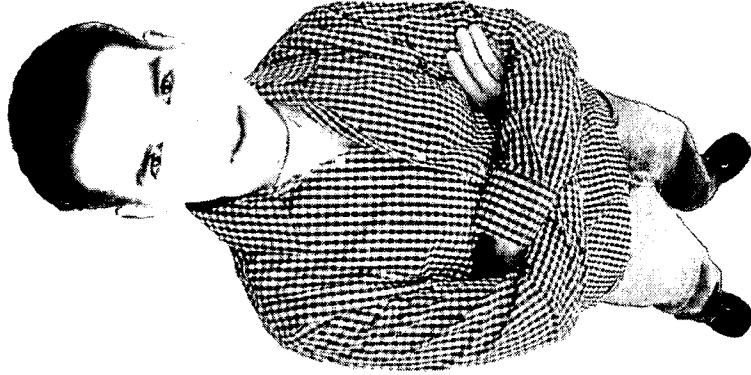
Representative Paul Miller
Chairman



Eryn Gee
Committee Assistant

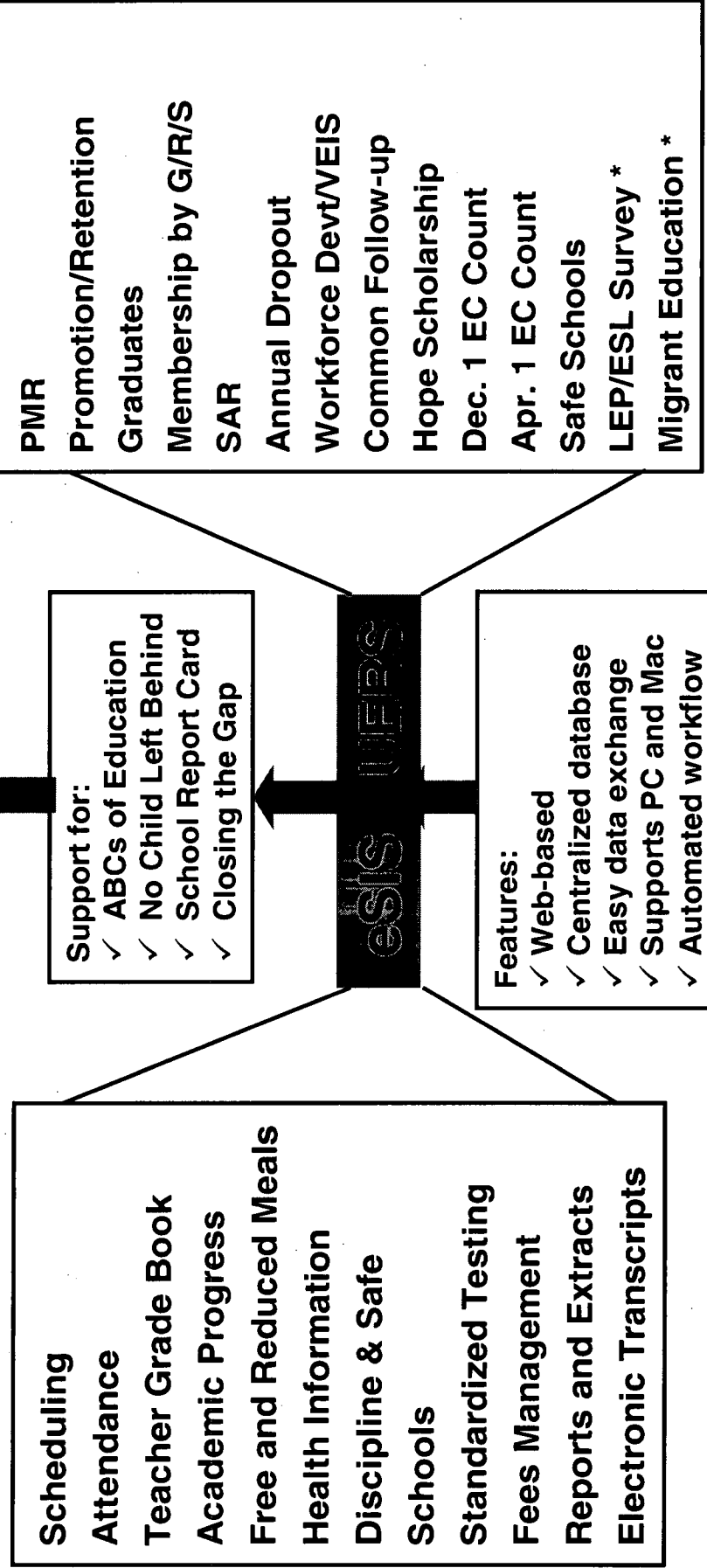
**A View into
NC WISE ::
North Carolina
Window of Information
on Student Education
Presentation to House Science
& Technology Committee
May 11, 2005**

Why Do We Need It?



- SIMS is an outdated system
 - Operates in a DOS environment
 - Does not meet all state and federal reporting requirements
 - Support for SIMS will be discontinued after 2007
 - Approximately 2250 separate databases

Data Driven Decision Making - (EDW)



ncwise

NC WISE ::

Part of the Solution

Instructional Support

- Grade book
- Report Cards
- Test Scores

- Membership
- Class Size
- Course Participation
- Graduates
- Dropout

- Transcripts
- Student Locator
- Health & Immun.
- Resource Mgmt.
- Fees Mgmt.

Reporting / Accountability

- Academic Progress
- Demographics
- Parent Contact

- EC Headcounts
- Safe Schools
- Migrant
- Workforce Devel.
- Promotion / Retention

- Scheduling
- Attendance
- Free & Reduced
- Discipline
- Record Transfer
- Budget Planning

Instructional Drivers:

- ABCs Accountability
- NCLB/AYP
- School Report Card
- Closing the Gap

Administration



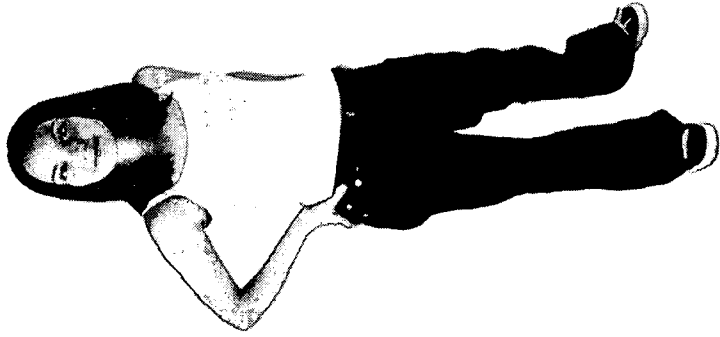
PUBLIC SCHOOLS OF NORTH CAROLINA

Department of Public Instruction | State Board of Education :: Technology Services :: NC WISE Support and Deployment

How Does NC WISE and its Modules Help Principals?

- Real time access to information at the district or building level depending on LEA role
- Reports at fingertips
- Query/extract ability
- Student grades/teacher gradebook
- Scheduling
- Discipline
- Transportation

What Does NC WISE Mean to Central Office Staff?



- Real time access to information
- Group versus individual processing
- Centralized data analysis
- Access during communications with parents
- Ease auditing programs (EC, CTE, Dropout)
- Automated UERS reporting

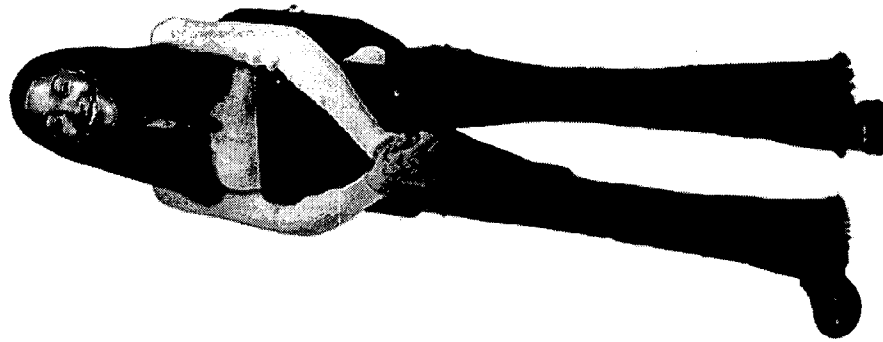
LEA Business Return

- Direct access to student data by central office staff, administrators and educators.
- Full support for ABCs Accountability Program with online access to student test results.
- Automatic transfer of student information between LEAs and schools.
- Automated, electronic transcript delivery through College Foundation of North Carolina (CFNC) to state post-secondary schools.
- Online access by principals, teachers, counselors to verify a schedule, share grades and attendance information with parents.
- Automated state reporting and approval.

LEA Financial Return

- Streamlines tasks or reduces time to do tasks
 - Eliminates or consolidates many time consuming tasks now performed in SIMS (i.e. data backup)
 - Saves time and money on printing costs for some LEA reports
- Eliminates need for additional software purchases because a wide range of functions are included
 - Teacher Assistant Module (Grade book and on-line attendance)
 - Health Information
 - Incident Tracking (Discipline and Safe Schools)

How Does NC WISE Support and Enhance Instruction?



- Real-time access to student demographic, academic and attendance data.
- Tailor student instruction by monitoring and evaluating student performance through electronic gradebook.
- Guide and support student's post-secondary choices based on student data.
- Tools to support parent communications and involvement.

Overview of Wave 1

- Wave 1 Deployment began October 18, 2004 and ended March 17, 2005.
- 35 LEAs and 23 charter schools or 601 schools converted to NC WISE during Wave 1.
- To date 38 LEAs and 22 charter schools are now using NC WISE. This includes the six LEAs (Catawba, Chapel Hill-Carborro, Cumberland, Gates, Wake and Whiteville) that participated in the pilot program from 1999 to the start of Wave 1.
- More than 39,000 users regularly access NC WISE and over 480,000 student records have been converted.

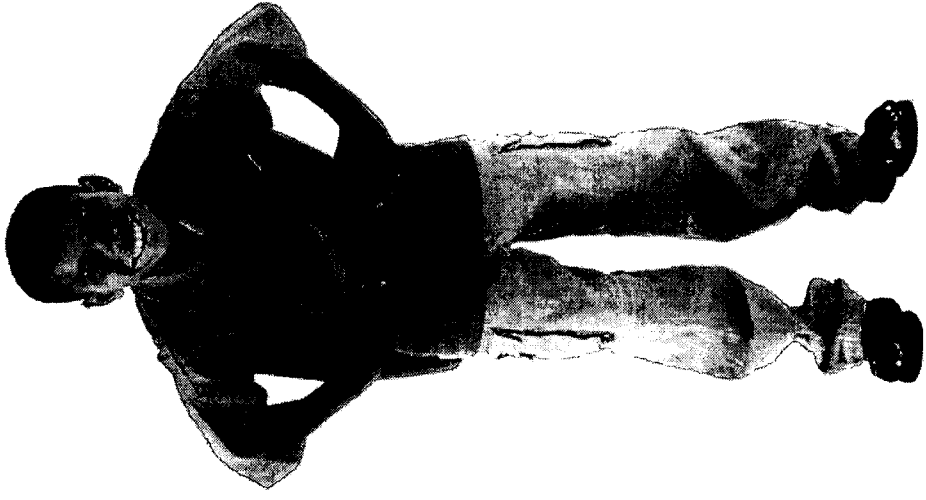
North Carolina State Board of Education Implications

- State Board of Education Policy
 - Student Information System
 - Adopted August, 2004
 - Web Link: <http://sbepolicy.dpi.state.nc.us>
and click on the link for EEO-C-018.

ncwise

Contact Information

- For More Information
- Email questions to
NCWISE@dpi.state.nc.us
- Visit - www.ncwise.org



PUBLIC SCHOOLS OF NORTH CAROLINA

Department of Public Instruction | State Board of Education :: Technology Services :: NC WISE Support and Deployment

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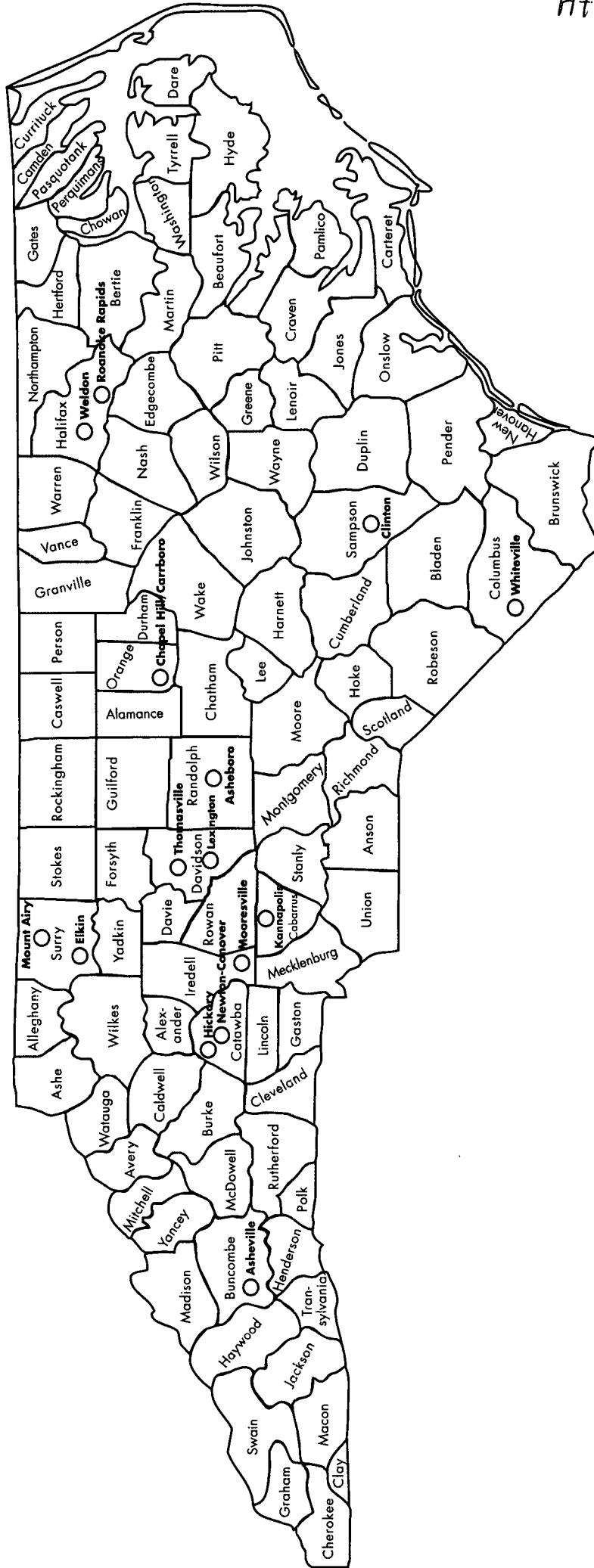
PUBLIC SCHOOLS OF NORTH CAROLINA

Department of Public Instruction | State Board of Education :: Technology Services :: NC WISE Support and Deployment

NC WISE

NC WISE DEPLOYMENT WAVES I, II, and III

(as of April 11, 2005)



NC WISE SITES

Name	2002-2004

WAVE I

Name	2004-2005

WAVE II

Name	2005-2006

WAVE III

Name	2006-2007

Please see NC Deployment Waves I, II, III List for Charter Schools.



PUBLIC SCHOOLS OF NORTH CAROLINA

Department of Public Instruction | State Board of Education
Accountability and Technology Services :: NC WISE Support and Deployment

LEA	SCHOOL YEAR OF SCHEDULED CONVERSION	# OF SCHOOLS
CAROLINA INTERNATIONAL SCHOOL	2004	1
CATAWBA COUNTY	2004	25
CHAPEL HILL-CARRBORO	2004	16
CHILDREN'S COMMUNITY SCHOOL	2004	1
CUMBERLAND COUNTY	2004	85
GATES COUNTY	2004	5
KINSTON CHARTER ACADEMY	2004	1
WAKE COUNTY	2004	126
WHITEVILLE CITY	2004	5
A CHILD'S GARDEN SCHOOL	2005	1
ALPHA ACADEMY	2005	1
ARTSPACE CHARTER	2005	1
ASHEBORO CITY	2005	8
ASHEVILLE CITY	2005	8
AVERY COUNTY	2005	9
BRUNSWICK COUNTY	2005	16
BUNCOMBE COUNTY	2005	40
BURKE COUNTY	2005	25
CALDWELL COUNTY	2005	25
CAMDEN COUNTY	2005	3
CHARTER DAY SCHOOL	2005	1
CLINTON CITY	2005	4
CRAVEN COUNTY	2005	22
CROSSNORE ACADEMY	2005	1
DAVIDSON COUNTY	2005	28
DILLARD ACADEMY	2005	1
ELKIN CITY	2005	2
FRANCINE DELANY NEW SCHOOL FOR CHILDREN	2005	1
FRANKLIN ACADEMY	2005	1
FRANKLIN COUNTY	2005	14
GRAHAM COUNTY	2005	3
GRANVILLE COUNTY	2005	14
HALIWA-SAPONI TRIBAL	2005	1
HAYWOOD COUNTY	2005	15
HEALTHY START ACADEMY	2005	1

LEA	SCHOOL YEAR OF SCHEDULED CONVERSION	# OF SCHOOLS
HOKE COUNTY	2005	11
HOPE ELEMENTARY	2005	1
IREDELL-STATESVILLE	2005	32
MADISON COUNTY	2005	6
MAGELLAN CHARTER	2005	1
MCDOWELL COUNTY	2005	11
MOORE COUNTY	2005	22
MOORESVILLE CITY	2005	6
MOUNTAIN DISCOVERY	2005	1
NEW HANOVER COUNTY	2005	34
PAMLICO COUNTY	2005	4
POLK COUNTY	2005	6
QUEST ACADEMY	2005	1
RICHMOND COUNTY	2005	18
ROANOKE RAPIDS CITY	2005	4
SAMPSON COUNTY	2005	16
STANLY COUNTY	2005	22
SUCCESS INSTITUTE	2005	1
THE LEARNING CENTER	2005	1
THE MOUNTAIN COMMUNITY SCHOOL	2005	1
THE NEW DIMENSIONS SCHOOL	2005	1
THOMAS JEFFERSON ACADEMY	2005	1
TORCHLIGHT ACADEMY	2005	1
TRANSYLVANIA COUNTY	2005	9
WAYNE COUNTY	2005	31
WELDON CITY	2005	3
WILKES COUNTY	2005	24
WINSTON-SALEM/FORSYTH COUNTY	2005	68
YADKIN COUNTY	2005	11
ALEXANDER COUNTY	2006	10
AMERICAN RENAISSANCE CHARTER	2006	1
ANN ATWATER COMMUNITY SCHOOL	2006	1
ARAPAHOE CHARTER	2006	1
BAKER CHARTER HIGH	2006	1

LEA	SCHOOL YEAR OF SCHEDULED CONVERSION	# OF SCHOOLS
BEAUFORT COUNTY	2006	14
BETHANY COMMUNITY MIDDLE	2006	1
BREVARD ACADEMY	2006	1
BRIDGES CHARTER SCHOOL	2006	1
CABARRUS COUNTY	2006	28
CAPE FEAR CENTER FOR INQUIRY	2006	1
CARTER COMMUNITY	2006	1
CASWELL COUNTY	2006	6
CHATHAM COUNTY	2006	15
CIS ACADEMY	2006	1
CROSSROADS CHARTER	2006	1
DHHS	2006	13
DAVIE COUNTY	2006	9
DOWNTOWN MIDDLE	2006	1
DUPLIN COUNTY	2006	15
EAST WAKE ACADEMY	2006	1
EAST WINSTON PRIMARY SCHOOL	2006	1
EDENTON/CHOWAN	2006	4
EDGEcombe COUNTY	2006	15
EVERGREEN COMMUNITY CHARTER	2006	1
GASTON COLLEGE PREP	2006	1
GASTON COUNTY	2006	52
GRANDFATHER ACADEMY	2006	1
GRAY STONE DAY SCHOOL	2006	1
GUILFORD CHARTER	2006	1
GUILFORD COUNTY	2006	102
HARNETT COUNTY	2006	26
HENDERSON COUNTY	2006	21
HERTFORD COUNTY	2006	6
HICKORY CITY	2006	10
HYDE COUNTY	2006	4
KANNAPOLIS CITY	2006	7
KESTREL HEIGHTS SCHOOL	2006	1
KENNEDY CHARTER SCHOOL	2006	1
LAKE NORMAN CHARTER	2006	1

LEA	SCHOOL YEAR OF SCHEDULED CONVERSION	# OF SCHOOLS
LAKEVIEW SCHOOL	2006	1
LEE COUNTY	2006	12
LINCOLN CHARTER SCHOOL	2006	1
MACON COUNTY	2006	10
MARTIN COUNTY	2006	12
MITCHELL COUNTY	2006	8
NASH-ROCKY MOUNT	2006	29
NC SCHOOL OF SCIENCE AND MATHEMATICS	2006	1
NEW CENTURY CHARTER	2006	1
NEWTON-CONOVER	2006	6
OMUTKO GWAAMAZIIMA	2006	1
ONSLOW COUNTY	2006	33
ORANGE COUNTY	2006	11
PAGE ACADEMY	2006	1
PENDER COUNTY	2006	15
PERSON COUNTY	2006	10
PIEDMONT COMMUNITY CHARTER	2006	1
PITT COUNTY	2006	33
PROVISIONS ACADEMY	2006	1
RALEIGH CHARTER HIGH	2006	1
ROBESON COUNTY	2006	41
ROCKY MOUNT CHARTER	2006	1
RUTHERFORD COUNTY	2006	19
SALLIE B HOWARD SCHOOL	2006	1
SANDHILLS THEATRE ARTS RENAISSANCE	2006	1
SOCRATES CHARTER SCHOOL	2006	1
SPARC ACADEMY	2006	1
STOKES COUNTY	2006	18
SUGAR CREEK CHARTER SCHOOL	2006	1
SURRY COUNTY	2006	16
SWAIN COUNTY	2006	5
THE CHILDREN'S VILLAGE ACADEMY	2006	1
THOMASVILLE CITY	2006	4
TWO RIVERS CHARTER SCHOOL	2006	1
TYRRELL COUNTY	2006	3
UNION ACADEMY	2006	1
UNION COUNTY	2006	34
VANCE CHARTER SCHOOL	2006	1

LEA	SCHOOL YEAR OF SCHEDULED CONVERSION	# OF SCHOOLS
VISIONS CHARTER SCHOOL	2006	1
WASHINGTON MONTESSORI	2006	1
WATAUGA COUNTY	2006	9
YANCEY COUNTY	2006	9
ALAMANCE-BURLINGTON	2007	33
ALLEGANY COUNTY	2007	4
AMERICAN RENAISSANCE MIDDLE SCHOOL	2007	1
ANSON COUNTY	2007	9
ARTS BASED ELEMENTARY	2007	1
ASHE COUNTY	2007	6
BERTIE COUNTY	2007	10
BETHEL HILL CHARTER	2007	1
BLADEN COUNTY	2007	14
CAPE LOOKOUT SCHOOL OF MARITIME STUDIES	2007	1
CARTER G. WOODSON SCHOOL OF CHALLENGE	2007	1
CARTERET COUNTY	2007	16
CASA ESPERANZA	2007	1
CENTRAL PARK SCHOOL	2007	1
CHAITHAM CHARTER	2007	1
CHEROKEE COUNTY	2007	13
CLAY COUNTY	2007	3
CLEVELAND COUNTY	2007	28
CLOVER GARDEN CHARTER SCHOOL	2007	1
COLUMBUS COUNTY	2007	19
COMMUNITY PARTNERS	2007	1
CURRITUCK COUNTY	2007	8
DARE COUNTY	2007	9
DURHAM COUNTY	2007	44
FORSYTH ACADEMIES	2007	1
ENGELMANN SCHOOL OF THE ARTS	2007	1
EXPLORES MIDDLE SCHOOL	2007	1
GREENE COUNTY	2007	4
GREENSBORO ACADEMY	2007	1
HALIFAX COUNTY	2007	15
HIGHLAND CHARTER	2007	1
IMANI INSTITUTE	2007	1
JACKSON COUNTY	2007	7

LEA	SCHOOL YEAR OF SCHEDULED CONVERSION	# OF SCHOOLS
JOHNSTON COUNTY	2007	32
JONES COUNTY	2007	6
LAURINBURG CHARTER	2007	1
LAURINBURG HOMEWORK	2007	1
LENOIR COUNTY	2007	20
LEXINGTON CITY	2007	6
LINCOLN COUNTY	2007	19
MAST SCHOOL INC	2007	1
MAUREEN JOY CHARTER	2007	1
MECKLENBURG COUNTY	2007	134
METROLINA REGIONAL SCHOLARS' ACADEMY	2007	1
MILLENNIUM CHARTER	2007	1
MONTGOMERY COUNTY	2007	10
MOUNT AIRY CITY	2007	4
NORTHAMPTON COUNTY	2007	10
ORANGE CHARTER	2007	1
PASQUOTANK COUNTY	2007	12
PERQUIMANS COUNTY	2007	4
PHOENIX ACADEMY INC	2007	1
PREEMINENT INSTITUTE OF LEARNING	2007	1
QUALITY EDUCATION ACADEMY	2007	1
QUEEN'S GRANT COMMUNITY	2007	1
RANDOLPH COUNTY	2007	28
RESEARCH TRIANGLE CHARTER	2007	1
RIVERMILL CHARTER SCHOOL	2007	1
ROCKINGHAM COUNTY	2007	25
ROWAN ACADEMY	2007	1
ROWAN-SALISBURY	2007	30
SCOTLAND COUNTY	2007	15
STERLING MONTESSORI ACADEMY	2007	1
SUMMIT CHARTER	2007	1
THE COMMUNITY CHARTER SCHOOL	2007	1
THE WOODS	2007	1
TILLER SCHOOL	2007	1
VANCE COUNTY	2007	15
WARREN COUNTY	2007	6
WASHINGTON COUNTY	2007	5
WILSON COUNTY	2007	23

This list provides the current status based on letters of intent sent to DPI from LEAs and charter schools. There will be an opportunity in the near future to change the targeted school year.



Moving to a Statewide Student Information System: The North Carolina Perspective



By Bob Bellamy Ed.D., (left) Associate State Superintendent for Technology Services, North Carolina Department of Public Instruction, and Christina Winter Ed.D., (right) NC WISE, IBM Business Consulting Services

■ ■ ■

NC WISE enables the state education agency to satisfy state and federal funding requirements and reporting needs such as those required under the "No Child Left Behind" (NCLB) Act.

■ ■ ■

East meets west! North Carolina and California are more than 3,000 miles apart. However, K-12 education technology leaders find ourselves facing many of the same goals and challenges.

The California Statewide Initiatives CSIS: Information Exchange and Student Information Project and North Carolina's NC WISE project have common goals, drivers and resulting impacts on school district technology leaders.

Background: A North Carolina Statewide Electronic Student Information System for K-12 School Districts

The North Carolina Department of Public Instruction (NCDPI) is currently sponsoring the North Carolina Window of Information on Student Education (NC WISE). NC WISE is a technology model to improve the way school districts conduct business in North Carolina by integrating information on all aspects of public school life from the classroom to the central office. The Web-based system provides student and school information management capabilities and captures essential data about students throughout their careers in North Carolina public schools. When fully deployed, NC WISE will be available in all 115 North Carolina school districts and 98 Charter Schools, reaching 2,250 schools and managing student information for an estimated 1.4 million students.

NC WISE enables the state education agency to satisfy state and federal funding requirements and reporting needs such as those required under the "No Child Left Behind" (NCLB) Act. NC WISE will be the primary student accounting and accountability management system for the North Carolina public schools. Data collected will drive an annual budget receipt of over \$6 billion. In addition, the NC WISE solution will provide a unique student identification process.

NC WISE was initiated in 1998 to meet goals of:

- high student performance
- safe and orderly schools
- quality teachers, administrators and staff
- accountability
- effective and efficient operations

The North Carolina State Board of Education (NCSBE) envisioned that NC WISE would help in fulfilling strategic priorities in the following ways:

- By effectively automating classroom, instructional, and administrative tasks while providing needed information directly to teachers through effective information system technology.
- By supporting school safety in captur-

ing and reporting details about school violence incidents and other discipline related information.

- By providing information access, extraction, analysis and decision support for senior and executive management (including accountability analysis and decision making).
- By providing effective new technology to support school-wide operations such as scheduling, transcript management, auditing, and student services.

State Background and Motivating Factors

The NCDPI identified the need to replace the outmoded Student Information Management System (SIMS) which has been in place statewide for approximately 20 years. SIMS is a PC-DOS based product programmed in the early 1980s and designed to be run in either stand-alone or in a multi-user mode in a Novell LAN environment. Under SIMS, each school has its own SIMS database that is not connected in any way to the databases of other schools. Movement of student data from one school to another within the same school district involves a combination of electronic diskettes and manual/paper based transfers.

In short, school districts needed to move forward and away from SIMS, either by purchasing a software reporting package and teacher tool on their own – or by joining the state's efforts and having input to use, re-design, test and build the new system.

State leaders believed there would be benefits to entering a statewide replacement for SIMS and taking advantage of modern technology to support the following goals:

- elimination of redundant and inconsistent data
- sharing of information (among schools, school district central offices and NCDPI);
- easy and effective communication of information
- implementation of easy-to-use graphical user interfaces
- easy-to-use tools to extract data for formulating tables and graphs for decision support and executive information.

The goal of a statewide student information system to provide a comprehensive, integrated, software package to support the day-to-day demands of public school operations, classroom management, and instructional management fit NCDPI's vision of comprehensive and strategic planning.

With a heavily state-funded public school system, North Carolina saw the

need to standardize educational data to ensure timely and accurate reporting for fiscal, human resource and student performance accountability. During the early 1980s, the General Assembly implemented the Uniform Education Reporting System (UERS) which included a comprehensive set of standard data definitions (financial, human resource, and student) and required that all local systems report their data to the state using either state-developed systems or commercial systems that were "certified" as UERS-compliant by the NCDPI. Requirements included:

1. Compliance with mandated business rules and financial accounting practices.
2. Standardized course weighting, class ranking and student transcripts.
3. Timely transfer of student data to the state and student records from one LEA/School to another.
4. Student record privacy (FERPA) and security.

With the implementation of NC WISE, a centralized system, the spirit of UERS is carried further with:

1. Virtually instant and secure student record transfer from school to school and district to district.
2. Electronic student transcripts to any of the states 115 public and private universities and community colleges, available through the College Fund of North Carolina (a unit of the University of North Carolina Office of the President) which allows North Carolina high school graduates to apply on line (www.cfnc.org) for college admission.
3. Standardized electronic reporting and integration with other electronic systems (Exceptional Children, Teacher Certification, ESL) of student data to comply with state and federal (No Child Left Behind and IDEA) reporting requirements, including data for attendance, class size, discipline, free and reduced lunch, and standardized test results.

North Carolina: A Student Information System Pilot

During the past five years, North Carolina has piloted the NC WISE student information system in six school districts. During the pilot, the functional requirements for the NC WISE solution have undergone dramatic changes primarily driven by changes to business processes at the district, state and federal levels.

It may be fair to say that over the five years the leaders at NCDPI were naïve in estimating the level of effort it would take to support local technology directors in

the transition from SIMS to an electronic student information system package. However, we established a relationship with local school systems and listened to the technology directors.

Statewide Student Information System: Input from Technology Directors in the Pilot LEAs

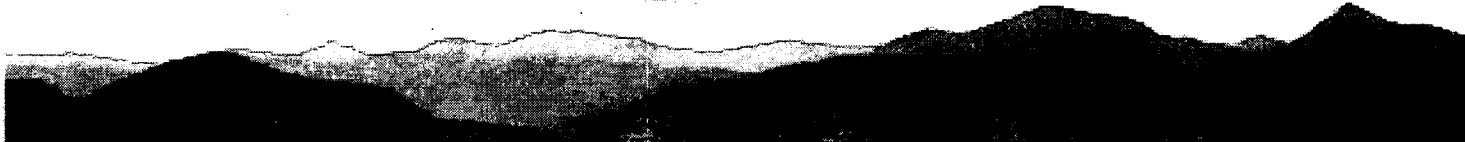
NCDPI established NCWISE steering committees and software change control boards with representation from the pilot Local Education Agencies (LEAs) including technology directors and supporting team members. From these input sessions, state leaders learned that technology directors in the six pilots needed support and backing from NCDPI. Specifically, NCDPI needed to:

1. Budget state resources for communication and change management tools
2. Create a system of readiness assessment to review each school district's data conversion, infrastructure and hardware standards
3. Provide tools and standards for technology support (ex: network monitoring)
4. Plan conversion to a new teacher business practices (ex: gradebook) incrementally
5. Manage state agency relationships to provide support for LEAs
6. Manage vendor relationships to support LEAs needs
7. Support an extensive, easily accessed training program using multiple methodologies
8. Create a system of tracking and managing change requests from the field
9. Create an improved help desk
10. Update existing business practices and adopt new state guidelines, procedures and policies

State Board Policy: Guiding North Carolina School Districts to Participate

While NCDPI provided support and developed new procedures, tools, communications and guidelines, technology directors across the state needed more backing. Driving the change in business processes required the North Carolina State Board of Education adoption of a new student information system policy. The policy, which went into effect in August 2004, guides the technology planning for student information systems for all North Carolina school districts and charter schools.

The policy confirms the board's support of NC WISE and Uniform Education Reporting System (UERS) as the state's selected system for student accounting as well as collecting and reporting student information.



It also defines the responsibilities of NCDPI in providing support to LEAs and charter schools so they may successfully implement NC WISE. Local school boards are required to be proactive regarding local policy reviews in areas such as security.

The NCSBE policy sets the expectation that every LEA and charter school will use NC WISE or meet the technology standards of NC WISE. All LEAs or charter schools are required to implement NC WISE or an alternate system by the end of the 2006-2007 school year.

Finally, any LEA or charter school that fails to install NC WISE or an approved benchmark alternate student accounting system will be considered out of compliance with UERS reporting guidelines and sanctions will be imposed.

To read or download a copy of the State Board policy, visit <http://sbepolicy.dpi.state.nc.us> and click on the link for EEO-C-018.

Today: Are North Carolina School Districts Optimistic About the Future of a Statewide Student Information System?

The pilots in unison proclaim they would not turn back the hands of time to

revive SIMS or select their own package. The resulting change, although difficult and controversial at times, has resulted in many benefits for the school district pilots. The NC WISE eSIS currently planned statewide implementation is comprehensive and includes: program management, Local Education Agency (LEA) deployment, training, data conversion, help desk support, system performance monitoring and problem resolution, network performance monitoring, application development, and testing. The state has investigated new network monitoring tools, dedicated new resources and responded to all the lessons learned from the pilot districts.

Looking to the Future

At the end of the five-year journey, would we go back? No. We have grown, improved, changed and discovered new improved business practices. The NCDPI has teamed with six leading school districts that entered and supported the pilot and shared knowledge and information.

During the past five years, North Carolina has learned many lessons that can pave the way for other states' success in K-12 administrative application implementation. Some of our trials, setbacks, and subse-

quent significant progress created a wealth of lessons learned. We hope to provide some guiding principles for other states which are ready to make the move forward into a similar charge into progressive technology supported business practices.

Geography may separate us. But North Carolina and California share many drivers and needs. NCDPI would like to know that our experience could assist technology directors 3,000 miles away.

For more information on NC WISE, please visit www.ncwise.org, e-mail ncwise@dpi.state.nc.us or write to NC WISE Project, NC Department of Public Instruction at 6306 Mail Service Center, Raleigh, NC 27699-6306.

For more information on IBM's involvement with NC WISE and other IBM K-12 Solutions, please contact Asif Jessani at ajessani@us.ibm.com or (800) 426-1751 x1857 or Christina S. Winter at cwinter@us.ibm.com or (877) 433-7782.

**NORTH CAROLINA STATE BOARD OF EDUCATION
Policy Manual**

Policy Identification

Priority: Effective and Efficient Operations

Category: State Board of Education/Department of Public Instruction Op

Policy ID Number: EEO-C-018

Policy Title: Policy regarding the implementation of NC WISE

Current Policy Date: 07/29/2004

Other Historical Information:

Statutory Reference: GS 115C-12; GS 115C-438; 20 USC § 1232g, The Family Educational Rights and Privacy Act Statute; 34 CFR Part 99 Regulations

Administrative Procedures Act (APA) Reference Number and Category:

The North Carolina Department of Public Instruction (NCDPI) has the legal and ethical responsibility to use and disseminate appropriate information as one of its most important priorities. The legal aspects of the use of public school data are based upon several state and federal laws including, primarily, the Uniform Education Reporting Systems (UERS) umbrella as required by General Statute (GS) 115C-12. Sanctions shall be imposed to the local school system (LEA) or charter school not in compliance with UERS reporting guidelines as stated in GS 115C-438. Additionally, the Family Education Rights and Privacy Act (FERPA), enacted by the United States Congress in 1988 and amended in 1996, mandates procedures for protecting the privacy of student data while acknowledging the necessity to collect it. North Carolina further defines the situations in which both student and education student data can (and cannot) be disclosed in GS 115C. (See State Board of Education Policy EE0-C-017.)

The North Carolina Window of Information on Student Education (NC WISE), comprised of Administrative Assistant Ltd.'s e-SIS software and associated UERS information systems, is the state's selected system for student accounting and the collection and reporting of student information. The following responsibilities will govern NCDPI's request for and use of student education data from individual schools and LEAs in the state.

Requirements for NCDPI

NCDPI shall

1. test, deliver, and provide support for NCWISE to LEAs and charter schools to comply with NCDPI reporting requirements and provide help desk for the software;
2. deliver training/professional development to LEAs to support the implementation of NC WISE;

3. provide reference materials and information to guide LEA conversion of SIMS data to NC WISE data;
4. provide reference materials and information to guide LEA technical architecture, infrastructure, and staffing requirements to implement NC WISE;
5. provide guidelines for computer hardware and networks to implement NC WISE;
6. provide security requirements in compliance with security standards established by the North Carolina Information Resource Management Commission; and
7. ensure all data is secure and student data privacy policies and procedures as set forth by the Office of the State Chief Information Officer are observed by NCDPI and its contractors for NC WISE services.

Requirements for LEAs and Charter Schools That Implement NC WISE

LEAs and Charter Schools shall

1. utilize and participate in the state's Unique Student ID Generation System for all student identification and for all applications using student information;
2. transmit and receive electronically all student records as a student transfers from one NC WISE school or LEA within North Carolina to another NC WISE school/LEA in North Carolina;
3. utilize the NCWISE Electronic Student Transcript system in sending all high school transcripts to colleges and universities in North Carolina that are participating in the NC WISE Electronic Student Transcript Program;
4. maintain all statewide systems codes such as but not limited to course codes, address codes, city codes, enrollment codes, withdrawal codes, discipline codes, etc.
5. meet all UERS data reporting requirements for all applicable state and federal reporting;
6. meet all SBE/UNC/NCCCS graduation requirements for calculating grade point averages (GPAs); and
7. ensure all data is secure and student data privacy policies and procedures established by the Office of the State Chief Information Officer are observed within the school/LEA.

LEAs and Charter Schools That Do Not Implement NC WISE

LEAs and charter schools that choose not to implement NC WISE shall implement an alternate student accounting/reporting system that shall comply with benchmark requirements established by NCDPI.

These benchmarks shall define requirements for

1. data reporting and data quality;
2. interface of functionality with NC WISE (i.e., electronic university transcripts, LEA-to-LEA student record transfer, NC Education Data Warehouse);
3. application, network, and physical security compliance;
4. disaster recovery/business continuity planning;
5. UERS reporting requirements; and

6. implement new UERS, federal, or state reporting requirements within a timeframe that allows newly required data to be available for collection by the first collection of such data by NCDPI.

Deadlines and Sanctions

All LEAs and charter schools must fully deploy and implement NC WISE or an approved/benchmarked alternate student accounting system by the end of the 2006-07 school year.

Any LEA or charter school that fails to install and utilize NC WISE or an approved/benchmarked alternate student accounting system by the end of the 2006-07 school year shall implement NC WISE at no cost to the state.

Any LEA or charter school that fails to install and operate NC WISE or an approved/benchmarked alternate student accounting system as stated above shall be considered to be out of compliance with UERS reporting guidelines as stated in GS 115C-438; sanctions will be imposed accordingly.

IN THIS ISSUE ::

Deployment Update.....	1
System Functionality Updates	2
A "Bit" of Change in NC WISE.....	4
NC WISE Symposium.....	5
Readiness Update.....	6
Dates to Know.....	7

DEPLOYMENT UPDATE

Wave 1 Deployment Completed March 17

The NC WISE team officially completed Wave 1 conversions for 35 LEAs and 20 charter schools March 17. There are now more than 740 schools including the schools from the six pilot LEAs that have converted to NC WISE. That means there are over 40,000 users that access NC WISE regularly and almost 500,000 student records that have been converted to NC WISE. Congratulations to those LEAs and charter schools in Wave 1.

LEAs that converted during Wave 1 include: Asheboro City, Asheville City, Avery County, Buncombe County, Burke County, Brunswick County, Caldwell County, Camden County, Clinton City, Craven County, Davidson County, Elkin City, Franklin County, Graham County, Granville County, Haywood County, Hoke County, Iredell-Statesville, Madison County, McDowell County, Moore County, Mooresville City, New Hanover County, Pamlico County, Polk County, Richmond County, Roanoke Rapids City, Sampson County, Stanly County, Transylvania County, Wayne County, Winston-Salem/Forsyth County, Weldon City, Wilkes County and Yadkin County.

Charter schools that converted to NC WISE during Wave 1 Deployment include: A Child's Garden School, ArtSpace Charter, Alpha Academy, Charter Day School, Crossnore Academy, Dillard Academy, Francine Delaney New School for Children, Franklin Academy, Haliwa-Saponi Tribal, Healthy Start Academy, Hope Elementary, Learning Center, Magellan Charter, Mountain Community School, Mountain Discovery School, New Dimensions School, Quest Academy, Success Institute, Thomas Jefferson Academy and Torchlight Academy.

Schools will continue to be converted at the rate of 40 a week through Waves 2 and 3 until all 115 LEAs and 100 charter schools are converted by 2007.

NC WISE Team Preparing for Wave 2

Wave 2 Deployment planning is currently underway. The following LEAs and charter schools are tentatively scheduled to participate in Wave 2 Deployment:

LEAs: Alexander County, Beaufort County, Cabarrus County, Caswell County, Chatham County, Davie County, Duplin County, Edenton/Chowan County, Edgecombe County, Gaston County, Guilford County, Harnett County, Henderson County, Hertford County, Hickory City, Hyde County, Kannapolis City, Lee County, Macon County, Martin County, Mitchell County, Nash-Rocky Mount, Newton-Conover, Onslow County, Orange County, Pender County, Person County, Pitt County, Robeson County, Rutherford County, Stokes County, Surry County, Swain County, Thomasville City, Tyrrell County, Union County, Watauga County and Yancey County.

Charter schools: Ann Atwater Community School, Arapahoe Charter, John H. Baker, Jr. High, Bethany Charter, Brevard Academy, Bridges Charter School, Cape Fear Center for Inquiry, Carter Community School, Central Park School, CIS Academy, Crossroads Charter High, DHHS, Downtown Middle School, East Wake Academy, East Winston Primary, Engelmann School of the Arts, Evergreen Community, Gaston College, Grandfather Academy, Guilford Charter School, Gray Stone Day School, Kennedy School, Kestrel Heights School, Lakeside School, Lake Norman Charter School, Lincoln Charter, Maureen Joy Charter, New Century School, Orange Charter School, Omuteko Gwamaziima, Piedmont Community, PreEminent Institute of Learning, Provisions Academy, Research Triangle Charter, Rocky Mount Prep School, Sallie B. Howard School, Sandhills Theatre Arts Renaissance School, SPARC Academy, Socrates Academy, Sugar Creek Charter, The Children's Village, Tiller School, Two Rivers, Union Academy, Vance Charter School, and Washington Montessori.

SYSTEM FUNCTIONALITY UPDATES

New NC WISE Password Requirements to be Implemented May 1

To better protect the sensitive information stored in the NC WISE application, new password requirements will be implemented beginning Sunday, May 1, 2005. Existing accounts which do not meet the password standards will not be affected immediately, but all users' passwords must be changed to meet the new standards on or before Friday, July 29, 2005 (90 days from May 1.)

The following is a list of the new password requirements:

- All new passwords must be at least 8 characters long.
- Passwords will expire every 90 days.
- Each password must begin with an alpha character and contain at least 2 non-alpha characters (allowable non-alpha characters are: 0-9 _#\$).
- The application keeps a record of passwords used and a password can not be reused until the password has been changed 6 times.
- Users who enter an invalid password 3 consecutive times will be locked out of the system. If a user is locked out of the system he or she will need to wait 2 hours for the account access to reset or contact the school data manager in order to get his or her account access reinstated.
- Accounts will be disabled after 30 days of inactivity (and must be re-enabled by the data manager).

Please remember these new standards become effective Sunday, May 1, 2005.

For more information on the new password standards please refer to the document "NC WISE Password Policies" on the Web site at www.ncwise.org.

Withdrawing Students in NC WISE on a Non-School Day

School personnel who are responsible for admitting and withdrawing students in NC WISE need to be aware that students can be withdrawn from a school on a non-school day.

Improvements to EDI transcript

LEA and school users working with the Electronic Data Interchange (EDI) transcript will now see that the transcript is pulling the right information.

The EDI transcript no longer pulls middle school courses unless the external course codes ends in a "X." The transcript now pulls a weighted rank and the GPA includes current year courses with final marks. School users with questions concerning the EDI transcript should contact their LEA Help Desk.

Exemptions in Gradebook Ignored When Posting

LEAs using the Teacher Assistant Module (TAM) need to be aware that there is an issue with the gradebook regarding exemptions.

When a reporting term is set in TAM with one assessment (i.e., Reporting term of 1st semester exam with only an exam assessment) and students have been marked exempt on the Teacher Enter Grade/Comments screen for that one assessment, the exempt students' grades post as zeros in the TA and Post columns. However the TA and Post columns should remain blank. An exemption should override the "Count Blanks as Zero" option if the option is checked on the Teacher Assistance Preferences screen, but it does not.

With the same reporting term scenario as above, when "Count Blanks as Zero" option is left unchecked the students should be considered exempt from the assessment if the grade is blank. However, their grades post as zeros in the TA and Post columns

The school will need to verify that mark calculations are based on the Post column and not the TA column on the School TA Configuration screen in eSIS. Once this is verified and the teacher does not want the assessment to be included in the total, the teacher needs to manually delete the zeros from the students' records in the Post column on the TA Reporting Term Marks screen.

AAL is currently working on a fix so the columns will remain blank when a teacher marks an exemption for an assessment for a student in the gradebook.

Questions about setting up exemptions in TAM should be directed to the NC WISE Help Desk at sis_support@dpi.state.nc.us or 919 807-4357.

Setting Up Reporting Periods

School staff must set up reporting periods and the respective attributes (calculated, final_mark) and exam before teachers start assigning their classes to the prep in the preferences screen –TAW 800 – of the TAM.

Teachers who try to assign classes before a school has established the reporting periods will find that their classes will not align in the correct reporting periods. If this happens schools will have to go back to the teacher gradebooks and reassign the classes to the proper reporting periods.

Those with questions about setting up reporting periods may contact the NC WISE Help Desk by email at sis_support@dpi.state.nc.us or by phone at (919) 807-4357.

Active CR Summary Report Tracks Change Requests for NC WISE

How can coordinators track change requests (CR) they submit? Every week an Active CR Summary Report is sent to NC WISE coordinators and LEA technical directors. Active CRs include change requests that are open or have closed within the last 30 days. This report is produced in MS Excel, and enables users to sort active CRs by Status, Priority, Date Entered, Category, or any other dimension in the report.

NC WISE now Sending Messages to Users with Lyris

NC WISE is now sending group messages using Lyris Listserv. This means subscribers can subscribe or unsubscribe themselves or add additional users.

Users already receiving messages from the NC WISE mailbox have been automatically subscribed to one of four lists based on user roles: LEA coordinator, LEA technical director, LEA finance director or NC WISE staff member.

To subscribe new members to one of the lists go to this link:

http://lists.dpi.state.nc.us/read/all_forums/?&max=100&skip=0&orderby=ListName+ASC. Scroll to the bottom of the page where the NC WISE groups can be found. Users may subscribe to one of the following lists based on their roles in their LEA:

- wisecoord: NC WISE LEA Coordinator
- wisefinancedir: LEA Finance Director
- wisetechdir: LEA Technology Director

Click on the subscribe button to the far right and enter the email address and the name, then click subscribe. Once the request comes to DPI it will be verified and approved and the users will receive confirmation notices.

To unsubscribe, users can simply follow the directions located in the footer of the email or they may forward any posting received from a mailing list to the unsubscribe-listname@lists.dpi.state.nc.us address (i.e., unsubscribe-wisecoord.wave1@lists.dpi.state.nc.us.)

A "BIT" OF CHANGE IN NC WISE

New Faces Join the NC WISE Team

NC WISE leadership is pleased to announce the following people have joined the NC WISE team:

Jim Davis is the project manager for NC WISE and is responsible for ensuring that the project stays on task, stays on budget and is delivered on time. Jim worked as a project manager for Northrup Grumman before joining the NC WISE team.

Chris Cline is one of two deployment managers for the NC WISE team. Chris handles the DPI deliverables for the NC WISE for professional development, configuration management, readiness management, requirements management and quality assurance. Chris was previously a project manager for DPI. Terry Bledsoe is the other deployment manager and is responsible for developing and managing the NC WISE deployment and training schedules as well as supervising the trainers who work with LEA and charter school personnel. Before joining NC WISE as a deployment manager, Terry was the chief technology officer for Catawba County Schools.

Lisa Ballance is the readiness manager and ensures that all LEAs and charters schools prepare their data, staffing, workstations and networking for the transition from SIMS to NC WISE. Lisa was previously the NC WISE coordinator for Nash-Rocky Mount Schools.

George Troxler is the operations manager and is responsible for keeping the NC WISE systems up and running smoothly. George worked as the data center manager – for Facilities and Operations for Aon Corporation before coming to the NC WISE Team.

2005 NC WISE Symposium Attracts Record Number of Participants



● READINESS UPDATE

Course and Schedule Set-ups Critical to Smooth Conversion

During the implementation of Wave 1 schools, certain SIMS setup items were discovered that prevented a smooth conversion of SIMS data. In order to ensure a successful conversion to NC WISE, LEAs and charter schools must address the following issues prior to deployment:

- The NC WISE course conversion team cannot guarantee a successful conversion of courses that have a course length other than 9, 18 or 36 weeks. The SIMS course length is set up in the 7th position of the external course code number. Only values in this position of 9, Q, S or Y can be cleanly converted to eSIS. Use of a course with other lengths may require manual data entry following conversion. This does not affect the number of reporting periods used for report card purposes.
- A school that offers 9-week courses must be set up as a 4-semester school in SIMS. The number of semesters is established during the Prepare New School Year (PSNY) process and cannot be changed once the school timetable is completed. During conversion, a 4-semester school will be changed to a 2-semester, 2-term school; this allows final marks to be given in eSIS for 9-week courses as well as 18-week and year-long courses. Schools that offer only 18-week and year-long courses should be set up as a 2-semester school. Schools that offer only 36-week courses can be a 1-semester school.
- No single course can be scheduled with multiple formats. For example, course 6412CA cannot be scheduled as an everyday course as well as an alternating day course in the same school. Two different course numbers (6th character) should be used.
- Mark types in ALL schools must be: TERM, EXAM, SEMESTER, FINAL in this order. No exceptions.
- The number of school days in the Timetable Day director cannot exceed 9.

Remember that the conversion of SIMS data into NC WISE is in large part an automated process. Any variations from the standards addressed here, as well as published documentation on the www.ncwise.org Web site, may result in an incomplete or inaccurate conversion and require manual entry into eSIS.

New Validation Reports will Enhance EDCAM

With Wave 1 complete the Conversion Team is adding additional validation reports to EDCAM to improve the conversion process for Wave 2 LEAs and charter schools. The new reports will:

- Check for courses that are scheduled Every Day AND on Alternating (A/B) Days. While SIMS allows this, eSIS will not, therefore the course selections and student marks cannot be converted.
- Print out the courses that are in error and allow the schools to correct them by creating new courses with a different 6th digit and transfer the students to the new course.
- List the lengths of each course, such as 36-week, 18-week and 9-week courses.
- Check for schedule errors, such as having Semester 2 courses but no semester start and stop dates (as required in eSIS) to accommodate them.

The EDCAM pre-conversion reports are also being enhanced by adding new reports to print:

- Current Year Marks by Student.
- The total number of records loaded into EDCAM, (i.e., number of students, number of rooms or number of courses.)
- A list of students who do not have immunization records.
- A list of each school's upload dates and times.

DATES TO KNOW

Coming Soon: Maintenance Weekend

The next maintenance weekend is scheduled for Friday, April 22, 2005. The system will be down beginning at 5 p.m., April 22 until Monday, April 25, 2005 at 6 a.m. Notification will be sent if the system is available sooner.

Maintenance weekends for the remainder of 2005 will occur on the following dates:

- May 20
- June 24
- July 29
- August 26,
- September 23
- October 21
- November 18
- December 16

Coordinator's Briefing Scheduled for April 29

To respond to the request to provide more information about NC WISE to LEA coordinators, the first communications briefing for NC WISE coordinators will be held Friday, April 29, 2005 from 1-2:30 p.m. at various locations across the state and connected to DPI via the North Carolina Information Highway.

Coordinators are encouraged to provide a list of topics they would like to see addressed at the briefing. The topics discussed will be based on the responses received. In addition, coordinators are also encouraged to send questions they would like answered by DPI staff as there will be time allotted for a question and answer session. Topic suggestions and questions must be received no later than Friday, April 22, 2005. Questions that are not received prior to the meeting will be responded to after the briefing.

A list of sites where individuals can attend and participate in the briefing will be sent to NC WISE LEA coordinators. Coordinators who plan to attend are asked to RSVP by providing the number of people who will be attending in addition to themselves and the site they plan to utilize by Friday, April 22, 2005.

NC WISE LEA coordinators who want to attend the briefing or have questions should sign-up and send questions to Yolanda Wilson at ywilson@dpi.state.nc.us.

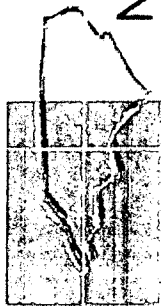
Coordinator's Summer Conference Scheduled July 31-August 2

Join us at the Sheraton Atlantic Beach Oceanfront Hotel for the NC WISE Summer Coordinator's Conference July 31-August 2, 2005. More information about the conference will be available soon on the Web site at www.ncwise.org.



COMMENTS AND FEEDBACK

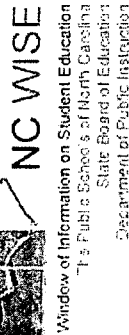
As always, we welcome your feedback and suggestions, as well as your program-level questions and comments, to the NC WISE project e-mailbox at ncwise@dpi.state.nc.us.



NC WISE

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The Public Schools of North Carolina
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NC WISE Update for May 2005



The diagram illustrates the project timeline for the NC WISE implementation, organized into several horizontal tracks. The timeline is divided into two main phases: Deployment-Wave 1 and Deployment-Wave 2. Key milestones and activities are marked along the timeline, with arrows indicating the flow and duration of activities.

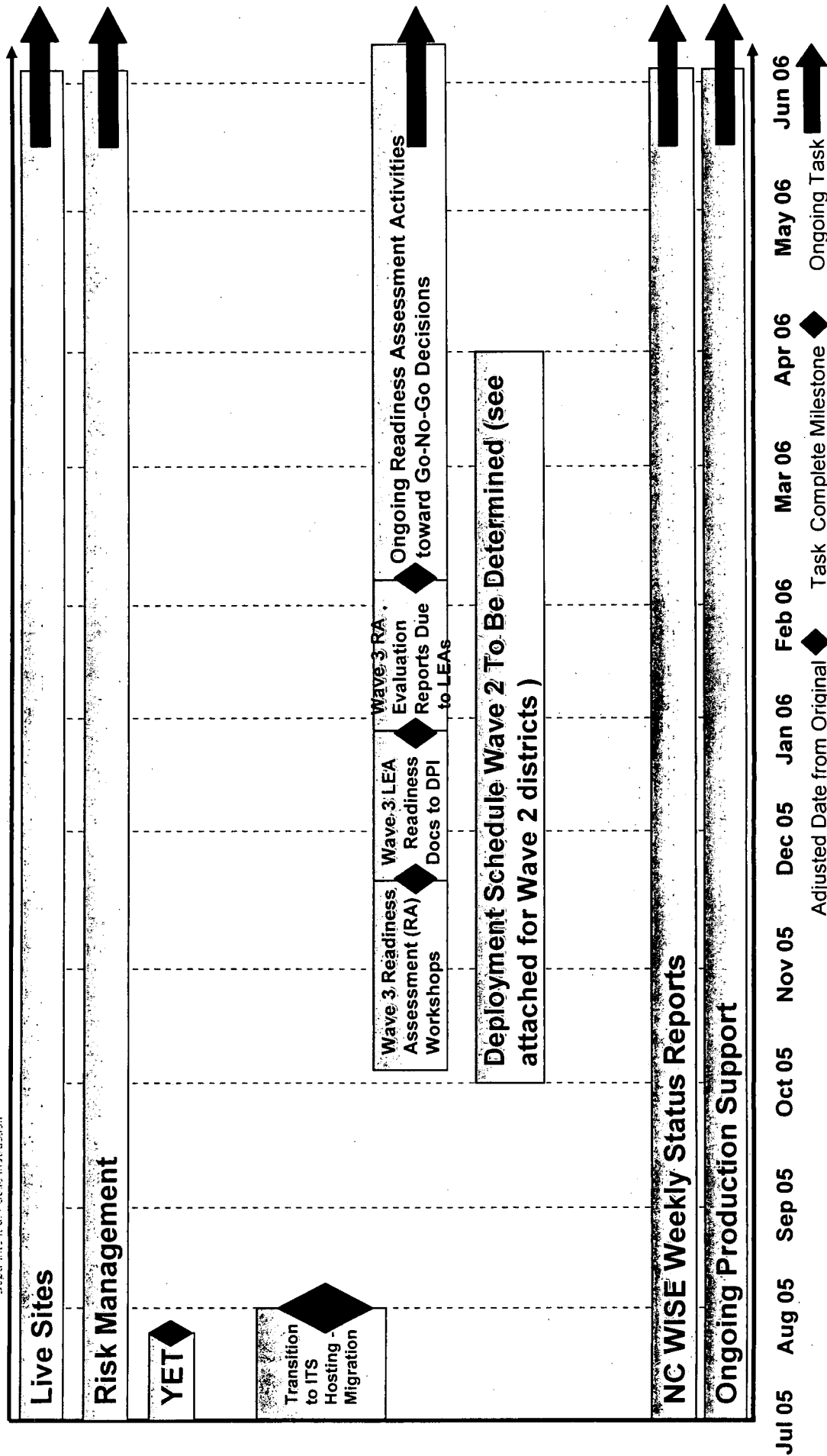
- Pilot Sites:** Includes 'Live Sites' and 'Risk Management'.
- Risk Management:** Includes 'Updated Quality Assurance Plan' and 'Enterprise Application Integration (EAI) Micro Design'.
- Web Based Training (WBT):** Includes 'Transition to ITS Hosting-Planning'.
- Training Materials:** Includes 'Transition to ITS Hosting - Migration'.
- Training Classes:** Includes 'Summer School Pilot'.
- Deployment-Wave 1:** Includes 'Ongoing Readiness Assessment Activities toward Go-No-Go Decisions'.
- Deployment-Wave 2:** Includes 'Wave 2 Hardware Procurement'.
- Wave 2 Readiness Assessment (RA) Workshops:** Includes 'Wave 2 RA Evaluation Reports Due to LEAs'.
- Wave 2 Network Assessments:** Includes 'Wave 2 Deployment Schedule'.
- Ongoing Production Support:** Includes 'NC WISE Weekly Status Reports'.

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NC WISE Milestones for 2006





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NC WISE Milestones from Prior Years

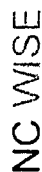
Year	Activity/Milestone
1999	Procurement & Contract Award
2000	Project Initiation
2000	Fit Gap Analysis
2000	Training Strategy & Planning - Pilot
2000	Security Planning - Pilot
2000	Infrastructure Analysis & Planning - Pilot
2000	Data Conversion Planning - Pilot
2000	Help Desk Strategy - Pilot
2000	Initial Training Documentation, Conversion Planning and Deployment - Pilot
2001	6 Schools in Catawba, Chapel Hill and Wake Deployed
2001	Pre-Phase II Enhancement Development and Testing
2001	Ongoing Regression Testing Pilot
2001	eSIS Release Testing - Pilot
2001	System Acceptance Testing - Pilot
2001	User Acceptance Testing - Pilot
2001	Software Quality Testing - Pilot
2001	Monitoring Pilot Performance and Load Test Pilot
2002	Catawba, Chapel Hill & Wake Deployed
2003	Gates, Whiteville City & Cumberland Deployed
2003	New Contract Amendment
2003	Planning for Statewide Deployment



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NC WISE Current Milestones

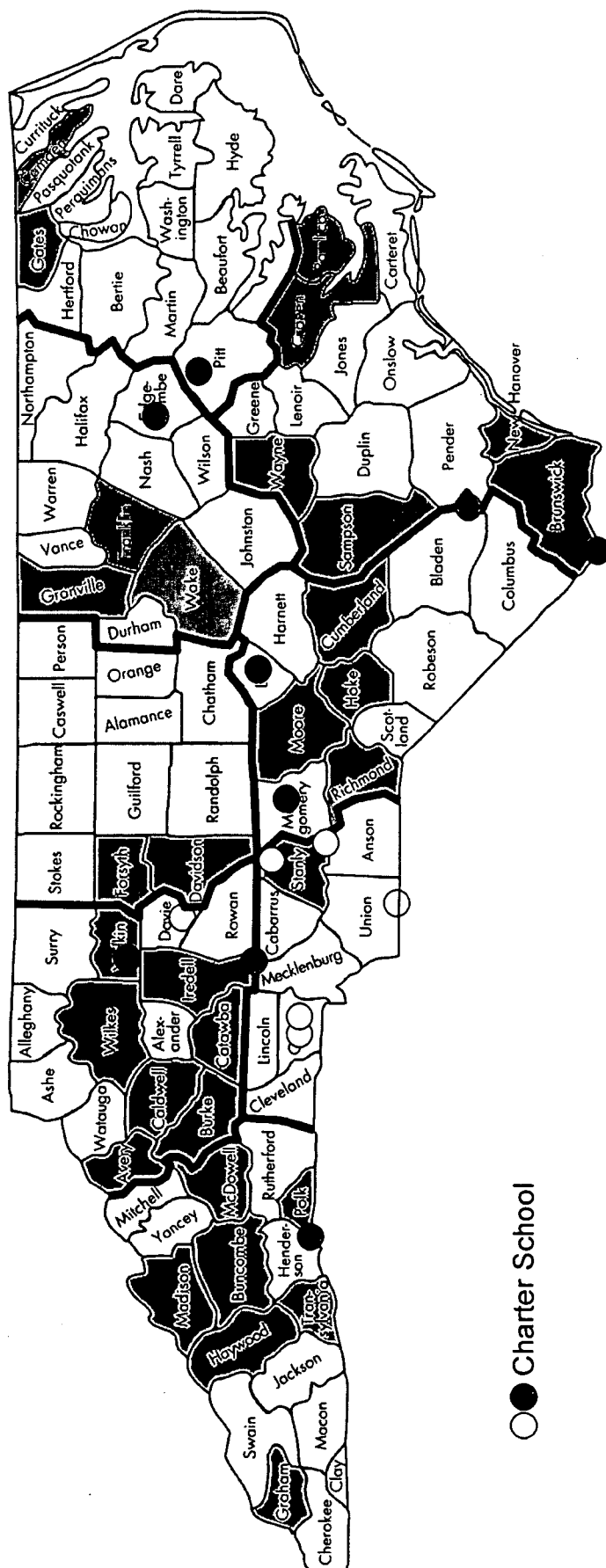
Year	Activity/Milestone	Due Date	Completion Status
2004	NC WISE Infrastructure Migration Detailed Plan	Feb-04	Completed
2004	Template LEA End User Training Evaluation Report	Jun-04	Completed
2004	NC WISE Solution Training Curriculum and Training Materials	Jun-04	Completed
2004	Template LEA Data Conversion Report	Jun-04	Completed
2004	Statewide Deployment Strategy and Planning Document	Jun-04	Completed
2004	NC WISE Training Detailed Plan	Jun-04	Completed
2004	NC WISE Data Conversion Detailed Plan	Jun-04	Completed
2004	NC WISE Communications Plan	Jun-04	Completed
2004	Networking Monitoring Strategy and Plan	Jun-04	Completed
2004	Security Strategy/Program	Jul-04	Completed
2004	Business Continuity Plan - DPI	Jul-04	Completed
2004	Help Desk Strategy and Plan	Aug-04	Completed
2004	LEA Deployment Detailed Plan	Aug-04	Completed
2004	Wave 1 Deployment Begins	Oct-04	Completed
2005	Permanent State Employee - Project Manager Hired	Feb-05	Completed
2004	Business Continuity Plan - LEA	Mar-05	In Process
2005	Migration to ITS	Jun-05	ETC July 2005
2006	Wave 2 Deployment	Mar-06	Planning Started
2007	Wave 3 Deployment	Mar-07	In Process



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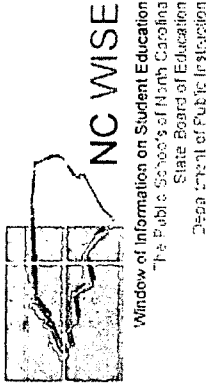
NC WISE Deployment Status

Showing Completion of Wave 1



Charter School

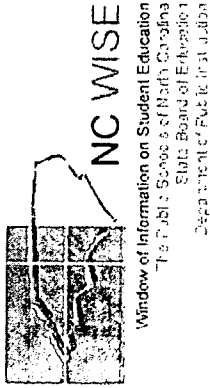
	Wave 1	Wave 2
Schools	597	743
Students	326,259	408,086
End users	26,567	



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The Public Schools of North Carolina
State Board of Education
Department of Public Instruction

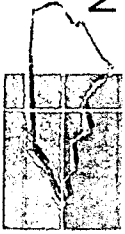
Wave 2 Readiness/Deployment

- Schedule/ planning
 - Wave 2 deployment schedule being reviewed. Training schedule being determined
 - Wave 1 Lessons Learned are being applied to Wave 2
 - Network assessment data started 4/18
- Staffing
 - Readiness Manager onboard 4/11
 - Software QA lead onboard 4/18
 - Project Coordinator onboard 4/25
- Active projects
 - Alternative site for Web Based Training and WebEx'
 - Athletic Eligibility
 - Summer School
 - UERS 2.0
- Wave 2 certification is in early stages



Operational Update

- EDCAM support ended until Wave 2
 - EDCAM improvements in process (more audits)
- Data Manager Training Plan developed.
- Adding Data Readiness Training for Waves 2 and 3
- Lessons Learned documented being incorporated in training and deployment materials.
- Hosting migration to ITS in progress; load testing will occur as part of migration.
- AAL tuned attendance functions on-site. Other efforts ongoing to improve software correction speed and quality.
- Working on status web page.



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Details on LEA deployments

Wave 1 Districts Deployed

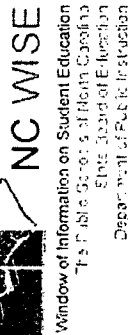
LEA or Charter School Name	Acceptance Date	Number of Schools	Number of Students*	Number of Total End Users*
Graham County	10/29/2004	3	1149	120
Haywood County	10/29/2004	15	7658	632
Learning Center	10/29/2004	1	90	11
Mountain Community School	10/29/2004	1	149	14
Mountain Discovery	10/29/2004	1	144	12
Polk County	10/29/2004	6	2343	219
Transylvania County	10/29/2004	9	3710	318
Avery County	11/5/2004	9	2301	249
Burke County	11/5/2004	25	14332	1277
Crossnore Academy	11/5/2004	1	50	16
New Dimensions School	11/5/2004	1	146	11
ArtSpace Charter	11/19/2004	1	210	17
Buncombe County	11/19/2004	41	24128	2076
Francine Delaney New School For Children	11/19/2004	1	140	17
Madison County	11/19/2004	6	2432	211
McDowell County	11/19/2004	11	6383	482
Thomas Jefferson Academy	11/19/2004	1	150	30
Asheville City	12/10/2004	8	3799	370
Caldwell County	1/7/2005	25	12536	1035
Granville County	1/7/2005	14	8340	571

*Estimated numbers for planning purposes only

Wave 1 Districts Deployed

LEA or Charter School Name	Acceptance Date	Number of Schools	Number of Students*	Number of Total End Users*
Iredell-Statesville	1/14/2005	32	18196	1295
Mooreville City	1/14/2005	6	4184	831
Success Institute	1/14/2005	1	100	12
Elkin City	1/21/2005	2	1128	105
Wilkes County	1/21/2005	24	9917	891
Yadkin County	1/21/2005	11	5818	451
Winston-Salem/Forsyth County	1/28/2005	69	45713	3889
Asheboro City	2/4/2005	8	4290	346
Davidson County	2/4/2005	29	18697	1047
Richmond County	2/11/2005	18	8161	688
Stanly County	2/11/2005	22	9789	773
Alpha Academy	2/18/2005	1	150	11
Hoke County	2/18/2005	11	6181	443
Moore County	2/18/2005	22	11314	912
Brunswick County	2/25/2005	16	10276	817
Charter Day School	2/25/2005	1	264	22
Clinton City	2/25/2005	4	2688	208
Dillard Academy	2/25/2005	1	200	11
Sampson County	2/25/2005	16	7789	619
Wayne County	2/25/2005	31	18842	1492

*Estimated numbers for planning purposes only

[illegible]

*Estimated numbers for planning purposes only



NC WISE
 Window of Information on Student Education
 The Public Schools of North Carolina
 State Board of Education
 Department of Public Instruction

Wave 2 Districts to Deploy

LEA or Charter School Name	LEA#	Number of Schools	Number of Students*
Lakeside School	01A	1	36
Alexander County	20	10	5556
Grandfather Academy	06A	1	43
Beaufort County	70	14	7160
Washington Montessori	07A	1	185
Evergreen Community Charter	11A	1	336
Cabarrus County	130	28	21616
Kannapolis City	132	7	4481
Caswell County	170	6	3360
Hickory City	181	10	4464
Newton-Conover	182	6	2797
Visions Charter	18B	1	69
Chatham County	190	15	7243
Edenton/Chowan	210	4	2461
NC School of Science and Mathematics	218	1	620
Thomasville City	292	4	2573
Davie County	300	9	6017
Duplin County	310	15	8680
Carter Community	32C	1	120
Kestrel Heights School	32D	1	156
Omutoko Gwamaziima	32G	1	72

*Estimated numbers for planning purposes only



NC WISE
Window of Information on Student Education
The Public Schools of North Carolina
State Board of Education
Department of Instruction

Wave 2 Districts to Deploy

LEA or Charter School Name	LEA#	Number of Schools	Number of Students*
Ann Atwater Community School	32J	1	96
Edgecombe County	330	15	7492
Downtown Middle	34C	1	283
East Winston Primary School	34E	1	115
Gaston County	360	53	30556
Highland Charter	36A	1	116
Piedmont Community Charter	36B	1	458
Guilford County	410	106	65118
Guilford Charter	41C	1	246
Harnett County	430	26	16589
Henderson County	450	21	12048
Hertford County	460	5	3541
Hyde County	480	4	657
American Renaissance Charter	49A	1	276
Lee County	530	12	8924
Provisions Academy	53A	1	75
The Children's Village Academy	54A	1	118
Lincoln Charter School	55A	1	456
Macon County	560	10	4073
Martin County	580	12	4444
Sugar Creek Charter School	60B	1	464

*Estimated numbers for planning purposes only



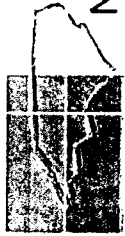
NC WISE

Window of Information on Student Education
 14 Public Schools of North Carolina
 State Board of Education
 Department of Public Instruction

Wave 2 Districts to Deploy

LEA or Charter School Name	LEA#	Number of Schools	Number of Students*
Kennedy Charter Public School	60C	1	62
Lake Norman Charter	60D	1	617
Crossroads Charter	60H	1	185
Socrates Charter School	TBD	1	TBD
Mitchell County	610	8	2302
Sandhills Theatre Arts Renaissance	63B	1	122
Nash-Rocky Mount	640	29	17894
Rocky Mount Charter	64A	1	856
Cape Fear Center for Inquiry	65A	1	319
Gaston College Prep	66A	1	184
Onslow County	670	33	21573
Orange County	680	11	6449
New Century Charter	68B	1	101
Pace Academy	68N	1	100
Arapahoe Charter	69A	1	353
Pender County	710	15	6932
Person County	730	10	5742
Pitt County	740	33	20905
Robeson County	780	41	23705
CIS Academy	78A	1	100
Bethany Community Middle	79A	1	92

*Estimated numbers for planning purposes only



NC WISE
Window of Information on Student Education
The Right to See What's in North Carolina
State Board of Education
Department of Public Instruction

Wave 2 Districts to Deploy

LEA or Charter School Name	LEA#	Number of Schools	Number of Students*
Rutherford County	810	18	9874
Gray Stone Day School	84B	1	119
Stokes County	850	18	7307
Surry County	860	16	8492
Swain County	870	5	1782
Brevard Academy	88A	1	196
Tyrrell County	890	3	635
Union County	900	36	26621
Union Academy	90A	1	518
Vance Charter School	91A	1	307
Baker Charter High	92C	1	49
East Wake Academy	92G	1	492
Sparc Academy	92I	1	182
Raleigh Charter High	92K	1	469
Watauga County	950	9	4633
Two Rivers Charter School	TBD	1	TBD
Bridges Charter School	97D	1	135
Sallie B Howard School	98A	1	567
Yancey County	995	9	2525
DHHS	997	13	400
		743	408,086

*Estimated numbers for planning purposes only

• FOR NORTH CAROLINA LEGISLATORS

1. What is NC WISE?

The **North Carolina Window of Information on Student Education (NC WISE)** project represents a major step forward in the state's capabilities to collect data on students attending North Carolina public schools. This Web-based system provides student and school information management capabilities and captures a wide range of data about students throughout their careers in North Carolina public schools. NC WISE offers unprecedented opportunities for local educators to use technology to help them make better instructional and business decisions in their schools.

NC WISE is an electronic student accounting system that is based on the Electronic Student Information System (eSIS), an Internet-based software package that provides student and school information management capabilities. Data are stored centrally and accessed and reported in a safe, secure manner across the Internet. NC WISE supports the data analysis and reporting requirements of education initiatives such as the North Carolina's ABCs of Public Education accountability program, the Uniform Education Reporting System (UERS), Closing the Achievement Gap and the various programs and requirements of the No Child Left Behind Act.

2. What is the statewide roll-out schedule for NC WISE?

NC WISE is being deployed in three phases, or waves. The roll-out of NC WISE began October 2004 with Wave 1, and will conclude at the end of Wave 3 in 2007.

- ☐ During Wave 1 deployment, 35 school districts and 23 charter schools or 601 schools are being converted.
- ☐ During Wave 2 deployment, approximately 39 school districts and 46 charter schools, or more than 700 schools, will be converted.
- ☐ During Wave 3, approximately 35 school districts and 31 charter schools, or approximately 400 schools, will be converted.

When complete, NC WISE will operate in all of North Carolina's 115 school districts and 100 charter schools.

3. How does NC WISE support and enhance teaching and learning?

NC WISE offers administrators and educators unprecedented opportunities to enhance their instructional capabilities through real-time access to student demographic, academic and attendance data. Using the electronic gradebook, teachers can monitor and evaluate their students' performances to determine how well they are doing in all classes overall. This gives teachers the information they need to tailor instruction to meet their students' requirements. The real-time student data available in NC WISE allows guidance counselors to help students make better-informed choices about their future, and streamlines the application process for students applying to post-secondary schools. Paperwork for administrators and teachers also is greatly reduced in NC WISE. When a student's record is modified, the changes are reflected throughout the school, significantly reducing the time teachers must spend confirming updates or changes. Because student data are centrally maintained, administrators and educators do not have to wait as long for new student records to be delivered.

4. How are the data from NC WISE used at the local and state levels?

At the district level NC WISE data can be exported into spreadsheets to use in other applications that support the business needs of local districts. Currently at the state level, the NC WISE data are merged with their counterparts from the Student Information Management System (SIMS) to produce a number of UERS reports that generate funds and provide critical information about students and teachers in North Carolina public schools. Agencies receiving the UERS reports include: the Department of Public Instruction (NC DPI), the General Assembly and a number of federal agencies. A few of the reports include: the Principal's Monthly Report (PMR), the School Activity Report (SAR), the Retention/Promotion/Graduation Report (RPG) and the Drop Out Report.

The PMR provides information on the Average Daily Membership (ADM) which is the basis for the majority of state funding from the General Assembly. The SAR provides data on a number of issues including class size information, teacher experience and whether a teacher is teaching in field. The RPG Report was developed in NC WISE to simplify the process for school districts of gathering information and reporting the retention, promotion and graduation rates of students. The Drop Out Report also was developed in NC WISE to assist school districts in gathering and reporting drop out information.

5. How was the contract awarded?

The NC WISE contract was competitively awarded to PricewaterhouseCoopers (PwC) in May 1999. In October 2002, IBM acquired the part of PwC that administered the NC WISE project and assumed responsibilities for the contract work. While the deployment of NC WISE to the school districts will finish in 2007, the contract with IBM will continue for another two years and conclude in 2009.

6. Doesn't SIMS produce the same reports?

SIMS can produce some, but not all of the same reports that are available in NC WISE. Also SIMS is a 20-year old software program that is becoming increasingly difficult to maintain and modify. NC DPI support for SIMS will discontinue after 2007.

7. Isn't it more cost efficient for districts to continue to use SIMS?

Using NC WISE offers substantial savings over using SIMS. NC WISE reduces the need for additional development costs because it uses eSIS, a commercial off-the-shelf software solution (COTS). The SIMS application does not include many of the built-in features of NC WISE. For example, there is no teacher grade book function in SIMS. Another example is the savings in manpower costs associated with SIMS. Last year there were 88,380 students who transferred from one school district to another. The gaining school had to spend about an hour manually entering the student information because SIMS information cannot be sent electronically between schools. At a salary of \$10 hour per student, this cost was \$883,800. With NC WISE, the student data can be electronically transferred to any NC WISE school in the state in minutes.

8. What is the total estimated cost of NC WISE and what are the components that make up the total cost of NC WISE?

As of January 31, 2005 the implementation cost of NC WISE is allocated to the following three organizational components in the following amounts.

Department of Public Instruction (NC DPI) \$204,480,454¹

Upgrades in local school districts \$ 40,612,729²

Upgrades in charter schools \$ 5,768,283²

Total \$250,861,466

1 This cost includes all contract and DPI internal costs.

2 This is the cost to achieve optimal system performance and provide sufficient data capacity levels to run NC WISE. This is only a statement of the cost, a portion of which will be paid for from current state, federal, and local resources.

9. What is a way to compare or understand the cost of NC WISE?

While the simple ticket price of NC WISE runs into the millions of dollars, the cost per student over the 10-year period (2000-2010) averages \$17 per student, per year. This annual cost per student includes student services such as: generating report cards for 1.4 million students per year; generating progress reports each marking period, storing all test and achievement data, generating electronic transcripts for admission to post secondary opportunities, tracking attendance, maintaining electronic permanent records and generating information for state and federal reporting requirements.

10. Who is paying for NC WISE?

The funding for NC WISE comes from different sources. At the DPI level, the funds are provided by the North Carolina General Assembly in the Uniform Education Reporting System appropriation. At the local school district level there are several additional potential funding sources, including:

- ☐ State funds appropriated specifically for school technology;
- ☐ Federal e-rate funds;
- ☐ Local school funds; and
- ☐ Funds allocated by county boards of commissioners.

11. Once NC WISE is fully functional in a school district will there be a cost benefit?

There will be definite cost benefits to using NC WISE. Most of these are the results of time savings from eliminating tasks or reducing the time to do a task. For example the SIMS data backup is one of the most time-consuming data tasks done in the schools. With NC WISE the student data backup is done centrally for all schools. Examples of other tasks requiring less time to complete include: printing of Student Progress Reports and Report Cards and the creation and approval of UERS reports.

12. What are some other benefits school districts will see once NC WISE is fully implemented?

NC WISE's biggest benefit is the ability to redefine school business processes. This results in a more efficient utilization of users' (i.e., teachers, central office staff and administrators) time. Additionally, students benefit by having key information available to help support their educational opportunities.

The following are examples of the redefined school business process:

- ☐ **Availability of medical information**—Appropriate users have online, real time access to medical information. Each student's teacher has an indicator on the student's main screen noting special medical conditions of which they should be aware. The school nurse can check immunizations and track daily medications. All of this can help school administrators and educators respond quickly to emergency situations on or away from campus.
- ☐ **Availability of guidance information**—The guidance counselor discusses performance with parents or reviews graduation goals with the students. The counselor has real time access to current student grades and standardized test results. Additionally, the counselor can create the list of courses the student needs to complete for graduation and print the information at the counselor's desktop.
- ☐ **Information for principals**—The principal has online, real time access to academic information and also attendance, demographic, health and disciplinary history. This facilitates discussions with the student's parents or guardians.
- ☐ **Academic eligibility**—No longer must coaches manually canvas teachers to get an athlete's grades. Coaches and others involved in extracurricular activities can have online, real time access to appropriate student information for students involved in their activities.
- ☐ **Transcript processing**—The electronic data interchange feature allows NC WISE school districts and schools within those districts to transfer students records with the speed of an email. In addition, it allows the most current transcript information to be sent electronically to North Carolina post-secondary schools.

13. How is security maintained in NC WISE?

Safe and secure data in NC WISE is a primary concern. By developing security procedures that are enforced by the application, as well as reinforcing the message in training sessions and written policies, educators and administrators receive a consistent message that security must be a priority for everyone.

The security and integrity of NC WISE is maintained using the following procedures:

- ☐ NC WISE application security is handled via Oracle user names and passwords. A school district's or charter school's NC WISE administrator assigns user names and initial passwords. Subsequently the users pick their own passwords. The user role determines the level of access a user has to NC WISE data and is provided on a "need to know" basis. Accounts are disabled by the LEA or school as soon as an employee no longer needs access to NC WISE data.
- ☐ Data are backed up daily and stored off site regularly.
- ☐ All Web traffic between the user's desktop and the Web servers is protected by Secure Socket Layer (SSL) encryption. This SSL encryption blocks anyone from intercepting traffic between the users and the Web servers.
- ☐ NC WISE servers are protected from Cyber attacks by using redundant firewalls.

14. Can anyone get into the NC WISE database to look up a student?

The access to data inside the NC WISE database is based on user roles. A teacher, for example only has access to data for students in his or her class. A principal is assigned access to all students in his or her school but not at any other school. Student data which is not relevant to a user's role cannot be accessed. All access to NC WISE is via a password protected Web site. These restrictions based on "need to know" roles make student data much more secure than in a traditional paper records.

15. How is it determined if an LEA or charter school has the proper procedures in place to ensure their networks are safe and the NC WISE data remains secure?

Once a school district or charter school chooses Wave 1, 2 or 3 to implement NC WISE, the school district's or charter school's NC WISE administrator must complete a readiness assessment document. This document addresses a number of minimum standards that a school district or charter school must meet to implement NC WISE. A Security Memorandum of Understanding (MOU) plan is a requirement and is included in the readiness assessment document. School districts or charter schools also must validate that their security plans meet or exceed state guidelines in the following areas:

- ☐ Guidelines for password protection
- ☐ Acceptable Use Policy
- ☐ Remote Access Policy
- ☐ User Awareness Policy

In addition, school districts or charters schools are required to have a business continuity plan in place to address issues of business impact, an incident response plan and a strategy to communicate the security plan to users.

16. Will school districts have to upgrade networks for NC WISE?

The initial NC WISE implementation has shown that districts learn to manage their networks better by initiating new network policies and obtaining additional network infrastructure. For example, districts assign priorities to different types of network traffic or limit access to select Web sites. Districts also may increase various network links between the schools or central office and the central NC WISE site. In addition some districts have procured equipment or software, or changed business processes to protect access to and manage the content of network traffic.

Other items or policies that school districts may need to consider when upgrading their networks include:

- ☐ Virus protection software that is up-to-date and active on all computers.
- ☐ Workstations that should be physically observed for the presence of "key stroke memory plugs."
- ☐ Programs to prevent the installation and modification of software.
- ☐ A policy restricting teachers from using non-shared computing equipment.
- ☐ Adding a layer of access control to the ID and password method to implement tighter control of school computers that can access the NC WISE system through the Internet protocol (this can be accomplished through a token or smart card).
- ☐ Technology that allows the blocking of access, via content filters, to the NC WISE Web sites from labs and media centers or "unapproved outside of school" Web sites.

Finally, all districts are encouraged to provide educational and training opportunities to the technical personnel responsible for network operations.

17. What other security policies are communicated to NC WISE users?

The NC WISE team stresses in training sessions as well as NC WISE security manuals that its users adopt simple, but effective procedures to maintain the security and integrity of NC WISE. Some of the procedures include:

- ☐ Don't share or write down your password.
- ☐ Do not share the same password for any other application.
- ☐ Passwords must be at least eight characters and include at least two non-alpha characters.
- ☐ Never put a password or personal information into an email.
- ☐ Users should keep a password protected screensaver on their personal computer.
- ☐ Users who access NC WISE from home should treat their home computers like their work computers and keep their operating systems and virus updates current and maintain a firewall in order to protect it.

18. Where can I get more information about NC WISE?

Visit the NC WISE Web site at www.ncwise.org for information on training and support, software updates and a library with documents that assist users in operating software, provide troubleshooting support and information on student data related initiatives. Email questions to ncwise@dpi.state.nc.us.

19. Acronyms Associated with Legislative FAQs

Listed below are acronyms and terms and corresponding definitions that are used throughout the Legislative FAQs.

ABCs of Public Education: The ABCs of Public Education Accountability Program is North Carolina's comprehensive plan to improve public schools that is based on three goals: strong local accountability, an emphasis on student mastery of basic skills and as much local control as possible. The ABCs have been in operation in all North Carolina schools since 1997-1998.

ADM: Average Daily Membership. The Average Daily Membership is a calculated number using the data from the Principal's Monthly Report. The ADM represents the average number of students in membership over a period of time, usually a school month. The ADM is calculated once all PMRs are submitted by schools in the State. ADM is used as the basis for many State funding formulas for Local Education Agencies.

Closing the Achievement Gap: Closing the Achievement Gap is a series of federal, state and local initiatives designed to improve academic achievement for minority and at-risk students.

COTS: Commercial Off the Shelf. Hardware and software that can be purchased and put in service without additional development costs.

eSIS: Electronic Student Information System. eSIS is a centralized web-based student information system that allows LEA personnel to collect, manage and report on a vast amount of critical student information.

NC WISE: North Carolina Window of Information on Student Education. NC WISE is a tool for managing student information. It is a Web-based, centrally-maintained system for capturing, accessing and reporting on a full spectrum of student information.

NCLB: No Child Left Behind. NCLB is the most sweeping reform of the Elementary and Secondary Education Act (ESEA) since ESEA was enacted in 1965. It redefines the federal role in K-12 education and will help close the achievement gap between disadvantaged and minority students and their peers. It is based on four basic principles: stronger accountability for results, increased flexibility and local control, expanded options for parents, and an emphasis on proven teaching methods.

PMR: Principal's Monthly Report. The Principal's Monthly Report (PMR) contains enrollment, membership and attendance information. This report falls under the umbrella of UERS and is transferred regularly to NC DPI during the school year.

SAR: School Activity Report. The School Activity Report provides school information as of the end of the second school month on the class activities, course codes, teacher assignments, number and type of students involved in educational activity, meeting frequency, class lengths and size, credits associated with each course, and personnel schedules. This report falls under the umbrella of UERS and is transferred to NC DPI during the third school month.

SIMS: Student Information Management System. The student accounting system used before NC WISE. SIMS has been the system of choice for collecting and maintaining student information in North Carolina public schools for close to 20 years. It is a DOS-based system that depends on old software and hardware that is hard to find and harder to maintain.

UERS: Uniform Education Reporting System. The Uniform Education Reporting System is a system that is mandated by G.S.115C-12 that includes requirements for collecting, processing, and reporting fiscal, personnel, and student data, by means of electronic transfer of data files from local computers to the State Computer Center through the State Communications Network. All local school administrative units were required to comply with the requirements of the Uniform Education Reporting System by the beginning of the 1989-90 school year.

In compliance with federal law, including the provisions of Title IX of the Education Amendments of 1972, NC Public Schools administers all state-operated educational programs, employment activities and admissions without discrimination because of race, religion, national or ethnic origin, color, age, military service, disability, or gender, except where exemption is appropriate and allowed by law.

Inquiries or complaints should be directed to:

Dr. Elsie C. Leak, Associate Superintendent :: Office of Curriculum and School Reform Services
6307 Mail Service Center :: Raleigh, NC 27699-6307 :: Telephone 919-807-3761 :: Fax 919-807-3767

What NC WISE Means for You

The **North Carolina Window of Information on Student Education (NC WISE)** is a technology project that is improving the way school districts conduct business. It is a Web-based, centrally maintained system for capturing, accessing and reporting student information.

NC WISE provides specific benefits to LEA personnel. Listed are some the benefits based on user roles for LEA staff.

Principals:

- NC WISE provides principals with instant access to real-time student data. Principals can retrieve the following student information anytime from home or school:
- Student health and discipline records
- Grades
- Transcripts
- Report cards
- Absenteeism rate
- Principals can review student information to address concerns and resolve issues presented by parents or other interested individuals.
- Principals can run reports and extract information to meet LEA or community needs such as:
- Students riding a particular bus number
- Students living within a zip code
- Most frequent discipline types
- Most frequent reasons for students being absent from school
- NC WISE makes the Uniformed Education Reporting System (UERS) process easier to run, perform pre-audits of critical data such as Exceptional Children (EC) Headcount and have greater accuracy of reporting.

Data Managers:

- Data Managers will find that their duties will evolve and grow.
- NC WISE is much better at UERS reconciliation because changes are faster and easier to input in NC WISE than in SIMS.
- Data managers no longer have to build records for incoming students from scratch. Information can be transferred from one NC WISE school to another NC WISE school in minutes.
- End of Course (EOC), End of Grade (EOG), and other standardized test scores are uploaded from central office.
- Data Managers no longer have to backup SIMS information everyday.
- Other school personnel can now enter student data depending on their role. EC teachers may elect to enter EC student data, guidance counselors can change student schedules or administrators can enter discipline.
- Data Managers become the quality control managers for school data ensuring it is clean and properly entered, correctly reported locally to the state and that timelines for data reporting are maintained.
- Providing reports to school personnel is less time consuming because the data manager can run a variety of reports in a requested format and send back to personnel via email.

- Teachers can now run reports within the Teacher Assistant Module (TAM) that were previously available only to data managers.
- Data Managers can monitor electronic transcripts through www.CFNC.org and request transcripts be sent to any state university in North Carolina or other educational institution participating in this initiative.
- Because NC WISE is a Web-based system, data managers can login anywhere. For example if the power goes out in one NC WISE school, a data manager can pack up the laptop or go to another NC WISE school, access a computer and continue working.
- NC WISE provides tools to compile reports to predict future trends. For example, NC WISE users can look at the most common dates and months of birthdays compared to the same monthly birth rate to predict future class sizes for pre-school or kindergarten.

Teachers

- Teachers have more access to data than in SIMS. This provides teachers the tools to examine strengths or weaknesses that may exist in a student's academic performance.
- Because NC WISE is Web-based teachers, can access it anywhere, anytime with an internet connection.
- Coaches can check on the academic standing of student athletes from their own computer by setting up teams in NC WISE.
- Teachers can also track English as a Second Language (ESL) and Limited English Proficient (LEP) students.

Central Office

- NC WISE allows the LEA central office staff to examine real time data from the schools and compile the information for state and federal reports.
- Central office staff can access real-time data about a student or school to provide background for meetings with parents or other concerned parties.
- Central Office staff can use NC WISE to analyze test or discipline data to help them make better business and educational decisions.
- The NC WISE coordinator can resolve IT issues in minutes because the coordinator can login to a teacher's account anywhere in the district examine the problem and fix it.

Local Board of Education

NC WISE allows the superintendent's staff to provide board of education members up-to-date LEA data, not information compiled over weeks and months as is the case in SIMS. Information may include:

- Class sizes
- Course offerings
- Accountability reports

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• FEEDBACK FROM THE FIELD

NC WISE is one of the most significant educational leadership projects in the recent history of North Carolina public schools and the largest technology project in North Carolina K-12 education. NC WISE represents a major step forward in the state's student data management and reporting strategies.

NC WISE improves the capabilities for district personnel to collect, maintain and access financial, student and personnel data. At the same time, it represents a significant culture change. The transformation process, while positive, is demanding for teachers, administrators and central office staff who have performed many tasks the same way for decades.

As with any change, support for NC WISE ranges from enthusiastic adoption to cautious acceptance. However, school system personnel report that any initial negative reactions to NC WISE quickly change once personnel discover the power of NC WISE. District leaders state that once school staffs realize what NC WISE can do, administrators must race to keep up with requests to provide more training and access.

In the paragraphs that follow, personnel from several districts share their experiences about NC WISE and how it has improved instructional and business processes in their school systems.

McDowell County Schools, Wave 1 - 2004

Francine Dillingham, NC WISE Coordinator

"McDowell County printed report cards via NC WISE for the first semester. Our data managers were naturally a little anxious about this whole process. Now that it's behind us, they LOVE report cards in NC WISE!

For those of you who are unfamiliar with the Student Information Management System (SIMS) and the way it generates report cards let me walk you through the process:

- There is a lengthy setup involving multiple screens before actual printing. If there's a mistake, you have to start all over!
- SIMS will not save the setup. On a good day, it takes about 15 minutes to perform the setup. Once the printing starts, if there is a forms jam, just pray you can get the jammed forms out of the printer! On top of that, it is difficult to determine where to re-start the job. Sometimes, you have to start this entire process over and try to leave out the report cards that managed to print on the first attempt (in SIMS the data manager cannot preview the data on a monitor before printing it. The first opportunity a data manager has to see the data is when it comes off the printer.)
- The SIMS forms have to be aligned in the printer exactly!
- SIMS report card forms are continuous - feed and multi-part on top of that. This means:
 - An impact printer must be used
 - 'Pin feeds' must be removed from the edges of the forms
 - Individual report cards must be separated from each other.
 - The top copy must be separated from the middle and last copy.

This is the process we had to go through to print a report card for one student!

This doesn't even address the amount of work involved in scanning the Academic Progress sheets necessary to get the grades into SIMS.

In NC WISE, we:

- Setup our Mark Scale and Report Period Abbreviation Legends.
- Define the Absence information to print on the report card.
- Create School Message for individual schools.

NC WISE will SAVE ALL this information so it only has to be done once. Report cards print on a laser printer about 75% faster than in SIMS.

With five mouse clicks and about two minutes, a report card can be printed for a student! That's about seven times faster than the SIMS setup part.

Here's another example of how NC WISE is helping teachers do their job more effectively:

The parent of an ESL student meets with the ESL teacher for a conference. Using the Teacher Assistant Module (TAM), the teacher was able to show the student's Progress Report immediately. No hand calculation, No concern of another student's grades being seen and a copy for the parent to take home."

Polk County Schools, Wave 1 - 2004

Dave Scherping, Technology Director

"Our teachers are really enjoying the access to historical student information.

Our teachers are sending home progress reports at more frequent intervals.

Our teachers are asking for more functionality because they can see many other ways of using this information.

Our principals have begun to use the reporting tools and it gives them a new way to look at their school. In particular, they are looking at grading summaries and EOC/EOG testing summaries. Using this information, they can make better decisions about how to meet their student's needs.

At the Central Office, we are using NC WISE to report attendance and testing information that would have been very difficult to aggregate using SIMS."

Wake County Public Schools, NC WISE Pilot - 2001

Curt Carlyle, Theater Arts Teacher

"With the advanced capabilities of our NC WISE program, I have a much needed resource right at my finger tips. I am able to gain access to my student's attendance records, log grades, post interims, class lists, and student information all from the click of a mouse. NC WISE has saved our staff a great deal of time and created less paper work, which allows more time for educating our students."

Haywood County Schools, Wave 1 - 2004

Michael Williams, Technical Director

"We are now live with NC WISE and doing very well," "The teachers have discovered what a powerful tool NC WISE is and how simple it is to use. We're just trying to keep ahead of their requests for more information."

Asheville City Schools, Wave 1 - 2004**Robert Logan, Superintendent**

"We are so pleased with the staff development, process and product that NC DPI used to help us roll out the new student information system. My technology and accountability staffs were not initially enthusiastic about the conversion to the new system. Now that we are underway, the NC WISE coordinator is enthusiastic and the accountability staff is excited. I am not 'hearing a peep of negativity' from teachers or from the community. That says a lot about how well things are going.

NC WISE has already positively impacted our school district in several ways. As an example, we just did something we would have not been able to do before. Our district has an emergency parent messaging system which gets messages to 4000 parents in 5 minutes. Before NC WISE, it would have taken our staff 4 days to download the parent data. With NC WISE, it took us one day. In addition, we were able to clean up the parent phone contact list at the same time. We had a snow emergency and the district messages got out to parents with a new degree of accuracy because we had the correct phone numbers from the NC WISE data base."

In compliance with federal law, including the provisions of Title IX of the Education Amendments of 1972, NC Public Schools administers all state-operated educational programs, employment activities and admissions without discrimination because of race, religion, national or ethnic origin, color, age, military service, disability, or gender, except where exemption is appropriate and allowed by law.

Inquiries or complaints should be directed to:

Dr. Elsie C. Leak, Associate Superintendent :: Office of Curriculum and School Reform Services
6307 Mail Service Center :: Raleigh, NC 27699-6307 :: Telephone 919-807-3761 :: Fax 919-807-3767

VISITOR REGISTRATION SHEET

Science & Technology

Name of Committee

5-11-05

Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME

FIRM OR AGENCY AND ADDRESS

Rooney Locke	City of Breunard, Mayor Pro Tem
Terry Bledsoe	Catawba County Schools
Jim Ayn	SBE / DPI
Debi Beckelheimer	Chapel Hill - Carrboro City Schools
Julie Batchelor	OSC
Elaine Glass	DPI
Robert Bellomy	DPI
Caroline Kazmierski	NC Technology Association
Jamie Fitzgerald	NCFPC
Stana McKenney	NC DHHS

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

June 22, 2005

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Presentations:

The Pisgah Astronomical Research Institute (PARI)
By John Avant

Discussion (Questions and Answers)

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

June 22, 2005

The House Committee on Science and Technology met on Wednesday, June 22, 2005, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson, Vice-Chair; Gulley, Harrison, Jones and Walend.

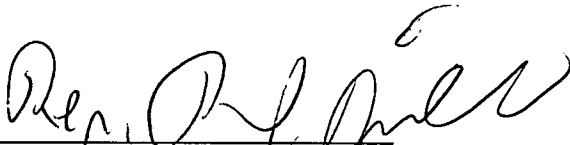
Representative Miller called the meeting to order. The pages serving the committee were Allison Gilboy from Union County sponsored by Representative Blackwood, Requita Demery from Pitt County sponsored by Speaker Black and Caitlin Lofton from Mecklenburg County also sponsored by Speaker Black. James Womack, Frank Prevo and Walter Spell were the assigned Sergeant-At-Arms.

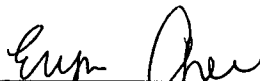
A presentation was given by John Avant on the Pisgah Astronomical Research Institute (PARI) (See Attachments N and O). Mr. Avant deems that astronomy is the first science and modern astronomy is at the leading edge of science, in the forefront of physics, involving mathematics and mechanical and electrical engineering, computer sciences, earth sciences and even involves chemistry. Following Mr. Avant's description of the organization, he showed a mini documentary produced by UNC Television. After the TV documentary Mr. Avant gave a slide show providing more information on PARI and its beneficial uses to teachers and students around the state and the capabilities that the program provides.

Representative Walend extolled the virtues of the program and would like it made accessible to primary and secondary students as well as college and graduate students for research purposes, and positive hands-on exposure to science.

At the conclusion of the presentation with the time having expired, the meeting was adjourned.

Respectfully submitted,


Representative Paul Miller
Chairman


Eryn Gee
Committee Assistant

PARI Programs and Activities

PARI offers a robust agenda of research and education opportunities. There is truly something for everyone. This page contains a few examples of our programs and activities. More complete information for each initiative is found at the PARI web site, www.pari.edu.

School of Galactic Radio Astronomy (SGRA)

SGRA provides high school students the opportunity to study the universe with our 4.6 meter radio telescope (nicknamed "Smiley"). Teachers in grades 8-12 participate in workshops at PARI, learning to use Smiley. The teachers then incorporate the SGRA curriculum into their classes and guide students through real-time exercises via a live Internet connection to the telescope. Since its inception, several thousand students have benefited from this enrichment of their schools' curricula.

North American Center for Astronomical Plate Preservation (NACAPP)

NACAPP is a PARI initiative to collect, preserve and digitize astronomical photographic plates. These plates are essentially photographs of the stars, many dating back a century or more, that provide unique and invaluable information to astronomers. There is currently no central repository for these plates, many of which are stored haphazardly and are in danger of being lost forever. PARI's goal is to become the central repository for astronomical photographic plates. We plan to digitize them and make the data available via the Internet to researchers and students from around the world.

StarLab

In terms of sheer numbers reached, StarLab is rapidly becoming perhaps the most popular astronomy program in the Carolinas. StarLab is a portable planetarium that visits schools (typically K-8) accompanied by a PARI astronomer. Schools can select from among several programs that are designed to support the North and South Carolina public school curricula at the appropriate grade levels. Usually set up in a gymnasium, StarLab typically stays at a school for one or two days, and has been viewed by tens of thousands of students and teachers.

Regional Astronomy Library

PARI has set aside 2,500 square feet of space in its main administration building and is seeking funds for a library that will eventually include 20,000 volumes and be a leading astronomy library in the Southeast U.S. The library currently houses more than 5,000 volumes and collections of major astronomy periodicals. Donors include Harvard University, the U.S. Naval Observatory and private contributors.

Newsletter

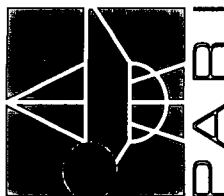
PARI provides a quarterly newsletter via Internet subscription. To receive a copy, email newsletter@pari.edu.

Friends of PARI

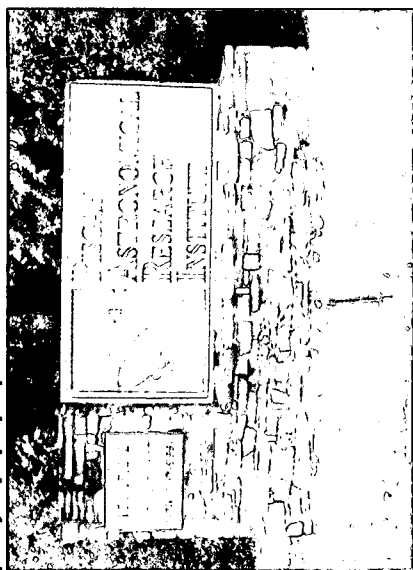
Annual Membership Levels and Benefits
Please make a mark in the box next to your contribution level.

- ☐ **Student Member** \$10.00. Member level for full time students. E-mail copy of the PARI Newsletter.
- ☐ **Associate Member** \$50.00. Receive Quarterly Issues of the PARI Newsletter.
- ☐ **Member** \$100.00. All of the above plus a PARI key chain with light.
- ☐ **Sponsor** \$200.00. All of the above plus a PARI coffee mug. Use of the PARI Astronomy Library.
- ☐ **Supporter** \$500.00. All of the above plus a PARI hat and a PARI lapel pin.
- ☐ **Mentor** \$1000.00. All of the above plus an invitation to one of the quarterly night astronomy sessions at PARI.
- ☐ **Advisor** \$2000.00. All of the above plus use of the Internet controlled remote optical imaging Space Observatory.
- ☐ **Benefactor** \$5000.00. All of the above plus 'Guest Astronomer Program'. Spend a day working with the astronomy staff, learning how to operate a radio telescope.

All donors at the level of \$5000.00 and above will receive recognition on a plaque at PARI.



**PISGAH
ASTRONOMICAL
RESEARCH
INSTITUTE**



The Pisgah Astronomical Research Institute (PARI) is a public, not-for-profit foundation begun in 1999 at the site of a former NASA facility. PARI offers research and educational opportunities in radio and optical astronomy, and in the related disciplines of physics, engineering, mathematics, chemistry and computer sciences.

Our mission is to promote science at all levels, which ranges from providing opportunities for world-class researchers to try unconventional ideas to giving children their first glimpse of the universe that will be their future.

PARI is a place where science excites the imagination.

One PARI Drive
Rosman, North Carolina 28772
(828) 862-5554
www.pari.edu



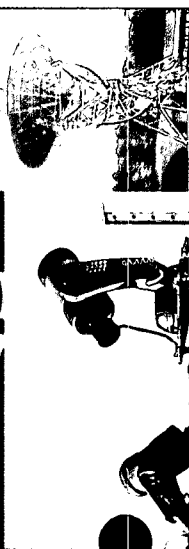
The PARI Campus

PARI is located on a 200 acre site in the Pisgah National Forest near Brevard, North Carolina. An optimal dark-sky location, the campus began as NASA's east coast tracking center for manned space flights. Built to NASA's exacting standards, the site once hosted as many as 300 workers.

Much of the infrastructure remains intact, and has been converted to research and educational programs. The site contains 30 buildings with 120,000 square feet of floor space, and PARI has systems for water, power, fire protection and security. A sophisticated fiber optic communications network connects campus buildings and provides remote access to telescopes and instruments on the Internet.

Scientific equipment at PARI includes:

- ◆ Two 26 meter (85ft) radio telescopes
- ◆ 12.2 meter (40ft) radio telescope in a geodesic dome
- ◆ 4.6 meter (15ft) radio telescope ("Smiley") operated remotely by high school students
- ◆ High frequency Jupiter-Io-Solar antenna
- ◆ Optical ridge with 10 telescopes
- ◆ Weather and atmospheric monitoring stations
- ◆ Environmental monitoring instruments
- ◆ Laboratory frequency and time standards



Pisgah Astronomical Research Institute
A not-for-profit public foundation
PARI

VISITOR REGISTRATION SHEET

Science & Technology
Name of Committee

06/22/05
Date

VISITORS: PLEASE SIGN BELOW AND RETURN TO COMMITTEE ASSISTANT

NAME

FIRM OR AGENCY

Missa Dolan	NC Conservation Network
Cooper Kinsey	Charlotte citizen
Patsy Kinsey	Charlotte City Council
John Snow	Staff
Danny Lindsey	ITS
Dennis McCarty	NCGA
BILL COX	DATA STAFF Tax
~~Mary Seaton~~	~~Capital Inc~~
Susan Brothers	Rep. Wiley
Caroline Kazmierski	NCTA
Jean Myers	NCTA
David McCall	TEKsystems

North Carolina General Assembly
Through House Committee on
Science and Technology

Date: 07/19/2006
Time: 17:15
Page: 001 of 001

2005-2006 Biennium

Leg. Day: H-168/S-170

Bill	Introducer	Short Title	Latest Action	In Date	Out Date
H0051	Michaux	IT SECURITY ASSESSMENTS.	H Ref To Com On Science and Technology	02-03-05	
H0633	Tolson	ELECTRONIC COURT FILING.-AB	H Re-ref Com On Appropriations Subcommittee on Justice and Public Safety	03-15-05	04-06-05
\$ H0639	Miller	TRAVELING SCIENCE AND TECHNOLOGY FUNDS.	H Re-ref Com On Appropriations Subcommittee on Education	03-15-05	03-31-05
H0640	Miller	TRACK STUDENTS THROUGHOUT THEIR EDUCATION.	H Ref to the Com on Science and Technology and, if favorable, to the Com on Education	03-15-05	
H0641	Miller	NANOTECHNOLOGY/ECONOMIC DEVELOPMENT STUDY.	*H Re-ref Com On Rules, Calendar, and Operations of the House	03-15-05	03-24-05
H0642	Miller	STUDY/USE OF SOCIAL SERVICES STATEWIDE.	H Ref to the Com on Science and Technology and, if favorable, to the Com on Appropriations Subcommittee on Health and Human Services	03-15-05	
H0830=	Tolson	E-NC VOTING MEMBERS/JOB CREATION FUNDS.	*H Re-ref Com On Appropriations	03-22-05	04-27-05
\$ H1961	Tolson	STATE CIO POWERS/DOJ IT/FUNDS.	H Ref to the Com on Science and Technology and, if favorable, to the Com on Appropriations	05-15-06	
\$ H1980=	Tolson	E-NC INTERNET CONNECTIVITY/JOBS FUNDING.	*H Re-ref Com On Appropriations	05-16-06	06-12-06

'\$' indicates the bill is an appropriation bill.

A bold line indicates the bill is an appropriation bill.

'*' indicates that the text of the original bill was changed by some action.

'=' indicates that the original bill is identical to another bill.

SCIENCE AND TECHNOLOGY

(Name of Committee)

[illegible]

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

June 7, 2006

Opening Remarks and Introductions

Rep. Grier Martin, Vice-Chair

Bill to be Discussed:

House Bill 1980 E-NC Internet Connectivity/Jobs Funding
Rep. Tolson

Presentations:

LobbyGuard

By Kevin Allen and Travis Lam

NanoARTS

By Branislav Vlahovic and Dr. Ken Menton

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

June 7, 2006

The House Committee on Science and Technology met on Wednesday, June 7, 2006, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Tolson, Vice-Chair; Martin, Vice-Chair; Gulley, Hollo, Jones and Walend.

Representative Martin called the meeting to order. The pages serving the committee were Olivia Hyatt from Union County sponsored by Representative Blackwood, and Ben Hilton from Iredell County sponsored by Speaker Black. Nell Casper and Mark Cone were the assigned Sergeant-At-Arms.

Representative Tolson was recognized to discuss House Bill 1980, *E-NC Connectivity/Jobs Funding* (See Attachment P). The purpose of the bill is to remove the sunset on the E-NC Authority. After some discussion, Representative Tolson welcomed questions. Representative Walend expressed a concern about removing the sunset because of the annual reports that are given about the agency's progress and proposed an amendment to maintain regular updates. Herb Crenshaw from BellSouth spoke in favor of the agency and supports Representative Walend's recommendation to amend the bill. Oppie Jordan, the Chair of the E-NC Authority also spoke in favor of the benefits that the agency provides as a key component to economic development in North Carolina. Representative Walend moved to amend the bill to include annual reports to the Joint Legislative Oversight Committee on Information Technology and the Information Technology Committees of the House and Senate. The amendment was approved. A second, technical amendment was submitted and approved. Representative Walend then moved that House Bill 1980 be rolled into a committee substitute, be given a favorable report and be re-referred to the Committee on Appropriations. Her motion was adopted.

A presentation was given by Kevin Allen and Travis Lam on LobbyGuard (See Attachment Q). Kevin Allen, President of LobbyGuard Solutions, described the product as an alternative to the traditional sign-in method for most buildings with their major focus being on schools. It is an interactive terminal on which individuals key in pertinent information to register and print a name badge. The system also verifies whether or not a person is a "bad guy" or threat.

Following a few questions, another presentation was given by Dr. Vlahovic along with Dr. Manton and Dr. Karoui on Nano Academic Research Technology Institute (NanoART) (See Attachment R). This organization develops products that significantly

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY MINUTES

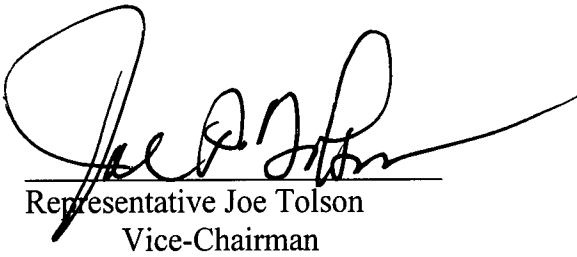
June 7, 2006

Page 2

reduce the size and cost of production. Additionally, the organization uses technology to specialize information that helps with medical disparities. The organization is looking for funding to continue operations particularly for the next few months. After much discussion the committee decided to propose a resolution that supports Nano Academic Research Technology Institute and its goals.

With the time having expired, the meeting was adjourned.

Respectfully submitted,



Representative Joe Tolson
Vice-Chairman



Eryn Gee Killough
Committee Assistant

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005**

H

1

HOUSE BILL 1980

Short Title: E-NC Internet Connectivity/Jobs Funding. (Public)

Sponsors: Representatives Tolson; Faison, McLawhorn, Parmon, and Warren.

Referred to: Science and Technology, if favorable, Appropriations.

May 16, 2006

A BILL TO BE ENTITLED

AN ACT REPEALING THE E-NC AUTHORITY SUNSET PROVISION AND
APPROPRIATING FUNDS TO THE E-NC AUTHORITY FOR HIGH-SPEED
INTERNET CONNECTIVITY INCENTIVE GRANTS AND FOR JOB
CREATION THROUGH ECONOMIC DEVELOPMENT AND SUPPORT OF
E-NC BUSINESS AND TECHNOLOGY TELECENTERS.

The General Assembly of North Carolina enacts:

SECTION 1. The General Assembly finds that:

- (1) The e-NC Authority, created in S.L. 2003-425 to continue the work of the Rural Internet Access Authority, is successfully pursuing its mandated goals, increasing access to affordable high-speed Internet and creating 21st century jobs through technology-based economic development in the rural areas and distressed urban areas of the State.
- (2) The e-NC Business and Technology Telecenters (BTTs) serve as catalysts to technology-based economic development in some of North Carolina's most distressed regions by helping to grow existing small businesses, bringing new kinds of businesses into rural communities and regions, stimulating and supporting entrepreneurship, and creating 21st century jobs.
- (3) e-NC works successfully with local governments and educational institutions to strengthen their technology capacities and services to their communities, making available to the citizens technology services and resources, training, and public access to computers and the Internet.

SECTION 2. Section 4 of S.L. 2003-475 reads as rewritten:

"**SECTION 4.** Sections 1 and 2 of this act become effective December 31, 2003, with the e-NC Authority hereby designated as the successor entity of the Rural Internet Access Authority that will dissolve on that date, as provided by Section 5 of S.L. 2000-149. The remainder of this act is effective when it becomes law. ~~The e-NC~~

~~Authority created in this act is dissolved effective December 31, 2006. This act is repealed effective December 31, 2006. Part 2F of Article 10 of Chapter 143B of the General Statutes and G.S. 120-123(77), as enacted by this act, are repealed effective December 31, 2006."~~

SECTION 3.(a) There is appropriated from the General Fund to the e-NC Authority the sum of seven million five hundred thousand dollars (\$7,500,000) for the 2006-2007 fiscal year for Internet connectivity incentive grants. These funds shall not revert. It is the intent of the General Assembly that these funds shall be used to allow at least seventy percent (70%) of the households in each county to have the ability to access high-speed Internet services by 2008. Funds for connectivity incentives should be committed to service providers by July 1, 2008. These incentive grants shall be competitive and shall require at least a fifty percent (50%) cash match from the participating service providers. Companies must ensure the number of additional households to be served as a result of this funding. The e-NC Authority may use up to five percent (5%) of these funds to cover its expenses in grant letting and monitoring.

SECTION 3.(b) There is appropriated from the General Fund to the e-NC Authority the sum of one million six hundred thousand dollars (\$1,600,000) for the 2006-2007 fiscal year for continued and expanded funding of the e-NC Business and Technology Telecenter (BTT) program. The e-NC Authority may use up to five percent (5%) of these funds to cover its expenses in program development and implementation of activity areas with the BTTs. The e-NC Authority may contract with other State agencies, The University of North Carolina, the Community Colleges System Office, and nonprofit organizations to assist with BTT program development and the evaluation of program activities.

SECTION 3.(c) There is appropriated from the General Fund to the e-NC Authority the sum of three hundred thousand dollars (\$300,000) for the 2006-2007 fiscal year for competitive innovation grants to e-communities, BTTs, and Local E-government Utilization Program participants for the development of model programs and value-added products that enhance the economy of their regions.

SECTION 4. The e-NC Authority shall work cooperatively with the following entities to carry out the purposes of this act: the Department of Commerce, The University of North Carolina, the Community Colleges System Office, the local councils of government, the local chambers of commerce, the North Carolina Association of County Commissioners, the North Carolina League of Municipalities, the Regional Economic Development Partnerships, local economic developers, and the private and nonprofit sectors.

SECTION 5. Section 3 of this act becomes effective July 1, 2006. The remainder of this act is effective when it becomes law.

NORTH CAROLINA GENERAL ASSEMBLY AMENDMENT

(Please type or use ballpoint pen)

EDITION No. 1st

H. B. No. 1980

DATE 6-6-06

S. B. No. _____

Amendment No. _____

(to be filled in by
Principal Clerk)

COMMITTEE SUBSTITUTE _____

Rep.) Walend
Sen.) _____

1 moves to amend the bill on page 2, line 36

2 () WHICH CHANGES THE TITLE

3 by inserting at the end of that line the
4 following: "The e-NC Authority shall
5 report annually on its activities to
6 the Joint Legislative Oversight Committee
7 on Information Technology and the Information
8 Technology Committees of the House and
9 Senate."

10 _____

11 _____

12 _____

13 _____

14 _____

15 _____

16 _____

17 _____

18 _____

19 _____

SIGNED Trudi Walend

ADOPTED ✓ FAILED _____ TABLED _____



NORTH CAROLINA GENERAL ASSEMBLY
AMENDMENT
House Bill 1980

H1980-ARV-23 [v.1]

AMENDMENT NO. _____
(to be filled in by
Principal Clerk)

Page 1 of 1

Date _____, 2006

Comm. Sub. [NO]
Amends Title [NO]
First Edition

Representative _____

- 1 moves to amend the bill on page 1, line 25,
- 2 by deleting "2003-475" and replacing it with "2003-425".
- 3
- 4

SIGNED _____
Amendment Sponsor

SIGNED _____
Committee Chair if Senate Committee Amendment

ADOPTED _____ FAILED _____ TABLED _____

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005

H

D

HOUSE BILL 1980
PROPOSED COMMITTEE SUBSTITUTE H1980-PCS80657-RV-26

Short Title: E-NC Internet Connectivity/Jobs Funding.

(Public)

Sponsors:

Referred to:

May 16, 2006

A BILL TO BE ENTITLED
AN ACT REPEALING THE E-NC AUTHORITY SUNSET PROVISION AND
APPROPRIATING FUNDS TO THE E-NC AUTHORITY FOR HIGH-SPEED
INTERNET CONNECTIVITY INCENTIVE GRANTS AND FOR JOB
CREATION THROUGH ECONOMIC DEVELOPMENT AND SUPPORT OF
E-NC BUSINESS AND TECHNOLOGY TELECENTERS.

The General Assembly of North Carolina enacts:

SECTION 1. The General Assembly finds that:

- (1) The e-NC Authority, created in S.L. 2003-425 to continue the work of the Rural Internet Access Authority, is successfully pursuing its mandated goals, increasing access to affordable high-speed Internet, and creating 21st century jobs through technology-based economic development in the rural areas and distressed urban areas of the State.
- (2) The e-NC Business and Technology Telecenters (BTTs) serve as catalysts to technology-based economic development in some of North Carolina's most distressed regions by helping to grow existing small businesses, bringing new kinds of businesses into rural communities and regions, stimulating and supporting entrepreneurship, and creating 21st century jobs.
- (3) e-NC works successfully with local governments and educational institutions to strengthen their technology capacities and services to their communities, making available to the citizens technology services and resources, training, and public access to computers and the Internet.

SECTION 2. Section 4 of S.L. 2003-425 reads as rewritten:

"SECTION 4. Sections 1 and 2 of this act become effective December 31, 2003, with the e-NC Authority hereby designated as the successor entity of the Rural Internet Access Authority that will dissolve on that date, as provided by Section 5 of S.L.

1 2000-149. The remainder of this act is effective when it becomes law. The e-NC
2 Authority created in this act is dissolved effective December 31, 2006. This act is
3 repealed effective December 31, 2006. Part 2F of Article 10 of Chapter 143B of the
4 General Statutes and G.S. 120-123(77), as enacted by this act, are repealed effective
5 December 31, 2006."

6 **SECTION 3.(a)** There is appropriated from the General Fund to the e-NC
7 Authority the sum of seven million five hundred thousand dollars (\$7,500,000) for the
8 2006-2007 fiscal year for Internet connectivity incentive grants. These funds shall not
9 revert. It is the intent of the General Assembly that these funds shall be used to allow at
10 least seventy percent (70%) of the households in each county to have the ability to
11 access high-speed Internet services by 2008. Funds for connectivity incentives should
12 be committed to service providers by July 1, 2008. These incentive grants shall be
13 competitive and shall require at least a fifty percent (50%) cash match from the
14 participating service providers. Companies must ensure the number of additional
15 households to be served as a result of this funding. The e-NC Authority may use up to
16 five percent (5%) of these funds to cover its expenses in grant letting and monitoring.

17 **SECTION 3.(b)** There is appropriated from the General Fund to the e-NC
18 Authority the sum of one million six hundred thousand dollars (\$1,600,000) for the
19 2006-2007 fiscal year for continued and expanded funding of the e-NC Business and
20 Technology Telecenter (BTT) program. The e-NC Authority may use up to five percent
21 (5%) of these funds to cover its expenses in program development and implementation
22 of activity areas with the BTTs. The e-NC Authority may contract with other State
23 agencies, The University of North Carolina, the Community Colleges System Office,
24 and nonprofit organizations to assist with BTT program development and the evaluation
25 of program activities.

26 **SECTION 3.(c)** There is appropriated from the General Fund to the e-NC
27 Authority the sum of three hundred thousand dollars (\$300,000) for the 2006-2007
28 fiscal year for competitive innovation grants to e-communities, BTTs, and Local
29 E-government Utilization Program participants for the development of model programs
30 and value-added products that enhance the economy of their regions.

31 **SECTION 4.** The e-NC Authority shall work cooperatively with the
32 following entities to carry out the purposes of this act: the Department of Commerce,
33 The University of North Carolina, the Community Colleges System Office, the local
34 councils of government, the local chambers of commerce, the North Carolina
35 Association of County Commissioners, the North Carolina League of Municipalities,
36 the Regional Economic Development Partnerships, local economic developers, and the
37 private and nonprofit sectors. The e-NC Authority shall make annual reports concerning
38 its activities to the Joint Legislative Oversight Committee on Information Technology
39 and the information technology committees of the House of Representatives and the
40 Senate.

41 **SECTION 5.** Section 3 of this act becomes effective July 1, 2006. The
42 remainder of this act is effective when it becomes law.

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005

H

2

HOUSE BILL 1980
Committee Substitute Favorable 6/12/06

Short Title: E-NC Internet Connectivity/Jobs Funding.

(Public)

Sponsors:

Referred to:

May 16, 2006

1 A BILL TO BE ENTITLED
2 AN ACT REPEALING THE E-NC AUTHORITY SUNSET PROVISION AND
3 APPROPRIATING FUNDS TO THE E-NC AUTHORITY FOR HIGH-SPEED
4 INTERNET CONNECTIVITY INCENTIVE GRANTS AND FOR JOB
5 CREATION THROUGH ECONOMIC DEVELOPMENT AND SUPPORT OF
6 E-NC BUSINESS AND TECHNOLOGY TELECENTERS.

7 The General Assembly of North Carolina enacts:

8 **SECTION 1.** The General Assembly finds that:

- 9 (1) The e-NC Authority, created in S.L. 2003-425 to continue the work of
10 the Rural Internet Access Authority, is successfully pursuing its
11 mandated goals, increasing access to affordable high-speed Internet,
12 and creating 21st century jobs through technology-based economic
13 development in the rural areas and distressed urban areas of the State.
14 (2) The e-NC Business and Technology Telecenters (BTTs) serve as
15 catalysts to technology-based economic development in some of North
16 Carolina's most distressed regions by helping to grow existing small
17 businesses, bringing new kinds of businesses into rural communities
18 and regions, stimulating and supporting entrepreneurship, and creating
19 21st century jobs.
20 (3) e-NC works successfully with local governments and educational
21 institutions to strengthen their technology capacities and services to
22 their communities, making available to the citizens technology
23 services and resources, training, and public access to computers and
24 the Internet.

25 **SECTION 2.** Section 4 of S.L. 2003-425 reads as rewritten:

26 **"SECTION 4.** Sections 1 and 2 of this act become effective December 31, 2003,
27 with the e-NC Authority hereby designated as the successor entity of the Rural Internet
28 Access Authority that will dissolve on that date, as provided by Section 5 of S.L.
29 2000-149. The remainder of this act is effective when it becomes law. ~~The e-NC~~

~~Authority created in this act is dissolved effective December 31, 2006. This act is repealed effective December 31, 2006. Part 2F of Article 10 of Chapter 143B of the General Statutes and G.S. 120-123(77), as enacted by this act, are repealed effective December 31, 2006."~~

SECTION 3.(a) There is appropriated from the General Fund to the e-NC Authority the sum of seven million five hundred thousand dollars (\$7,500,000) for the 2006-2007 fiscal year for Internet connectivity incentive grants. These funds shall not revert. It is the intent of the General Assembly that these funds shall be used to allow at least seventy percent (70%) of the households in each county to have the ability to access high-speed Internet services by 2008. Funds for connectivity incentives should be committed to service providers by July 1, 2008. These incentive grants shall be competitive and shall require at least a fifty percent (50%) cash match from the participating service providers. Companies must ensure the number of additional households to be served as a result of this funding. The e-NC Authority may use up to five percent (5%) of these funds to cover its expenses in grant letting and monitoring.

SECTION 3.(b) There is appropriated from the General Fund to the e-NC Authority the sum of one million six hundred thousand dollars (\$1,600,000) for the 2006-2007 fiscal year for continued and expanded funding of the e-NC Business and Technology Telecenter (BTT) program. The e-NC Authority may use up to five percent (5%) of these funds to cover its expenses in program development and implementation of activity areas with the BTTs. The e-NC Authority may contract with other State agencies, The University of North Carolina, the Community Colleges System Office, and nonprofit organizations to assist with BTT program development and the evaluation of program activities.

SECTION 3.(c) There is appropriated from the General Fund to the e-NC Authority the sum of three hundred thousand dollars (\$300,000) for the 2006-2007 fiscal year for competitive innovation grants to e-communities, BTTs, and Local E-government Utilization Program participants for the development of model programs and value-added products that enhance the economy of their regions.

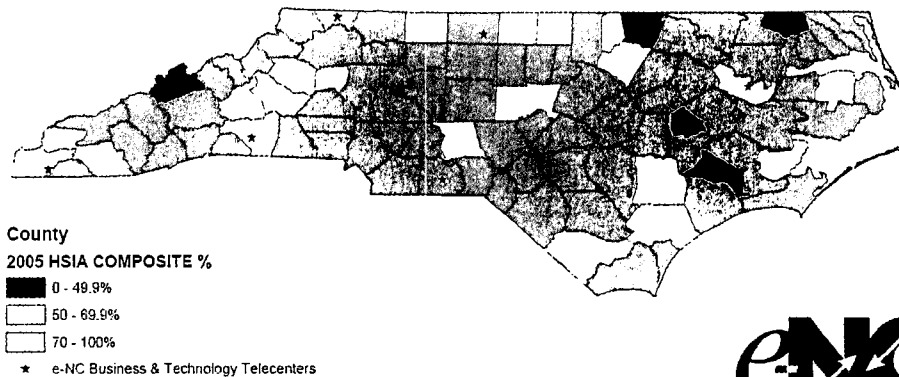
SECTION 4. The e-NC Authority shall work cooperatively with the following entities to carry out the purposes of this act: the Department of Commerce, The University of North Carolina, the Community Colleges System Office, the local councils of government, the local chambers of commerce, the North Carolina Association of County Commissioners, the North Carolina League of Municipalities, the Regional Economic Development Partnerships, local economic developers, and the private and nonprofit sectors. The e-NC Authority shall make annual reports concerning its activities to the Joint Legislative Oversight Committee on Information Technology and the information technology committees of the House of Representatives and the Senate.

SECTION 5. Section 3 of this act becomes effective July 1, 2006. The remainder of this act is effective when it becomes law.

e-NC Authority - Request for Legislative Action

2005 High Speed Internet Availability

DSL and Cable Modem Composite



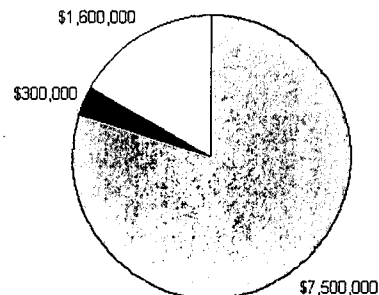
4/22/06

High-speed Internet access and the broadband applications it delivers are a necessary platform to support development of emerging technology-based sectors of great economic promise. Since January 2001, the e-NC Authority (formerly the Rural Internet Access Authority) has led rural and distressed urban communities towards a more competitive position where affordable broadband access is improving the quality of life and creating high-value jobs. Serious disparity in Internet access and the resources it delivers remains, with 26 rural counties significantly lagging urban counties in their ability to access and utilize the high-speed Internet (meaning less than 70% of the households in these 26 counties have the ability to access high-speed Internet services, compared to the state average of 82%). e-NC Business and Technology Telecenters (BTTs) are transforming the prospects and perceptions of 7 rural regions, creating the base for a strategic structure for a statewide business development support and service delivery system. Interest and need for the presence of e-NC BTTs remains in the other distressed regions in NC's border and coastal counties. The following requests constitute an integrated package of initiatives that are needed to secure and extend to other regions of need the benefits of investments already made by the NC Legislature.

- **Ever-Green the e-NC Authority:** There is a recognized need for an on-going organized one-stop effort to ensure that the citizens and businesses of NC keep pace with the ever-faster technological changes in telecommunications and information infrastructure networks in order to assure the economic competitiveness of NC with special focus on rural and urban distressed areas. The e-NC Commission requests that the legislature revise Session Law 2003-425 to remove the e-NC sunset date of December 31, 2006, with all powers, duties and goals remaining as stated in Section 143B-437.47.
- **Continue \$500,000 e-NC Operating Funds Appropriation.**

Expansion Initiatives - \$9.4 million:

- **\$7.5 million Connectivity Incentives Fund**
- **\$1.6 million BTT Support Grants Program**
- **\$300,000 Competitive Innovation Grants Program**



□ Connectivity Incentives ■ Competitive Innovation Grants □ BTT Support Grants

- **\$7.5 million Connectivity Incentives Fund:** Five counties (Gates, Greene, Jones, Madison and Warren) have broadband access rates below the critical 50% threshold; another 21 rural counties have access rates of less than 70%. While the counties will still not reach the state average for connectivity, the incentive funds will enable providers to narrow the gap and bring these counties to at least the 70% threshold and to a more competitive economic position. E-NC will push towards 80% access for all households by the end of 2008.
- **\$1.6 million BTT Support Grants Program:** e-NC requests continued and expanded funding of e-NC BTT program to support existing e-NC telecenters as they move toward sustainability. Funds will be distributed through a competitive grants process that identifies BTT initiatives that have strong potential to enhance a BTT's sustainability as well as the initiative that has the capacity to scale throughout the BTT system. This \$1.6 million is for Phase II development (\$400k each) for 4 BTTs funded in 2004.
- **\$300,000 Competitive Innovation Grants Program:** e-NC works with e-NC BTTs and e-communities statewide to develop model programs and value-added products that enhance the economy of their regions. e-NC also provides assistance with new technologies for citizens and businesses and conducts research to prototype programs that can support the sustainability of these BTTs' effort to become engines of innovation. Seed and matching funds will be made available through a competitive grants program to support the development of initiatives and their extension to other communities and BTTs across North Carolina.

Expected Results

A recent report from researchers at MIT and Carnegie Mellon universities has provided conclusive evidence that "broadband enhances economic activity, helping to promote job creation both in terms of the total number of jobs and the number of establishments in communities with broadband." (Gillett and Sirbu. Measuring Broadband's Economic Impact, 2005). This confirms our experience with our Business and Technology Telecenters and their job creation of more than 900 jobs since the initial BTTs inception in 2002. Validation of this impact was found by a third party review of our BTTs (RTI, 2005). The RTI study further noted that transformation of the entire community surrounding the BTTs had taken place with children making better scores in school and unemployment being lower than in other communities with similar economies and demographics.

Based on the leveraging performance of existing BTTs, requested appropriations for the BTTs will generate a matching amount of funds in the respective communities. As a result, higher wage, higher skilled jobs will be created and new and expanded businesses will emerge. New opportunities for online learning and work force certifications will be offered within these distressed communities. (Selection of BTTs has been limited to Tier 1 and Tier 2 areas.)

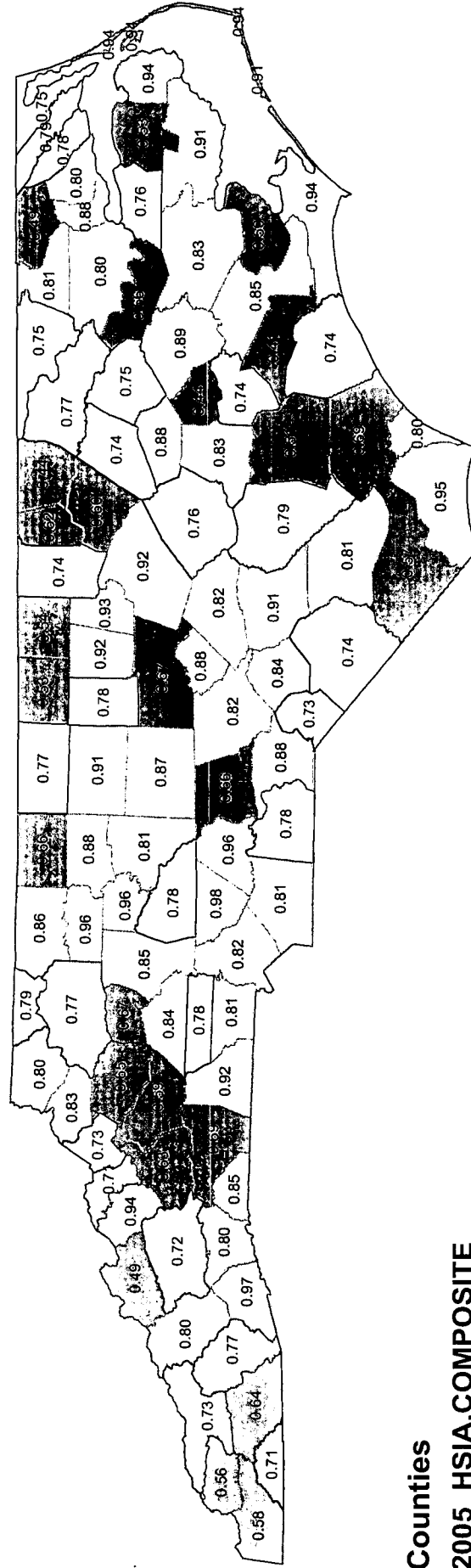
Connectivity incentives funds will bring all 100 counties up to the point where at least 70% of each county's households can purchase high-speed Internet. From the MIT/Carnegie Mellon study, "one would expect the mean growth in rent, employment, number of [business] establishments and share of establishments in IT intensive sectors to be higher in the communities with broadband."

The work of the e-NC Authority (formerly the RIAA) with the citizens and businesses of North Carolina enabled North Carolina to move from 47th in 2001 to 11th in 2004 in the citizens' ability to purchase broadband. Evidence from the Federal Communications Commission (FCC) states that our citizens are purchasing broadband at higher rates than other states' rural areas. The interactive work of the e-NC with NC communities and citizens has proved to be very productive. Citizens, businesses and local governments benefit from assistance received from a one-stop place to assist them with their communities' connectivity issues and needs. The e-NC has brought to this initiative the technical hands-on leadership and fiduciary oversight that has driven this broadband deployment through an award winning model of collaborative, public private partnerships.

Countries With Less Than 70% High Speed Internet Availability

2005 DSL and Cable Modem Composite

State Average - 82%



Counties

2005_HSIA.COMPOSITE_

$$\boxed{0.41 - 0.69}$$

$$0.70 - 0.79$$

$$0.80 - 0.98$$



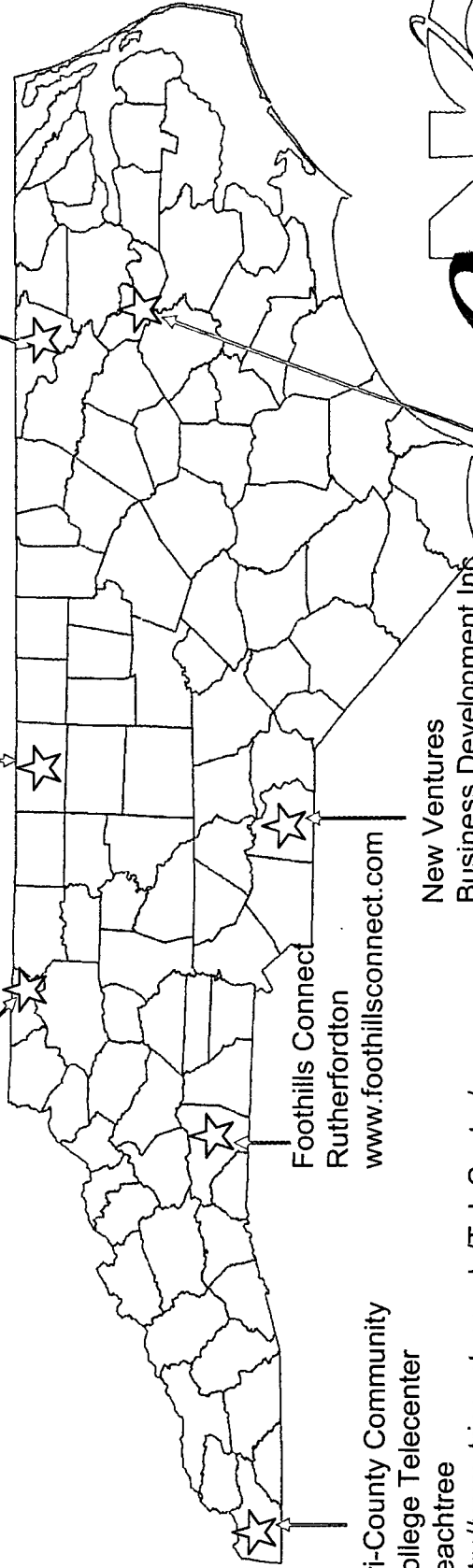
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e-NC Business & Technology Telecenters

Blue Ridge Business
Development Center
Sparta www.blueridgebdc.org

Rockingham County
Business & Technology Center
Wentworth www.rcbtc.org

The Roanoke Center
Rich Square
www.roanokecenter.org



Tri-County Community
College Telecenter
Peachtree
<http://www.tricountycc.edu/TeleCenter/>

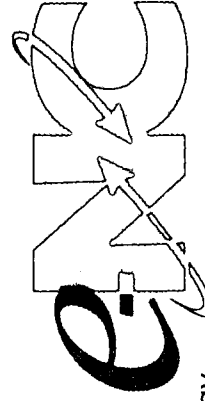
Foothills Connect
Rutherfordton
www.foothillsconnect.com

New Ventures
Business Development Inc.
Wadesboro & Monroe
www.nvbdi.org

Northeast Technology
& Business Center
Williamston
www.nctelecenter.com

<http://www.e-NC.org>

April 2006





CREATING SUCCESS

**"The NC
TeleCenter is
the hub of
development
activities in Martin
County. We are
able to use the
communication
technology for
training and the
incubation of jobs."**

- Jim Ward

Executive Director

Martin County's

**Economic Development
Center**

Quick Facts

Martin County

24,930 people

463 square miles

County seat:
Williamston

Northeastern NC

In 2004:
475 Jobs Added
77 Jobs Lost
\$26.9 million in
Investment

Tier 1 County, an indicator that it is one of the most economically distressed areas of the state

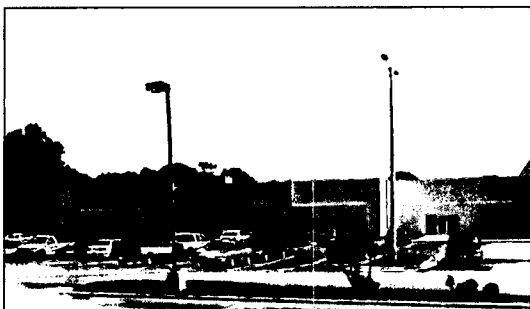
*Economic facts from NC
Department of Commerce*

NC TeleCenter

An e-NC Business & Technology Telecenter

Martin County, North Carolina

Northeast North Carolina's Technology and Business Center — known locally as the NC TeleCenter — is "bringing the world" to Martin County. Initially funded by e-NC, it is one of eight telecenters in existence or under development in North Carolina.



Dawn of another workday at the NC TeleCenter in Williamston

The primary focus of the NC TeleCenter is to support Martin County's vision for technology-based economic development by creating jobs in the area. All e-NC Business & Technology Telecenters have five key components: business services, technology services, business enterprise, technology training and public access.

"The NC TeleCenter has placed Martin County in a better competitive position to recruit both small businesses and large industries," said Stan Crowe, chair of the Board of Directors of Martin County Economic Development.

"Small businesses find a nurturing environment, access to technology and affordable space. Industries can experience first-hand the technology and training services that are available in Martin County."

In the past few years, communities across North Carolina have seen unemployment rates rise as industries moved overseas. To stem this trend, the NC TeleCenter works closely with

the Martin County EDC to provide Northeastern North Carolina with resources that attract national and international corporations to the area, resulting in an increase in jobs.

Syfan, an Israeli company that makes Polyolefin shrink films for general and food packaging, recently chose Martin County over locations in six other states for its first US-based plant, at least in part because of the telecenter.

"Syfan's representatives saw that Martin County could handle the company's needs for training, workforce development and access to technology," said Crowe. "The company's president was impressed with the high level of activity at the center, particu-

larly considering its rural location. When we finalized the deal in one of the NC TeleCenter's three conference rooms, he stated that the telecenter was one of the deciding factors in choosing Martin County."

The NC TeleCenter has a wealth of resources to offer companies like Syfan, including teleconferencing, workforce training, general meeting space, and the offices of community stakeholders like Congressman GK Butterfield and the EDC.

"Syfan liked the NC TeleCenter's ability to provide space and training classes through partnerships with the NC State Industrial Extension Service, Martin Community College, and Martin County Schools," said Jim Ward, executive director of the county's EDC. "They were attracted to Martin County's geographical location and the prospect of hiring a quality workforce."

Quick Facts NC TeleCenter

88 Jobs Created

15 Tenants

15,855 Tech/Bus. Service Clients

7,385 Public Access Visits

www.nctelecenter.com
Figures as of Fall 2004

Linda White and Kim Griffin, Roanoke Medical Transport's first employees, in front of the company's van



Martin County lost nearly 7 percent of its businesses employing less than 20 employees between 1998 and 2002.

Since opening, the NC TeleCenter has been reducing this trend by combining the use of shared ser-

vices and technology to support entrepreneurs. To date, the center has attracted 15 full-time tenants and added 88 jobs to the area.

Resources and connections provided by the center help local businesses thrive and entrepreneurs succeed.

An NC TeleCenter client since July 2004, Ballance Industries is one example of a company that found a supportive environment at the NC TeleCenter. Owner Rodney Ballance developed a patent for an innovative cleaning tool called Scrubber1.

After developing the idea for the product, Mr. Ballance turned to the NC TeleCenter for office space and assistance. Contacts he made at the telecenter put Ballance in touch with manufacturing firms, which supplied the main components for the product.

Recently, NC TeleCenter contacts enabled him to present before a major international company,

which is now considering a purchase of his invention.

"Through the professional relationships I've made at the NC TeleCenter, I was able to turn an idea on paper into a real product that will be available to customers at major retail locations in the U.S. and abroad in the next year" said Ballance.

"The NC TeleCenter provides a location and atmosphere in which normal, everyday people can develop a business. This center is a tremendous benefit to Martin County and I highly recommend it to anyone in the area interested in their own business," he adds.

Martin County has long been dependent on tobacco production for jobs and tax revenue. As the economy changes, area producers have needed to look at other ways to make a living.

The NC TeleCenter's newest client is a farming family from nearby Bertie County who is looking toward the future.

Using their second set of skills as medical technicians, Ricky Leggett, general manager of Ward Farms, and his wife Vicki, started a medical transport service in January 2005. The couple opened an office in the NC TeleCenter and hired their first two employees to provide medical transport services to area nursing homes, doctors' offices and hospitals. The NC TeleCenter has provided a variety of helpful resources, including phone services and computers, as well as access to services provided by other tenants.

"The NC TeleCenter is encouraging people to stay as Martin County grows," said Leggett. "The location is ideal."

Both Leggett and Ballance are seeing their businesses quickly grow and are hoping the NC TeleCenter will find the funds to renovate additional space soon so they will be able to expand within the building.



Constituents meet with Congressman Butterfield, whose offices are located in the NC TeleCenter

What's next in economic development for Martin County? Quite a bit. The EDC's project list includes the creation of two industrial parks and the establishment of several new industrial and manufacturing plants in the county, as well as a call center at the telecenter. The EDC's collaboration with the NC TeleCenter is a vital part of these plans.

"The NC TeleCenter is the hub of development activities in the county," says Ward. "We are able to use the communication and technology for training and the incubation of jobs."



One of the offices for rent at the NC TeleCenter

Creating Success chronicles the achievements of the e-NC Authority's grantees and programs.



CREATING SUCCESS

**"It is our hope that
this project will
help stimulate the
local economy by
encouraging new
business
opportunities
within our area."**

- Jeff Loven

**French Broad Electric
Membership
Corporation**

Quick Facts

Madison County
20,196 people
450 square miles
15.4% in poverty
4.9% unemployed
Tier 3 County

Mitchell County
16,052 people
220 square miles
13.8% in poverty
5.2% unemployed
Tier 2 County

Yancey County
18,131 people
312 square miles
15.8% in poverty
7.5% unemployed
Tier 1 County

**Partnership
Region:
AdvantageWest**

*Economic facts
from the NC
Department of
Commerce as of
Q1 2005*

Innovative Hybrid Collaboration Deploys Broadband in Madison, Mitchell and Yancey counties, North Carolina

In 2002, the e-NC Authority awarded a \$1.45 million grant to AdvantageWest, the regional economic development commission for western North Carolina, to increase connectivity in the western part of the state. After an extensive study conducted by the engineering firm Callisma, AdvantageWest allocated \$588,000 to address key connectivity issues in Madison, Mitchell and Yancey counties.

The grant is funding a successful project, thanks in large part to the innovative, hybrid partnership created to accomplish the work. French Broad Electric Membership Corporation, a nonprofit, was selected to build infrastructure from Mars Hill to Burnsville and Bakersville. Country Cable Vision, a for-profit cable company, was chosen to build from Burnsville to Spruce Pine.

As well, the AdvantageWest project complements the work of the Education and Research Consortium of the Western Carolinas, Inc., a 501 (c)(3) organization, which also is deploying fiber in western North Carolina. The ERC was asked to equip the PoPs in Marshall and Burnsville. In addition, ERC is building fiber from Asheville to Marshall.

French Broad has a long history of providing citizens with important services at a reasonable cost. The company has provided electrical service to Madison, Mitchell, and Yancey counties for more than 60 years.

Partnering with French Broad enabled AdvantageWest to hang fiber from electric poles for approximately \$8,000 per mile, significantly less than the standard \$21,000 per mile charged by other companies to deploy aerial fiber.

Savings also resulted from French Broad's efficient construction techniques, which included limiting pole hardware, utilizing their own employees for installation, and deploying self-supported, 72-count fiber.

"We used our own people, which helped with the quality of the installation and kept costs down," said Jeff Loven of French Broad. "We also were able to take advantage of the all dielectric self-supported cable, which can be installed without a messenger wire and contains no metal or other conductive material. This makes for a clean and fast installation process."

The lack of metal in the fiber sheath allows for placement on the pole immediately beneath a neutral electric line, eliminating the need to rearrange existing utility lines to make room.

He continued: "We did our own terminating and splicing which kept the cost to a minimum, gave us the training we would need for repairs, and gave us the freedom to connect the cables in the manner that worked best for us."

When asked about the project's impact, Loven added, "This project will provide high-

speed Internet service to businesses that cannot currently get the speed they need to operate at a price they can afford. It is also our hope that it will help stimulate the local economy by encouraging new business opportunities within our area."

Country Cable Vision (CCV) is another local company with a history of serving citizens in Madison, Yancey and Mitchell counties. Starting out with only half-megabyte service in limited areas, the company now provides more than 5,000 customers with up to three megabyte service. Eventually, CCV plans to supply five megabyte service.

Once operative, CCV's leg of the Advantage West project will link French Broad's efforts in Bakersville and Burnsville to Spruce Pine.

Partner Web Sites

AdvantageWest
www.awnc.org

Country Cable Vision
www.ccvn.com

Education and Research Consortium of the Western Carolinas
www.ercwc.org
www.ercbroadband.org

French Broad Electric Membership Corporation
www.frenchbroademc.com

The e-NC Authority
www.e-nc.org

"This partnership will support the local citizenry by not only lowering the cost of Internet connectivity, but also by increasing the speeds with which one can connect."

- Hunter Goosmann, ERC

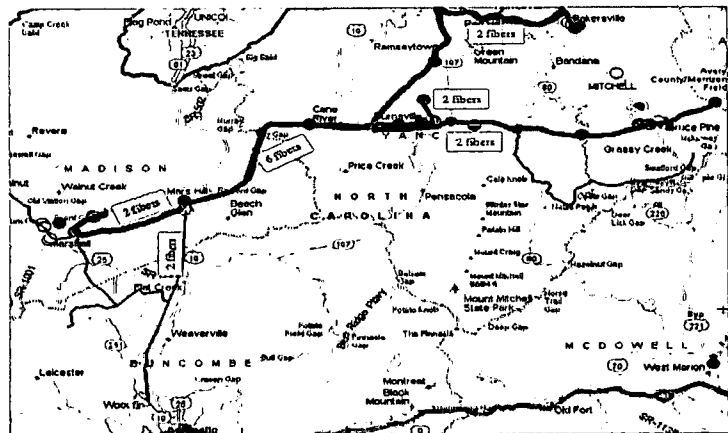
"The e-NC Authority is bringing bandwidth to our area and we are maintaining the fiber," said Bryan Hyder with Country Cable Vision. "This collaboration will result in more bandwidth, and therefore faster service for our customers."

Some parts of CCV's service area have only 17 homes per mile, making it difficult for regional ISPs to afford to maintain high-speed service. "Without teaming up with AdvantageWest and ERC, we would not have been able to afford the bandwidth," said Hyder. "At our size, we just couldn't afford the line charges on our own."

The mission of the ERC is to further economic development in the western Carolinas through education, infrastructure and capital development. The group, conceived and championed by Congressman Charles Taylor, has supported the citizens of western North Carolina for the past eight years. Programs include An Adventure of the American Mind which trains teachers to use the digitized primary resources of the Library of Congress in their classrooms and Pisgah Forest Institute which trains teachers in science using the forest as a lab. In addition, the ERC has provided technology labs at colleges throughout WNC including Mars Hill College and Mayland Community College's Burnsville campus.

Currently, the ERC is partnering with French Broad and Country Cable Vision to build fiber through Weaver-ville into Madison County where it will connect to French Broad's network.

"This partnership will support the local citizenry by not only



The above map shows most of the 72-count fiber route being built as a result of the innovative hybrid collaboration developed by AdvantageWest and funded by e-NC, which will join other fiber routes in the area.

lowering the cost of Internet connectivity, but also by increasing the speeds with which they can connect," said Hunter Goosmann, ERC Director of Network Operations.

Goosmann looks forward to the benefits of broadband. "Individuals, schools, government agencies and businesses will receive the benefits of faster connectivity options," he said. "The larger impact will be to the business community which will be in the position to expand their service offerings through technology. Additionally, the community will be able to recruit new businesses and support their technology needs."

In addition to building infrastructure from Mars Hill to Burnsville and Bakersville, French Broad also is working on a wireless project in Hot Springs, North Carolina. Plans currently are underway to construct a cellular tower on Rich Mountain. Once the tower is completed, French Broad plans to run fiber to the tower, which would enable them to provide wireless Internet access and associated services to the town of Hot Springs and to much of the surrounding area. Currently, this region only has access to dial-up Internet

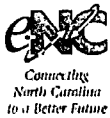
service.

"Our goal is to provide businesses, schools, government agencies, or any other commercial entity with high-speed Internet service at a reasonable cost," said Loven. "We hope that this will not only help our existing customers, but will attract new business opportunities for our service territory. We also hope it will help stimulate the local economy."

The AdvantageWest project is on schedule for completion by the end of 2005. This important middle-mile step will make it more feasible for Internet service providers to purchase transport at a lower cost and therefore extend last-mile access and services into the remote areas of Madison, Yancey and Mitchell counties.

The e-NC Authority has worked with three counties and four organizations to create an innovative solution and to develop the legal documents and operational contracts that enabled this hybrid partnership to come together. This unique connectivity solution will benefit citizens for years to come.

Creating Success chronicles the achievements of the e-NC Authority's grantees and programs.



CREATING SUCCESS

**"The Blue Ridge
BDC is our county's
IT department.**

**They can quickly
devote an
incredible amount
of manpower and
expertise to a
project."**

- Duane Davis

Superintendent

Alleghany County

Public Schools

Quick Facts

**Alleghany
County**

10,677 people

235 square miles

County seat:
Sparta

Northwestern NC
1.5 hrs to Triad
2 hrs to Charlotte

Tier 1 County, an
indicator that it is
one of the most
economically
distressed areas
of the state

Economic facts from NC
Department of Commerce

Blue Ridge Business Development Center

An e-NC Business & Technology Telecenter

Sparta, North Carolina

Founded in June 2003, the nonprofit Blue Ridge Business Development Center provides critical technology services to rural Alleghany County and the surrounding area. Before the Blue Ridge BDC, technical services of this caliber were not available locally.

The Blue Ridge BDC promotes economic growth by supplying the region with its very own, reasonably priced, IT department.

Partially funded by the e-NC Authority, the Blue Ridge BDC is one of eight business and technology telecenters in North Carolina. All e-NC telecenters have five key components: business services, technology services, business enterprise, technology training and public access. Each telecenter chooses to focus in a specific area. For the Blue Ridge BDC, that focus is technology services.

The Blue Ridge BDC's technology services range from data storage and Web hosting to listserv and on-call IT support. Customers range from for-profit manufacturing companies like NAPCO and TruLine Truss to educational entities, such as Alleghany County Public Schools and the Northwestern Regional Library system.

"Alleghany County Public Schools has approximately 700 computers in its system, plus various handhelds. We

have a Windows 2000 server. We run a Point-of-Sale system in our cafeterias. We host our own Web sites, house our own e-mail, handle content filtering, and run virus protection software on all our computers," said Chief Technology Facilitator Susan Milo.

"On top of software you'd see in a typical business, we have education-specific software. We also have a direct connection to the state for payroll and human resources, and another direct connection to the world through the NC Information Highway."

"The Blue Ridge BDC manages all of that. They do everything from individual work

Ridge BDC was able to complete the project with no service interruptions in under a year.

"They work around our needs and schedule. They get the job done, leaving us to focus on integrating the technology into the classroom," said Milo.

The Blue Ridge BDC also works with the Northwestern Regional Library system, which is comprised of 13 libraries in Alleghany, Stokes, Surry and Yadkin counties.

During the economic downturn at the start of the century, NWRL lost state funding for its technical support person.



Blue Ridge Business Development Center

station repair to network engineering to software maintenance to wiring the router closets."

Last year, the Blue Ridge BDC helped the school system switch its five servers from Novell to Windows 2000. Careful to work only when instruction was not taking place, the Blue Ridge BDC completed the transition on spring and summer break, and over the Christmas holidays. By waiting patiently – and then working manically – the Blue

2004 Quick Facts Blue Ridge BDC

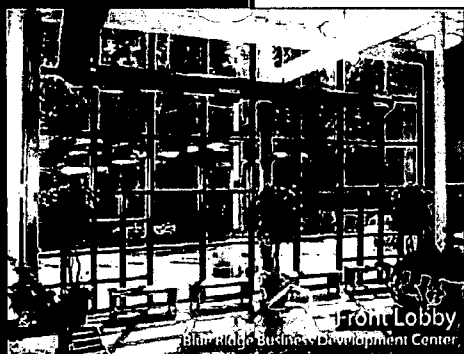
71 jobs created

79 technology/ business services
clients served

14 business tenants housed

1,476 users of free public Internet
access site helped

www.blueridgebdc.org
Figures since Fall 2003



"The budget cuts couldn't have come at a worse time – we had just taken our entire circulation system online and now had no IT person to maintain it," said Joan

Sherif, Branch Supervisor and Technical Coordinator. "Luckily, Blue Ridge BDC was there."

The Blue Ridge BDC provides remote and onsite IT support to all 13 libraries. A responsibility previously carried by one person now is distributed across the five Blue Ridge BDC technical support staff, each of whom brings different strengths and capabilities to the project.

In addition to ensuring day-to-day operations proceed smoothly, the Blue Ridge BDC also keeps an eye on NWRL's bottom line. For instance, soon after gaining NWRL as a client, the Blue Ridge BDC instituted remote access to the libraries. Considering it is 175 miles all the way around the four counties in the system, this ability to remotely access systems and solve problems has meant more time could be

spent on solving IT issues rather than traveling to get to them.

The Blue Ridge BDC's responsiveness and proactive attitude meant

the NWRL doubled its contract for the coming year.

"They are always looking at new and different ways to help us," said Sherif. "With a system our size, with it so spread out, and with varying degrees of employee technical knowledge, it is reassuring to know the Blue Ridge BDC is there. We can count on them."

For Alleghany Memorial Hospital, a private health care non-profit serving the community's needs, working with the Blue Ridge BDC can often mean an electrifying experience. Last year, the hospital was struck by lightning, which fried a small component and shut down the entire network.

space, providing business services, and selling annual computer tune-ups for home and small business owners.

Exciting projects in the works include tenant relationships with the new Sparta Teapot Museum and All Seasons, a Christmas tree sales and marketing company.

It is through these business enterprises that the Blue Ridge BDC is able to offer free public Internet access to local citizens, furthering its mission of increasing technology access, awareness and services in the area.

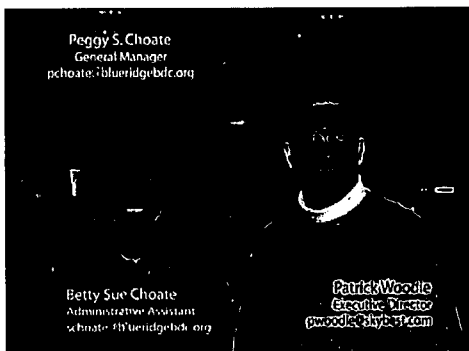
An exceptional feat for any new business, the Blue Ridge BDC is nearly self-sustaining

after a little more than two years of operations. In 2004, it directly created seven jobs and indirectly created 64 more in the community.

The e-NC Authority is Blue Ridge BDC's primary grantor. However, e-NC has been able to step

down support every year as the Blue Ridge BDC has become increasingly self-sustaining. The authority gave \$650,000 in 2001 and \$390,000 in 2002, but only needed to contribute \$50,000 in 2004.

"The Blue Ridge BDC provides the IT services necessary for growth in this county," said Blue Ridge BDC Executive Director Patrick Woodie. "We keep area businesses and nonprofits connected to each other and the rest of the world."



"Networks aren't like a person. You can't ask it where it hurts," said Chief Financial Officer Ralph Castillo. "The Blue Ridge BDC went through methodically, checking everything. They had us back up and working in a matter of hours."

A symbol of the changing local economy, the Blue Ridge BDC is housed in a converted factory, once the Bassett-Walker plant and a major employer in the area. Inside the brick, factory walls, is a fully networked building that would be the envy of most metropolitan areas.

In addition to technology services, the Blue Ridge BDC also generates revenue through business enterprises. These include leasing office



Break Room/ Meeting Area
Blue Ridge Business Development Center

Creating Success chronicles the achievements of the e-NC Authority's grantees and programs.



CREATING SUCCESS

"I just can't say enough about how wonderful this program has been. I am amazed by how much I've learned, and it's exactly what I need for work in the future."

— Patricia Busby
TechSmart student and
Cherokee County
resident

Quick Facts Cherokee County

25,694 people

467 square miles

County seat:
Murphy

Western NC
2 hrs to Asheville,
NC; Atlanta, GA;
Chattanooga, TN;
and Knoxville, TN

In 2004:
\$375,000 invested;
6 percent unem-
ployment rate

In January 2005:
68 Job Losses

*Economic facts from
NC Department of
Commerce*

Tri-County Community College TeleCenter

An e-NC Business & Technology Telecenter

Cherokee County, NC

What happens when you combine the resources of a community college with an e-NC Technology & Business Telecenter? You provide a vast wealth of resources to local small businesses and vital training to area workers.

The e-NC Authority has funded eight business and technology telecenters across the state, all of which have five key components: business services, technology services, business enterprise, technology training and free

other experts; additional sources for capital; high-speed Internet access; video conferencing services; as well as conference rooms and a business library.

Additionally, the small business center and TeleCenter combined resources to develop and offer the TechSmart Curriculum®, a grant-funded program designed by college professors who spoke with local employers regarding the type of skills they wanted to see in future employees.

The program is intended to teach computer skills to the unemployed and underemployed to make them more competitive in the job market. Local citizens can participate in the program free of charge. All books and related materials are provided for free.



The ribbon-cutting and official opening of the first site of the Tri-County Community College TeleCenter in 2001.

Every community college in North Carolina houses a small business center that provides counseling, referral services and other support to local companies and entrepreneurs.

When the e-NC Authority opened a telecenter at Tri-County Community College in 2001, its leaders could see the potential benefits of combining the efforts of the small business center with that of the telecenter. The telecenter could share the latest technology with local businesses. As well, local workers could be retrained on modern software.

public Internet access. Each focuses in a different area.

The primary focus of the TCCC TeleCenter is to drive economic development and job creation in Cherokee, Clay and Graham counties by helping entrepreneurs to use computers and local workers to develop computer skills.

The collaboration of the two organizations enables local businesses to receive a wide-variety of valuable services, including one-on-one specialized counseling; business and e-commerce seminars; referrals to legal, accounting and

2004 Quick Facts

Tri-County Community College TeleCenter

115 Jobs Created

266 TechSmart Graduates

727 Tech/Bus. Service Clients

18,473 Public Access Visits

[www.tricountycc.edu/TeleCenter/
telecenter.htm](http://www.tricountycc.edu/TeleCenter/telecenter.htm)



Participants learn from an online banking course at the TeleCenter.

Classes meet four hours per week for seven weeks. The first session is on employability skills. It covers

ethics, communication, critical thinking, workplace safety, and general business concepts.

Session two is an introduction to computers, focusing on the functions, operations and components of a PC. Session three introduces participants to the Internet and guides them in setting up a personal e-mail account. The remaining four sessions cover Microsoft Word, Excel, PowerPoint and Access.

There are five qualified TechSmart instructors, each certified to teach all seven classes. Each session is offered four times throughout the day so interested participants can avoid schedule conflicts.

Professor Carrie Morgan has lived in Cherokee County for nearly 20 years and is excited about the opportunities TechSmart is providing her students. She has seen people without high school diplomas who have never used a computer, learn to balance

their budget, write letters and create databases on the computer by the end of their sessions.

"TechSmart is a wonderful program that provides former factory workers with the skills they need to be employable again," she said.

"I just can't say enough about how wonderful this program has been," said TechSmart student Patricia Busby. "I am amazed by how much I have learned and it's exactly what I need for work in the future."

To promote the program, the TeleCenter has advertised in local newspapers, distributed brochures, and used local radio stations. Tri-County Community College has placed an employee at the Employment Security Commission's local office to answer questions concerning TechSmart, and to sign new students up for the program.

After approximately 18 months of successful TechSmart sessions, producing 266 graduates, organizers feel they are beginning to saturate the market and are debuting new programs designed to meet local needs.

The center currently is offering a Caregiver Program through which participants can earn a certificate in basic care giving. They also have developed a machinist's training program, that will provide local workers with important skills and create 200 new jobs in the area. Both programs are provided at no charge to participants.

In addition to certificate programs, the TeleCenter offers smaller courses on everyday computer-based activities, such as online banking.

The online banking course originated when TeleCenter officials realized employees of local banks did not know how to use the service, much less train customers to use it. A class was developed, bank employees were invited to attend, and now banks have started using the class to train their customers.

In addition to classes, the TeleCenter provides high-speed Internet access, video conference technology, and



Staff from the Tri-County Community College TeleCenter and the e-NC Authority attend the TeleCenter's groundbreaking of the new site.

conference rooms to area businesses. These services are provided to nonprofit organizations free of charge, while other companies pay a small fee.

In order to prevent having to turn interested participants away, the TeleCenter currently is embarking on an expansion effort, adding 1,500 additional square feet to its current 3,000 square foot space.

Creating Success chronicles the achievements of the e-NC Authority's grantees and programs.

"TechSmart is a wonderful program that provides former factory workers with the computer skills they need to be employable again."

*- Carrie Morgan
Professor,
Tri-County Community
College*

The TeleCenter's advisory committee ensures local needs are met.





CREATING SUCCESS

"Visitors to the Web sites can quickly find resources throughout the county. The sites are easy to use and fast. They make Rutherford County unique."

— Kris Jordan

Designer of Rutherford County government Web site and Web portal, and former e-Rutherford committee youth chairperson

Quick Facts

Rutherford County

63,861 people

563 square miles

County seat:
Rutherfordton

Southwestern NC

Bordered by
South Carolina

Tier 2 County, an indicator that it is an economically distressed area

*Economic facts from
NC Department of
Commerce*

e-Rutherford

Rutherford County, North Carolina

When Rutherford County, population 64,000, lost more than 6,000 jobs in five years, locals took the economic downturn as an opening to come together as a community — an "e-community," dedicated to creating opportunity through high-speed connectivity and a technology savvy local population.

The e-NC Authority's e-communities program is an outreach effort to galvanize local support for and involvement in bringing high-speed Internet access and training to all areas of the state.

By the end of 2004, e-Rutherford had launched 13 free public Internet access sites, a county government Web site, a county Web portal, and an e-NC Business & Technology Telecenter, among other initiatives.

As a starting point, the county used a \$10,000 e-NC planning grant to identify local needs and create a strategic plan. The plan outlined ways to spearhead technology-led economic development and to garner support at the government, business and grassroots levels.

E-Rutherford volunteers adopted the following objective: "provide county-wide, high-speed communication

access at affordable rates for residents, businesses and industries."



Rutherford County proclaims it is wired for business to area

In addition to holding community meetings, volunteers collected more than 250 surveys from local citizens and businesses to measure demand for high-speed Internet access. The survey results were then distributed to every Internet service provider in the county to help them prioritize their deployment efforts.

Public Internet access sites also were created. These sites are places where people can use computers and go online for free.

Funded by a \$17,000 e-NC grant, sites were opened in 13 locations, including seven local libraries. Other locations include the Rutherford County Senior Center, Union Mills Lifelong Learning Center, Community Empowerment Resource Center, and Legal

Grounds restaurant.

Two of the public Internet access sites - located at a Denny's restaurant and Daily Grind coffee shop - are wireless "hotspots" where people can bring their own laptops and go online. Denny's is open 24 hours a day, seven days a week, meaning local residents can access the Internet anytime.

The county also launched a Web site through which citizens can pay their taxes, access the register of deeds, and download government forms. The site contains a calendar of events, contact page, phone directory, weather forecast, and county history.

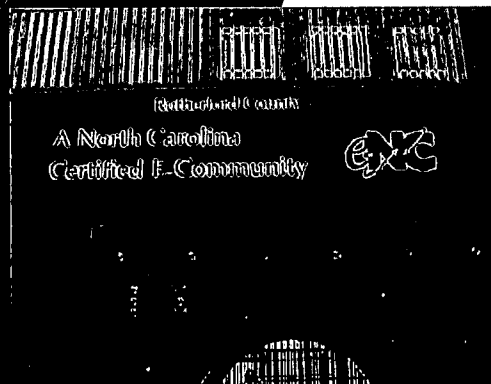
Rutherford County 2004 E-Community Resources

13 free public Internet access sites

County Web site
www.rutherfordinfo.com

County government Web site
www.rutherfordcountync.gov

Business & Technology Telecenter
www.foothillsconnect.com



Located in a converted bank, the local Economic Development Commission touts Rutherford County's designation as an e-community.

"We are in the process of developing a long-term plan for our telecommunications infrastructure. We are excited about the increased demand for high-speed Internet and are working to make sure this demand is being met through local providers."

- Kerry Giles
Project Manager,
Rutherford County
Economic Development
Commission

Funded through a \$20,000 grant from e-NC, the site also links visitors to local services and information. The site links to Web pages for local schools, the Economic Development Commission, *Daily Courier* newspaper, Rutherford Tourism office, and Chamber of Commerce.

The county also developed www.Rutherfordinfo.com, a new county Web portal. Through this doorway into the community, visitors can access local businesses, churches and civic organizations that have a Web site.

The Web portal helps businesses create an online presence. If a business does not have a Web site, it can "Get Listed" for free with a one-page site.

The goal of this portal project was to "create a convenient location for local information, and for the county as a whole to have a stronger Internet presence," said Kerry Giles, project manager for the county's Economic Development Commission and e-champion of Rutherford County.

"There is information on the Web site that lists local businesses that can help individuals create their own Web site or develop e-commerce for their business."

Participating business and organizations are asked to link to the portal from their individual Web sites. The more cross links the portal can generate, the more utilized the data will become.

The project was funded by a \$2,500 grant from Advantage West, western North Carolina's regional economic development commission, as well as through donations from the Leadership Rutherford class of 2003-2004.

FoothillsConnect BUSINESS & TECHNOLOGY CENTER

The grand opening of the Foothills Connect telecenter is planned for October 2005.

In another example of Rutherford County's dedication to providing Internet access and training for its citizens, the county will hold the grand opening of the Foothills Connect Business & Technology Telecenter in October 2005.

Foothills Connect will drive technology-based economic development and job creation in the area. Created through a \$400,000 e-NC grant, the telecenter will operate as a non-profit business. Support also came from the Rutherford County Commissioners and Rutherford County business and community leaders.

The center will be one of eight e-NC Business and Technology Telecenters in North Carolina. All e-NC telecenters have five key components: business services, technology services, business enterprise, technology training and public access. Each telecenter focuses in a

specific area, such as business services.

The telecenter's primary initiative will be to spur technology-based economic growth within the area by assisting small businesses and entrepreneurs. Supporters hope the telecenter will mean the relocation of technology businesses to the region. Developers predict the telecenter will become a nationally recognized catalyst of change as the community prospers in the global economy.

Additionally, e-Rutherford is exploring ways of expanding its technology infrastructure. The group is talking with Advantage West,

e-Polk Inc., and the Education Research Consortium regarding the possibility of expanding e-Polk, Inc.'s fiber ring to Rutherford County and eventually linking it to the MetaPop ring in Asheville. If the collaboration goes through, it may result in a lower middle-mile cost and expanded last-mile coverage for the region.

Plans also are in the works to develop wireless hot spots in the towns of Chimney Rock, Forest City, Rutherfordton, and Spindale.

By pulling together as an e-community, Rutherford County has created the infrastructure necessary to draw businesses to their region and has provided opportunities to local citizens.

Creating Success chronicles the achievements of the e-NC Authority's grantees and programs.



CREATING SUCCESS

**"It is nice to
know the
future is
unlimited."**

**- Jeff Byrd,
President,
e-Polk, Inc.**

**and
Owner/Editor,
Tryon Daily
Bulletin**

Quick Facts

Polk County

19,194 people

238 square miles

County seat:
Columbus

Southwestern NC
1.75 hrs to
Charlotte,
.75 hrs to
Asheville,
.5 hrs to
Spartanburg, SC

In 2004:
51 Jobs An-
nounced
\$469 Average
weekly wage per
employee (Q1)

*Economic facts from
NC Department of
Commerce*

PANGAEA and e-Polk, Inc.

Polk County, North Carolina

In 2001, a determined group of volunteers decided to change the prospects of their community. The members of the e-Polk Steering Committee joined together to get high-speed Internet service to their area.



Part of the e-communities program, e-Polk was one of 86 local efforts created in rural counties and the Eastern Band of the Cherokee Indians in 2001. The purpose of the e-communities program is to galvanize local support for and involvement in bringing high-speed Internet services to all areas of North Carolina.

"Everyone wanted to serve [on the committee]," said Mark Pumphrey, the county's volunteer e-champion and director of its library system. "People knew technology and access were important."

With support from e-NC, the

committee assessed Polk County's Internet services. Members then developed a plan for improving access and training.

"We had nothing but dial-up in Polk County," said Jeff Byrd, now president of e-Polk, Inc.

Terry Stroud of Southern Pipeline & Utilities Inc. and Ken Rossen of e-Polk Inc. hang cable funded by e-NC from a telephone pole in downtown Columbus, NC

and the owner/editor of the local newspaper, the *Tryon Daily Bulletin*. Dial-up meant slow transmission speeds, inability to download large files, limited access to certain interactive and transactional Web sites, and an overall inability to compete on

an economic plane with areas wired for business.

Traditional high-speed providers indicated they would be unlikely to extend service to the area any time soon.

"Local drivers pushed for a fiber optic network," said Byrd. "Why just shoot for DSL or cable? Why not go all the way?"

The committee went all the way by creating PANGAEA, a fiber optic network. PANGAEA's central element is a 144-strand fiber optic cable built along a 7-mile arc from the northeast edge of Columbus through the downtowns of

Columbus and Tryon.

Fiber optic far surpasses both satellite and copper in present performance and potential for the future. As well, fiber optic enables several online processes to occur at once without interruption, such as the exchange of large Internet files while a Voice Over IP — a phone call over the Internet — is underway.

Early on, the e-Polk Steering Committee recognized it would need to create an entity to administer PANGAEA. The organization formed a non-profit, 501(c)(3) corporation. The new entity took on the name e-Polk, Inc. In addition to supporting PANGAEA in Polk County and the surrounding region, e-Polk, Inc., set out to further digital literacy, Web applications and public Internet access in the region.

2004 Quick Facts

PANGAEA and e-Polk, Inc.

17 community customers

144 fiber optic strands running down main county road

0 paid employees

37 active volunteer members of the board of directors and community advisory board

www.pahgaea.us

Figures since January 2004

"It is a service available in a large city, which will attract companies from outside."

**- Scott Warren,
Senior Manager,
RIM Direct**

Cover photograph
provided by the Tryon
Daily Bulletin.

Members of the e-Polk, Inc. board of directors and community advisory board represent nearly every facet of the community: retired bank vice presidents, IT gurus, educators, telecommunications leaders, local government officials, technology whizzes, and businesspeople. Together, they decide Polk County's technology future.

The members of e-Polk, Inc., appealed to many sources for funding. They were successfully awarded \$375,000 for the fiber ring by the e-NC Authority. Additional support came in the form of \$23,000 from the Polk County Community Foundation and \$5,000 from Polk County Government. As well, the school system contributed \$25,000 specifically for the build-out of the network to school sites.

Pairing up with PANGAEA represented significant cost-savings to Polk County Schools. The school system is guaranteed 6 MB of bandwidth on the PANGAEA network. The bandwidth is mission critical as the school system's entire student management system is online. All 150 teachers enter in such information as attendance and grades, transmitting the data to the Department of Public Instruction in Raleigh on a daily basis.

"I estimate we save about \$2,000 per month by using PANGAEA," said Dave Scherping, Technology Director for Polk County Schools and now an e-Polk, Inc. board member. "That's the equivalent of nearly one teacher's salary per year."

The bandwidth assured by PANGAEA also offers unique possibilities to the school system.

"We're looking at a variety of online billing and donating systems," says Scherping. "We'd like to have it so parents can pay the school lunch fee online rather than having 2,500 children bring money in on a daily basis."

Polk County Schools is one of 17 anchor PANGAEA customers. Other users include the local community college, county government, health department, a local pharmacy, a private mental health facility, a bank, a local doctor, and a real estate firm. As well, two Internet service providers buy bandwidth from PANGAEA, reselling it to local customers.

One of PANGAEA's first users was RIM Direct, Resource for International Manufacturing. Established in 2001, RIM Direct helps leading medical, automotive and electronic companies in the United States manufacture items in China. With headquarters in Tryon, the company operates out of offices in Arizona, California, Colorado and Washington, as well as a manufacturing facility in mainland China.

RIM Direct uses PANGAEA for all of its online needs, including e-mail, Intranet and Voice Over IP.

"The Voice Over IP capability saves us several hundreds of dollars per month in long distance across the country alone," said Senior Manager Scott Warren. "It works really well. You can't tell the difference between it and a normal phone line."

Warren expects PANGAEA to lead to business growth in the region.

"It is a service available in a large city, which will attract companies from outside. It also helps small businesses evolve and grow. Hopefully, we'll see

good staying power with those businesses, and not the kind of turnover you get with retail in a small town."

Demonstrating the community's dedication, this urban-quality service is entirely provided by volunteers. While e-Polk, Inc., has an office, the nonprofit has no employees.

Part of promoting growth in the region is linking the PANGAEA network to others like it in Western North Carolina. Supported by grant money from e-NC, more than a dozen infrastructure projects have been completed or are underway in Western North Carolina. The e-NC Authority is working with regional stakeholders, such as Advantage West, e-Polk, Inc., and the Education Research Consortium on these projects.

"We're heading down I26 to meet the [Education Research Consortium] in Columbus," said e-Polk, Inc. President Jeff Byrd. "Advantage West will meet us in Mill Spring on the way to Rutherford."

The expanded resources will bring with them greater opportunity for Polk County and the region as a whole. This larger network will connect Polk County to information hubs in Asheville, N.C., Atlanta, Ga., and Washington, D.C.

The fiber optic network guarantees new possibilities for Polk County. When asked what PANGAEA has meant to his community and his business, Byrd responds, "it is nice to know the future is unlimited."

Creating Success chronicles the achievements of the e-NC Authority's grantees and programs.



CREATING SUCCESS

Initiative Partners

APEC
Golden LEAF
Foundation
MCNC/NCREN
Sprint
The e-NC Authority
University Health
Systems of Eastern
North Carolina

ENCBI Target Counties

Northeast Loop

Beaufort
Bertie
Camden
Dare
Gates
Greene
Hertford
Hyde
Martin
Pamlico
Perquimans

DSL Deployment

Beaufort
Bertie
Bladen
Camden
Carteret
Columbus
Currituck
Duplin
Gates
Greene
Hertford
Hyde
Martin
Northampton
Onslow
Pamlico
Perquimans
Robeson
Sampson
Washington
Wilson

Eastern North Carolina Broadband Initiative

Public-private technology partnership creates NE Loop

In August 2002, the e-NC Authority awarded \$2.925 million to the Albemarle Pamlico Economic Development Corporation, a regional development group in eastern North Carolina. The grant is funding a series of infrastructure transport projects, which were part of a larger \$14.6 million partnership with Sprint known as the Eastern North Carolina Broadband Initiative.

APEC was formed in 2002 with the intent of enhancing broadband access in rural areas east of Interstate 95. The group's goals included promoting economic development and job growth opportunities, enhancing educational and health-care resources, and enriching the community.

The Eastern North Carolina Broadband Initiative is multifaceted and includes efforts such as the installation of a self-healing fiber ring through the affected region, providing

additional network protection and redundancy, and complementing the company's network of rings; as well as the expansion of tele-health and e-learning projects in the area.

The first \$1.5 million of the e-NC grant enabled APEC to deploy conduit along the route of a gas pipeline under development in the eastern part of the state, allowing fiber-optic cable to be pulled into the conduit, as necessary, to meet customer demand. APEC later sold most of this conduit to Sprint, in exchange for Sprint's continuation and expansion of the project. The remaining \$1.425 million of e-NC's award allowed Sprint to complete two projects: a self-healing fiber loop in the Northeastern part of the state, as well as the deployment of additional DSL in this area – addressing both middle and last-mile needs in the region.

The Northeast Loop will bene-

fit citizens in 11 counties, including Beaufort, Bertie, Camden, Dare, Gates, Greene, Hertford, Hyde, Martin, Pamlico, and Perquimans. All 11 counties are designated by the North Carolina Department of Commerce as tier three or lower and seven are designated as tier one, an indicator they are among the most economically distressed areas of the state.

The DSL deployment project benefits North Carolinians in 21 counties, including Beaufort, Bertie, Bladen, Camden, Carteret, Columbus, Currituck, Duplin, Gates, Greene, Hertford, Hyde, Martin, Northampton, Onslow, Pamlico, Perquimans, Robeson, Sampson, Washington and Wilson.

According to Jon Hamm, Sprint's director of community development for the Carolinas, acquiring APEC's conduit provides the company with "additional capacity in areas that could reach exhaust levels with forecasted growth and with the future sale of broadband services. The anticipated demand resulting from the



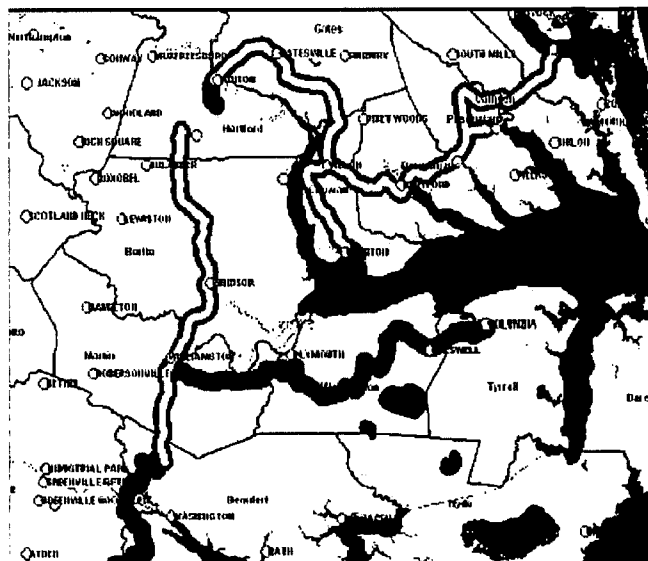
Sprint 'Self-Healing' Fiber Ring

Proposed Sprint fiber
Existing Sprint fiber route
Sprint local service territory

"This is what we consider a good example of a working and quite successful public-private partnership. This is the way creative solutions to connectivity issues can happen."

- Steve Parrott, Sprint's state executive for the Carolinas.

Right: Sprint workmen bury telecommunications cable as part of the expansion of Sprint high-speed Internet in a rural North Carolina county. An e-NC grant and matching investment by Sprint enabled placement of the cable on a much faster timetable than economic conditions would have allowed.



partnership is expected to accelerate the need for fiber relief in several areas. This purchase will enable Sprint to deploy fiber-optic cable, when needed, to continue providing broadband services to customers in this region , and it will ensure that facilities are available to new and existing businesses."

State Executive of the Carolinas Steve Parrott added, "The ring has enhanced economic development opportunities and made eastern North Carolina more attractive to prospective businesses."



The self-healing fiber ring portion of the project will greatly enhance the network redundancy available to existing and prospective businesses, particularly those requiring uninterrupted services for their data needs. The project will bring increased telephony and data network protection to areas such as Bath, Belhaven, Engelhard and Swan Quarter.

Locations of additional nodes will include Edenton, Elizabeth City, Hertford, Kill Devil Hills, Mamie, Manns Harbor, Mantoe, Sligo, Southern Shores, Washington, Williamston and Windsor.

The e-NC funding is providing high-speed Internet access to nearly 30,000 new lines east of I-95 through the deployment of DSL to 20 of Sprint's central offices and 45 digital line carriers not previously equipped with this technology. The sites targeted by the project were selected by Sprint and APEC to ensure optimal coverage in critical locations.

The Eastern North Carolina Broadband Initiative will provide northeastern North Carolina with a lot more potential for broadband and represents the

potential local benefits created by a partnership of this kind.

"This is what we consider a good example of a working and quite successful public-private partnership," said Parrott. "This is the way creative solutions to connectivity issues can happen."

Added Parrott, "North Carolina's spirit of innovation has come through again."

"This project helps remove some barriers and bridge some gaps in the state's broadband, tele-health and e-learning resources, and it helps ensure that eastern North Carolina will take a strong leading and supporting role in the state's evolution as an educational and technological showcase for the rest of the nation. With the invaluable counsel, ideas and financial support of our partners, we are taking an already robust network to a higher level through a variety of important enhancements."

In addition to the \$2.925 million dollar grant contributed to the Eastern North Carolina Broadband Initiative, the e-NC Authority also has awarded Sprint \$800,000 as part of a connectivity incentives grant. The grant funded a project to upgrade DSL high-speed Internet service to 52 exchanges in 32 North Carolina counties spanning the state.

By investing in connectivity in the eastern half of North Carolina, e-NC has enriched citizens' lives and contributed to business growth in the region.

Creating Success chronicles the achievements of the e-NC Authority's grantees and programs.



CREATING SUCCESS

Sprint & e-NC Deploy DSL in 32 Counties

Project brings access to rural areas, with focus on eastern NC

Targeted Counties

Eastern NC

Beaufort
Bertie
Bladen
Camden
Columbus
Currituck
Dare
Duplin
Edgecombe
Halifax
Hertford
Hyde
Jones
Lenoir
Martin
Northampton
Onslow
Pamlico
Pasquotank
Perquimans
Pitt
Tyrell
Washington
Wilson

Central NC

Caswell
Chatham
Montgomery
Moore
Stokes
Warren

Western NC

Alleghany
Ashe

In 2002, the e-NC Authority launched its Connectivity Incentive Grants program, intended to encourage groups to provide affordable, high-speed Internet access and to develop new and expanded services for users in rural areas of the state.

As part of this program, a special effort was made to install digital subscriber line (DSL) service for counties in eastern North Carolina. After a competitive grant/bid process, the e-NC Authority partnered with Sprint, a major telecommunications provider in the state, in August 2002.

Sprint was awarded \$600,000 to bring service to previously unserved areas. Monies went toward the deployment of DSL, high-speed Internet service to 35 exchanges in 24 counties. In March 2003, the Authority awarded Sprint \$200,000 more to provide DSL to an additional 17 wire centers in 16 counties.

With this project, a total of 32 counties received upgraded service, including 24 in the east, six in central

North Carolina, and two in the western part of the state.

Those counties were Alleghany, Ashe, Beaufort, Bertie, Bladen, Camden, Caswell, Chatham, Columbus, Currituck, Dare, Duplin, Edgecombe, Halifax, Hertford, Hyde, Jones, Lenoir, Martin, Montgomery, Moore, Northampton, Onslow, Pamlico, Pasquotank, Perquimans, Pitt, Stokes, Tyrell, Warren, Washington, and Wilson.

In May 2005, Sprint passed a major milestone when the company connected its **10,000th customer** in the state to DSL service as a result of its project with e-NC. By June 2005 all exchanges east of I-95 had DSL service installed.

Without incentives from e-NC, it is unlikely Sprint would have had a business case to take on the project because all of the targeted 32 counties are rural and sparsely populated.

According to Sprint's State Executive of the Carolinas Steve Parrott, however, "in rural areas, if you have the

*"In rural areas,
if you have the right
training and integra-
tion advice, and if
you put in
service, people will
take
you up on it."*

- Steve Parrott, Sprint's state
executive of the Carolinas

right training and integration advice, and if you put in the service, people will take you up on it."

With e-NC's help, citizens across the state of North Carolina received faster, more affordable Internet service sooner than they would have otherwise.

Creating Success chronicles the achievements of the e-NC Authority's grantees and programs.



CREATING SUCCESS

Quick Facts

Haywood County
57,097 people
11.5% in poverty
4.6% unemployed
Tier 4 County

Jackson County
36,245 people
15.1% in poverty
4.0% unemployed
Tier 3 County

Madison County
20,196 people
15.4% in poverty
4.9% unemployed
Tier 3 County

McDowell County
43,576 people
11.6% in poverty
6.7% unemployed
Tier 2 County

Mitchell County
16,052 people
13.8% in poverty
5.2% unemployed
Tier 2 County

Polk County
19,170 people
10.1% in poverty
4.1% unemployed
Tier 3 County

Rutherford County
63,397 people
13.9% in poverty
9.3% unemployed
Tier 2 County

Yancey County
18,131 people
15.8% in poverty
7.5% unemployed
Tier 1 County

**Partnership
Region:**
AdvantageWest
www.awnc.org

*Economic facts from the
NC Department of
Commerce
as of Q2 2006*

AdvantageWest Increases Connectivity

Promoting Economic Development in Western North Carolina Counties

In 2002, the e-NC Authority awarded a \$1.45 million grant to AdvantageWest, the regional economic development partnership for western North Carolina, to fund connectivity projects in the region.

partnership provided the negotiating skills necessary to bring the key parties together in this project.

In an extensive study, the engineering firm Callisma sur-

ville and to construct a 36-count fiber network from the Haywood County Sheriff Office to the county's High Tech Center. AdvantageWest teamed with Wynncom, a local telecommunications company, to complete the project. According to Wynncom's Jimmy Wynn:

"The fiber network will do much more than offer Wi-Fi in Waynesville. For example, the network's first customers - the Haywood County and Town of Waynesville government offices - will be able to connect to remote offices for voice, data and Internet services at much higher speeds and at considerably lower cost. They will be able to share sensitive information over the network, which they currently are unable to do."



Wynncom installs infrastructure in Haywood County as part of a fiber network.

AdvantageWest set out to identify areas of need in the region and determine the best use of the funding. First, they contracted with John Howell of Telecommunications Consulting Associates (TCA) to oversee and coordinate the project.

TCA works with cities and counties across the country on cable TV, Internet, telecom and utility right-of-way matters. TCA has successfully negotiated over 30 franchises in the last 18 months for member cities and counties. This

veyed 23 counties in western North Carolina, located available fiber, identified fiber and data gap areas, and singled out willing partners. After three months of research, AdvantageWest and TCA developed four connectivity projects impacting eight counties in the western part of the state including: Haywood, Jackson, Madison, McDowell, Mitchell, Polk, Rutherford and Yancey.

For one of the projects, in Haywood County, \$154,000 was allocated to build a Wi-Fi network in downtown Waynes-

Web sites

AdvantageWest: www.awnc.org

BWFN: www.balsamwest.net

CCV: www.ccvn.com

DukeNet:

www.dc.duke-energy.com

e-NC: www.e-nc.org

ERC: www.ercbroadband.org

French Broad EMC:

www.frenchbroademc.com

Mediacom:

www.mediacomcc.com

Metrostat: www.metrostat.net

PANGAEA: www.pangaea.us

TCA: www.munihelp.com

Verizon: www.verizon.com

WynnCom: www.wynncom.com



Wynncom's fiber trailer is part of the effort to build a wireless network in Haywood County.

"If Waynesville and Haywood County are to compete economically, we must have the quick transfer of data that will be made available with this fiber optic network. We are extremely grateful for the funding provided to implement this project."

*- Lee Galloway
Waynesville Town
Manager*

"The infrastructure we are putting in place will definitely allow easier, less expensive access to networked data and broadband services in Waynesville," continued Wynn. "The presence of multi-fiber networks will assist economic development in the area and we are excited to be a part of this effort."

Waynesville Town Manager Lee Galloway believes efforts like this are crucial to economic development. "Communities that do not have high-speed Internet available will be left behind in today's climate," he said.

"We are no longer talking about textile mills and furniture plants when discussing economic development, we are talking about enterprises which depend on the rapid transfer of data. Those enterprises will go where the broadband is. If Waynesville and Haywood County are to compete economically, we must have the quick transfer of data that will be made available with this fiber optic network. We are extremely grateful for the funding provided to implement this project."

Haywood County Manager C. Jack Horton echoed those sentiments: "Information technology is an absolute must if we are to compete in the world economy today. With this network, the area will be in a position to market itself as a quality location in which to live and conduct business. Collaboration with AdvantageWest, e-NC and Wynncom is a win-win for all," said Horton.

"This project will make our local government more productive and more accessible to the public, allowing everyone ac-

cess to connectivity and resulting economic opportunities."

For the second project, \$50,000 of the grant was allocated to connect existing networks into the regional collocation facility at Western Carolina University. This project is being administered through the Education and Research Consortium of the Western Carolinas (ERC), and in addition to e-NC and Advantage West, project partners include Balsam West Fiber Network (BWFN), DukeNet, MediaCom, Metrostat Technologies, and Verizon.

"The increased coverage will allow individuals, schools, and businesses to receive the benefits of faster connectivity options," said Hunter Goosmann, ERC director of network operations. "Additionally, the community will be able to recruit new businesses and support the technology needs of local industry."

For the third connectivity project, approximately \$417,000 of the grant is funding an effort benefiting McDowell, Polk and Rutherford counties. Partners include PANGAEA and ERC. Infrastructure will be built from Forest City to Columbus and from Columbus to Lake Lure; to complete a fiber loop from Lake Lure back to Forest City; to connect to PANGAEA's network in Polk County and finally connecting to ERC's PoP in Asheville.

"The collaboration will result in a lower middle-mile cost and expanded last-mile coverage for the region," said Kerry Giles, marketing director for the Rutherford County Economic Development Commission. "We are excited about the increased demand for high-speed Internet and are working to make sure this demand is

being met through local providers."

For the fourth project, AdvantageWest allocated \$588,000 of the grant money to address key connectivity issues in Madison, Mitchell and Yancey counties. To build infrastructure, AdvantageWest created a hybrid partnership among French Broad Electric Membership Corporation, a nonprofit; Country Cable Vision, a for-profit cable company; and the Education and Research Consortium of the Western Carolinas, Inc., a 501(c)(3) organization.

Among the benefits of this unique partnership is that as part of the contract with AdvantageWest, the fiber transport must be made available for lease to all Internet service providers. The project is on schedule for completion by the end of 2005. This important middle-mile step will make it more feasible for Internet service providers to purchase transport at a lower cost and therefore extend last-mile access and services into the remote areas of Madison, Yancey and Mitchell counties.

Through these connectivity projects, e-NC and AdvantageWest are promoting technology-led economic development in western North Carolina, thereby empowering businesses to better compete in today's economy and improving the future prospects of local citizens.

Creating Success chronicles the achievements of the e-NC Authority's grantees and programs.



CREATING SUCCESS

"E-NC's Charlie Pittman understood exactly the problem I was facing. He didn't have any quick fixes but he said he would do all that he could to address my concerns and hopefully bring some solutions to this problem... I appreciate e-NC so much. I cannot thank them enough for taking an interest in my situation."

*— Donna Evans
Stokes County resident*

The e-NC Authority

Service Inquiries Contact Information

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E-mail: info@e-nc.org
Web: www.e-nc.org

4021 Carya Drive
Raleigh, NC 27610

e-NC Service Inquiries Program

Connecting citizens to providers to Internet solutions

Donna Evans is a 38 year-old mother of three. She lives in the Sandy Ridge exchange in Stokes County, but her complaints are not unique to that area. Residents across the state, particularly in rural areas, share frustrations over their lack of access to affordable Internet services.

Most of the communities surrounding Evans' home have access to local dial-up Internet service through providers such as Earthlink and Net Zero, and many have access to high-speed service through Sprint. Until recently, Evans could use her modem to dial a local number and access the Internet. Now, there are small pockets in the area where toll free local dial-up service is unavailable and Evans' home happens to be in one of those pockets. In order to connect to the Internet, people in those areas must add an extended calling feature to their local telephone service or dial a long distance number every time they log on.

"I have a cousin who lives within a fourth of a mile and he is in the same boat as me," said Evans. "But I know several other people that live three or four miles from me who have great Internet service through Sprint DSL. My family is in a small area that is not able to get this service. It is not any more rural than all the areas around me, but it feels like we have to take a backseat to everyone else. And because we are rural and not everyone uses Internet in

this area, it is difficult to convince the service providers to give us a local number."

Evans was so disappointed when she lost her local dial-up number, she began surfing the Internet in search of a place to vent her frustrations. She came across the Web site for the e-NC Authority, called their toll free number, and was connected to Charlie Pittman, who handles service inquiries for the organization.

"Charlie was not aware that our Internet provider was going to drop us," said Evans. "He was glad I contacted him. He said he would work to get another provider to our area. I was encouraged by our conversation and felt that Charlie understood exactly the problem I was facing. He didn't have any quick fixes but he said he would do all that he could to address my concerns and hopefully bring some solutions to this problem."

Evans hopes high-speed Internet service will ultimately become available to her home address. In the meantime, she has enrolled in an expanded area service plan through her phone company, allowing her to access a local ISP when connecting to the Internet.

Having someone listen to her concerns and commit to helping her discover new options meant a lot to Evans. "I appreciate e-NC so much," she said. "They are the only ones that seem to understand my frustrations. I cannot thank

them enough for taking an interest in my situation."

In 2000, the NC General Assembly charged the e-NC Authority with ensuring all citizens, businesses and communities are aware of, know how to use, and have access to Internet services at affordable prices. Since that time, e-NC's concentrated efforts have had a measurable impact on North Carolina, which has expanded infrastructure, applications and training. By working with both public and private service providers, e-NC has helped ensure that more than 80 percent of citizens and businesses have access to high-speed Internet.

A unique collaboration between public and private sectors, e-NC brings together nonprofits; national, state and local governments; telecommunications companies; small Internet service providers; software and equipment companies; foundations; universities and think-tanks in an effort to improve North Carolina's connectivity.

An important step in providing access is understanding local needs. E-NC continually maps the state's high-speed Internet access and, thereby, the gaps in that access, in unparalleled detail. The organization also communicates with citizens to see where service gaps have developed, passes information on local need to service providers, and advocates for increased coverage.

In 2001, e-NC verified that North Carolinians had 100

"The young people here learned about the Internet in school and are hungry for it. The Post Office and NC Ferry terminal here also want broadband... I cannot say enough about how much I appreciate the work of e-NC to bring broadband to Cedar Island."

*- Steve Johnson
Carteret County resident*

percent access to dial-up Internet services via a local call - meaning no long distance charge is associated with connecting to the Internet. Since that time, e-NC has maintained a database on its Web site where citizens can enter their home phone numbers and identify local Internet service providers in their calling areas. Using this database, e-NC realized this year that some areas are losing their local ISPs, causing small pockets of the state to lack local dial-up service.

E-NC believes this trend is due partly to providers switching to broadband access, and also to recent changes in telecommunications regulations by the Federal Communications Commission. Telecommunications companies are no longer required to share broadband lines with local ISPs, forcing some out of business and creating pockets in the state where local dial-up service is no longer available.

The e-NC Authority has received service inquiry calls since its inception. Sometimes callers want providers to upgrade their service from dial-up access to high-speed. Sometimes, like in Evans' case, ISPs have cut service or gone out of business, leaving shortages in areas that previously had Internet access.

E-NC's Charlie Pittman listens to callers' stories and concerns, then explains their options. Once he has collected information from the caller, he contacts local service providers, who typically dispatch an engineer to explore service options in the area. If they decide they cannot provide or expand ser-

vice, Pittman communicates the reason to the citizens who call in. He discusses with callers the pros and cons of satellite service and lets them know if their area offers wireless service - he tries to give them choices.

"People are frustrated," said Pittman. "They read that 82 percent of the state has access and want to know why they don't. Many times, they have already tried to call their local ISP. But they get service reps who are ill equipped to handle requests. They usually read from a script and don't do a good job of explaining when areas will have service, because they don't know. They aren't familiar with the areas and they don't understand local needs, particularly as communities build up."

The e-NC Authority receives calls from the general public and legislators alike, sometimes as many as 10-15 per week. "The more e-NC is in the news, the more calls come in," said Pittman. "Anytime a story comes out on what e-NC does, or what percent of the state is connected, the number of calls goes up. Even when news is quiet, the calls are constant."

Usually, if e-NC receives enough calls from one area, a strong enough business case can be established to convince service providers to speed up plans to provide service. Such was the case for Steve Johnson and his wife, who run a bed and breakfast on Cedar Island, along North Carolina's east coast. The island is isolated by a saltwater marsh, and while residents have access to dial-up services, they would like high-speed capabilities on the island.

"The population of the island is about 350 and most of the workers are fishermen or work

for the NC Ferry System," said Johnson. "The young people here learned about the Internet in school and are hungry for it. These are smart kids, many go on to college even though their folks do not make much money. Families are very close here so the kids get a lot of attention when it comes to education. They want the World Wide Web - they want the same access as their classmates in the city. My B&B takes online reservations, which is a slow process with dial-up. The Post Office and NC Ferry terminal here also want broadband."

Johnson contacted his local senator, who asked e-NC to look into the request. Pittman called the cable company serving that area and was told they were looking to upgrade but did not know when because of infrastructure engineering challenges in the area.

To add voices to the effort, Johnson began circulating a petition for expanded service, which more than 100 of Cedar Island's 350 residents signed in a matter of days. Johnson sent the petition to e-NC, who presented it to Sprint. Representatives of the telecommunications provider said the petition demonstrated enough of a business case to provide broadband service to the area. A short time later, Johnson signed up as a Sprint DSL customer.

"I cannot say enough about how much I appreciate the work of e-NC to help bring broadband to Cedar Island," said Johnson. "E-NC is a true advocate for rural areas and, as in this case, it's a job they do quite well."

Creating Success chronicles the achievements of the e-NC Authority's grantees and programs.



CREATING SUCCESS

Quick Facts

Though blessed with an excellent climate, North Carolina does experience its share of severe weather.

NC Storms & Natural Disasters

Average number of times each year hurricanes come close enough to influence NC weather: 2

Average number of years between hurricane strikes resulting in significant inland damage: 10

Most costly hurricane: Fran, 1996, \$1.275 billion

Most recent large-scale flooding due to drought then hurricane: 1999 (Hurricanes Dennis and Floyd)

Number of tropical cyclones, the precursor to tropical storms, typhoons and hurricanes, recorded since 1886: 951

Percent that passed within 300 miles of NC: 17.5

Average number of tornadoes per year: 2 to 3

Tornado occurrences, deaths and injuries are increasing

Average yearly loss due to severe summer thunderstorms: \$5 million

Gathered from the State
Climate Office
www.nc-climate.ncsu.edu

Infrastructure & Natural Disasters

e-NC Helps Communities Across North Carolina Cope

When you ask a North Carolinian what the weather is like in the state, you are likely to hear words like "sunny," "beautiful," "humid" or "mild." In recent years, however, North Carolina has made international news for severe weather and natural disasters.

When these events happen, entire communities and regions can be cut off for short periods of time. For owners of vacation property at North Carolina's renowned mountains and coast, not being on site at the time may heighten worry over a precious holding.

Technology and telecommunications infrastructure help a community cope before, during and after a natural disaster. GIS technology is at the core of tracking and coping. The e-NC Authority, for instance, keeps a GIS database of telecommunications infrastructure throughout the state, as well as a database of Inter-

Aftermath of a flood
Photo courtesy of Macon County government.



net Service Providers, both of which are available to citizens on the e-NC Web site.

When the e-NC Authority gave more than \$20 million for Internet infrastructure, e-government and local technology efforts across the state, the authority expected the grants to result in increased connectivity, enhanced quality of life and improved economic prospects. Another benefit of

technology access became evident during natural disasters: the ability to use the Internet to help communities cope and stay informed.

In Macon County, for example, e-NC funds helped establish a county Web site with GIS, aerial and topographical maps of the area. When floods hit

the county, citizens turned to local government for help.

"A lot of people were asking if their property was in the flood plane," said Josh Pope, GIS Analyst with Macon County Government. "We could show them a picture of their house and say if they were safe or needed to seek shelter over the weekend."

The mapping helped with other evacuation efforts. "When the EMS director would ask for a map, we could give it to him. He evacuated several mobile home parks as a result," adds Pope.

Placing FEMA and other emergency information on the county Web site cut down on call volume, allowing officials to focus on recovery efforts. Posted photos of the hard-hit areas also helped.

Web Sites:

e-NC Authority
www.e-nc.org

Macon County Government
www.maconnc.org

NC TeleCenter
www.nctelecenter.com

RiverLink
www.riverlink.org



Rescue of an artist
Downtown Asheville, N.C.



Car in house
Photo courtesy of Macon County Government.

"It cut down on the rubber neckers,"

said Pope. Residents could go online to view the devastation, rather than traveling to affected areas.

Pope added: "There were houses in the slide area that weren't just moved. They were gone. The foundations were gone. Everything was gone down to the bedrock. Because of the GIS information, we were able to tell where houses had been."

"Because of GIS information, we were able to tell where houses had been."

*- Josh Pope,
GIS Analyst for
Macon County
Government*

The county also cross-referenced tax information with utility billing systems to find home owners that likely lived out of state. "In 20 minutes, we did what would have taken hours before."

Being able to communicate, pay utilities, and check on property from a remote location is important. The e-NC Authority has helped 55 local governments create transactional Web sites and improve their service to citizens.

"Non-resident property owners and deployed military are able to conduct business with government off-site," said e-NC's Deborah Watts. "We helped a large number of coastal counties and areas — Brunswick, Carteret, Havelock, Southern Shores in Northern Dare, Town of Manteo, Pamlico, Perquimans, Washington, and more — serve citizens better online."

In the mountains of North Carolina, RiverLink keeps a community archive of photos. The pictures document not just the path of flooding in the region, but the community's response. Many pictures feature people in muddy jeans mucking out a neighbor's home or business.

"People used the Web site to communicate," said RiverLink Executive Director Karen Cragnolin. "They posted pictures and showed needs. It brought our community together."

The RiverLink Web site received funding from e-NC for GIS mapping and an online information display of the French Broad River. In addition to providing a community forum, the GIS maps were a disaster recovery resource. RiverLink could show where the banks had overflowed and how high the water had risen, and then compare this data with past years.

"The French Broad is an ecological resource and source

Train tracks and waste bins in Asheville
Photo courtesy of RiverLink.



of pride," adds Cragnolin. "It runs by our homes and through our towns. People wanted to see what happened to it during the flooding. They were worried about debris and pollution in it, and how it was going to recover after the effort."

The economic impact of severe weather also is fierce. In the beginning, residents and businesses cope with insurance, FEMA and rebuilding. But in some cases, perception of poor weather may hamper future business growth.

"Right after Hurricanes Dennis and Floyd, it was tough to recruit businesses to the area. They worried about their inventory," said Stan Crowe, founder of the NC TeleCenter in Martin County. "North Carolina is a safe place to operate. But people had just seen flooding on TV, and had a hard time understanding this was the worst in 100 years."

Now the modern infrastructure and technology access in the area serve as a selling point for Martin County. "It definitely helps," adds Crowe. "You can show how the area's recovered and improved."

By giving grants for technology infrastructure, GIS mapping and transactional government Web sites, the e-NC Authority is helping to connect communities to each other and to necessary emergency resources. The e-NC Authority is helping areas not only to recover, but also to modernize and thrive through technology.

Creating Success chronicles the achievements of the e-NC Authority's grantees and programs.

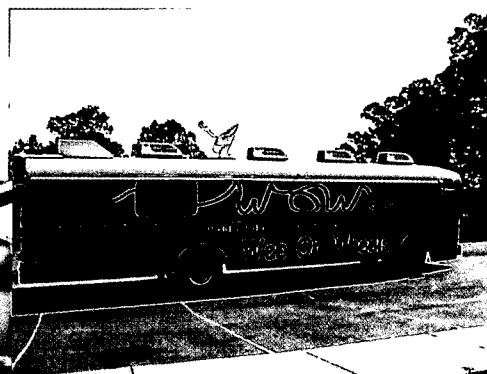
The e-NC Authority



Bringing Broadband to Rural NC



Learning to Connect, Teaching to Thrive



Pioneering Digital Roads

2005 Annual Report

www.e-nc.org

e-NC
Connecting
North Carolina
to a Better Future

The e-NC Authority

Connecting North Carolina to a Better Future

A Message from the Chair

Table of Contents

2005 Highlights	2
2006 Goals	6
e-NC Staff & Commission Members	8
Financial Information	9
e-NC Contact Information on Back Cover	

Special points of interest:

- o The work of the e-NC Authority has positively impacted North Carolina since its inception.
- o The e-NC Authority believes its work must extend beyond 2006 to continue to assist NC citizens and communities in moving forward with technology-based economic development.
- o The e-NC Authority would like to thank all of its supporters.

Connecting North Carolinians to the Internet and a better future has been the goal of the e-NC Authority for the past five years. This goal drives the work that has earned e-NC support from public and private sectors, and a reputation as a model for technology-based economic development.

In *Measuring Broadband's Economic Impact*, the December 2005 issue of *Broadband Properties* stated, "The mean growth in rent, employment, number of establishments, and share of establishments in IT-intensive sectors were all higher in the communities with broadband."

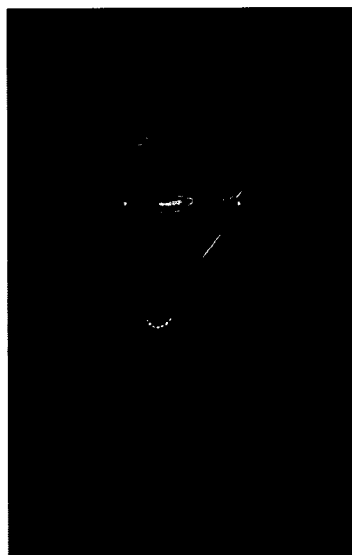
The article goes on to say, "The present study has several clear implications for policy-makers. The most obvious and important implication is that **broadband does matter to the economy.**"

Underlying every initiative pursued by e-NC is this concept that technology access and know-how will drive economic development. Work completed and sponsored by e-NC has benefited people, governments and businesses across the state since 2001.

The authority's 100 County Report and GIS maps have been utilized by citizens and industries, as well as by the NC Utilities Commission and the NC General Assembly. Connectivity projects have helped Bed & Breakfasts in the Outer Banks utilize online booking, and enabled groups in the western part of the state to develop a Web Market showcasing local goods.

The e-NC Business & Technology Telecenters have directly created new jobs, and have made rural citizens more employable. They have assisted small businesses with start-up and self-sustaining activities, in addition to providing communities with free computer courses and professional development seminars. For example, the Tri-County Community College TeleCenter offers certificate programs as well as shorter courses on everyday computer-based activities, such as online banking. Local bank employees were invited to attend the first sessions, and now the banks recommend the course to their customers.

In addition to its own endeavors, e-NC supports the work of public and private



Oppie N. Jordan,
e-NC Authority Chair

entities, and often links resources with ongoing state projects in order to ensure broadband connectivity is an embedded component. Beyond performing its own research, e-NC seeks independent, third party evaluations of its work in order to identify and seize every opportunity to drive technology-based economic development on behalf of the citizens of this great state.

But our work is not complete. By its very nature, technology continually evolves, and so must we. We must continue our work with telecommunications providers to ensure broadband services for everyone in this state. We must continue to research and implement new technologies and ensure North Carolina is on the forefront of economic development.

In 2005, the e-NC Authority continued to pursue initiatives which assist communities in improving the economic promise of the state of North Carolina, and which provide the nation with a model for broadband deployment. Efforts backing e-NC's community-driven initiatives span across four primary areas: research and policy, supply-building initiatives, demand-creating programs, and technology-based economic development through the e-NC telecenters.

"Broadband access does enhance economic growth and performance, and... the assumed (and oft-touted) economic impacts of broadband are real and measurable."

**Measuring Broadband's Economic Impact
Broadband Properties
December 2005**

By William H. Lehr & Carlos A. Osorio

Sharon E. Gillett
Massachusetts Institute of Technology

Marvin A. Sirbu
Carnegie Mellon University



www.broadbandproperties.com

Research & Policy

The e-NC Authority strives to ensure North Carolina keeps pace with changes in technology so the state will be economically competitive and able to protect and increase local jobs. As part of that effort, e-NC conducts research on topics such as technology-based economic development initiatives, and citizens' use of the Internet, in addition to tracking telecommunications infrastructure and emerging technologies.

In 2005, e-NC sponsored several major studies and evaluations:

- ***High-Speed Internet Connectivity in NC's Distressed Urban Areas***
By Dr. Robin Howarth and Dr. William Rohe, Center for Urban & Regional Studies, The University of North Carolina at Chapel Hill
(Released May 2005)
- ***North Carolinians Online: Trends from the Citizens Surveys 1999-2004***
By Dr. Ed Feser, The University of Illinois, Urbana-Champaign
(Released May 2005)
- ***e-NC Business & Technology Telecenter Evaluation 2005***
By Dr. Catherine Renault, Research Triangle Institute International
(Released December 2005)
- ***North Carolina Local E-Government Utilization Project, External Evaluation Report***
By Dr. Harvey A. Goldstein, UNC-CH
(Released December 2005)
- ***Creating Wealth, Regional Development through Cross-Border Collaboration***
By Nick Maynard, Aaron McKethan, and Rawley Vaughan, Carolina Center for Competitive Economies, Kenan Institute for Private Enterprise, Kenan Flagler Business School, UNC-CH
(Released March 2006)
- ***The Time for Technology-Based Economic Development is Now: e-NC Business & Technology Telecenter Tool Kit***
By The e-NC Authority
(To Be Released May 2006)

For more information and to download complete copies of e-NC's studies and evaluations, please visit www.e-nc.org

Research & Policy Contd.

In addition to these studies, e-NC continues its regular tracking of telecommunications infrastructure through its annual 100 County Report, **High-Speed Internet Access in North Carolina**, and through its GIS mapping.

A considerable percentage of e-NC's work is gathering research by speaking directly with the public regarding their connectivity concerns. Since its inception, e-NC has received service inquiry calls on a weekly basis. Sometimes callers want providers to upgrade their service from

dial-up access to high-speed. Sometimes, ISPs have cut service or gone out of business, leaving a shortage of service options. E-NC representatives listen to callers' stories and concerns, then explain their options.

Usually, if e-NC receives a large volume of calls from one area, a strong enough business case can be established to convince service providers to speed up plans to provide access there – such as on Cedar Island where Sprint decided to extend service in 2005 as a result of a petition put together by a citizen who

called e-NC with a service inquiry regarding high-speed capabilities in his area.

The authority also sponsors annual conferences on connectivity. For the past three years, e-NC has held the Southeast Wireless Symposium, which draws some of the nation's foremost Internet technology leaders, as well as political officials, Internet service providers, educators and local economic development officials. In 2005, the conference focused on the latest in the deployment and legal issues surrounding municipal networks.



Information Infrastructure Supply-Building Initiatives

The e-NC Authority helps North Carolinians by funding projects that speed the delivery of services. The authority supported multiple collaborative, public-private, supply-building projects throughout the state in 2005.

In western North Carolina, e-NC and AdvantageWest worked with public and private partners on fiber infrastructure expansion. In late 2002, the economic development group was granted \$1.45 million by e-NC to implement a middle-mile solution enabling providers to offer service to homes and businesses in the targeted counties.

With support from e-NC, AdvantageWest completed a study of the existing infrastructure and built alliances. After locating existing available fiber, AdvantageWest identified fiber and data gap areas. Then the group set about the long process of singling out willing partners, negotiating contracts and creating a complete loop. In 2005, the primary focus of the project was on building

out that infrastructure. The project is on schedule for completion in 2006.

Another one of e-NC's bigger supply-building projects has been a fiber ring in northwestern North Carolina. Research by e-NC highlighted the need for the ring, which was constructed to ensure continuous telecommunications services for surrounding areas. Construction was put on hold for many months when a citizen filed a claim seeking compensation for infrastructure installation planned across his property, reflecting one of many difficulties projects like these face. The issue was resolved in 2005 and now seven counties will have a secure, reliable means of conducting business via a redundant information fiber ring, set for completion in 2006.

In addition to funding the fiber-electronics portion of the fiber ring project, e-NC networked with several organizations to ensure its overall success: New River Community Partners and Blue Ridge Business Devel-

opment Center worked to gain local support. Blue Ridge Electric Membership Corporation installed the fiber. DukeNet, a private company, handles the administration of the ring, along with sales and marketing. Moreover, by requiring that resellers be offered a 25 percent discount off market price in exchange for project funding, e-NC ensured the early success of small, private Internet service providers.

In the east, e-NC has been working with Sprint and APEC (the Albemarle Pamlico Economic Development Corporation) on an e-Learning Pilot Project to bring connectivity to schools. This partnership also includes the University of North Carolina System, University Health Systems of Eastern Carolina, and MCNC (via NCREN), and is one piece of the broader Eastern North Carolina Broadband Initiative launched in 2002.

As part of this effort e-NC has been working with local



To serve rural citizens, wireless antennas have been installed on fence posts in cow pastures.

school systems in northeastern North Carolina to evaluate the current level of connectivity at the schools, and to select participants for the pilot project. Participating schools will receive connectivity funding, through a \$2 million grant from the Golden LEAF Foundation and matching funds from e-NC and the University Health Systems of Eastern Carolina. The program will run for five years and will provide multi-megabit connectivity to participating schools, allowing enough bandwidth to accommodate needs for instructional curriculum and administrative functions.

Information Infrastructure Demand-Building Programs

The e-NC Authority recognizes that the best way to raise awareness is to work with stakeholders in the local community. By providing leadership, coordination and support for grassroots efforts, e-NC is building demand and laying the foundation for technology-based economic development.

The e-communities program is a grassroots effort to engage local citizens in bringing high-speed Internet access and training to their local areas. Counties were taught how to assess their local areas in terms of technology infrastructure, with all 85 rural counties putting together e-communities plans and becoming officially designated "e-communities." The e-NC Authority has awarded more than \$2.5 million to the e-communities program since its 2001 inception.

In 2005, e-NC began the next phase of the program, adding urban counties and acting as a champion, advocate, technological resource, grant-writing assistant, and policy-proposing organization on behalf of e-communities across the state. In 2005 the program focused on providing training free of charge to the e-champions, or local technology leaders, in each e-community.

Four training sessions were held in 2005, cover-

ing connectivity, grant writing, e-government and wireless infrastructure. In addition, e-Communities Action Grants totaling \$22,693, were awarded to support ongoing e-communities efforts such as providing public Internet access, building county Web sites, and developing digital literacy training programs. The authority is also working to complete an e-communities toolkit to teach communities how to develop grassroots technology initiatives.

Another primary demand-building effort has been e-NC's Local E-government Utilization Program (LEG-UP). Launched in early 2003, via a grant from the U.S. Department of Commerce, the effort was designed to improve the delivery of public services. The 55 LEG-UP counties and municipalities received training, equipment and funds to help them bring transactional e-government services to local citizens and businesses.

Services made available through LEG-UP include online utility billing and bill-pay, access to various permits and applications, and admittance to title and deed records, as well as other customized applications. Another service enabled citizens to see pictures of animals up for adoption and to keep track of newly res-

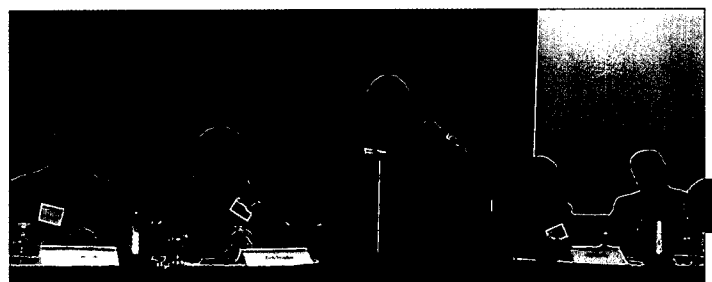


Rutherford County is wired for business. For more information, please visit www.rutherfordcountync.gov

cued animals. One participating area launched a GIS-based application, which assisted FEMA and county officials in the recovery effort when Hurricane Ivan caused deadly flooding in the area.

Having accomplished all of the goals set out for the program, including an external evaluation, e-NC completed the successful program in December 2005.

The e-NC Authority's Deborah Watts and other panel members present information on LEG-UP to e-champions from across the state.



Technology-Based Economic Development

Since 2002, the e-NC Authority's Business & Technology Telecenters (BTTs) have encouraged technology-based economic development in the most economically distressed areas of the state. There are currently seven e-NC BTTs operating in North Carolina, with three of these launched in 2002 and four additional centers opened in 2005. In 2005 alone, the original telecenters created more than 400 jobs and provided business, technology and/or technical services to nearly 800 different clients across the state. The centers held approximately 700 classes for rural citizens and business owners, and more than 4,100 North Carolinians utilized the centers' public Internet access sites.

Four new e-NC Business & Technology Telecenters launched in 2005:

- New Ventures Business Development, Inc. serves Anson and Union counties and focuses on outreach and education. The center is educating entrepreneurs on starting and growing a business; women and minorities on becoming HUB certified; and local leaders on the benefits of developing entrepreneurs. (www.nvbdi.org)
- The Roanoke Center in Northampton County launched its e-NC telecenter in April. The center offers a wide range of services to small business owners and to those starting their own businesses, with a special focus on the construction industry. Specialties include business planning, growth strategy, management strategy and loan packaging. (www.roanokecenter.org)
- The Rockingham County Business and Technology Center opened in July. The center is working to create economic growth in Rockingham County by supporting business activity through technology applications and managerial support. Among other things, the center offers technology and business training, as well as counseling for entrepreneurs and small business owners. (www.rcbtc.org)
- Rutherford County's Foothills Connect Business & Technology Center held its grand opening in November, with the objective of generating local economic growth through entrepreneurs, small businesses and the relocation of technology-based business to the region. The telecenter offers public Internet access; hourly office space for home businesses; a technology resource library; training and assistance for starting or growing a business; basic computer help; and increased visibility through space on the county Web site. (www.foothillsconnect.com)

"Broadband enhances economic activity, helping to promote job creation both in terms of the total number of jobs and the number of establishments in communities with broadband."

**-- Measuring
Broadband's Economic
Impact, Broadband
Properties**



Rockingham County telecenter ribbon cutting and official opening

The e-NC authority awarded Columbus County a planning grant in 2005 for a telecenter to be located in Tabor City. The business and operations plan for the center has been developed and local leaders are working to identify the optimal site for the BTT. The identified mission of the center is to create jobs, to empower residents through access to technology, and to build an effective border strategy between North and South Carolina. Implementation plans will continue in 2006.

Microsoft Corp. awarded e-NC a \$50,000 Unlimited Potential grant in support of the telecenters in summer 2005.

In addition to supporting existing centers, e-NC created the e-NC Business & Technology Telecenter ToolKit to assist other areas and organizations in duplicating the program. The toolkit will be available in May 2006.

Connectivity

Since its inception, the work of the e-NC Authority has significantly and measurably impacted North Carolinians' access to, understanding of, and use of the technology that drives the economy of the 21st century. This work has not only kept the state's workers competitive in the new economy, it also has helped employees, entrepreneurs, new businesses and local economies thrive.

As much as e-NC has accomplished on community, state and regional levels, e-NC's work is not complete. Technology continues to evolve, and so will our economy, and so must e-NC. North Carolina must continue to invest in infrastructure in order for local communities to succeed.

The December 2005 issue of *Broadband Properties* featured a Carnegie Mellon/MIT study on the economic impact of broadband. Among other positive conclusions, the study's authors stated, **"we find a substantial positive impact for broadband availability on the growth in total employment."**

The study presented proof of economic success in communities offering broadband Internet services, and through this research affirmed the importance of the work of the e-NC Authority, as envisioned by the Rural Prosperity Task Force and the N.C. General Assembly in the creation of e-NC.

In 2006, e-NC will further work to bring economic

prosperity to the rural and distressed urban areas of the state by continuing to promote, manage and monitor efforts to provide areas with affordable high-speed Internet access through supply- and demand-building endeavors and connectivity projects.

In order to make important policy recommendations, e-NC must continue to thoroughly study the potential impact of new technology trends and developments on North Carolina's economy. Supporting the e-NC BTTs also remains a top priority for the e-NC Authority in 2006.

One specific connectivity project planned for 2006 is the BETA Project:

BETA Project: At the request of the NC General Assembly, and as part of Lt. Governor Beverly Perdue's Business Education Technology Alliance (BETA) project, the e-NC Authority is conducting a baseline study on regional education networks for submission to the legislature in the 2006 regular session. The authority is collaborating with broadband service providers, the NC Office of Information Technology Services, MCNC, representatives from local school administrative units, the University of North Carolina, private colleges, the State Board of Education, and the Community College System to gather essential data for the formulation of the study.

Cross-Borders Initiative

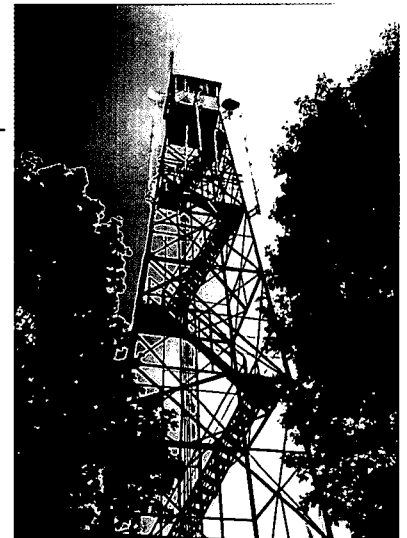
In 2005, the e-NC Authority began a Cross-Borders Initiative intended to ease the ability of neighboring regions to collaborate, and therefore to do business and share technology resources.

In 2006, e-NC will continue to work with South Carolina and Virginia, and will begin work with Tennessee on initiatives to help border areas grow their economies by planning together, and to make certain that high-speed

telecommunications services are accessible to local businesses so they can grow their client base.

The authority will also make available a study, funded by the Z. Smith Reynolds Foundation, conducted to highlight the regulations governing neighboring municipalities in hopes of easing the restrictions placed on border communities and businesses as they seek to thrive in the 21st century economy. Titled, *Creating*

Wealth, Regional Development Through Cross Border Collaboration, the study can be downloaded on e-NC's Web site. The study was conducted by Ph.D. candidates in public policy under the auspices of the Carolina Center for Competitive Economies, a unit of the Kenan Institute for Private Enterprise. The Institute is part of the Kenan Flagler Business School at the University of North Carolina at Chapel Hill.



Wireless equipment is installed on this forest service tower on Big Knob mountain.

"Broadband is clearly related to economic well-being and is thus a critical component of our national communications infrastructure."

-- Measuring Broadband's Economic Impact, *Broadband Properties*

e-NC Business & Technology Telecenters

Continuing to support the seven existing BTTs remains a primary component of the e-NC Authority's work in 2006.

Through project TEE-OFF (Technology-Enabled Entrepreneurship – Opportunities Fueling the Future), funded by The Golden LEAF Foundation; e-NC, the Blue Ridge Business Development Center (BRBDC), and NC REAL are working together to develop an integrated set of technology-rich educational and training tools and resources designed for delivery on site at e-

NC's BTTs and statewide via broadband Internet.

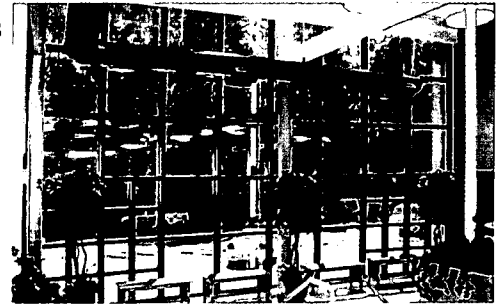
Project goals include updating entrepreneurial training products and methods, developing new modules focused on emerging technology-based opportunities, improving outreach and marketing efforts, and the establishment of a "technopreneur," at the BTTs to guide entrepreneurs to the successful launch of a new business.

Technopreneurs do not replicate the work of other service providers in the area, rather they work as a liaison ensur-

ing that clients know about, and are referred to all appropriate and available providers.

The Blue Ridge Business Development Center was selected as a pilot for the program and in 2005 became the first of the telecenters to have a technopreneur on site.

The program will be expanded to the BTTs in Martin, Rockingham and Rutherford counties in 2006.



Front lobby of the Blue Ridge Business Development Center, once a textile mill

In 2005, a team led by the NC Rural Economic Development Center was awarded a \$2 million grant from the W.K. Kellogg Foundation to create a comprehensive entrepreneurship development system to serve rural and minority entrepreneurs in low-wealth areas of the state. Key project roles for e-NC, one of 21 partner organizations, include working with the BTTs on expansion of the TEE-OFF program and the technopreneur model, and energizing communities to work with entrepreneurs.

Urban Distressed Program

In 2006, e-NC plans to conduct pilot projects in two urban distressed areas, replicating the e-NC e-communities model with the goal of raising public awareness and use of technology, and of assessing needs relative to public Internet access and digital literacy at the

community level.

The authority will continue to be a proponent of technology-based economic development in urban distressed areas of North Carolina via an Internet platform.

"We find a substantial positive impact for broadband availability on the growth of total employment."

**-- Measuring
Broadband's
Economic Impact,
Broadband
Properties**

Staff

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Executive Director

Donna Sullivan
Senior Associate,
Programs & Outreach

Angie Bailey
Senior Associate,
Programs & Operations

Deborah Watts
Senior Director,
Research & Development

Charlie Pittman
Senior Director,
Telecommunications

Joanna Wright
Senior Director,
Programs & Planning



Jane Smith Patterson,
e-NC Executive Director

Commission Members

Oppie N. Jordan, Chair
Rocky Mount

Craig Fowler
Hickory

Lee Mandell
Raleigh

George Bakolia
Raleigh

Billy Ray Hall
Raleigh

Bo McNeill
Lake Waccamaw

John Bardo
Cullowhee

Jon R. Hamm
Wake Forest

Rhonda Raney
Raleigh

Herb Crenshaw
Raleigh

Lewis C. Hoggard
Windsor

Rebecca Troutman
Raleigh

Jim Fain
Raleigh

Joseph Hurdt
Shelby

Curtis Wynn
Rich Square

The Rural Center's Billy Ray Hall, Congressman Brad Miller's District Director Pam Kohl, Microsoft's Tim Macklin, Sen. Walter Dalton, e-NC Chair Oppie Jordan, e-NC Executive Director Jane Smith Patterson, and Rep. Joe Tolson celebrate a gift from Microsoft Corporation.



2005 Financial Statements

e-NC Authority Statement of Financial Position (Unaudited) December 31, 2005

Assets:	
Cash and cash equivalents	\$ 4,287,546
Accounts receivable	125,817
Prepaid expenses and other assets	9,389
Total assets	<u>\$ 4,422,752</u>
Liabilities and net assets:	
Liabilities:	
Accounts payable	\$ 688
Accrued leave	38,448
Deferred revenue	2,719,189
Total liabilities	<u>2,758,325</u>
Net assets:	
Unrestricted	25,000
Temporarily restricted	1,639,427
Total net assets	<u>1,664,427</u>
Total liabilities and net assets:	<u>\$ 4,422,752</u>

The e-NC Authority thanks all of its supporters for helping bring technology-based economic development to the rural and distressed urban areas of the state, and for making the work of e-NC possible.

2005 Contributors

In 2005, e-NC received financial contributions from the NC General Assembly, Microsoft Corporation, Golden LEAF Foundation, Z. Smith Reynolds Foundation, and the U.S. Department of Commerce.

The NC General Assembly appropriated \$500,000 to the e-NC Authority for support of e-NC programs. In addition, e-NC received an appropriation of \$100,000 to complete a feasibility study on education networks for the Business Education

Technology Alliance.

The \$1,992,500 received by e-NC from the NC General Assembly in 2004 continued to provide support for the e-NC Business & Technology Telecenters in 2005. Microsoft Corporation awarded \$50,000 to the e-NC Authority, also in support of the telecenters program.

Also in 2005, e-NC launched its Technology-Enabled Entrepreneurship – Opportunities Fueling the Future, or TEE-OFF, program. This pro-

gram, a partnership with the Blue Ridge Business Development Center and NC REAL, was funded by a \$150,000 grant from the Golden LEAF Foundation.

E-NC completed the second year of a \$30,000 Z. Smith Reynolds grant to conduct a study on economic development challenges faced by counties that sit on the geographic border with South Carolina, Virginia and Tennessee.

The \$700,000 multi-year LEG-UP grant, or Local

E-government Utilization Program, awarded by the US Department of Commerce's Technology Opportunities Program, was completed in the fall of 2005.

In addition to the 2005 contributors, funding from nonprofit MCNC continued to provide support for e-NC programs and operations. In 2000, nonprofit MCNC provided \$30 million allowing for the early work of e-NC.

2005 Financial Statements

e-NC Authority Statement of Activities (Unaudited) Year Ended December 31, 2005

	Unrestricted	Temporarily Restricted	Total
Revenues and other support:			
Grants and gifts:			
Federal government	\$ -	\$ 178,458	\$ 178,458
State of North Carolina	250,000	1,094,535	1,344,535
Foundations	50,000	77,800	127,800
Contract revenue	2,032,637	-	2,032,637
Interest income	137,353	-	137,353
Other income	7,616	-	7,616
Net assets released from restrictions:			
Satisfaction of program restrictions	737,616	(737,616)	-
Total revenues	3,215,222	613,177	3,828,399
Expenses:			
Technology based programs	1,036,834	-	1,036,834
Other grant programs	1,099,201	-	1,099,201
	2,136,035	-	2,136,035
Management and general	1,054,187	-	1,054,187
Total expenses	3,190,222	-	3,190,222
Change in net assets	25,000	613,177	638,177
Net assets:			
Beginning	-	1,026,250	1,026,250
Ending	\$ 25,000	\$ 1,639,427	\$ 1,664,427

All of the financial activity of the e-NC Authority is reported in the financial statements of its fiscal agent, the N.C. Rural Economic Development Center, Inc. The N.C. Rural Economic Development Center, Inc.'s financial statements have been audited annually, and the center has received unqualified audit opinions on them. No audit exceptions have been noted.

In Closing

Connecting people to the Internet and a better future is the continual goal of the e-NC Authority – a goal that has earned the organization support from public and private sectors, and a reputation as a model for technology-based economic development. In 2006, the e-NC Authority will continue to be a proponent of positive economic change. We will focus on increasing the integration of technology infrastructure, access to this infrastructure, and the development of necessary skill sets within our North Carolina communities and among their citizens in order to operate effectively within a 21st century innovation economy.

The e-NC Authority

The e-NC Authority is housed by legislative mandate in the NC Rural Economic Development Center.

www.e-nc.org

4021 Carya Drive

Raleigh, NC 27610

Toll Free: 866.627.8725

Phone: 919.250.4314

Fax: 919.250.4325

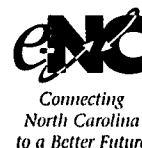
E-mail: info@e-nc.org

About the e-NC Authority:

Devoted to connecting people to the Internet and a better future, the e-NC Authority works with all 100 of North Carolina's counties with a focus on rural and distressed urban areas.

Created by the NC General Assembly, the authority is dedicated to increasing prosperity for North Carolina citizens and businesses by creating jobs through technology-based economic development, which requires a broadband Internet platform for success.

The authority operates statewide from a base in Raleigh, N.C., and is supported through contributions from foundation, nonprofit, public and private entities. For more information, visit www.e-nc.org or call 1-866-627-8725.



GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005

H

1

HOUSE BILL 1980

Short Title: E-NC Internet Connectivity/Jobs Funding. (Public)

Sponsors: Representatives Tolson; Faison, McLawhorn, Parmon, and Warren.

Referred to: Science and Technology, if favorable, Appropriations.

May 16, 2006

A BILL TO BE ENTITLED

AN ACT REPEALING THE E-NC AUTHORITY SUNSET PROVISION AND
APPROPRIATING FUNDS TO THE E-NC AUTHORITY FOR HIGH-SPEED
INTERNET CONNECTIVITY INCENTIVE GRANTS AND FOR JOB
CREATION THROUGH ECONOMIC DEVELOPMENT AND SUPPORT OF
E-NC BUSINESS AND TECHNOLOGY TELECENTERS.

The General Assembly of North Carolina enacts:

SECTION 1. The General Assembly finds that:

- (1) The e-NC Authority, created in S.L. 2003-425 to continue the work of the Rural Internet Access Authority, is successfully pursuing its mandated goals, increasing access to affordable high-speed Internet and creating 21st century jobs through technology-based economic development in the rural areas and distressed urban areas of the State.
- (2) The e-NC Business and Technology Telecenters (BTTs) serve as catalysts to technology-based economic development in some of North Carolina's most distressed regions by helping to grow existing small businesses, bringing new kinds of businesses into rural communities and regions, stimulating and supporting entrepreneurship, and creating 21st century jobs.
- (3) e-NC works successfully with local governments and educational institutions to strengthen their technology capacities and services to their communities, making available to the citizens technology services and resources, training, and public access to computers and the Internet.

SECTION 2. Section 4 of S.L. 2003-475 reads as rewritten:

"**SECTION 4.** Sections 1 and 2 of this act become effective December 31, 2003, with the e-NC Authority hereby designated as the successor entity of the Rural Internet Access Authority that will dissolve on that date, as provided by Section 5 of S.L. 2000-149. The remainder of this act is effective when it becomes law. ~~The e-NC Authority created in this act is dissolved effective December 31, 2006. This act is repealed effective December 31, 2006. Part 2F of Article 10 of Chapter 143B of the General Statutes and G.S. 120-123(77), as enacted by this act, are repealed effective December 31, 2006.~~"

SECTION 3.(a) There is appropriated from the General Fund to the e-NC Authority the sum of seven million five hundred thousand dollars (\$7,500,000) for the 2006-2007 fiscal year for Internet connectivity incentive grants. These funds shall not revert. It is the intent of the General Assembly that these funds shall be used to allow at least seventy percent (70%) of the households in each county to have the ability to access high-speed Internet services by 2008. Funds for connectivity incentives should be committed to service providers by July 1, 2008. These incentive grants shall be competitive and shall require at least a fifty percent (50%) cash match from the participating service providers. Companies must ensure the number of additional households to be served as a result of this funding. The e-NC Authority may use up to five percent (5%) of these funds to cover its expenses in grant letting and monitoring.

SECTION 3.(b) There is appropriated from the General Fund to the e-NC Authority the sum of one million six hundred thousand dollars (\$1,600,000) for the 2006-2007 fiscal year for continued and expanded funding of the e-NC Business and Technology Telecenter (BTT) program. The e-NC Authority may use up to five percent (5%) of these funds to cover its expenses in program development and implementation of activity areas with the BTTs. The e-NC Authority may contract with other State agencies, The University of North Carolina, the Community Colleges System Office, and nonprofit organizations to assist with BTT program development and the evaluation of program activities.

SECTION 3.(c) There is appropriated from the General Fund to the e-NC Authority the sum of three hundred thousand dollars (\$300,000) for the 2006-2007 fiscal year for competitive innovation grants to e-communities, BTTs, and Local E-government Utilization Program participants for the development of model programs and value-added products that enhance the economy of their regions.

SECTION 4. The e-NC Authority shall work cooperatively with the following entities to carry out the purposes of this act: the Department of Commerce, The University of North Carolina, the Community Colleges System Office, the local councils of government, the local chambers of commerce, the North Carolina Association of County Commissioners, the North Carolina League of Municipalities, the Regional Economic Development Partnerships, local economic developers, and the private and nonprofit sectors.

SECTION 5. Section 3 of this act becomes effective July 1, 2006. The remainder of this act is effective when it becomes law.

*This document (also available in PDF and RTF formats) is not an official document.
Please read the NCGA Web Site disclaimer for more information.*

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005**

H

1

HOUSE BILL 2671*

Short Title: Martin Telecenter Funds. (Public)

Sponsors: Representative Warren.

Referred to: Appropriations.

May 25, 2006

A BILL TO BE ENTITLED
AN ACT TO APPROPRIATE FUNDS TO EXPAND THE NORTH CAROLINA
TELECENTER TO MARTIN COUNTY.

The General Assembly of North Carolina enacts:

SECTION 1. There is appropriated from the General Fund to the Department of Commerce the sum of four hundred thousand dollars (\$400,000) for the 2006-2007 fiscal year to be allocated to the e-NC Authority for expansion of the North Carolina Telecenter in Martin County.

SECTION 2. This act becomes effective July 1, 2006.

*This document (also available in PDF and RTF formats) is not an official document.
Please read the NCGA Web Site disclaimer for more information.*

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005**

S

1

SENATE BILL 1840

Short Title: E-NC Internet Connectivity/Jobs Funding. (Public)

Sponsors: Senator Dalton.

Referred to: Appropriations/Base Budget.

May 24, 2006

A BILL TO BE ENTITLED

AN ACT REPEALING THE E-NC AUTHORITY SUNSET PROVISION AND
APPROPRIATING FUNDS TO THE E-NC AUTHORITY FOR HIGH-SPEED
INTERNET CONNECTIVITY INCENTIVE GRANTS AND FOR JOB
CREATION THROUGH ECONOMIC DEVELOPMENT AND SUPPORT OF
E-NC BUSINESS AND TECHNOLOGY TELECENTERS.

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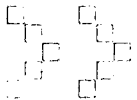
SECTION 5. Section 3 of this act becomes effective July 1, 2006. The remainder of this act is effective when it becomes law.

Keep Sex Offenders Off School Grounds



LobbyGuard Meets and Exceeds the Requirements of Florida's Jessica Lunsford Act

- Quickly runs instant background checks on all campus visitors
- Immediately notifies appropriate personnel if a match is made



• Affordably Priced • Effective • Easy to Use



LobbyGuard™ is a computerized **visitor management system** designed to help schools account for and screen the thousands of visitors, contractors, volunteers and faculty passing through their doors each year.

The system utilizes step-by-step visual instructions and audio queues to walk the visitor through the sign-in process. Quickly and efficiently, LobbyGuard **captures the visitor's information and photograph**, and stores the information in a secure database.

LobbyGuard can also print an easy-to-see **visitor badge** which allows security personnel and building employees to identify each visitor at a glance.

By implementing the license or state ID scanner, LobbyGuard captures the visitor's information and scans it against all available lists of **sex offenders**, wanted criminals, and those with open orders of protection. A 'red flag' message notifies facility staff and the visitor's entry is rejected.

You can even enter **your own customized list** of names to keep out known gang members, drug dealers, suspended students, and other unwanted guests. In addition, the program **integrates with access control systems** to further ensure your students' safety.

The Jessica Lunsford Act requires schools to provide a safe learning environment for the students. **Don't just comply with the law's requirements – exceed them.**

LobbyGuard Benefits:

- >> **Parent, Student, and Faculty Registration**
Makes signing in and out as simple as waving a bar-coded tag across a scanner.
- >> **Volunteer Registration**
Keeps track of your volunteer hours and in/out times.
- >> **Custody Issue Management**
Gives school personnel instant access to information regarding parental custody for each parent and student, eliminating questions about who has the right to pick up students.
- >> **Real-Time Visitor Reporting**
Provides crucial list of who is in the building in the event of an emergency situation.



LOBBYGUARD™
Sign In. Sign Out. Secure.



LOBBYGUARD™

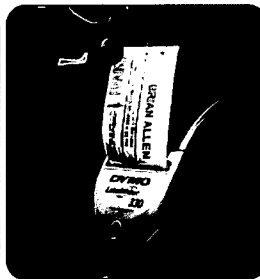
Sign In. Sign Out. Secure.

Enhanced Visitor Processing

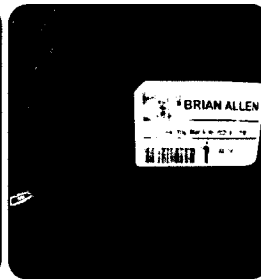
- Visitors sign in through an easy-to-use touchscreen interface that only takes seconds.
- Information collected prints on a highly visible visitor badge.
- Visitors may sign out via the touchscreen application or by using the barcode scanner option.



Sign In



Print Badge



Sign Out

LobbyGuard

Employees Visitors

View: Visitors Currently Signed In Submit

7 visitors signed in as of 3/12/2004 11:43:33 AM

Visitor Name	Visitor Company	Visiting	Authorized by	Date and Time
BILL MANESS	ABC CONSULTING	Allen, Kevin	Allen, Kevin	3/12/2004
BRENT SANSOM	KNS	Allen, Brian	No one	3/12/2004
CHRIS ROTH	No company entered	Allen, Kevin		12/6/2002 1
DAVID FOTHERINGHAM	ALTUM, INC.	Allen, Brian	Wadkinson, Sue	11/20/2003
ERNEST ROBINSON	FRANKLIN PRINTING	Nicholson, Pat	Nicholson, Pat	9/24/2003 1
GLEN ALFREDSON	CI	Allen, Kevin	Allen, Kevin	11/6/2003 1
HOWARD PICKETT	None			11/12/2003

General | Event Log

Visitor Name: BILL MANESS
Visitor Company: ABC CONSULTING
Employee Visited: Allen, Kevin
Signin Time: 3/12/2004 1:28:58 PM
Signin Location: Lobby Kiosk
Authorized By: Allen, Kevin
Wait Time: 15 seconds
Signout Time: Currently Signed In
Signout Location: Currently Signed In
Signed Out By: Currently Signed In
Length of Visit: Currently Signed In

Photo: [Image of Bill Maness]

Sign this Visitor Out OK

Visitor Activity Data & Reporting

- Maintain a complete record of each visitor including name, affiliation or company, reason for visit, arrival and departure time and photograph.
- Produce real-time reports for visitors currently signed into your building or during a selected period of time.
- Drill-down by visitor to view complete visitor detail and photograph.

For more information on LobbyGuard, or to schedule a demo, please contact:



LOBBYGUARD™

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Travis Lam
LOBBYGUARD SOLUTIONS, LLC
4700 Six Forks Road Ste. 300
Raleigh, NC 27609
Toll Free: (866) 905-6229 ext. 501
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Fax: (919) 785-3398
travis.lam@lobbyguard.com
www.lobbyguard.com

NanoART Institute

Nano Academic Research Technology Institute

Dr. Branislav Vlahovic
Dr. Kenneth Manton
Dr. Abdennaceur Karoui

Raleigh, June 6, 2006

NanoART Institute

Nano Academic Research Technology Institute

- Cutting Edge Research and Education Programs
- Commercialization and Product Development

Medicine, Biodefence, Chemical Sensors,
Environmental Clean up, Energy Conversion
and Conservation, Homeland Security, Process
Modeling, Statistics, Database Development,
and Drug Delivery

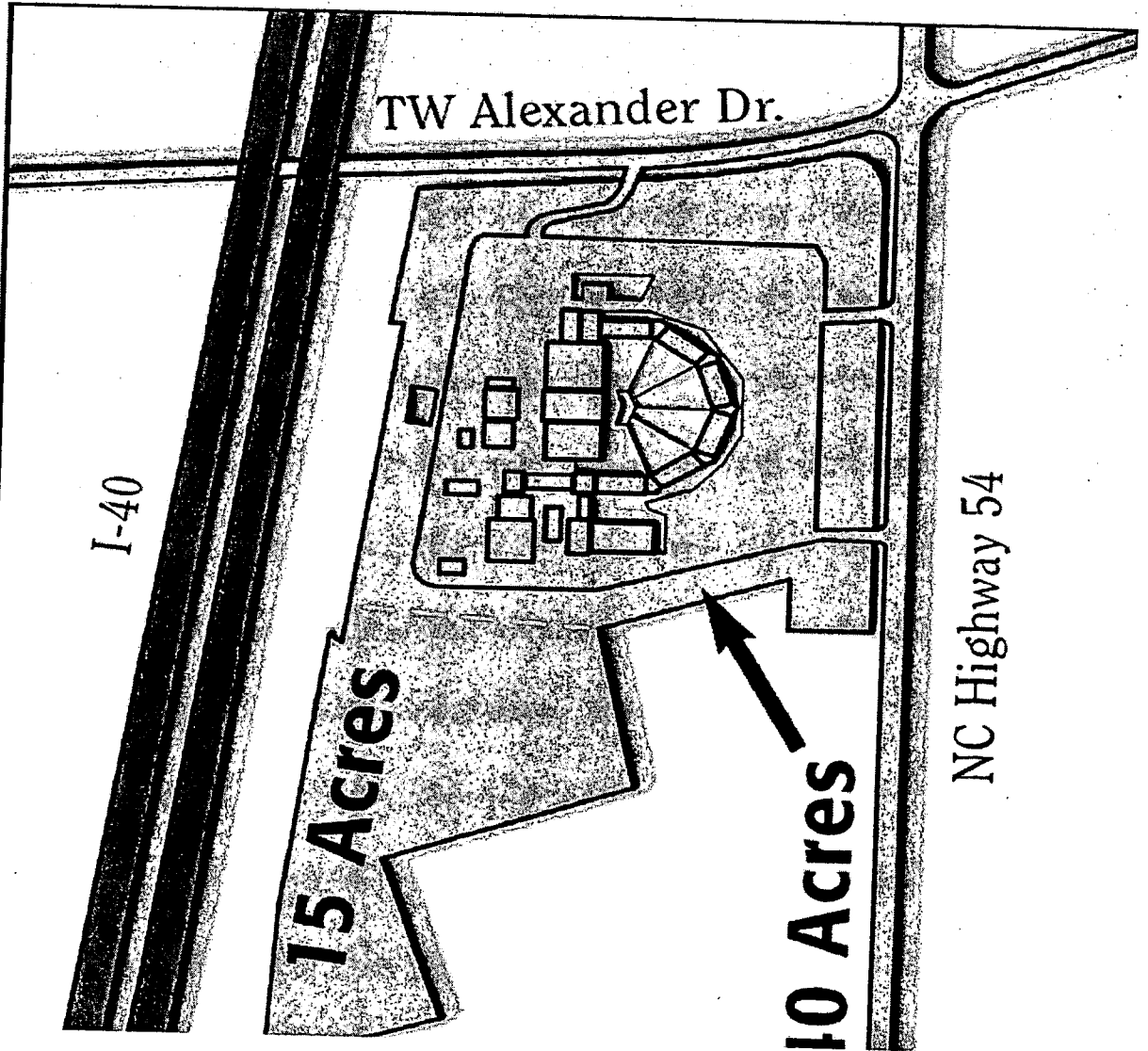
- **Core Scientists**

- 40 affiliated interdisciplinary scientists
- leaders in their fields
- strong record of achievements:
awards, publications (hundreds), patents,
development of commercial products
- strong record of grants awards (in millions)

- **Broad Network of Researchers**

universities, industry, national laboratories
international collaborations

ACRES AVAILABLE



400,000 square feet of existing office, lab and support space.

55-acre site, with 15 acres zoned for up to 250,000 square feet of additional development.

Surface parking for 788 cars (expandable).

Attentive, on-site property management team.

Ability for high-security perimeter as required.

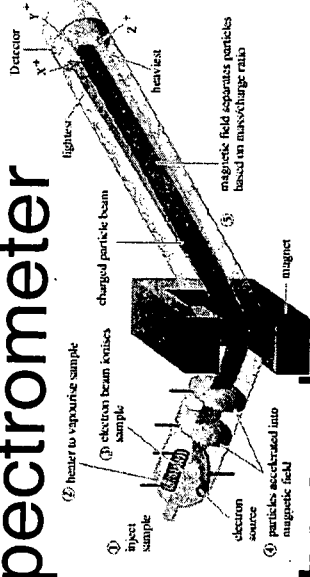
Projects for today discussion

- Production of new products at NanoART
- Establishment of the Institutes for the National Long Term Care Survey (NLTCs) and International Studies of Ionizing Radiation
- HBCU-NanoTechnology NanoScience Network

New products at NanoART

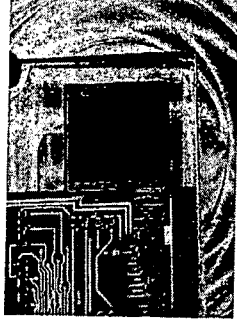
- Miniature High Resolution Mass Spectrometer Development

Extrel Pittsburgh www.extrel.com



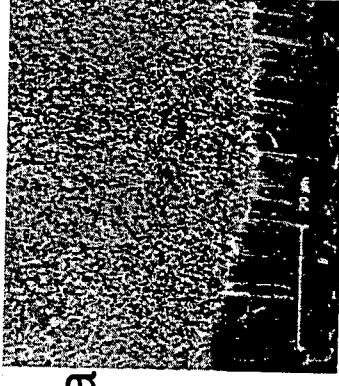
- Biochemical Sensor, high sensitivity and selectivity

based on nanotechnology, new method, patent
DARPA, Homeland Security, Boeing



- Carbon Nanotube, high conductivity, extraordinary mechanical properties

Lockheed Martin Missiles and Fire Control Orlando Florida



Economic benefits for the state

- 50 people will be employed on Mass Spectrometer production by the end of the first year
- 15 people will be employed on development of biochemical sensor in first year, 40 after the production will start in second year
- 25 people will be employed on the NanoWire production at the end of the first year
- Most of the jobs are high skilled – high salary

Influx of resources from other large companies

Support for the carbon NanoWires
Lockheed Martin

Dr. Leslie D. Kramer

Director - Chief Technologist Research and Technology
Lockheed Martin Missiles and Fire Control Orlando,
Florida Phone and Fax: (407) 356-5942/1380Cel: (407) 252-4863
E-mail: leslie.d.kramer@lmco.com

Dr. Percy Funchess

Acting Manager MEMS/Nanotechnology Research Lockheed Martin
Telephone: (407) 356 8284
E-mail: percy.n.funchess@lmco.com

Support for the Biochemical Sensor
Boeing

Dr. James HuangSr. Mgr, VMS D&ISST, Phantom Works
Phone (714) 896 – 4435 (714) 317 - 0901 (cell)
E-mail: james.p.huang@boeing.com

Support for the Mass spectrometer
Extrel Corre Mass Spectrometers www.extrel.com
Mr. Luke Kephart, Chief Executive Officer
575 Epsilon Drive, Pittsburgh. PA 15238
Luke.kephart@extrel.com Tel: 412-967-5773 Fax: 412-963-6578J

Dr. Jian Wei, Director, Core Technology
Tel: 412-967-5778 Jian.wei@extrel.com

National Interdisciplinary Institute for Research on Aging and Health (NIIRAH)

- biomarker study, focusing on the analyses of black-white health disparities, to be conducted in conjunction with the 2009 National Long Term Care Survey (NLTCs) Center for Demographic Studies at Duke 1982, 1984, 1989, 1994, 1999, 2004 data transfers from Duke to NanoART
- VA, ASPE, HIH, CMS/HCFE, GAO, OMB, Congress studies of therapeutic agents and treatment strategies for medical countermeasures to population health effects produced by different environmental sources of ionizing radiation.

Agreement to use unique data collected in Russia
Urgent Intervention, homeland security

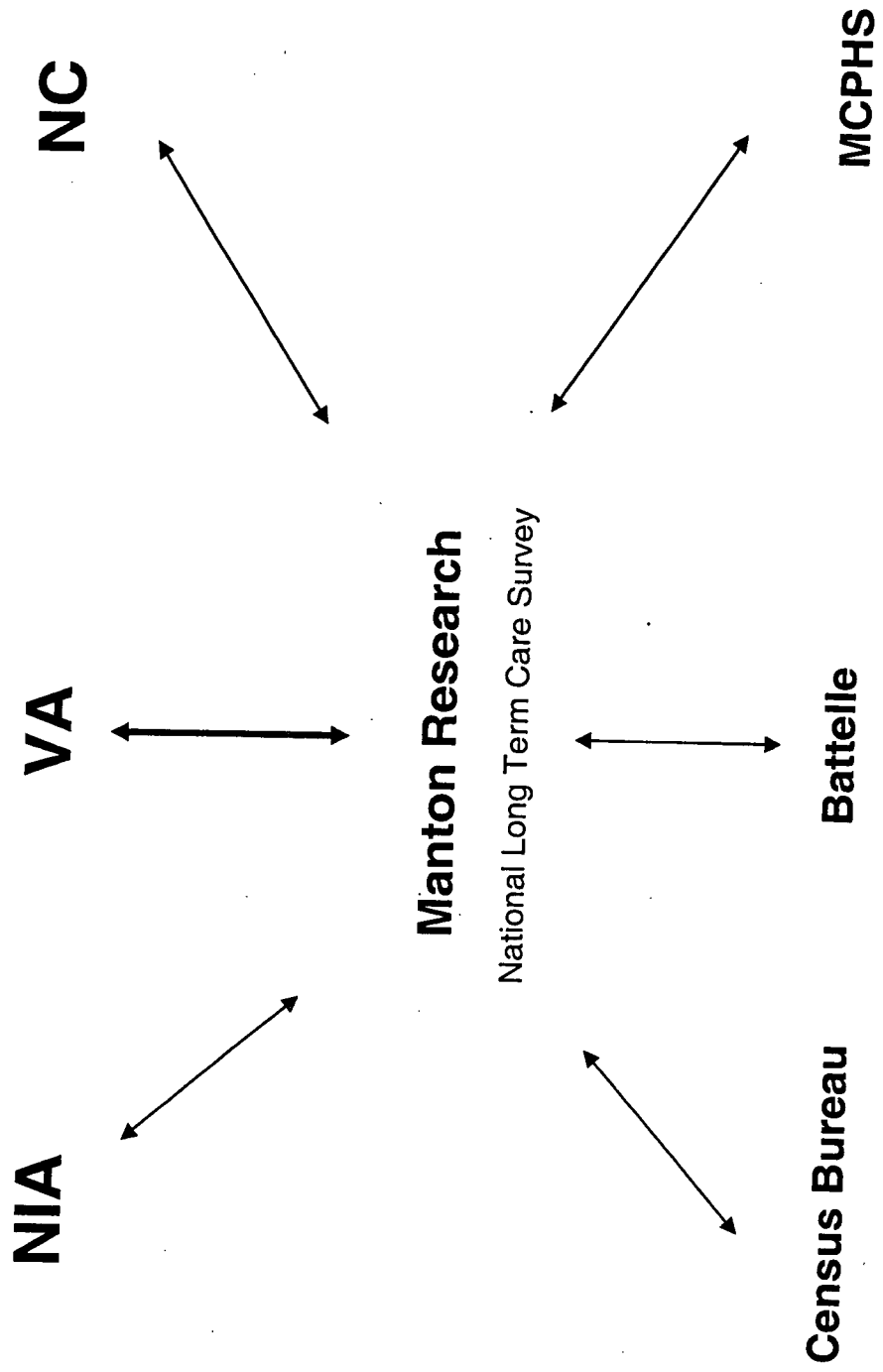
Economic (Job) Impact on North Carolina of the

Biomarker and Health Disparity Component

- 30 to 40 positions for the collection, cleaning, and dissemination of the core survey
- 10 positions for data dissemination and documentation;
- 20 positions for analytic studies from both a sociodemographic and biomedical (including both Medicare and Medicaid health economic studies and analyses of bioassays of the biomarker data) perspective.
- Additional positions would be created at NCCU/BBRI for a biorepository and analytic projects,
- and at least several positions would be created at the Battelle facility in RTP.
- There would also likely be research projects generated at Duke and UNC Medical Centers, and possibly at commercial firms in RTP.

Overall Assessment of Economic ImpactAn International Institute for Research into the Population Health Effects of Environmental Exposure to Ionizing Radiation (Dr. Kenneth G. Manton, Principal Investigator).

- The job impact would be on the order of 70 to 100 persons in direct terms. If some of the research advances to commercial status, the effect on employment could be much larger.
- create research opportunities (funded by NIH – and possibly DOD, DOE, and other agencies) for NCCU, UNC, and Duke University Medical Center. This volume of research activity would also enhance the visibility and credibility of research in the NC and RTP area (a major news article is currently being prepared on the NLTCS by the *New York Times*).
- A number of commercial opportunities could result from new product development.



NLTCS

National Long Term Care Survey
\$40-50M July 1, 2006 submission

Effect of Modified Vaccine in Reducing the Damage to
the Immune system of IR in the Acute Phase of a Nuclear Attack

RadCCore, April 15, 2005

Development of a Miniature Mass Spectrometer
for Monitoring Inflammatory Lung Function in
Victims Exposed to Ionizing Radiation

RadCCore, April 15, 2005

400,000 sq ft building
Triangle Life Science
TLS

NanoART

Research Institute

Duke
Center for Demographic Studies

MCPHS
Institute for Aging Research

MCPHS

Manton-MCPHS Research Professor
Manton-Prepares NLTCS Proposal
NLTCS Work Performed in NC

NLTCS Team

Relocate 12 Staff

Renovate/set up
25 Offices

Low-dose Ionizing Radiation as Risk Factor for
Accelerated Aging: 1950-2006 ETRC
RO1, Feb. 1, 2006

Active Life Expectancy in Old & Oldest Old Population
RO1 March 1, 2006

Health of Chernobyl Emergency Workers and Their Children
RO1 March 1, 2006

MCPHS - Massachusetts College of Pharmacy and Health Sciences

Historically Black Colleges and Universities Nanoscience and Nanotechnology Network (HBCU-3N)

Network of:

- Faculty Members from HBCUs
- Their Colleagues in Majority institutions
- Industry Members and
- Students

Doing Research on / Working on / Studying
Nanoscience and Nanotechnology

Historically Black Colleges and Universities Nanoscience and Nanotechnology Network (HBCU-3N)

Rational of this Research Network

- Excellent Scientists are dispersed in HBCUs
- Do not have time for research (very busy with teaching)
- They are Generally Not Funded (In a deadlock Situation)
- Large risk of degradation of this important potential
- Nanoscience and Nanotechnology requires:
 - Very Expensive and Heavy Equipment
 - Large Research Teams
 - Extensive discussion → Better Communication
 - Better Compilation of Information to produce patents and significant R&D results

Advantages offered by the Research Federation

- Enables more powerful means for R&D
- Helps better investigate nanotechnology R&D → more powerful and faster results
- Increases the Efficiency of Resources (at all levels)
- Decreases the down time of the
- Reduces maintenance and Operation Cost of equipment (expensive)
- Avoids duplication of costly Infrastructure

Services The Network Will Create

1. Advanced Communication Channels
2. Group Federation for Joint-Proposal
3. Reflection on Education of Nanoscience and Nanotechnology
4. Knowledge Dissemination and Outreach
5. Conferences
6. R&D Service Exchanges
7. User Support
 - Training Workshops
 - User Support

Request for Funding of Nanoscience and Nanotechnology R&D Infrastructure

Eleven PIs from HBCU-3N are teaming up

They are asking for:

- Release time for their teams
- Capital Equipment adequate for nanoscience and nanotechnology R&D
- Maintenance and Upgrades
- Industry support
- Creation of Research service → User Support

Budget Immediate Needs

Production

- Mass Spectrometer \$70,000
- Biochemical Detector \$50,000
- Carbon nanowires \$35,000

total \$155,000

NLTCS

- biomarker \$45,000
- ionizing radiation \$30,000
- Establishment of the W.H.O. Center and organization of world conference \$20,000 to \$50,000

total \$95,000 to \$125,000

HBCU Network

- Network operation \$75,000

Total all programs \$340,000

Optimal Long Term Budget

- Production \$2 M/year for next 4 years
- NLTCs \$3 M/year for next 5 years
- HBCU-NNN \$9 M/year for next 5 years

To receive funding after 1st year all benchmarks must be achieved (start of production of mass spectrometer, and NanoWires, and developed final prototype for biochemical Sensor)

Conclusion

- The revenue generated by the company will be in hundreds of millions
- Requested investment will be returned back to the state in one year

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Science + Technology
Name of Committee

6-7-06
Date

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Kevin Allen	Lobby Guard Solutions 4700 Six Forks Rd
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BILL + SHIRL THOMAS	SIERRA CLUB, POB 272, CEDAR Mt NC
RM Westbrook	United Transportation Union
Tom Coley	CWA
HERO CRENSHAW	BELL SOUTH
Ed TURLINGTON	BP/ML
Jim Rapp	NCTA
Jane Patterson	e-NC Authority -
Oppe A. Jordan	e-NC Authority - Chair / Comm.
Joanna Wright	e-NC Authority
John Bando	e-NC Authority Commissioner

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Date _____

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Box 10 Contents
2005-06 Standing Committee Minutes

2005-06 House State Government
2005-06 House State Personnel
2005-06 House Transportation
2005-06 House Ways & Means
2005-06 House Wildlife Resources
2005 Senate Agriculture, Environment, & Natural Resources
2006 Senate Agriculture, Environment, & Natural Resources
2005 Senate Appropriations Base Budget
2006 Senate Appropriations Base Budget