2003-2004

HOUSE SCIENCE & TECHNOLOGY

COMMITTEE MINUTES

NORTH CAROLINA GENERAL ASSEMBLY

COMMITTEE ON SCIENCE AND TECHNOLOGY
2003 – 2004 SESSION

Rep. Paul Miller
Chair

Rep. Joe Tolson
Vice chair

Rep. Billy Creech

Rep. Beverly Earle

Rep. Sam Ellis

Rep. Mark Hilton

Rep. Earl Jones

Rep. Ed McMahan

Rep. Mickey Michaux

Rep. Trudi Walend

Rep. Brubaker
Ex-officio

Rep. Culpepper
Ex-officio

Rep. Cunningham
Ex-officio

Rep. Eddins
Ex-officio

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

CONTACT LIST

MEMBER	ASSISTANT	PHONE	OFFICE
Rep. Paul Miller, Chair	Eryn Gee	3-5872	640 LOB
Rep. Joe Tolson, Vice-Chair	Gayle Christian	5-3024	402 LOB
Rep. Billy Creech	Rhonda Todd	5-0795	1421 LB
Rep. Beverly Earle	Ann Raeford	5-2530	634 LOB
Rep. Sam Ellis	Alice Falcone	5-6707	504 LOB
Rep. Mark Hilton	Anne Soles	3-5988	1021 LB
Rep. Earle Jones	Mia Bailey	3-5825	536 LOB
Rep. Ed McMahan	Sharon Cram	3-5602	1426 LB
Rep. Mickey Michaux	Anita Wilder	5-2528	1227 LB
Rep. Trudi Walend	Ken Walend	5-4466	602 LOB

STAFF

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

ATTENDANCE

SCIENCE AND TECHNOLOGY

(Name of Committee)

DATES	March 12	April 2	April 9	April 16	April 23	April 30	May 7	May 14	May 21	June 4	June 11				
Rep. Miller, Chair	X	X	X	X	X	X	X	X	X	X	X				
Rep. Tolson, Vice Chair	X	X	X	X	X	X		X	X	X	X				
Rep. Creech				X						X	X				
Rep. Earle					X	X									
Rep. Ellis	X	X	X	X		X			X	X	X				
Rep. Hilton															
Rep. Jones	X	X	X	X	X	X	X	X	X	X	X				
Rep. McMahan		X	X				X			X					
Rep. Michaux	X	X	X					X		X					
Rep. Walend	X		X	X	X	X	X	X	X		X				
Ex Officio Members															
Rep. Brubaker															
Rep. Culpepper				X	X										
Rep. Cunningham															
Rep. Eddins															

North Carolina General Assembly
Through House Committee on
Science and Technology

Date: 08/15/2003
Time: 14:50

2003-2004 Biennium

Leg. Day: H-102/S-102

Bill	Introducer	Short Title		Latest Action	In Date	Out Date
H0294=	Tolson	OK TO USE COM COL FUNDS FOR LITERACY LABS.-AB	H	Ref To Com On Science and Technology	03-06-03	
H0665	Miller	SCIENCE AND TECHNOLOGY BOARD.	HR	Ch. SL 2003-210	03-25-03	04-14-03
$ H0820	**Miller**	**TRAVELING SCIENCE AND TECHNOLOGY FUNDS.**	**H**	**Re-ref Com On Appropriations**	**04-01-03**	**06-11-03**
H0865=	Tolson	INFORMATION TECHNOLOGY R&D CREDIT.	H	Ref to the Com on Science and Technology and, if favorable, to the Com on Finance	04-07-03	
H0940	Miller	MAKE E-TEXTBOOKS AVAILABLE TO STUDENTS.	*H	Re-ref Com On Rules, Calendar, and Operations of the House	04-17-03	04-30-03
H0941	Miller	STUDY IT LEGACY SYSTEMS.	HR	Ch. SL 2003-172	04-08-03	04-30-03
H0972	Culpepper	PROPERTY TAX CERTIFICATION PROCEDURE.	*HR	Ch. SL 2003-399	04-09-03	04-24-03
H1003	Tolson	IT SECURITY CHANGES.	*HR	Ch. SL 2003-153	04-10-03	04-22-03
H1176	Miller	IT FUNDS FLEXIBILITY.	H	Re-ref Com On Appropriations	04-10-03	04-30-03
H1194	Tolson	ESTABLISH E-NC AUTHORITY.	*HR	Ch. SL 2003-425	04-10-03	04-24-03
$ H1254	**Miller**	**DNA-FELONY SAMPLES/ SCIENTIFIC RESEARCH.**	**H**	**Ref to the Com on Science and Technology and, if favorable, to the Com on Finance**	**04-24-03**	
1255	**Miller**	**DNA BANK/VOLUNTARY DNA SAMPLE FROM PRISONERS.**	**H**	**Ref to the Com on Science and Technology and, if favorable, to the Com on Finance**	**04-24-03**	
$ H1256	**Miller**	**VOLUNTARY DNA DATABASE.**	***H**	**Ref To Com On Health & Human Resources**	**04-24-03**	**05-22-03**
S0622	Eric Miller Reev	PROMOTE E-COMMERCE & E-GOVERNMENT.	*HR	Ch. SL 2003-233	04-22-03	06-05-03
S0623	Eric Miller Reev	IT GAP ANALYSIS "HACK ATTACK."	*H	Ref To Com On Science and Technology	04-30-03	

'$' 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 12, 2003

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Presentation: 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 12, 2003

The House Committee on Science and Technology met on Wednesday, March 12, 2003, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson, Vice-Chair; Ellis, Jones, Michaux and Walend.

Representative Miller called the meeting to order and introduced himself and recognized the pages. Emily Mabe, from Wake County, was sponsored by Rep. Eddins; and Krystal Hammond form Harnett County was sponsored by Rep. Lewis. The Chairman introduced Mr. Thomas Wilder and Mr. Francis Poole as the Sergeant-At-Arms covering the committee, and committee assistant Eryn Gee.

Members were asked by the Chair to introduce themselves and share their interests, thoughts or experiences on science and technology.

Representative Miller gave an introduction of Dr. Nagui M. Rouphail who is the Director of the Institute for Transportation Research and Education at North Carolina State University. Dr. Rouphail gave a presentation on Traffic Simulation Model Visualization (See Attachment **A**).

After the presentation, a short question and answer period followed.

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

Respectfully submitted,

Representative Paul Miller
Chairman

Eryn Gee
Committee Assistant

Traffic Simulation Model Visualization

Nagui M. Rouphail, PhD., Director
Institute for Transportation research and Education (ITRE)
Tel: 919-515-1154

http://itre.ncsu.edu

March 12, 2003

Why Visualization ?

1. Simulation is a computer tool that allows decision makers to test design and operations concepts numerically, before they are implemented in the field
2. Visualization helps make sure the model results are realistic
3. Can clearly show the impact of transportation design alternatives on traffic flow
4. A very effective way to communicate the results to the public in a non-technical way

Types of Visualization in Traffic Computer Models

1. Static visualization… just showing colored bars or graphs that may change over time
2. 2-D dynamic visualization… usually an overhead view of traffic moving on roads and across intersections
3. 3-D dynamic visualization… enables view from any angle including driver or pedestrian view of road and traffic ahead

Traffic Models Currently Available at ITRE

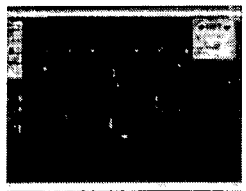
1. CORSIM (CORridor SIMulation)... developed by the U.S. DOT ... produces static and 2-D dynamic visualization
2. Paramics .. Developed in Scotland... same visualization features as CORSIM
3. VISSIM... Developed in Germany, distributed in the US.... Produces 2-D and 3-D visualization on request

All these models require high-end Pentium III or IV computers to show high quality visualizations

Today's demo

1. CORSIM 2-D animation/ visualization of a freeway interchange area
2. VISSIM 2-D/ 3-D animation of the newly installed roundabout on Pullen and Stinson on the NCSU campus
3. VISSIM 2-D / 3-D animation of proposed system of roundabouts on the Hillsborough street corridor in Raleigh

Sample screen shots ...



CORSIM

VISSIM

VISITOR REGISTRATION SHEET

Science and Technology — March 12, 2003

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Please Print	
ALBERT ECKEL	CORNING
Chris McClure	NCEITA
ANN WELL	DUNS
Amy Dobson	NC Statewatch
BEN MCLAWHORN	OSC
JEFF VAN DYKE	BST
Stan Pace	VERIZON
Brad Wilson	Rep Culpepper
Vickie Miller	Citizen
Vicky Young	OSA
Woody Yates	IRMC

VISITOR REGISTRATION SHEET

Name of Committee

MARCH 12, 2003
Date

VISITORS: PLEASE SIGN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
DENNY MCGUIRE	ITS/ETS
TOM MORROW	SPRINT
JOE MILAZZO II	ITRE - NC STATE UNIV
NAGUI ROUPHAIL	ITRE - NC STATE UNIV

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

April 2, 2003

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Bills to be Discussed:

HB 294 – OK to Use Community College Funds for Literacy Labs

Presentation of the Rural Internet Access Authority
by Dr. James Leutze, Chairman and Chancellor of UNC-W

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

April 2, 2003

The House Committee on Science and Technology met on Wednesday, April 2, 2003, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson, Vice-Chair; Ellis, Jones, McMahan and Michaux.

Representative Miller called the meeting to order and introduced the page and Sergeant-At-Arms. Jason Sexton from Granville County was sponsored by Rep. Crawford.

Representative Tolson withdrew House Bill 294, *OK to use Community College Funds for Literacy Labs*, and will try to incorporate the bill into a special provision in the budget. Dr. Luetze, Chairman of the Rural Internet Access Authority, was introduced and gave a presentation (See Attachment **B**).

After the presentation, a short question and answer period followed.

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

Respectfully submitted,

Representative Paul Miller
Chairman

Eryn Gee
Committee Assistant

Attachment **B**

2002 ANNUAL REPORT

Connecting
North Carolina
to a Better Future

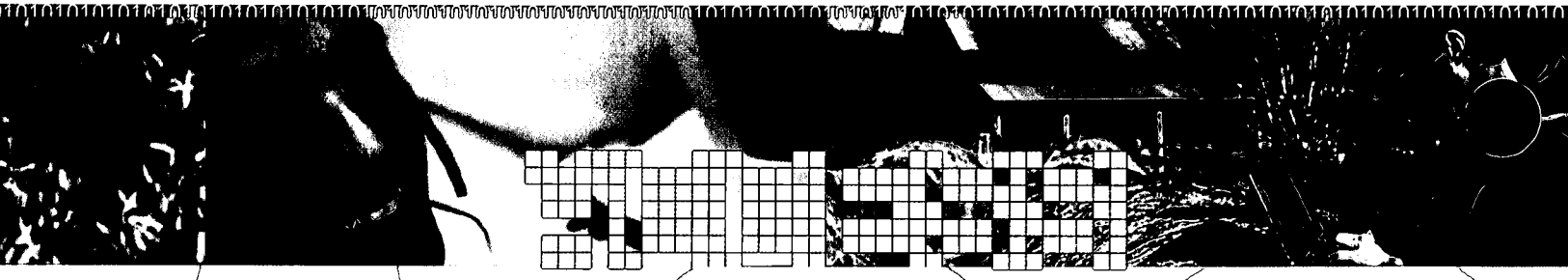
RURAL INTERNET ACCESS AUTHORITY

The mission of the Rural Internet Access Authority is to ensure all North Carolina citizens, businesses and communities are aware of, know how to use, and have access to high-speed Internet services at affordable prices.

2002 COMMISSION MEMBERS

Donald P. Altieri
South Piedmont Community College, Polkton
George Bakolia
State of North Carolina, Office of Information Technology Services, Raleigh
Wally Bowen
Mountain Area Information Network, Asheville
John Carringer
Murphy Power Board, Murphy
Jim Fain
N.C. Department of Commerce, Raleigh
Patricia Ferguson
Bertie County Board of Commissioners, Colerain
Joe Foster
Verizon Communications, Durham
Cecil L. Groves
Southwestern Community College, Sylva
L.S. Guy, Jr.
Duplin County Board of Commissioners, Faison
Billy Ray Hall
N.C. Rural Economic Development Center, Raleigh
Jon R. Hamm
Sprint, Wake Forest
C. Don Hathcock
BellSouth Telecommunications, Charlotte
Oppie N. Jordan
Carolinas Gateway Partnership, Rocky Mount
John Killebrew
for MCNC, Research Triangle Park
James R. Leutze (Chairman)
University of North Carolina at Wilmington, Wilmington
Bo McNeill
Mayor of Lake Waccamaw, Lake Waccamaw
Brad Phillips
Time Warner Cable, Morrisville
Paul C. Ridgeway
Everett, Gaskins, Hancock & Stevens, Raleigh
Ed Turlington
Brooks, Pierce, McLendon, Humphrey, & Leonard, Raleigh
Billy Wellons, Jr.
Faynet, Spring Lake
Curtis Wynn
Roanoke Electric Cooperative, Rich Square

The commission expresses its appreciation to Ronald P. Hawley, formerly of the N.C. Office of Information Technology, for his service to the authority this past year.



GOVERNMENT LIAISONS

Progress on the legislative mandate is regularly communicated to the Joint Committee on Information Technology, chaired by Sen. Eric Reeves and Rep. Joe Tolson.

VOLUNTEERS

The success of the Rural Internet Access Authority is due in large part to its nearly 3,000 dedicated volunteers throughout the state. Volunteers contribute in a variety of ways, including:

Participation on state-level committees:

- Applications
- Budget & Finance
- Communications
- Incentives
- Legal, Legislative & Regulatory
- Outreach
- Technical
- Telecenter

Helping their neighbors through NC TechForce:

Nearly 400 students are volunteering in 34 NC TechForce chapters statewide, offering technical assistance that otherwise might not be available, especially in rural areas.

Leadership of local efforts through e-communities:

E-champions and their steering committees actively are working in 81 counties and the Eastern Band of the Cherokee to bring high-speed Internet access and training to their areas. The offer of high-speed Internet infrastructure and a technology-trained workforce already is helping to boost economic development activities in many of these areas.

Helping citizens go online at public access sites:

Volunteers help to staff more than 135 public access sites, funded in part through the authority, which are opening or expanding across the state, and offer free or low-cost access to computers and the Internet.

Dear Volunteers and Supporters,

Thank you for your support of the Rural Internet Access Authority and the e-NC Initiative to connect North Carolina to the Internet and a better future. This was a year of fast-paced work and incredible results.

Building on a strong foundation created in 2001, we confidently began 2002 with the launch of our telecenters, or model technology centers. These centers already are fulfilling their promise to catalyze economic development. In less than a year, they have created a total of 66 jobs in rural North Carolina. The Northeast Technology & Business Center, which is featured on the front cover of this report, alone has created 44 jobs and has attracted more than $1 million in additional funds to help boost the telecenter's economic development activities in the Northeastern region.

Throughout the spring, we helped guide e-champions from 81 rural counties and the Eastern Band of the Cherokee through a strategic technology planning process. Having assessed needs at the local level, we awarded millions of dollars to help extend infrastructure, open public access sites, create computer and Internet training programs, develop computer applications, and expand our student NC TechForce program. We are helping North Carolina citizens to build the technology skills they need to obtain better paying, more stable jobs.

In our two years together, we have built one of the country's most comprehensive efforts to increase high-speed Internet access throughout an entire state. We have brought training and economic opportunity to our citizens, set the stage for continued success, and secured the attention, endorsement and acclaim of national organizations, including the U.S. Department of Commerce and the National Association of State Chief Information Officers. Our efforts are serving as a national blueprint for technology-led economic development activities.

As we reflect positively on the past year, we also look expectantly toward 2003. In the coming year, we will continue to focus on improving the technology situation in our state's most connectivity-challenged counties. We also eagerly anticipate the impact public access sites, local government technology programs, and computer and Internet training classes will have on citizens, communities and the state's economic future.

We offer our deepest gratitude to those who have supported the authority throughout the past two years and encourage others to join us in 2003 as we work toward connecting North Carolina to the Internet and a better future.

Sincerely,

Dr. James Leutze, Chairman
Rural Internet Access Authority

Jane Patterson
Phil Bond
James Leutze

"Efforts like North Carolina's Rural Internet Access Authority are great examples of how technology expansion and training, driven by grassroots efforts, can be a critical component in leading our nation's economic recovery."

U.S. Department of Commerce Salutes Authority as National Model for Rural Connectivity

In November 2002, the U.S. Department of Commerce showcased the authority's e-NC Initiative, a grassroots effort to connect all North Carolinians to the Internet and a better future. The roundtable focused on the authority's inclusive and broad-based approach, which has led to early success.

Phil Bond, U.S. Under Secretary of Commerce for Technology and then Chief of Staff, held up the authority's efforts as an excellent model for rural connectivity – one other states can and are beginning to follow.

"Technology is a vital contributor to our nation's economic growth, especially in the struggling rural areas that have been hardest hit by the economic downturn," said Bond. "Efforts like North Carolina's Rural Internet Access Authority are great examples of how technology expansion and training, driven by grassroots efforts, can be a critical component in leading our nation's economic recovery."

During the roundtable, Dr. James Leutze and Jane Patterson, executive director, explained how the authority recognized early the need to involve and galvanize local citizens in the rural connectivity process, which led to the creation of the e-communities program and has helped to drive much of the authority's success. They also highlighted the authority's attention to three primary components of connectivity: awareness, access and training.

Based on comparative statistics and its own research, the authority estimated that 2002 marked the biggest deployment year North Carolina has ever had. In one year alone, the authority helped to drive a 20 percent increase in computer ownership. This is a significant statistic, especially in a state that started out in the bottom 10 percent of the nation in households with computers and Internet access in 1998.

PROGRESS TOWARD GOALS

When the N.C. General Assembly created the authority, the legislature charged it with making high-speed Internet access available to all areas of North Carolina – at comparable prices in rural and urban areas – by December 2003. Senate Bill 1343 gave direction for the effort. The authority has made significant strides toward achieving its goals. (For a complete copy of Senate Bill 1343, visit www.ncleg.net/SessionLaws/2000_/sl20000149/default.htm.)

GOAL 1:

Make local, dial-up Internet access available from every telephone exchange by August 2001

ACHIEVED GOAL

- *Announced ahead of schedule that all citizens could get dial-up access, eliminating long distance phone charges for Internet service*
- *Offered online database of Internet service providers, which citizens can search at, www.e-nc.org, or by calling 1-866-NCRURAL*

GOAL 2:

Make high-speed Internet access available to every citizen of North Carolina within three years, at prices in rural counties that are comparable to prices in urban North Carolina

STRONG PROGRESS TOWARD GOAL

- *Initiated an ongoing study, "High-speed Internet Access in North Carolina: A 100-County Report," which determined an estimated 74.88 percent of North Carolina households would have access to high-speed Internet service by the end of 2002*
- *Invested about $20 million in private funds to date in communities through grants and incentives*
- *Documented a marked drop in the rates charged for some types of high-speed service in North Carolina since it began monitoring the industry in early 2002*
- *Determined major service providers tend to charge the same rate statewide for Internet service*

GOAL 3:

Establish two model telecenters, or technology hubs within communities, in the most economically disadvantaged areas in the state by January 2002

EXCEEDED GOAL

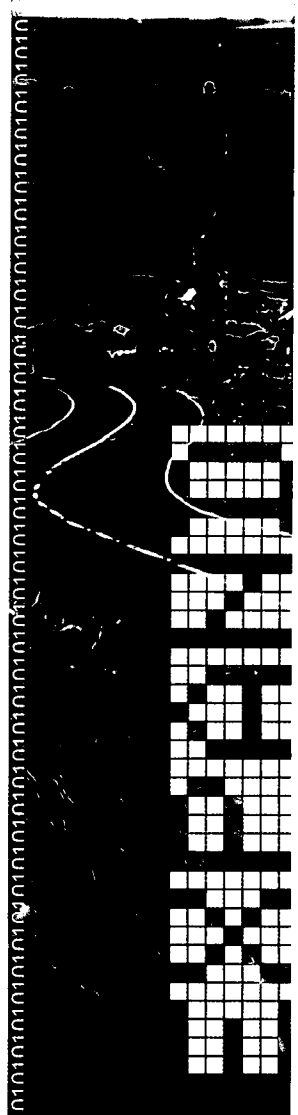
- *Met and exceeded goal with four telecenters in operation*
- *Created 66 jobs through telecenters in 2002*
- *Attracted more than $4.4 million from a variety of sources to further support the telecenters' economic development activities*
- *Increased communities' abilities to attract companies to their areas*
- *Expanded North Carolinians' opportunities for teleworking*
- *Helped small businesses compete by providing necessary technology, office space and support services*

GOAL 4:

Promote significant increases in ownership of computers, related Web devices and Internet subscriptions throughout North Carolina

SUBSTANTIAL PROGRESS TOWARD GOAL

- *Developed e-communities program to mobilize citizens to lead local technology efforts*
- *Funded computer and Internet training classes, and more than 135 public access sites, which are helping citizens gain familiarity with technology and build the computer and Internet skills they need to compete for today's jobs*
- *Held more than 300 public forums in communities across the state*
- *Launched public awareness campaign to help educate citizens about the Internet*
- *Opened dialogue between citizens and Internet service providers through the e-NC Web site's high-speed service request page, which has allowed more than 1,000 citizens to register requests for service and has enabled providers to gauge demand and expand service*



GOAL 5:

Provide citizens with accurate, current and complete information through the Internet about the availability of present telecommunications and Internet services with periodic updates on the future deployment of new telecommunications and Internet services

CONSISTENTLY MEET GOAL

- *Completed inventory of state's telecommunications infrastructure and services, and continues to update data*
- *Created a continually updated interactive Web site, www.e-nc.org, which includes all research to date and searchable Geographic Information System maps that show where various technology infrastructure exists in the state*

GOAL 6:

Promote the development of government Internet applications to make citizen interactions with government agencies and services easier and more convenient, and to facilitate the delivery of more comprehensive programs, including training, education and health care

WILL EXCEED GOAL

- *Worked with the Center for Public Technology within the University of North Carolina at Chapel Hill's Institute of Government to survey local governments' computer and Internet use*
- *Received a $700,000 grant from the U.S. Department of Commerce's Technology Opportunities Program to support the authority's Local E-government Utilization Program, which will improve the way local governments use technology to serve citizens*
- *Held an e-learning summit and initiated efforts to create an e-learning portal*

GOAL 7:

Employ open technology approaches to encourage all potential providers to participate in the implementation of high-speed Internet access with no technology bias

CONSISTENTLY MEET GOAL

- *Played key role in development of N.C. Consortium of Internet Service Providers*
- *Encouraged broad-based corporate participation by representatives of various technology companies*
- *Funded infrastructure projects that utilize a variety of technologies to provide Internet service*

GOAL 8:

Coordinate activities, conduct and sponsor research, and recommend and advocate actions, including regulatory and legislative actions, to achieve goals and objectives

CONSISTENTLY MEET GOAL

- *Regularly update legislature through reports to Joint Committee on Information Technology*
- *Conducted or sponsored more than nine research projects to determine technology needs*
- *Created e-communities program to empower local citizens in the state's 85 rural counties to lead efforts to bring greater high-speed Internet access and training to their communities*
- *Developed NC TechForce Program, creating a corps of student volunteers that offers training and technical assistance to communities*
- *Organized 20 e-business workshops statewide to encourage small business owners and aspiring entrepreneurs to use computers and the Internet as tools for growing their businesses*

Telecenter gives displaced workers a second chance

Funded through a $650,000 grant from the authority and serving Alleghany, Ashe, Surry and Wilkes counties, the Blue Ridge Business Development Center, www.blueridgebdc.org, has become a beacon of hope in a region fraught with economic troubles and plant closings. The telecenter provides free Internet access to citizens, and a variety of technical and business support services to commercial and nonprofit organizations. As a focus for its activities, the telecenter also has stepped up to prepare displaced workers to re-enter the workforce in more stable, higher paying jobs. Among other classes, the center offers a medical transcription training program in cooperation with nearby Wilkes Community College. More than 35 people currently are enrolled. On average, medical transcribers earn between $25,000 and $30,000 per year – quite an increase from the less than $20,000 average annual incomes earned by citizens in the area. Students leaving the program also will have the flexibility to work remotely from either the telecenter or home, allowing graduates to stay in the communities they love.

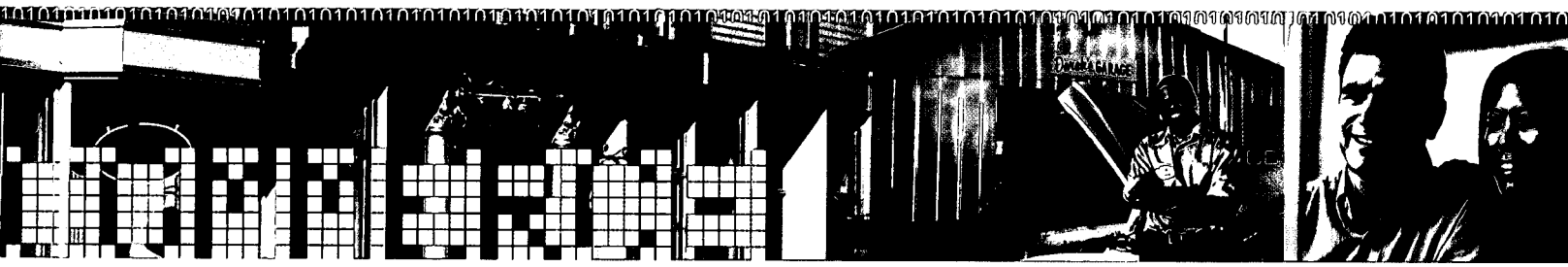
COUNTY CONNECTIVITY DATA & RANKINGS

With collaboration from service providers, the authority began an ongoing statewide study, *High-speed Internet Access in North Carolina: A 100-County Report.* The study includes cable modem, DSL, satellite and wireless services, and gauges what services are available throughout the state. This helps the authority determine what level of high-speed access exists in all 100 counties.

The authority found that by the end of 2002, 74.88 percent of all North Carolina households and 44.73 percent of all rural households would be able to access high-speed Internet services. This is a significant statistic, especially in a state that started out in the bottom 10 percent of the nation in households with computers and Internet access (U.S. Department of Commerce, *Falling Through the Net,* 1998).

The authority identified which counties had less than 50 percent access to high-speed service and therefore were among the most connectivity challenged in the state. The state's 25 most connectivity-challenged counties primarily were located in the Western tip and along the state's borders to the north, south and east.

The authority also used the data to rank counties according to severity of connectivity needs. The ranking uncovered some significant – and at times surprising – findings. For instance, Burke County, a rural mountain county, had the highest connectivity ranking – not just in Western North Carolina, but in the entire state – with 96.46 percent of households having access to high-speed service.



County Connectivity Rankings**

This chart ranks all counties in North Carolina based on the percentage of households that have access to some type of high-speed Internet service. The figures for percentage of households with available high-speed access are a composite of cable modem and DSL access figures. Counties are ranked from most to least connected. (These figures represent the level of access available but not the number of households that currently subscribe to the services available to them.)

Rank	County	High-speed Availability
1	Burke	96.46%
2	**Cabarrus**	94.35%
3	Carteret	92.06%
4	**Guilford**	91.86%
5	**Forsyth**	91.76%
6	Craven	89.64%
7	Onslow	89.49%
8	Richmond	89.21%
9	**Orange**	88.73%
10	Wilson	88.67%
11	**Buncombe**	87.20%
12	Davie	86.72%
13	Cleveland	86.38%
14	Pitt	86.11%
15	Avery	86.08%
16	**Wake**	85.85%
17	**Durham**	85.84%
18	**Alamance**	85.52%
19	**New Hanover**	85.52%
20	Watauga	84.37%
21	**Gaston**	84.17%
22	Brunswick	83.96%
23	**Cumberland**	83.75%
24	Stanly	83.22%
25	Nash	82.83%
26	Caldwell	82.24%
27	**Davidson**	82.11%
28	Yadkin	81.82%
29	Edgecombe	81.52%
30	Lenoir	81.05%
31	Ashe	79.86%
32	Haywood	79.55%
33	**Catawba**	78.73%
34	Pasquotank	78.73%
35	Dare	77.12%
36	Alleghany	75.46%
37	**Mecklenburg**	75.18%
38	Wilkes	74.97%
39	Halifax	73.04%
40	Rockingham	72.64%
41	Washington	71.73%
42	Union	70.60%
43	Bladen	70.43%
44	Henderson	68.42%
45	Randolph	68.10%
46	Chowan	67.42%
47	Transylvania	67.10%
48	Sampson	66.77%
49	Lee	65.02%
50	Surry	64.03%
51	Vance	63.36%
52	Wayne	62.93%
53	Moore	62.63%
54	Person	62.29%
55	Iredell	61.09%
56	Stokes	60.75%
57	Yancey	60.22%
58	Chatham	59.78%
59	**Rowan**	59.18%
60	Camden	58.75%
61	Currituck	58.49%
62	Bertie	56.39%
63	Johnston	54.67%
64	Northampton	54.30%
65	Perquimans	53.71%
66	Harnett	53.14%
67	Duplin	52.17%
68	Franklin	51.51%
69	Polk	51.45%
70	Pender	51.19%
71	Rutherford	51.09%
72	Alexander	51.00%
73	Lincoln	50.84%
74	Hoke	50.15%
75	Hertford	50.08%
76	Columbus	49.33%
77	Montgomery	48.80%
78	Martin	48.75%
79	Robeson	48.18%
80	Tyrrell	47.82%
81	Gates	47.80%
82	Cherokee	45.47%
83	Granville	44.70%
84	Mitchell	44.65%
85	Jackson	43.55%
86	Scotland	40.59%
87	Anson	39.46%
88	Jones	36.64%
89	Greene	36.43%
90	Macon	34.84%
91	Pamlico	27.53%
92	Warren	26.54%
93	Madison	22.88%
94	McDowell	21.10%
95	Hyde	20.97%
96	Beaufort	17.11%
97	Caswell	17.10%
98	Clay	0.00%
99	Graham	0.00%
100	Swain	0.00%

**** Urban counties in bold***

Computer courses provide hope for farming family

When Jennifer Mabe's scholarship fell through, so did her hopes of becoming the first one in her family to attend college. However, her dreams of obtaining an education and securing employment did not disappear. Those dreams were realized when Jennifer, a farmer's daughter from Stokes County, read an ad in her local newspaper for a digital literacy training class funded through the authority, and she registered for the Basic PC Literacy class. Soon after beginning the class, which met two nights a week, an electrical corporation learned she was gaining computer skills and hired her to do contract work. When her contract work ended, she joined the sales team at a national home improvement chain. She hopes when she completes her classes and is Microsoft certified she will be able to apply for one of the higher-skilled, better-paying jobs in her new employer's computer department. Thanks to these computer training courses and her own initiative, Jennifer is now helping to support her father, who has been diagnosed with leukemia. She has registered for digital literacy training classes through May 20, 2003.

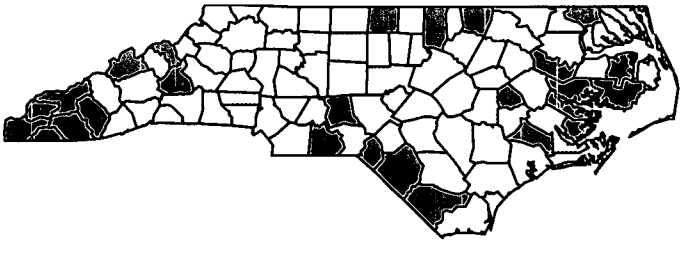
CONNECT

Jennifer Mabe

High-speed Access Availability**

This map shows the level of high-speed access available in each county based on the percentage of households that have access to the service. These percentages are a composite of cable modem and DSL access figures.

- ☐ *0 to 49.9% of households have access to high-speed Internet service*
- ☐ *50 to 69.9% of households have access to high-speed Internet service*
- ▒ *70 to 100% of households have access to high-speed Internet service*



Greatest Connectivity Challenges**

This map displays the state's most connectivity-challenged counties, which are counties in which less than 50 percent of households currently have access to high-speed Internet service.

- ☐ *most connectivity-challenged counties*

**Data current as of Dec. 31, 2002. For more up-to-date information, contact the authority at 1-866-NCRURAL or info@e-nc.org.

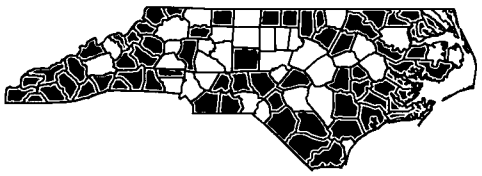
GRANTS AWARDED

The authority has invested nearly two-thirds of its original $30 million in private funding in communities. Projects funded through the authority focus on building technology infrastructure, public access sites, computer and Internet training programs, and applications that allow government agencies, businesses and other organizations to better serve citizens and communities. The authority awards funds to those projects that display potential for long-term sustainability, offer creative solutions, impact the largest number of people, and have the potential to be replicated statewide. In 2002, the authority awarded a variety of grants to both public and private entities to work toward the goal of statewide high-speed connectivity by December 2003. These grants help to empower citizens and businesses to get access to the technology they need to be competitive in today's economy.

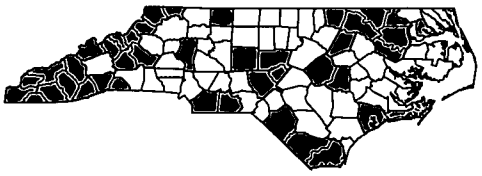
Public Access Site Grants (July 2002)
The authority awarded $768,000 to groups in rural counties statewide to help build or enhance 135 public access sites where North Carolina citizens can access the Internet at little or no cost. By creating greater Internet accessibility, the authority is helping citizens gain familiarity with technology, which they can use to improve their employment and educational opportunities. Many of the sites funded through these grants began serving citizens during fall 2002. More sites will open in early 2003.

The authority awarded 64 counties across North Carolina with grants of $12,000 each. Groups were expected to leverage additional funds to ensure sustainability.

Digital Literacy Training Grants (July 2002)
The authority awarded 29 separate grants – a total of $725,718 – to groups in rural counties for digital literacy training. The grants support projects that establish or sustain free or low-cost computer and Internet training programs in rural North Carolina communities. The funded training programs further focus on building technology skills among the unemployed, the disabled, the elderly, and people learning English, and address three levels of training, ranging from the development of basic computer skills to the operation of advanced software applications. The programs began serving communities in fall 2002 and are helping citizens build the skills they need to use the Internet and obtain higher-paying, more stable jobs in a technology-driven economy.



Counties Served by Public Access Site Grant Awards



Counties Served by Digital Literacy Training Grant Awards

Connectivity Incentives Grants (August & December 2002)

The authority awarded nearly $9 million in private funds to nonprofit and for-profit groups statewide to encourage them to provide affordable, high-speed Internet access to North Carolina's 85 rural counties and to develop new and expanded services for users. These connectivity incentives grants helped fund both supply- and demand-building projects affecting rural areas.

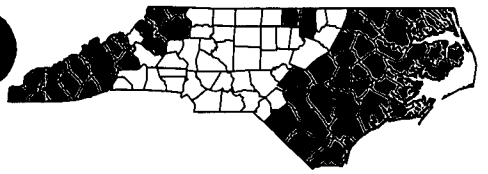
Supply-building projects are those that help to bring high-speed Internet access to underserved areas, and include efforts to build various levels of technology infrastructure in rural areas. Demand-building projects are those that help to increase the demand for and use of high-speed access. Examples of demand-building projects range from the creation of Web sites to the promotion of online training and education programs.

Through the connectivity incentives grants program, the authority awarded 17 grants ranging in amount from $1,600 to $2,925,000 to public and private entities. The authority sought to affect the widest possible geographic coverage and to work toward its legislative mandate of statewide high-speed connectivity by December 2003. Preference was given to projects that targeted the most connectivity-challenged counties and for which the authority was not the sole source of funding.

E-communities Implementation Grants (November 2002)

The authority awarded more than $1.8 million in e-communities implementation grants to help rural counties expand high-speed Internet service, training and use. The grants, which ranged from $15,000 to $375,000, are helping 30 rural counties carry out strategic technology plans. Many of these strategic efforts were developed during the planning phase of the authority's e-communities program.

Projects were funded in four categories: applications, connectivity, digital literacy training and public access. By definition, applications use the Internet to improve access to business, government, agriculture, health care and education services. Connectivity projects – efforts to extend the infrastructure that makes access possible – were required to include last-mile solutions, which can deliver high-speed Internet services to the doors of homes and businesses.

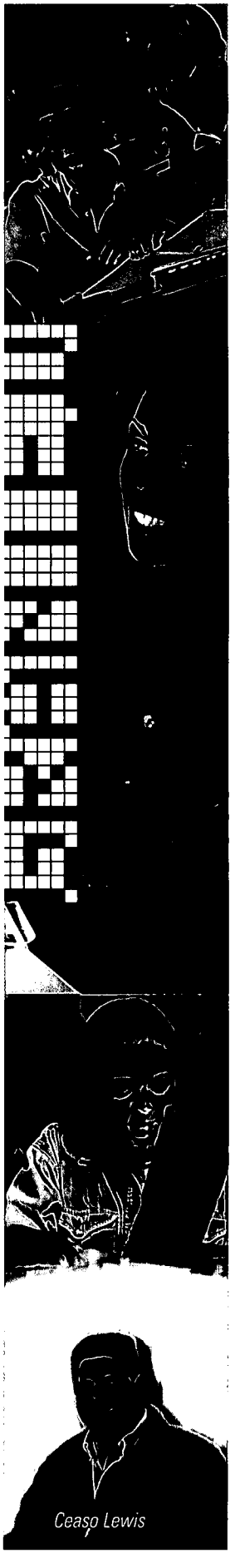


Counties Served by Connectivity Incentives Grant Awards

Counties Served by E-communities Implementation Grant Awards

Grants improve access for small businesses

Cape Lookout Internet Service has helped small business owner Ceaso Lewis do better business using the Internet. Ceaso opened his computer repair and upgrade company in Scotland Neck in November 2002. At the time, only dial-up Internet service was a viable option for his business. The highest speed his Internet service provider could offer was 56 kilobits per second, and he was charged long distance rates while connected. This hampered his business. Through a connectivity incentive grant from the authority, Cape Lookout now has been able to offer Ceaso high-speed satellite service at a reasonable price. Ceaso is thrilled with his new high-speed access, which he uses to download drivers and other large software files quickly at speeds ranging from 350 to 400 kilobits per second. With his new service, Ceaso has eliminated long distance charges and significantly decreased the amount of time it takes him to complete tasks online. He also has expanded his use of the Internet to include purchasing and selling computer equipment, and troubleshooting.



Ceaso Lewis

E-COMMUNITIES

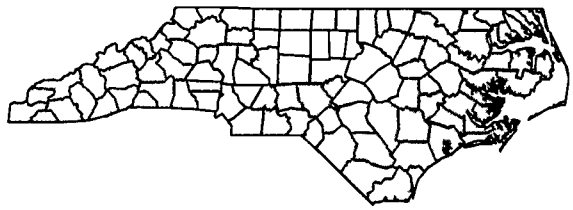
In October 2002, 81 rural counties and the Eastern Band of the Cherokee were recognized as official e-communities by the authority. This recognition highlighted their steadfast commitment to connectivity and successful completion of the e-communities planning process. Representatives from each of the e-communities received certificates signed by Gov. Michael Easley to recognize their counties' accomplishments.

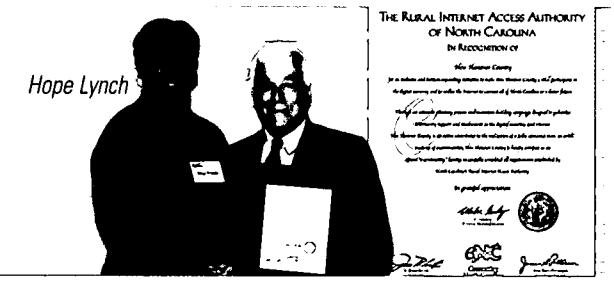
During winter 2001, the authority launched the e-communities program, a $6.3 million community outreach effort to galvanize local support for and involvement in bringing high-speed Internet access and training to all areas of the state. The authority designed the program to address four primary needs: connectivity, training, public access and applications.

Throughout the spring of 2002, e-champions, or local technology champions, worked together with county steering committees to tackle a comprehensive technology assessment and planning process.To support and guide the process, the authority awarded each county a $10,000 planning grant and led monthly training sessions attended by the e-champions. In May 2002, 81 rural counties and the Eastern Band of the Cherokee submitted extensive plans to the authority outlining their counties' technology needs, goals and strategies.

During the remainder of 2002, the e-champions led their communities through the first steps of implementing their plans, securing grant funding, and bringing increased high-speed Internet access and training to their areas. In less than a year, the authority's e-champions made significant strides in getting their counties online and in working toward a fully connected state – an e-NC made up of e-communities.

North Carolina's Official E-communities



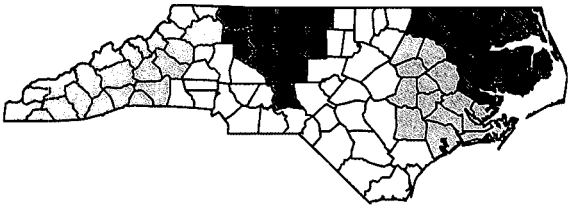


Hope Lynch

COMMI

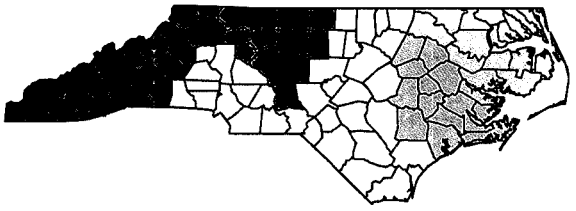
STATEWIDE DISTRIBUTION OF FUNDS

In working toward its mission of achieving statewide high-speed connectivity by December 2003, the authority has sought to invest the greatest amount of funding in areas with the greatest connectivity challenges. In awarding grants, the authority considers a variety of factors ranging from community support and involvement to sustainability and matching funds. The authority expects to further address connectivity needs in other regions during 2003. Funding is displayed below by economic development partnership region.



Funding Awarded by Region
- *$6,878,712*
- *$4,650,033*
- *$3,448,802*
- *$771,679*
- *$476,740*
- *$463,356*
- *$251,810*

Also invested $52,000 for statewide digital literacy training project
Total grant awards - $17,013,132



Funding Awarded Per Capita by Region
- *$13.58 per capita (population: 342,428)*
- *$6.90 per capita (population: 999,424)*
- *$3.76 per capita (population: 916,141)*
- *$0.50 per capita (population: 1,549,822)*
- *$0.49 per capita (population: 964,239)*
- *$0.26 per capita (population: 1,812,289)*
- *$0.17 per capita (population: 1,464,979)*

Also invested $52,000 for statewide digital literacy training project
Total grant awards - $17,013,132

Andy Gibson

Clay County: a microcosm of connectivity in the North Carolina mountains

Andy Gibson, Clay County's e-champion, has long recognized the importance of connectivity, especially to his small, rural county, nestled in the far western tip of North Carolina. Andy helped lead his county in networking the 18 buildings of the Clay County School System, but he knew so much more was possible. He quickly became involved in the e-communities program and participated in training sessions throughout the spring of 2002 that helped him and others from his county fine-tune their connectivity plans. Thanks to careful planning and an incredible community collaboration effort, Clay County won a $166,000 grant from the authority in August 2002 to help expand the network developed for the school system into a wide area network that would unite the schools, local government and businesses in Hayesville bringing citizens greater connectivity and better access to critical services in the county.

TMENT

DONATIONS RECEIVED: GRANTS & IN-KIND

The authority attracted substantial cash and in-kind support from both private and federal sources during 2002. It utilizes donations from a variety of companies and organizations to support select initiatives.

MCNC, Founding Benefactor (2000)
The authority operates primarily using $30 million in private funds committed by MCNC, formerly the Microelectonics Center of North Carolina, in 2000.

HP Purchase Credit Program Gives the Authority a Boost (January 2002)
Now a part of the new HP, Compaq Computer Corporation announced its North Carolina Purchase Credit Program which is a first-of-its-kind effort to give financial credits to the authority for equipment purchased from the technology company by a variety of groups.The groups include state and local government agencies, schools and colleges, and state employees who buy HP products under the North Carolina State Employees Purchase Program. The authority can apply these financial credits to future purchases of HP equipment.

Kerr Drug, HP, Cisco Systems, Sprint and Dnet Help Launch Public Access Pilot Program (September 2002)
The authority has created an innovative, collaborative project with Kerr Drug, HP, Cisco Systems, Sprint and Dnet Internet Services to set up pilot public access sites in four Kerr Drug locations in Bryson City, Kinston, Tabor City and Windsor. The pilot sites are one of the first such arrangements in North Carolina and the nation. If successful, the sites can be replicated at Kerr Drug stores across the state.

Kerr Drug is donating the space – at least 100 sq. ft. per store – for the sites. The authority will use credit built up through the North Carolina Purchase Credit Program to purchase computer equipment from HP for the four sites. Cisco donated high-speed switches to help bring Internet service to each of the sites. Sprint will provide FastConnect DSL high-speed Internet access to three of the sites: Kinston, Tabor City and Windsor. Dnet Internet Services, based in Franklin, will donate high-speed, Internet access to the Bryson City site. The sites are scheduled to open in early 2003.

Appalachian Regional Commission Helps the Authority Connect the Mountains (September 2002)
The authority received a $200,000 grant from the Appalachian Regional Commission in September 2002 to address connectivity needs in 27 rural Western North Carolina counties. The monies will be used primarily to help select counties implement strategic technology plans created in spring 2002 during the planning phase of the e-communities program.

Lexmark Donates Printers to Help Build Public Access Sites (October 2002)
Lexmark International generously donated 100 of its Z53 Color Jetprinters to the authority through its Print Art Educational Program, a national, philanthropic initiative to expand and enrich the art and cultural education resources in select school districts and communities. During January 2003, the printers will be distributed statewide to help outfit public access sites where citizens can get free or low-cost computer and Internet access.

U.S. Department of Commerce Grant Supports E-government Efforts (October 2002)
The U.S. Department of Commerce's Technology Opportunities Program awarded the authority a $700,000 grant to help support the authority's Local E-government Utilization Program or LEG-UP. The authority was one of about 20 organizations out of an applicant pool of more than 700 to receive a grant award. The authority expects to select local governments for participation through a competitive process in early 2003.

LEG-UP will improve technology infrastructure, training and use by local governments in 55 counties and/or municipalities in North Carolina. By working to expand local governments' use of technology, the authority will help to improve the delivery of public services.

LEG-UP is a $1.5 million program. The authority matched the $700,000 in federal funds with $605,000 in cash and $204,032 in in-kind support from its own private funds. The N.C. Center for Public Technology also has pledged $11,250 to support the LEG-UP effort. The N.C. League of Municipalities, N.C. Association of County Commissioners, and N.C. Rural Economic Development Center also are partnering on the project.

MCNC

hp invent

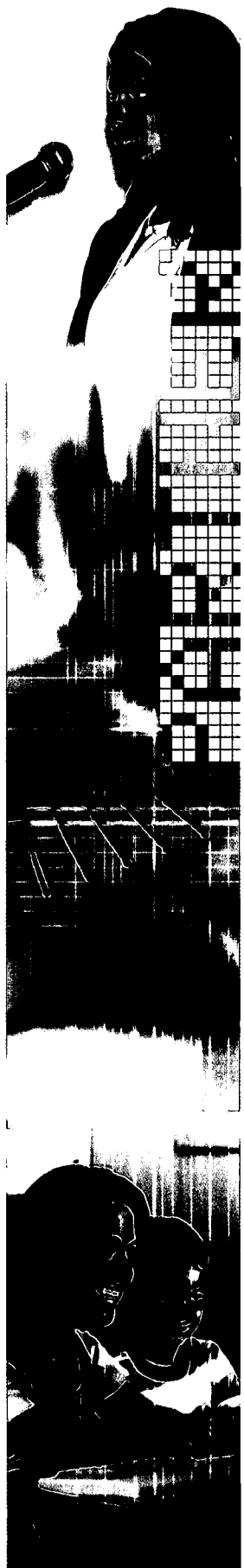
Cisco Systems

Dnet Internet Services
The One You've Been Looking For

Sprint.

KERR DRUG

LEXMARK



FINANCIAL INFORMATION

Rural Internet Access Authority
Statement of Financial Position
December 31, 2002

Assets:	
Cash and cash equivalents	$1,965,981
Prepaid expenses and other assets	16,871
Total assets	$1,982,852
Liabilities and net assets:	
Liabilities:	
Accounts payable	$ 13,171
Accrued leave	$ 35,629
Deferred revenue	1,934,052
Total liabilities	1,982,852
Net assets:	
Unrestricted	-
Total net assets	-
Total liabilities and net assets:	$1,982,852

Rural Internet Access Authority
Statement of Activities
Year Ended December 31, 2002

		Inception to 12/31/02	Inception to 12/31/01
Revenues:			
Contract revenue recognized	$ 6,800,513	9,891,902	$ 3,091,389
Interest income	13,170	162,732	149,562
Other income	10,649	10,649	
Total revenues:	6,813,683	10,065,283	
Expenses:			
Education, awareness and outreach	2,192,593	2,619,570	426,977
Inventory	220,633	1,041,707	821,074
Telecenters	2,056,025	2,518,437	462,412
Incentives	163,750	163,750	-
General operations	2,180,682	3,711,170	1,530,488
Total expenses:	6,813,683	10,054,634	
Change in net assets:	-		
Net assets, beginning	-		
Net assets, ending	$ -		

NC TechForce connects seniors to computers and family

Staffed by student volunteers, the Perquimans County NC TechForce chapter has set a goal to help senior citizens who feel intimidated by technology become more comfortable with computers. During classes offered by the chapter, seniors are given special attention to help them gain confidence and skill. Viola Johnson came to the classes for help after her son, who lives in Philadelphia, gave her a computer. She was not comfortable with technology yet, so her son encouraged her to take NC TechForce workshops on using the Internet and word processing. Viola enrolled in the classes and now sends e-mails almost daily to her friends in Maine and her family in Pennsylvania and Florida. She is grateful for the computer skills that enable her to keep in better contact and save the expense of long distance phone calls, and she continues to register for nearly every new class the chapter offers.

LOOKING AHEAD: 2003 & BEYOND

- Continue expansion of affordable access to high-speed Internet services to homes, businesses and communities
- Continue to work with the 82 e-communities in 2003 to help guide them in implementing their strategic technology plans and meeting their connectivity goals
- Provide a second round of funding to the four telecenters to help expand their offerings and support their economic development efforts
- Select about 20 local governments through a competitive process to participate in the pilot phase of the Local E-government Utilization Program; work with these entities to expand and improve their use of technology to better serve citizens and businesses with public services; provide assistance such as equipment, high-speed access, training, development of an interactive Web page, and creation of transactional applications; later, select a second group of about 35 local governments to participate in the process
- Develop a searchable database to help citizens locate public access sites and digital literacy training programs as they continue to open and expand
- Move forward with plans to create regional technology councils, which will promote, support and nurture the incorporation of technology into the business, government and community life of rural regions; guide the councils in focusing on strategies for using available technology infrastructure and training as economic development tools
- Develop a leadership development program on the use of information technology in economic development
- Host a statewide technology conference focused on technology-driven economic development
- Recognize 400 NC TechForce students from 34 rural counties and award scholarships to some of its best volunteers
- Expand the NC TechForce program to more North Carolina counties
- Work with grant recipients to ensure grant requirements are met, and Internet access and training opportunities are expanded statewide
- Continue to update information on Web site, www.e-nc.org, and answer questions through toll-free number, 1-866-NCRURAL
- Help citizens stay informed about the state of connectivity in North Carolina

TECHNOLOGY LEADERSHIP MUST CONTINUE

At both the state and national levels, high-speed Internet access has become a linchpin of commercial competitiveness. Issued in February 2002, the U.S. Department of Commerce's *Digital Economy Report* states, "the number of workers using computers at work increased from 24.2 million in 1984 to almost 64 million in 1997 [about 50 percent of the working population at that time], an average annual increase of 7.8 percent per year." While that initial growth may have slowed somewhat, the number of jobs requiring computer skills will continue to increase. We all have seen the transformation: computers and the Internet are integral parts of the modern workplace.

In North Carolina especially, communities must be able to offer high-speed Internet infrastructure and service to attract businesses. Citizens must have technology skills to obtain the higher paying, more stable jobs of today's digital economy. Due in large measure to the work and leadership of the Rural Internet Access Authority, for the first time, rural North Carolina is getting connected to this wide array of opportunities, resources – and hope.

As the authority sunsets in December 2003, it will leave an impressive three-year legacy of success. While the authority is poised to complete and exceed the legislature's mandate, technology is constantly evolving and demands continued attention. This need will not sunset with the authority. To maintain economic competitiveness, North Carolina must continue to address its technology needs.

As the authority looks beyond 2003, it is considering the need to have an entity focused on the advancement of North Carolina's technology and infrastructure policies. Projects funded by the authority must continue to be monitored. Guidance and continued support – both financial and programmatic – must be provided to communities to ensure they can meet the technological and economic needs of citizens and businesses. As the General Assembly convenes its session in early 2003, the authority will work with legislators to further explore the need for a continuing statewide body.

By continuing to build technology infrastructure and enhancing citizens' skills in using technology, we are working toward economic recovery and making North Carolina more competitive nationally and globally. If you want economic prosperity and enhanced quality of life in this state, we encourage you to join our efforts. Together, we can ensure this state continues its work to connect all North Carolinians to the Internet and a better future!

2002 SUPPORTERS

AOL/Time Warner
Alcatel
Alleghany High School Cyber Campus
Appalachian State University
Asheville-Buncombe Technical Community College
BellSouth
Blue Ridge Business Development Center
Brody School of Medicine at East Carolina University
Capital Broadcasting Corporation
Cavanaugh & Associates, PA
Cisco Systems Inc.
Coastal Carolina Community College
College of the Albemarle
Compaq Computer Corporation
Craven Community College
Curtis Media Group
ElectriCities of NC
E-NC Telecenter of Duplin County
ExplorNet
Fayetteville Technical Community College
Forsyth Technical Community College
Global Systems Inc.
Green Engineering
Halifax Community College
Haywood Community College
HP
Hobbs, Upchurch & Associates
IBM
Johnston Community College
Kerr Drug
Lexmark
Martin Community College
Mayland Community College
McDavid & Associates Inc.
McDowell Technical Community College
McGill Associates
McKim & Creed, PA
MCNC
Microsoft Corporation
Mountain Area Information Network
N.C. Association of County Commissioners
N.C. Cable Telecommunications Association
N.C. Department of Agriculture and Consumer Services/National Agricultural Statistics Services
N.C. Department of Public Instruction
N.C. Electronics and Information Technologies Association
N.C. Farm Bureau
N.C. Global TransPark
N.C. Healthcare Information and Communications Alliance Inc.
N.C. League of Municipalities
N.C. Museum of History
N.C. Office of Information Technology
N.C. Rural Economic Development Center
N.C. Telephone Alliance
N.C. Telephony Industry Association
North Carolina's electric cooperatives
Northeast Technology and Business Center
Piedmont Community College
Pitt Community College
Randolph Community College
Rivers and Associates
Roanoke Electric Cooperative
South Piedmont Community College
Southeast Community College
Southern Bank Foundation
Southwestern Community College
Sprint
Tri-County Community College
Tri-County Community College Telecenter
University of North Carolina at Wilmington
Verizon
Western Carolina University
Wilkes Community College

SUPPORT

2002 Rural Internet Access Authority Staff

Jane Patterson
Executive Director

Angie Bailey
Executive Assistant

Shaheen Bandukwala
Program Associate

Charlie Clark
Network Access Technologist

Will Johnson
Regional Program Officer – Northeast

Ashlie Lefko
Regional Program Officer – West

Dan McAuley
Subscriber Network Technologist

Jerald Perry
Regional Program Officer – Northeast

George Ponder
Regional Program Officer – North Central

Charles Stanback
Outreach Director

Donna Sullivan
Regional Program Officer – Southeast & South Central

Mark Walters
Legal Intern

Deborah Watts
Grants/Research Officer

Joanna Wright
Program Coordinator

Contractors:
Sandy Babb
Keith Clark
John Howell
Charlie Pittman

Former Staff:
Chuck Clark, Cisco Fellow

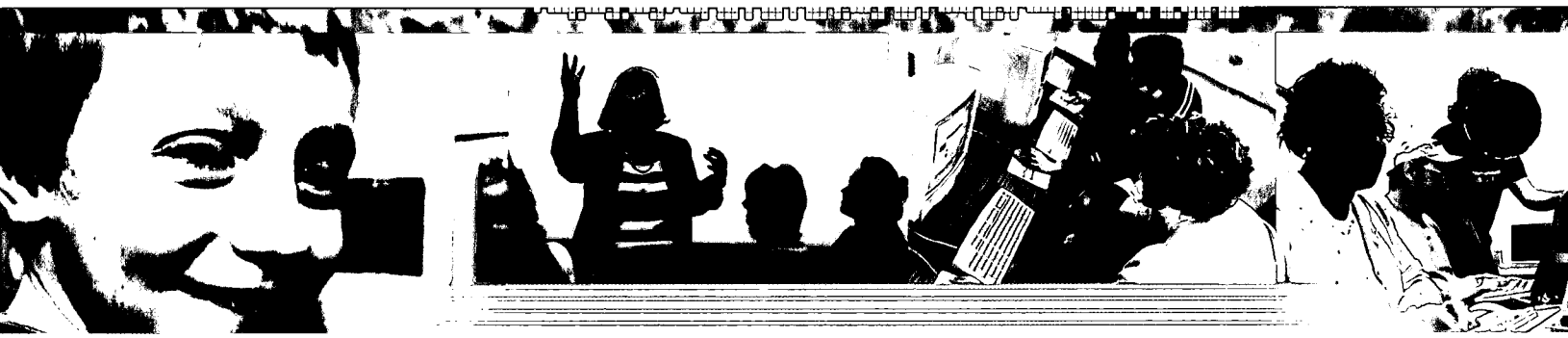
Connecting North Carolina to a Better Future

ECONOMIC PROSPERITY

Without high-speed Internet infrastructure, leaders in Northeastern North Carolina were crippled in their economic development efforts to recruit companies and to offer existing businesses the technological support they needed. With the opening of the Northeast Technology & Business Center in January 2002, hopes for a brighter economic future were restored. With help from the authority, the center offers technology-equipped space for business and technology resources to the community.

One of four North Carolina telecenters created by the authority, the Northeast Technology & Business Center also hosts computer and Internet training classes and provides citizens with free computer and Internet access, enabling them to gain the technology skills they needed to compete for today's jobs.

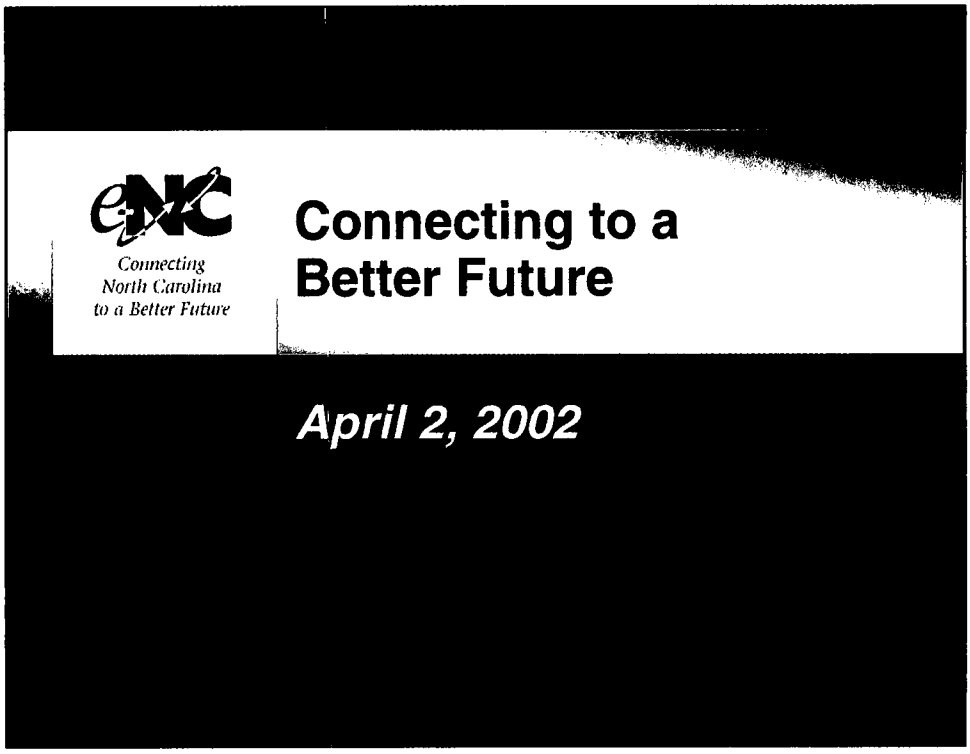
As the center approaches its one-year anniversary, it has much to celebrate. The center has helped more than 2,100 people get access to computers and the Internet, and it has empowered small business owners to grow their companies in a technology-rich environment. Overall, the center has brought 44 new jobs to the region and has attracted more than $1 million in additional funds to help boost economic development activities in Northeastern North Carolina. Perhaps even more exciting, by the end of 2002, the center was fully occupied and has plans to expand to accommodate a waiting list of companies seeking space in the center – that will mean more jobs and a brighter economic future for the region.

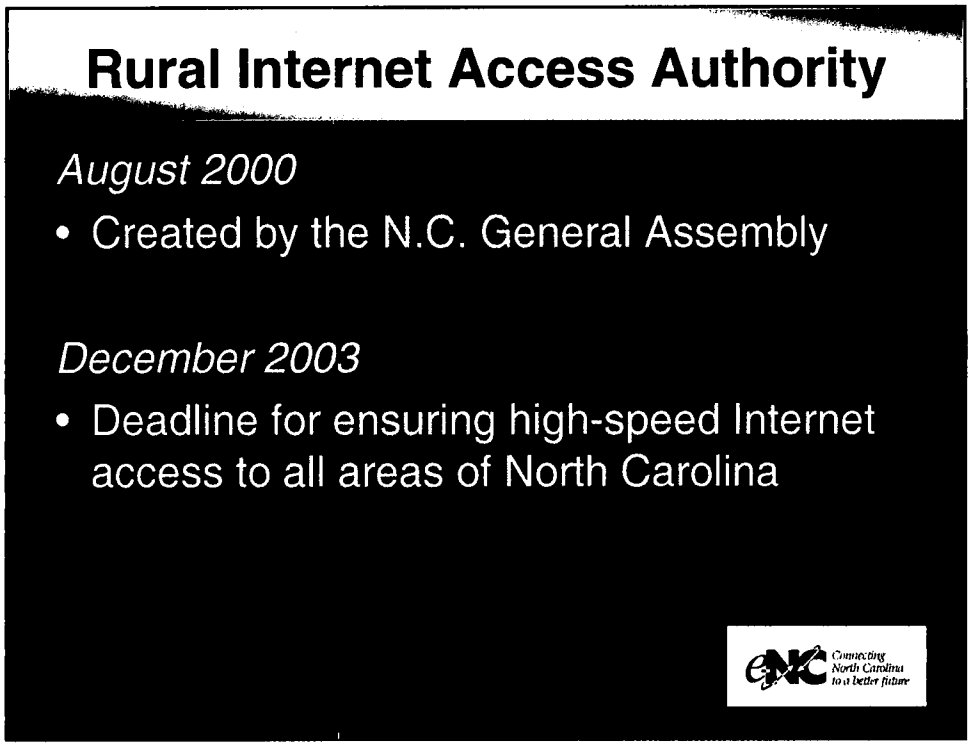


e-NC Initiative
c/o Rural Internet Access Authority
4021 Carya Drive
Raleigh, NC 27610

1-866-NCRURAL
www.e-nc.org

Connecting North Carolina to a Better Future


eNC
Connecting
North Carolina
to a Better Future
Connecting to a
Better Future
April 2, 2002


Rural Internet Access Authority
August 2000
• Created by the N.C. General Assembly
December 2003
• Deadline for ensuring high-speed Internet access to all areas of North Carolina
eNC Connecting North Carolina to a better future

Impetus for Creation

- Four reports in 1999 and 2000 pointed to North Carolina's need for advanced technology:
  - *Falling through the Net*, U.S. Department of Commerce, 1999
  - *Vision 2030*, series of reports, N.C. Board of Science and Technology, 1999
  - *Choices for a New Century*, N.C. Rural Economic Development Center, 1999
  - *Final Report*, N.C. Rural Prosperity Taskforce, 2000

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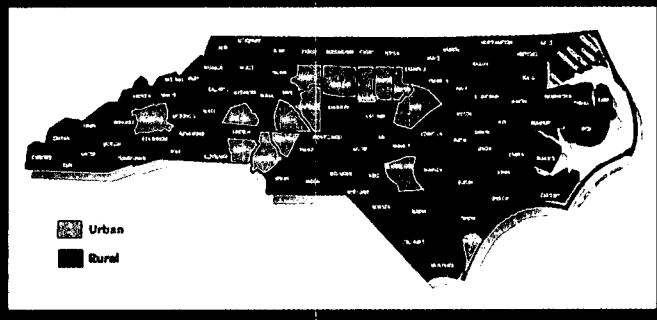
Population Served



Source: N.C. Rural Economic Development Center, As defined in N.C. General Statute 143B-437.41, a rural county is defined as one with a density of fewer than 200 people per square mile

- 100 North Carolina Counties:
  - 85 rural
  - 15 urban
- Special emphasis on rural

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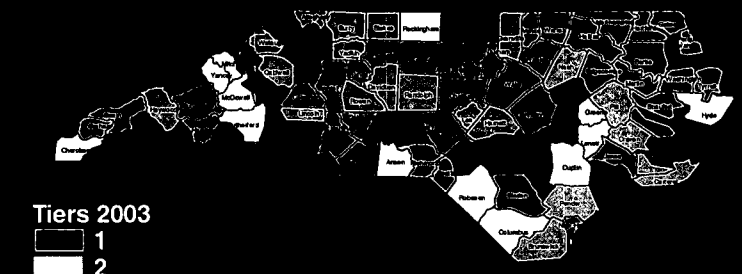
Economically Disadvantaged

Tier Designations 2003



Tiers 2003
1
2
3
4
5

Tier designations are a measure of economic distress. Tiers 1 and 2 are most distressed.

Source: NC Department of Commerce, February2003

200 0 200 400 Mile

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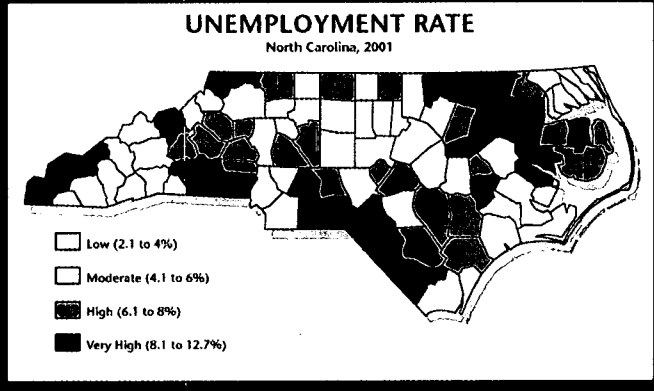
Unemployment & Layoffs



Source: N.C. Employment Security Commission

- 39,069 layoffs in 2002, particularly in manufacturing
- In 2002, unemployment benefits reached over $1.2 billion

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Authority's Funding Sources

- *Public-private partnership*
  - $30 million in private funding from MCNC, a self-supporting nonprofit
  - $700,000 grant from the U.S. Department of Commerce's Technology Opportunities Program
  - $200,000 from the Appalachian Regional Commission
  - In-kind and cash support from more than 80 other organizations

Investment

- *Investing Directly in Local Communities*
  - Nearly two-thirds invested in rural North Carolina counties through grants and incentives
  - $3 million committed to education, outreach and awareness projects
  - $2 million invested in research

Gauging Needs

- Examples of Completed Research
  - Citizens Survey (*December 2001*)
  - Infrastructure Inventory (*December 2001*)
  - E-government Survey (*February 2002*)
  - Threat X Survey (*February 2002*)
  - Digital Literacy Survey (*March 2002*)
  - Net Readiness Survey (*March 2002*)
  - 100 County Report (*June 2002*)
  - Agriculture Survey (*July 2002*)

  Visit www.e-nc.org to download copies.

Addressing Rural Needs

- *Customized, Locally Driven Solutions*
  - Grassroots structure
  - Awareness
  - Local action
  - Access
  - Education and training
  - Scalable applications

Grassroots Structure: Connectivity Key

e-NC Initiative:
Connecting North Carolina to a Better Future

Grassroots effort that provides the funding and framework to empower citizens to work to bring greater high-speed Internet access and training to their communities

- More than 2,800 volunteers in all 100 counties
- The authority's state leaders, staff and regional program officers support local efforts
- More than 250 local forums

Awareness

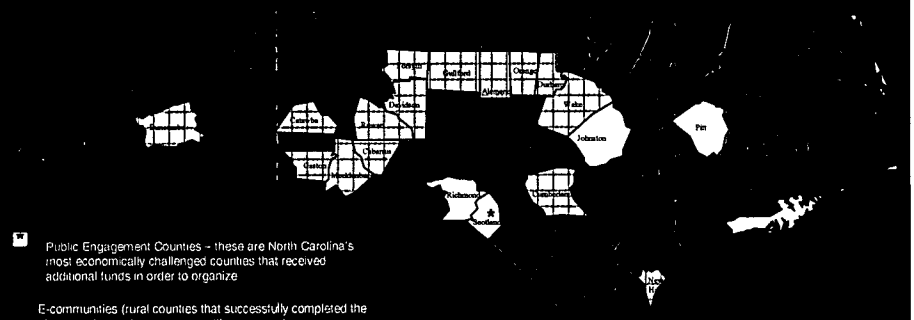
E-communities

- E-NC works with local citizens to build community commitment to and participation in bringing high-speed access and training to all areas of the state

  create a fully connected state - an "e-NC" made of e-communities

  or local technology champions, leading county-specific efforts

E-communities Program



Public Engagement Counties - these are North Carolina's most economically challenged counties that received additional funds in order to organize

E-communities (rural counties that successfully completed the planning phase of the e-communities program)

Urban Counties

Rural: A county with a density of fewer than 200 people per square mile based on the 1990 U.S. Census (as defined in N.C. Senate Bill 1343)

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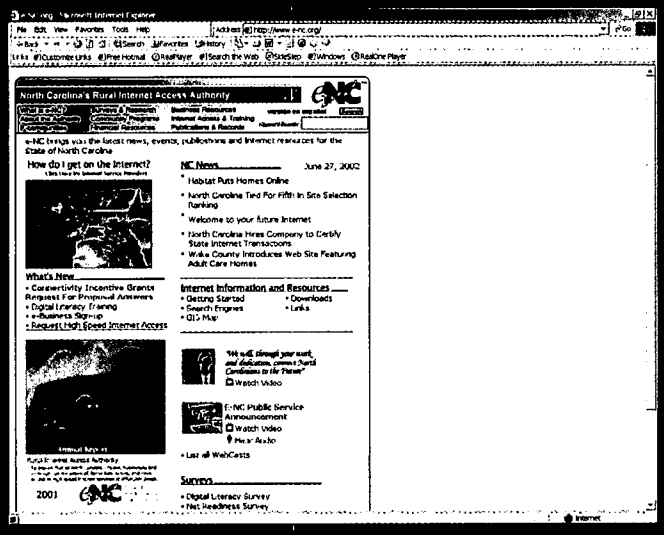
Local Action

- E-NC works to provide citizens with the information they need to get connected and give them a voice in the process.
  - www.e-nc.org
  - 1-866-NCRURAL

eNC Connecting North Carolina to a better future

e-NC Web Site: www.e-nc.org

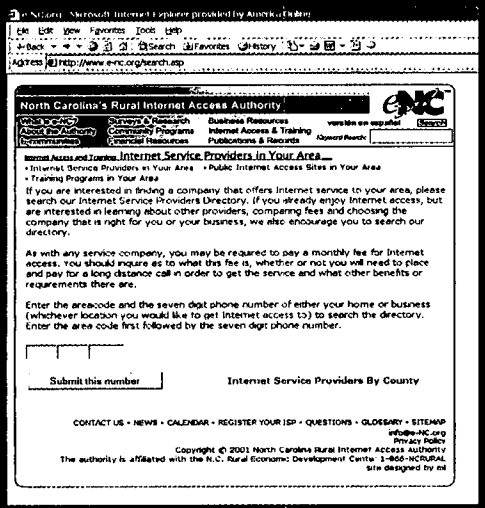


11,140 average hits per day

4.1 million hits to the Web site in the last year!

e-NC Connecting North Carolina to a better future

Internet Service Provider Locator



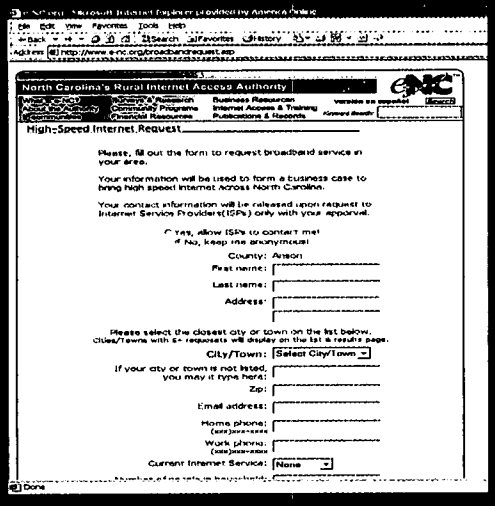
To search for a local Internet service provider, click on:

"Internet Access & Training"

Database features information of 179 registered ISPs

e-NC Connecting North Carolina to a better future

High-speed Request Registration



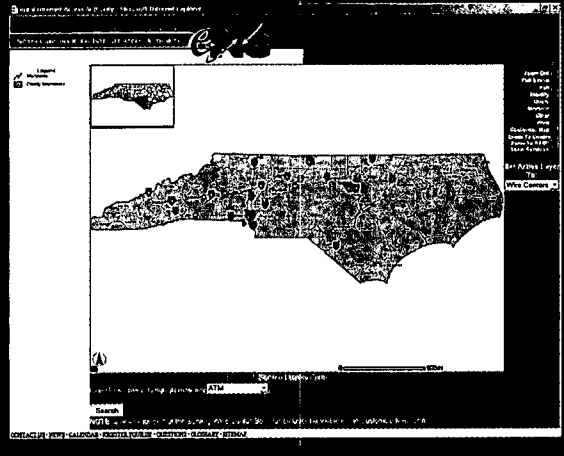
To register a request for high-speed service, click on:

"[redacted]"

under "What's New"

eNC Connecting North Carolina to a better future

Infrastructure Inventory GIS Map



To learn more about service and infrastructure available in your area, click on:

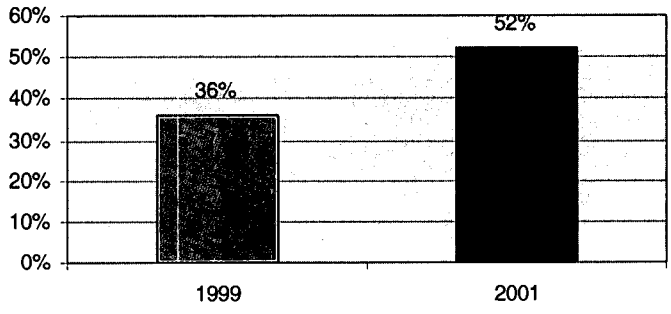
"[redacted]"

under "Internet Information & Resources"

eNC Connecting North Carolina to a better future

Access: Home Internet

Portion of all households that have home Internet access



Source: *Citizens Survey*, East Carolina University and the Rural Internet Access Authority, June 2002

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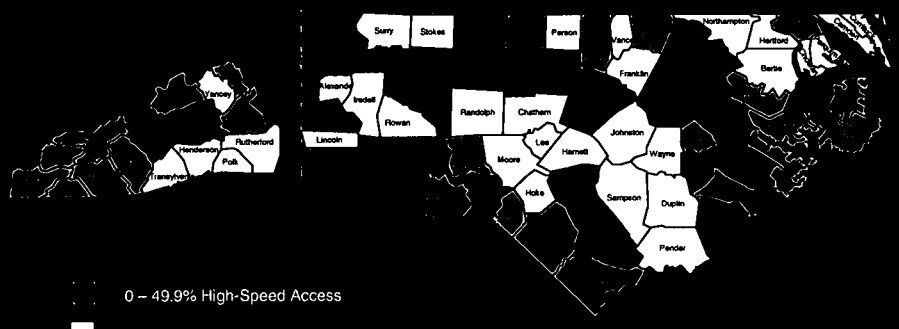
Households with Access to High-speed Service



0 – 49.9% High-Speed Access

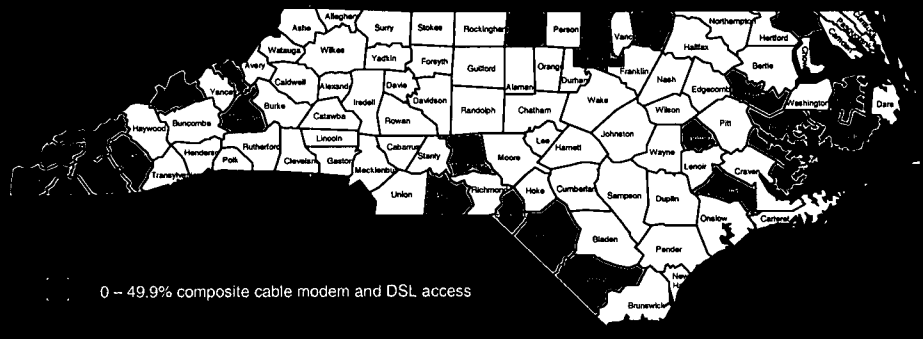
50 – 69.9% High-Speed Access

70 – 100% High-Speed Access

Composite of Cable Modem and DSL Access

eNC Connecting North Carolina to a better future

Overcoming Greatest Connectivity Challenges

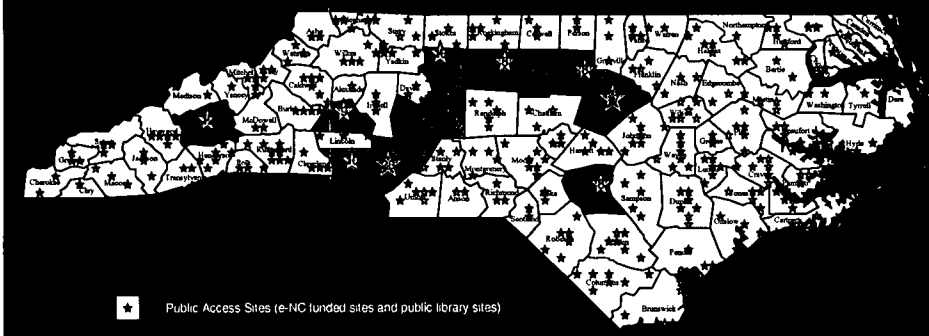


Connectivity Challenges.ppt

Increased Public Access

- Opened or expanded more than 140 public access sites across North Carolina
  - Partially funded by e-NC, sites are opening or expanding in 64 rural counties
  - 4 pilot sites located in Kerr Drug stores in rural areas opening through innovative partnership
- Citizens can get free access to computers and the Internet

Public Access Sites

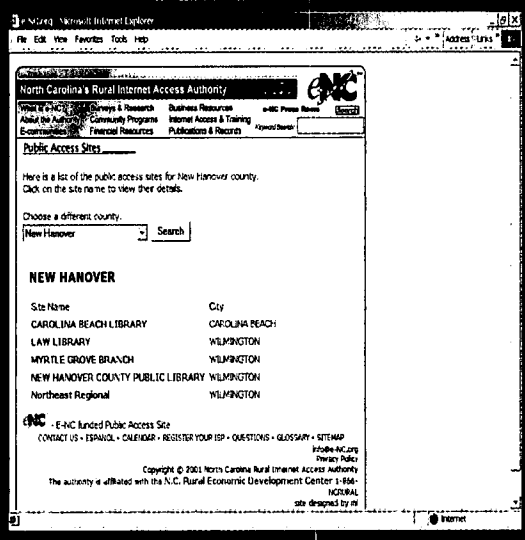


Public Access Sites (e-NC funded sites and public library sites)

Urban Counties

e-NC Connecting North Carolina to a better future

Increased Public Access



To view a listing of public access sites in your county, click on:

"[illegible]"

under "Internet Access and Training"

e-NC Connecting North Carolina to a better future

Created Community Models

- Four telecenters in operation in some of the most economically distressed counties in the state
- Telecenters are technology hubs within communities that provide technology tools and resources for communities by offering:
  - Public access sites
  - Internet & computer training
  - Technical resource services
  - Sites for e-work / business incubation space

Created Community Models

- In 2002, the telecenters:
  - Created 66 new jobs
  - Raised $4.4 million
- 3 out of 4 telecenters is debt-free

Telecenters

Connecting North Carolina to a better future

Training

- 25 e-business workshops for small business owners conducted around the state – attendees receive *Business Connections* handbook
- $721,718 for 28 grants for free or low-cost digital literacy training programs for citizens, with a special emphasis on:
  - Unemployed
  - Disabled
  - Elderly
  - People learning English

Connecting North Carolina to a better future

NC TechForce

- Nearly 400 student volunteers
- 34 chapters
- Offers technical assistance that might not be available otherwise, especially in rural areas

Connecting North Carolina to a better future

The North Carolina Model

- Comprehensive and inclusive
- Technology neutral
- Public-private-nongovernmental partnership
- Grassroots movement with motivation coming from local areas
- Active leadership and enthusiastic support staff
- Statewide effort
- Statistically valid research
- Scaleable applications provide models to be replicated statewide

Connecting North Carolina to a better future

National Recognition

- National Association State Chief Information Officers (NASCIO)
- Technology Opportunities Program (TOP)
- Appalachian Regional Commission (ARC)
- U.S. Department of Commerce Briefing

Moving Forward

The authority recommends the following:

- The Commission presents the position that the Rural Internet Access Authority has largely completed its work and will sunset on December 31, 2003.
- The Commission accepts three guiding principles as providing the focus for attention in the future.

Moving Forward *(Continued...)*

- The Commission set aside $600,000 for possible follow-on work, to be held while the RIAA pursues various options for achieving the three principles.
- The Commission will ask the General Assembly to enact legislation to authorize follow-on activities that will provide the support for information infrastructure for North Carolina citizens – particularly NC rural citizens, and also as identified by the guiding principles.

Guiding Principles

Monitor

- Monitor and safeguard the investments made by the Rural Internet Access Authority.

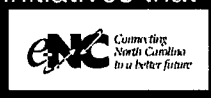
Secure Funding

- Attract and coordinate funding of federal and foundation dollars for regional and statewide technology initiatives and assist local governments, including e-communities, in obtaining grants to further enhance their technology infrastructure.

Guiding Principles *(Continued...)*

Leadership/Technical Assistance/Project Development

- Provide leadership, coordination and support for grassroots efforts targeting technology-based economic development.
- Provide leadership, coordination and support for telecommunications policy assessment.
- Develop collaborative technology projects, programs and activities that reflect comprehensive efforts to develop technology-based economic development initiatives that utilize high speed Internet as a technology platform.



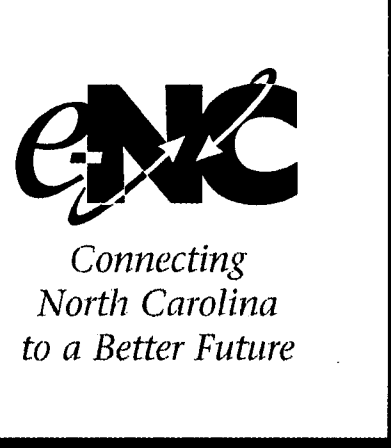
Guiding Principles *(Continued...)*

- Provide for replicable and scalable Internet applications that will assist the communities of North Carolina to remain competitive with respect to knowledge of, use of, and affordable access to high speed Internet.
- Maintain databases managing comprehensive information on telecommunications networks, public access sites and digital literacy training programs in North Carolina.

What's to come?

Prosperity

Continuing to Connect North Carolina to a better future



1-866-NCRURAL

www.e-nc.org

e-Communities

The e-Communities program is a grassroots, community outreach effort to create local commitment and participation in bringing high-speed access, awareness and training to all areas of the state. The program provides a vital structure for catalyzing communities to reinvigorate their local economies to participate in technology-driven economic development. e-Communities inspires citizens to enhance their personal, as well as their community's, access to e-learning, e-health, e-government and e-commerce.

To become a designated e-community, 81 counties, plus the Eastern Band of the Cherokee, successfully developed e-community strategic plans that were reviewed and accepted by the RIAA. The RIAA provided $820,000 in grants to support their efforts. Steering committees from each county evaluated and prioritized connectivity goals addressing four main areas of technology: connectivity, digital literacy training, public access and applications.

The e-community plans specified years of work needed across the state before North Carolina can become a fully connected state. To realize the vision captured in these plans the RIAA awarded $1.8 million in grants in November 2002 to help counties implement selected technology efforts.

Representative sample of e-communities Implementation Grant Proposals:

- Caldwell County proposed a multi-county project that would integrate and simplify intake systems at county social security offices, health departments, Smart Start, community action and county government
- The Pamlico County e-communities steering committee created a 501c3 organization, Pamlico Information Network Enterprise or PINE, and proposed a local wireless network for their remote coastal county
- South Piedmont Community College proposed the creation of two business development centers to nurture and mentor startup entrepreneurial e-businesses
- Virtual Farmers Markets and e-agriculture training programs are being developed in eastern North Carolina by Mount Olive College and in the west by Madison County

In addition to these awards, Public Access Site Grants were made available on a non-competitive basis to each of the e-communities counties. These $12,000 grants created or enhanced 141 sites in 64 counties where citizens can have free access to the Internet.

What is the future of the e-community effort?

A tremendous amount of energy has been expended by e-champions and steering committees to educate and excite citizens about the possibilities available to them through technology. Our counties are poised and ready to move ahead but it will take time and money to implement all the plans. In the meantime, it is vital that North Carolina not loose the focus that the e-communities have worked so hard to develop. On-going support in the following areas is needed to keep citizens engaged and e-communities thriving:

- Public engagement events in all counties
- Mentoring and guidance for e-champions, local governments, and public access site directors
- Awareness campaigns, using all media
- Monetary support for the public access sites

e-NC Telecenters

What Are Telecenters?
e-NC Business and Technology Telecenters are multi-purpose technology, business, training, and public access centers whose mission is to strengthen and grow the economy and to create new income, educational, and civic opportunities for businesses and communities in rural North Carolina.

Currently, e-NC Telecenters are driving technology-based economic development in four rural North Carolina communities. They provide businesses, local governments, and community organizations with the most current technology resources and services, including high-speed Internet access, business services and support, including business incubation, training programs, and public access computers, as well as opportunities for telecommuting and e-work. Telecenters are bringing new kinds of businesses into rural communities, stimulating entrepreneurship, and creating 21st century jobs.

The four e-NC Telecenters were established in January, 2002, with two located in western North Carolina (Alleghany and Cherokee Counties) and two located in eastern North Carolina (Duplin and Martin Counties). Each of these counties is identified as economically distressed by the NC Department of Commerce. Nonetheless, during their first year of operation, the Telecenters are making a huge positive impact by bringing the benefits of state-of- the-art information and communications technology to the entire community.

Telecenters and Communities
Telecenters are fast becoming focal points of their communities. The following are some of the things our Telecenters are doing to help their communities prosper in today's digital economy and society.

- Transforming traditional economic development into technology-based economic development
- Demonstrating to medium and larger size companies that rural communities have the technology, technical, business, and workforce capacities to be desirable sites for headquarters, branch offices, outsourcing, and telecommuters
- Creating jobs through developing new income opportunities and pursuing grow-your-own strategies
- Nurturing entrepreneurs and small businesses through the provision of technology services and resources and business incubation
- Providing technology and technical assistance to local governments, non-profit and community-based organizations and assisting them to bring their operations on line and serve clients more effectively and efficiently
- Providing free public access to computers and the Internet for individuals and small groups
- Delivering, in collaboration with local schools, colleges, and universities, a diverse range of excellent education and training programs, tailored to the client's needs, including technology training, distance and e-learning programs

One Framework: Different Approaches

e-NC Telecenters were designed within a common framework and all must have certain components (technology services and resources, training programs, public access to computers and the Internet, and business enterprise or e-work. The latter can take the form of business incubation, telecommuting by individuals or groups, or any kind of enterprise that uses technology as a part of its business and produces revenue. Each Telecenter is developing all required components, but each is unique and may have differing emphases and approaches, depending on the community's circumstances, needs, and priorities.

The Telecenters are operating under a variety of administrative structures. Two are hosted by Economic Development Commissions, one is hosted by a community college, and one is hosted by a community-based non-profit organization with a history of success in other ventures. Decisions about administrative structure are made primarily by the community, with input from the e-NC Initiative.

Although each Telecenter has its distinct identity within the common framework, they possess in common the following attributes which are critical to success:

- Clear vision and specifically articulated goals
- Dedicated, passionate leadership
- Focus on technology-based economic development
- Authentic collaboration and teamwork with diverse community partners
- Realistic, strategic business plan, including specific action steps and benchmarks
- Continuous self-appraisal and willingness to make mid-course corrections
- Unflagging perseverance

The Future

Today, e-NC Telecenters are changing lives in four rural communities. Not only are new economic, educational, and civic opportunities being created, but the way that these communities think about their economic and social future changes as they began to see themselves, their capacities, and their potential in a new light. Likewise, others are seeing that these communities are good places to live, to innovate and to work. Telecenters are broadening horizons and connecting rural communities to the rest of the world.

We propose to create four new Telecenters in 2003. North Carolina needs a network of Telecenters to serve its widespread rural communities. As new Telecenters are created, existing Telecenters will provide peer assistance and support, and all will be engaged in a mutual learning and growing process, which will better equip them to help move their communities forward. The resulting Telecenter Network will play an essential role in transforming rural North Carolina communities into vital, flourishing places, brimming with opportunity and alive with a sense of possibilities. Telecenters can serve as a model for rural America and other developing countries as they move to transition from an agricultural to a technology-driven economy.

NC TechForce

The Rural Internet Access Authority, via the e-NC initiative, has assembled the finest young minds in the State of North Carolina to form a cadre of technology-savvy, enthusiastic, energetic volunteers to serve as technology gurus in their communities. The NC TechForce team consists of high school, community college and university students that lend their technology skills to the surrounding communities. The goal of e-NC is to have trained and committed students in every county in North Carolina by the end of 2003. The NC TechForce project began in November 2001 with a pilot program in several rural counties in NC and has grown to include more than 400 students active in 34 TechForce chapters.

TechForce students build Internet and Information Technology skills in their communities, conducting seminars and discussion groups on technology uses to catalyze greater usage of the Internet. Other tasks include helping small businesses with system setup and Web design and implementation. The greatest contribution, probably, will be to assist local citizens and businesses with "conquering the 'Net" ... answering questions, explaining usage of browsers, etc. and being a local Internet resource for the community.

So what are the TechForce Troops doing?

- In Northeastern North Carolina, a five-county TechForce project is helping schools, churches, businesses and other community groups establish a web presence
- The chapters in Yadkin, Perquimans and Alleghany counties are holding Internet "How to" classes for Senior Citizens in their communities
- In Pamlico County, a coastal NC community, the TechForce chapter has been integral in the design of a community wireless network. The network is currently being implemented with funding assistance from the RIAA
- Invaluable technical assistance is being provided to the local K-12 system by the Pender County chapter. The TechForce kids install software, help with hardware upgrades and assist with in-school local area networks
- The Anson/Union Chapter (our largest with over 80 Troops) recently completed an operating system upgrade and software upgrade for the Union County Department of Aging and networked their computers to the Internet

And what do the Troops get for their efforts?

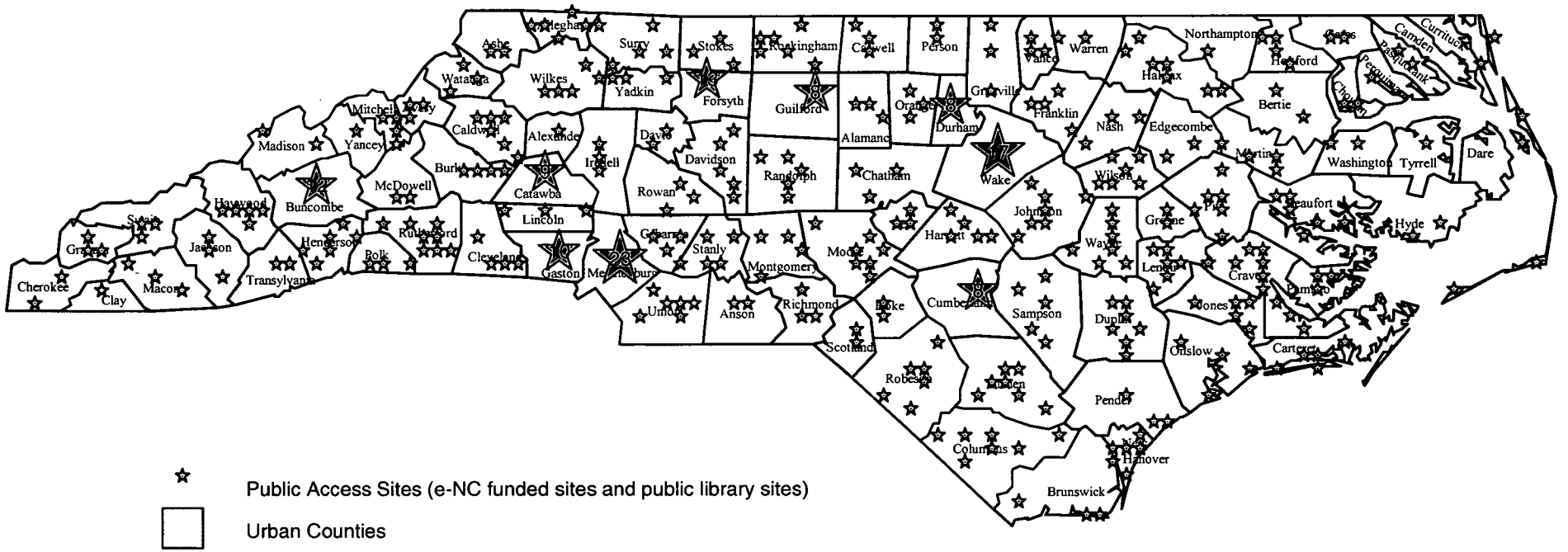
- Scholarships of up to $1000 per student to a Community College or University
- The opportunity to attend an Internet Immersion Camp, held at several universities around the state
- A feeling of accomplishment in helping out in their own communities ... *and* ...
- "Really Cool" TechForce shirts

So how can you help?

- Funding for scholarships and other chapter incentives
- Materials/Experiences that enhance TechForce coordinator's effectiveness
- Staffing to expand beyond North Carolina

Via NC TechForce, young people have a vital role in North Carolina's and the nation's Internet Revolution. Visit www.e-nc.org to look at our effort to Connect North Carolina to a Better Future.

Public Access Sites



3/24/03

LEG-UP: Local E-Government Utilization Program
Executive Summary

Government services are increasingly important to economic development, improved education, healthcare delivery and homeland security. Yet, citizens and businesses in North Carolina's rural counties lack the access and capacity to take advantage of e-government. Through the Rural Internet Access Authority's (RIAA) innovative grassroots e-communities initiative all of North Carolina's rural counties have developed plans that capture their communities' prioritized goals for economic development through connectivity. E-government emerged as one of the highest priorities for access and applications and one of the least available options in rural and distressed communities that have been shown to lack the funds, training, technology infrastructure and leadership needed to obtain and support connectivity and its promising applications.

The US Department of Commerce funded Local E-Government Utilization Project (LEG-UP), is a targeted, multi-phase effort that encompasses elements of infrastructure and application development, information technology investment decision modeling/training, portal development, applications training, and implementation and evaluation to bring e-government to all counties and municipal governments in the state. Beginning the early 2003, LEG-UP will be conducted in two cycles, with approximately half of the local governments completing the process before the second half initiates it in early 2004. LEG-UP represents a partnership of these local governments and the Rural Internet Access Authority, the NC League of Municipalities, NC Association of County Commissioners, NC Rural Economic Development Center, and the University of North Carolina's Center for Public Technology. Three milestone activities are proposed over thirty months:

1) Develop, test and train 55 local governments in the use of web-based IT metrics/tools that can assist government managers in selecting and implementing new IT to improve the delivery of public services;
2) Assist North Carolina local governments to develop broadband-based effective, affordable and sustainable websites as a platform for local e-government and regional collaborations;
3) Assist North Carolina local governments to obtain and deliver interactive, transactional electronic applications that meet the needs and further the goals identified by their communities.

LEG-UP will deliver a core of 55 local governments with enhanced e-government capacities to serve as mentors to other local governments beginning the path to connectivity. LEG-UP will develop a set of related web-based capacity building tools/models to be broadly disseminated via the RIAA's network of e-communities and through the professional outreach and communication venues supported by the RIAA and its partners in support of using technology to connect to a better future.

Governments selected to participate in the Pilot Group of LEG-UP include the counties of: Alleghany, Brunswick, Caswell, Chowan, Columbus, Duplin, Edgecombe, Hoke, Macon, Montgomery, Rutherford, and Vance; and the Cities and Towns of Bolton, Chadbourn, Edenton, Fair Bluff, Havelock, Henderson, Holden Beach, Jacksonville, Lake Waccamaw, Mt. Airy, Manteo, Monroe, Northwest, Roanoke Rapids, Rose Hill, St. Paul, Spruce Pine, Swansboro, Tarboro, and Whiteville.

Grants By County

County	*Tier*	*Grant*	*Amount*	
Alexander				
	5			
		e-Communities Planning	$10,000.00	
Summary for 'County' = Alexander (1 detail record)				
			Sum for county	*$10,000.00*
Alleghany				
	1			
		Digital Literacy	$40,000.00	
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
		Public Engagement	$5,000.00	
		Telecenter	$650,000.00	
		Western Connectivity	$100,000.00	
		Y2 Telecenter	$390,000.00	
Summary for 'County' = Alleghany (7 detail records)				
			Sum for county	*$1,207,000.00*
Anson				
	2			
		2nd Incentives	$100,000.00	
		Digital Literacy	$40,000.00	
		e-Communities Planning	$10,000.00	
		Implementation	$130,000.00	
		Public Access Site	$12,000.00	
		Public Engagement	$5,000.00	
Summary for 'County' = Anson (6 detail records)				
			Sum for county	*$297,000.00*
Ashe				
	1			
		e-Communities Planning	$10,000.00	
		Implementation	$38,571.00	
		Public Access Site	$12,000.00	

	Public Engagement	$5,000.00	
	Western Connectivity	$100,000.00	
Summary for 'County' = Ashe (5 detail records)			
		Sum for county	*$165,571.00*

Avery

3			
	e-Communities Planning	$10,000.00	
	Public Access Site	$12,000.00	
Summary for 'County' = Avery (2 detail records)			
		Sum for county	*$22,000.00*

Beaufort

1			
	e-Communities Planning	$10,000.00	
	Incentives	$1,600.00	
	Incentives	$265,000.00	

County	*Tier*	*Grant*	*Amount*	
		Public Access Site	$12,000.00	
		Public Engagement	$4,358.00	
Summary for 'County' = Beaufort (5 detail records)				
			Sum for county	*$292,958.00*
Bertie				
	1			
		Digital Literacy	$40,000.00	
		e-Communities Planning	$10,000.00	
Summary for 'County' = Bertie (2 detail records)				
			Sum for county	*$50,000.00*
Bladen				
	2			
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
		Public Engagement	$5,000.00	
Summary for 'County' = Bladen (3 detail records)				
			Sum for county	*$27,000.00*
Brunswick				
	4			
		Digital Literacy	$20,000.00	
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
Summary for 'County' = Brunswick (3 detail records)				
			Sum for county	*$42,000.00*
Buncombe				
	5			
		Implementation	$15,000.00	
		Incentives	$110,100.00	
Summary for 'County' = Buncombe (2 detail records)				
			Sum for county	*$125,100.00*
Burke				
	4			
		Digital Literacy	$20,000.00	

	e-Communities Planning	$10,000.00	
	Public Access Site	$12,000.00	
Summary for 'County' = Burke (3 detail records)			
		Sum for county	*$42,000.00*

Caldwell

4			
	e-Communities Planning	$10,000.00	
	Incentives	$610,000.00	
	Public Access Site	$12,000.00	
	Western Connectivity	$100,000.00	
Summary for 'County' = Caldwell (4 detail records)			
		Sum for county	*$732,000.00*

Camden

1			
	2nd Incentives	$12,000.00	
	e-Communities Planning	$10,000.00	

County	*Tier*	*Grant*	*Amount*	
		Implementation	$325,000.00	
		Public Engagement	$5,000.00	
Summary for 'County' = Camden (4 detail records)				
			Sum for county	*$352,000.00*
Carteret				
	4			
		Digital Literacy	$19,982.00	
		e-Communities Planning	$10,000.00	
		Implementation	$54,428.00	
		Public Access Site	$12,000.00	
Summary for 'County' = Carteret (4 detail records)				
			Sum for county	*$96,410.00*
Caswell				
	3			
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
Summary for 'County' = Caswell (2 detail records)				
			Sum for county	*$22,000.00*
Chatham				
	5			
		Digital Literacy	$20,000.00	
		e-Communities Planning	$10,000.00	
Summary for 'County' = Chatham (2 detail records)				
			Sum for county	*$30,000.00*
Cherokee				
	1			
		Digital Literacy	$60,000.00	
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
		Public Engagement	$5,000.00	
		Telecenter	$473,000.00	
		Western Connectivity	$48,000.00	
		Y2 Telecenter	$50,000.00	
		Y2 Telecenter	$283,800.00	

Summary for 'County' = Cherokee (8 detail records)

Sum for county *$941,800.00*

Chowan

2

e-Communities Planning	$10,000.00
Public Access Site	$12,000.00

Summary for 'County' = Chowan (2 detail records)

Sum for county *$22,000.00*

Clay

1

e-Communities Planning	$10,000.00
Incentives	$166,000.00
Public Access Site	$12,000.00
Western Connectivity	$48,000.00
Western Connectivity	$333,334.00

County	*Tier*	*Grant*	*Amount*
Summary for 'County' = Clay (5 detail records)			
		Sum for county	*$569,334.00*
Cleveland			
	3		
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00
Summary for 'County' = Cleveland (2 detail records)			
		Sum for county	*$22,000.00*
Columbus			
	2		
		Digital Literacy	$20,000.00
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00
		Public Engagement	$5,000.00
Summary for 'County' = Columbus (4 detail records)			
		Sum for county	*$47,000.00*
Craven			
	4		
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00
Summary for 'County' = Craven (2 detail records)			
		Sum for county	*$22,000.00*
Currituck			
	3		
		e-Communities Planning	$10,000.00
Summary for 'County' = Currituck (1 detail record)			
		Sum for county	*$10,000.00*
Dare			
	3		
		e-Communities Planning	$10,000.00
Summary for 'County' = Dare (1 detail record)			
		Sum for county	*$10,000.00*
Davie			

5			
	e-Communities Planning	$10,000.00	

Summary for 'County' = Davie (1 detail record)

Sum for county	*$10,000.00*

Duplin

2			
	e-Communities Planning	$10,000.00	
	Public Access Site	$12,000.00	
	Public Engagement	$4,592.00	
	Telecenter	$526,804.00	
	Y2 Telecenter	$316,083.00	

Summary for 'County' = Duplin (5 detail records)

Sum for county	*$869,479.00*

EBCI

1			

County	*Tier*	*Grant*	*Amount*	
		e-Communities Planning	$10,000.00	
Summary for 'County' = EBCI (1 detail record)				
			Sum for county	*$10,000.00*
Edgecombe				
	1			
		e-Communities Planning	$10,000.00	
		Public Engagement	$5,000.00	
Summary for 'County' = Edgecombe (2 detail records)				
			Sum for county	*$15,000.00*
Franklin				
	4			
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
Summary for 'County' = Franklin (2 detail records)				
			Sum for county	*$22,000.00*
Gates				
	2			
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
Summary for 'County' = Gates (2 detail records)				
			Sum for county	*$22,000.00*
Graham				
	1			
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
		Public Engagement	$5,000.00	
		Western Connectivity	$48,000.00	
		Western Connectivity	$120,000.00	
		Western Connectivity	$56,000.00	
Summary for 'County' = Graham (6 detail records)				
			Sum for county	*$251,000.00*
Granville				
	4			

	e-Communities Planning	$10,000.00	
	Incentives	$250,000.00	
	Public Access Site	$12,000.00	

Summary for 'County' = Granville (3 detail records)

Sum for county *$272,000.00*

Greene

3

	e-Communities Planning	$10,000.00	
	Public Access Site	$12,000.00	

Summary for 'County' = Greene (2 detail records)

Sum for county *$22,000.00*

Halifax

1

	Digital Literacy	$40,000.00	
	e-Communities Planning	$10,000.00	
	Public Access Site	$12,000.00	

County	*Tier*	*Grant*	*Amount*
		Public Engagement	$4,000.00
Summary for 'County' = Halifax (4 detail records)			
			Sum for county *$66,000.00*
Harnett			
	4		
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00
Summary for 'County' = Harnett (2 detail records)			
			Sum for county *$22,000.00*
Haywood			
	3		
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00
Summary for 'County' = Haywood (2 detail records)			
			Sum for county *$22,000.00*
Henderson			
	5		
		Digital Literacy	$34,000.00
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00
Summary for 'County' = Henderson (3 detail records)			
			Sum for county *$56,000.00*
Hertford			
	1		
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00
		Public Engagement	$9,900.00
Summary for 'County' = Hertford (3 detail records)			
			Sum for county *$31,900.00*
Hoke			
	2		
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00

	Public Engagement	$5,000.00

Summary for 'County' = Hoke (3 detail records)

Sum for county *$27,000.00*

Hyde

1

e-Communities Planning	$10,000.00
Implementation	$100,000.00
Public Access Site	$12,000.00
Public Engagement	$5,000.00

Summary for 'County' = Hyde (4 detail records)

Sum for county *$127,000.00*

Iredell

5

Digital Literacy	$16,356.00
e-Communities Planning	$10,000.00
Public Access Site	$12,000.00

County	*Tier*	*Grant*	*Amount*
Summary for 'County' = Iredell (3 detail records)			
		Sum for county	*$38,356.00*
Jackson			
	3		
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00
		Western Connectivity	$333,333.00
		Western Connectivity	$56,000.00
Summary for 'County' = Jackson (4 detail records)			
		Sum for county	*$411,333.00*
Johnston			
	5		
		Digital Literacy	$19,679.00
Summary for 'County' = Johnston (1 detail record)			
		Sum for county	*$19,679.00*
Jones			
	1		
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00
		Public Engagement	$4,910.00
Summary for 'County' = Jones (3 detail records)			
		Sum for county	*$26,910.00*
Lee			
	5		
		Digital Literacy	$20,000.00
		e-Communities Planning	$10,000.00
Summary for 'County' = Lee (2 detail records)			
		Sum for county	*$30,000.00*
Lenoir			
	3		
		e-Communities Planning	$10,000.00
		Implementation	$125,000.00
		Public Access Site	$12,000.00

Summary for 'County' = Lenoir (3 detail records)

Sum for county *$147,000.00*

Lincoln

4

e-Communities Planning	$10,000.00
Public Access Site	$12,000.00

Summary for 'County' = Lincoln (2 detail records)

Sum for county *$22,000.00*

Macon

4

e-Communities Planning	$10,000.00
Public Access Site	$12,000.00
Western Connectivity	$333,333.00

Summary for 'County' = Macon (3 detail records)

Sum for county *$355,333.00*

County	*Tier*	*Grant*	*Amount*	
Madison				
	3			
		e-Communities Planning	$10,000.00	
		Implementation	$61,350.00	
		Public Access Site	$12,000.00	
		Public Engagement	$5,000.00	
		Western Connectivity	$150,000.00	
		Western Connectivity	$120,000.00	
Summary for 'County' = Madison (6 detail records)				
			Sum for county	*$358,350.00*
Martin				
	1			
		Digital Literacy	$20,000.00	
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
		Public Engagement	$5,000.00	
		Telecenter	$650,000.00	
		Y2 Telecenter	$50,000.00	
		Y2 Telecenter	$390,000.00	
Summary for 'County' = Martin (7 detail records)				
			Sum for county	*$1,137,000.00*
McDowell				
	3			
		Digital Literacy	$19,891.00	
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
		Western Connectivity	$100,000.00	
Summary for 'County' = McDowell (4 detail records)				
			Sum for county	*$141,891.00*
Mitchell				
	2			
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
		Public Engagement	$5,000.00	

	Western Connectivity	$120,000.00
	Western Connectivity	$150,000.00

Summary for 'County' = Mitchell (5 detail records)

Sum for county *$297,000.00*

Montgomery

2

e-Communities Planning	$10,000.00
Public Access Site	$12,000.00
Public Engagement	$5,000.00

Summary for 'County' = Montgomery (3 detail records)

Sum for county *$27,000.00*

Moore

5

Digital Literacy	$20,000.00
e-Communities Planning	$10,000.00

County	*Tier*	*Grant*	*Amount*
		Public Access Site	$12,000.00
Summary for 'County' = Moore (3 detail records)			
			Sum for county *$42,000.00*
Nash			
	4		
		2nd Incentives	$125,000.00
		Digital Literacy	$20,000.00
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00
Summary for 'County' = Nash (4 detail records)			
			Sum for county *$167,000.00*
Northampton			
	1		
		e-Communities Planning	$10,000.00
		Incentives	$40,000.00
		Public Access Site	$12,000.00
		Public Engagement	$3,300.00
Summary for 'County' = Northampton (4 detail records)			
			Sum for county *$65,300.00*
Onslow			
	2		
		Digital Literacy	$20,000.00
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00
Summary for 'County' = Onslow (3 detail records)			
			Sum for county *$42,000.00*
Pamlico			
	2		
		e-Communities Planning	$10,000.00
		Implementation	$238,204.00
		Public Access Site	$12,000.00
		Public Engagement	$3,800.00
Summary for 'County' = Pamlico (4 detail records)			
			Sum for county *$264,004.00*

Pasquotank

2

e-Communities Planning	$10,000.00
Public Access Site	$12,000.00
Public Engagement	$5,000.00

Summary for 'County' = Pasquotank (3 detail records)

Sum for county *$27,000.00*

Pender

3

e-Communities Planning	$10,000.00
Public Access Site	$12,000.00

Summary for 'County' = Pender (2 detail records)

Sum for county *$22,000.00*

Perquimans

1

County	*Tier*	*Grant*	*Amount*	
		Digital Literacy	$20,000.00	
		e-Communities Planning	$10,000.00	
		Implementation	$34,875.00	
		Public Access Site	$12,000.00	
		Public Engagement	$5,000.00	
Summary for 'County' = Perquimans (5 detail records)				
			Sum for county	*$81,875.00*
Person				
	3			
		e-Communities Planning	$10,000.00	
		Incentives	$250,000.00	
		Public Access Site	$12,000.00	
Summary for 'County' = Person (3 detail records)				
			Sum for county	*$272,000.00*
Polk				
	3			
		e-Communities Planning	$10,000.00	
		Implementation	$375,000.00	
		Public Access Site	$12,000.00	
Summary for 'County' = Polk (3 detail records)				
			Sum for county	*$397,000.00*
Randolph				
	5			
		Digital Literacy	$20,000.00	
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
Summary for 'County' = Randolph (3 detail records)				
			Sum for county	*$42,000.00*
Regional/State				
	0			
		2nd Incentives	$200,000.00	
		2nd Incentives	$250,000.00	
		Digital Literacy	$52,000.00	
		Digital Literacy	$20,000.00	

	Incentives	$600,000.00
	Incentives	$575,000.00
	Incentives	$2,925,000.00

Summary for 'County' = Regional/State (7 detail records)

Sum for county *$4,622,000.00*

Robeson

2

	Digital Literacy	$20,000.00
	e-Communities Planning	$10,000.00
	Public Access Site	$12,000.00
	Public Engagement	$5,000.00
	Telecenter	$236,705.00

Summary for 'County' = Robeson (5 detail records)

Sum for county *$283,705.00*

Rockingham

County	*Tier*	*Grant*	*Amount*	
	2			
		e-Communities Planning	$10,000.00	
Summary for 'County' = Rockingham (1 detail record)				
			Sum for county	*$10,000.00*
Rutherford				
	3			
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
Summary for 'County' = Rutherford (2 detail records)				
			Sum for county	*$22,000.00*
Sampson				
	4			
		e-Communities Planning	$10,000.00	
		Implementation	$18,035.00	
Summary for 'County' = Sampson (2 detail records)				
			Sum for county	*$28,035.00*
Stanly				
	3			
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
Summary for 'County' = Stanly (2 detail records)				
			Sum for county	*$22,000.00*
Stokes				
	4			
		Digital Literacy	$20,000.00	
		e-Communities Planning	$10,000.00	
		Implementation	$63,000.00	
		Public Access Site	$12,000.00	
Summary for 'County' = Stokes (4 detail records)				
			Sum for county	*$105,000.00*
Surry				
	4			
		e-Communities Planning	$10,000.00	

Summary for 'County' = Surry (1 detail record)

Sum for county *$10,000.00*

Swain

1

e-Communities Planning	$10,000.00
Public Access Site	$12,000.00
Public Engagement	$5,000.00
Western Connectivity	$96,000.00
Western Connectivity	$120,000.00

Summary for 'County' = Swain (5 detail records)

Sum for county *$243,000.00*

Transylvania

5

e-Communities Planning	$10,000.00
Public Access Site	$12,000.00

County	*Tier*	*Grant*	*Amount*
Summary for 'County' = Transylvania (2 detail records)			
		Sum for county	*$22,000.00*
Tyrrell			
	1		
		e-Communities Planning	$10,000.00
		Public Engagement	$5,000.00
Summary for 'County' = Tyrrell (2 detail records)			
		Sum for county	*$15,000.00*
Union			
	5		
		e-Communities Planning	$10,000.00
		Implementation	$130,000.00
		Public Access Site	$12,000.00
Summary for 'County' = Union (3 detail records)			
		Sum for county	*$152,000.00*
Vance			
	1		
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00
		Public Engagement	$5,000.00
Summary for 'County' = Vance (3 detail records)			
		Sum for county	*$27,000.00*
Warren			
	1		
		Digital Literacy	$20,000.00
		e-Communities Planning	$10,000.00
		Public Engagement	$5,000.00
Summary for 'County' = Warren (3 detail records)			
		Sum for county	*$35,000.00*
Washington			
	1		
		e-Communities Planning	$10,000.00
		Public Access Site	$12,000.00

	Public Engagement	$5,000.00	

Summary for 'County' = Washington (3 detail records)

Sum for county *$27,000.00*

Watauga

3

	Digital Literacy	$20,000.00
	e-Communities Planning	$10,000.00
	Public Access Site	$12,000.00
	Western Connectivity	$100,000.00

Summary for 'County' = Watauga (4 detail records)

Sum for county *$142,000.00*

Wayne

3

	Digital Literacy	$20,000.00
	e-Communities Planning	$10,000.00
	Implementation	$125,000.00

County	*Tier*	*Grant*	*Amount*	
		Public Access Site	$12,000.00	
Summary for 'County' = Wayne (4 detail records)				
			Sum for county	*$167,000.00*
Wilkes				
	4			
		e-Communities Planning	$10,000.00	
		Western Connectivity	$100,000.00	
Summary for 'County' = Wilkes (2 detail records)				
			Sum for county	*$110,000.00*
Wilson				
	3			
		e-Communities Planning	$10,000.00	
Summary for 'County' = Wilson (1 detail record)				
			Sum for county	*$10,000.00*
Yadkin				
	4			
		e-Communities Planning	$10,000.00	
		Public Access Site	$12,000.00	
Summary for 'County' = Yadkin (2 detail records)				
			Sum for county	*$22,000.00*
Yancey				
	1			
		e-Communities Planning	$10,000.00	
		Public Engagement	$5,000.00	
		Western Connectivity	$150,000.00	
		Western Connectivity	$120,000.00	
Summary for 'County' = Yancey (4 detail records)				
			Sum for county	*$285,000.00*
			Grand Total	*$17,796,323.00*

This Report is prepared for the General Assembly and the people of North Carolina by the Rural Internet Access Authority as a part of its compliance with Session Law 2000-149, Senate Bill 1343, General Assembly of North Carolina, Session 1999.

The recommendations included in this report are of the consultant.

Prepared by Charles G. Pittman

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Table of Contents

Infrastructure information is graphically displayed on the e-nc.org website in Geographic Information Systems (GIS) format. The data is constantly changing and may be different from what is included in this report. Future data will be updated by the service providers.

There will be a third assessment of this data in December of 2003.

A CD is included inside the back cover containing the High Speed Internet Access study, the 100 County Report and a Service Provider List.

1.1 Purpose

One of the goals tasked to the Rural Internet Access Authority (RIAA) by North Carolina Senate Bill 1343 (SB 1343) is "High-speed Internet access available to every citizen of North Carolina within three years, at prices in rural counties that are comparable to prices in urban North Carolina".

The purpose of this project is to: (a) evaluate the technologies that are available to provide high-speed internet access, (b) develop a profile for each county showing the high speed technologies that are available, the number of households that can access the technology and what percentage that is of the total number of households in each county, and (C) show the average cost of high speed access based on the services offered, with the cost to the 15 urban counties being compared with the cost to the 85 rural counties.

The study addresses high-speed Internet access for residential and small office/ home office (SOHO) customers. High-speed Internet access required by large business customers are provided by PRI ISDN, T-1, ATM, Frame Relay and business class cable modem services. These services are usually distance sensitive, requiring a specific address to determine pricing, so therefore, are not covered in this study. Generic information for business customers can be found in KPMG's RIAA North Carolina Telecommunications Infrastructure And Services Assessment and Recommendations Report.

1.2 Executive Summary

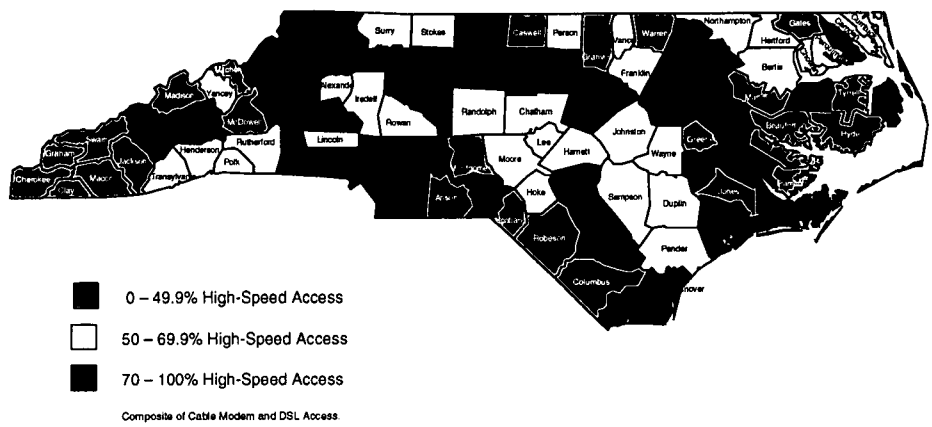
1.2.1 High-Speed Internet Access

By the end of 2002, 74.88% of the households in North Carolina will have the ability to access high-speed Internet services via cable modem or DSL services.

According to the US Census Bureau, North Carolina has 3,132,022 households, of which 1,589,867 or 50.74% are located in the 85 rural counties and 1,542,837 or 49.26% are located in the 15 urban counties. High-speed Internet is available to 2,345,117 of those households, with 1,048,995 or 44.73% being in the rural counties and 1,296,122 or 55.27% being in the urban counties.

Both cable modem and DSL deployment has grown extensively in 2001 and 2002. This growth will continue in 2003, with cable companies continuing to upgrade their coax systems and the Telcos deploying DSL in remotes, providing service to subscribers living more the 18kft from the central office.

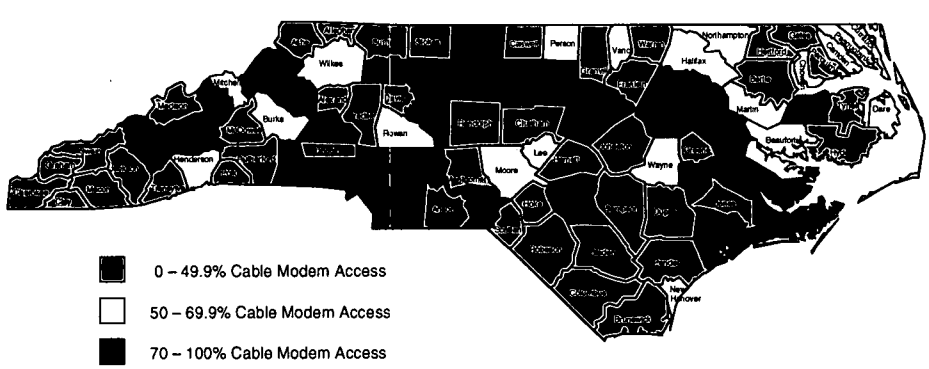
Percentage of Households with High-Speed Internet Access



1.2.2 Cable Modem Access

Cable companies will continue to upgrade their infrastructure to handle digital TV and will offer cable modem Internet as a vertical service. Cable modem service is available to 2,082,253 households in North Carolina, with 835,957 or 40.15% being in the rural counties and 1,246,296 or 59.85% being in the urban counties.

Percentage of Households with
Cable Modem Internet Access
by County



Data collected by the Rural Internet Access Authority from interviews with service providers.

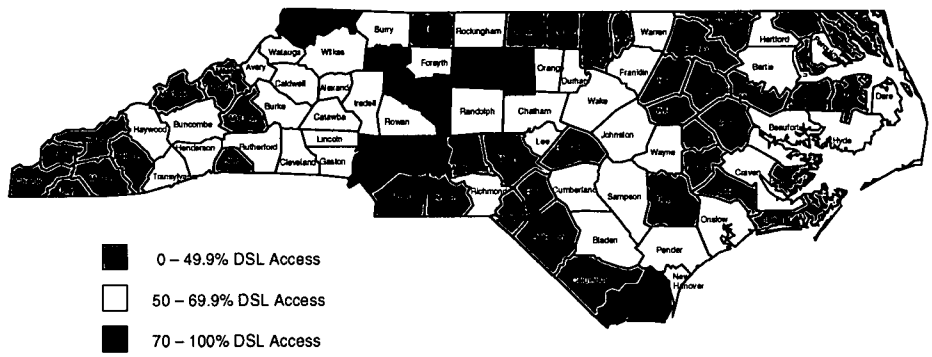
1.2.3 ADSL/DSL Access

The incumbent Telcos should complete their deployment of DSL equipment in their central offices and start deployment in environmentally controlled remotes, Digital Subscriber Line Access Multiplexers (DSLAMs), and digital subscriber carrier locations by the end of 2003. The Rural Telephone Membership Corporations (RTMCs) and the independently owned companies provide access to approximately 80% of their subscribers now, with several already providing DSL service to 100% of their subscribers. Generally, these companies serve mostly rural areas. Overall, 1,806,672 households in North Carolina have access to DSL service with 791,411 or 43.80% being in the rural counties and 1,015,261 or 56.20% being in the urban counties.

Percentage of Households with

DSL Internet Access

by County



Data collected by the Rural Internet Access Authority from interviews with service providers.

1.2.4 Satellite Access

Satellite is considered the ubiquitous service, although it requires a clear view of the southern sky. It can be purchased from numerous resellers and is available from chains such as Best Buys and Circuit City. Satellite service normally requires an upfront purchase of hardware and a professional installation. Satellite, along with wireless, will be the only means of obtaining high-speed Internet service for many of the rural areas of North Carolina for many years to come. Satellite providers declined sharing subscriber data for North Carolina. Therefore satellite service is not included in the high-speed Internet access data.

1.2.5 Wireless Access

Broadband wireless is a relative new technology being deployed to provide high-speed Internet service in North Carolina. It is normally a line of sight service and uses unlicensed frequencies. A number of start-ups and existing Internet Service Providers (ISPs) are using it to expand their service and to cut their cost of providing service. Many areas of North Carolina have wireless service providers, but deployment is rather spotted. Most providers cover a county or only a portion of a county. A few have networks that cover several counties. Some companies would provide subscriber data, but could not provide households that have access. Therefore wireless service is not included in the high-speed Internet access data. Wireless, along with satellite, will be the only means some areas of North Carolina have of obtaining high-speed Internet access.

1.2.6 Conclusions

Considering the information obtained from the interviews, meetings, and reviewing the compiled data, several conclusions can be drawn:

1. The citizens of Clay, Graham and Swain counties have no access to high-speed Internet service. Seventeen other counties have less than 50% access to either cable modem or DSL services. Reasons for such low access percentages:

A. The area has no cable TV provider, the provider hasn't developed a business case or the business case does not justify the expense, the provider lacks the funds and technical expertise required to provide the service, the provider has scheduled deployment in 2003 or 2004.
B. The Telco's business case for DSL deployment does not justify the capital expense, or the area is served by remotes, digital subscriber carriers and DSLAMs, which won't be upgraded until the 2003 or later.

2. Demand – Although 75% of the households in North Carolina have access to cable modem service, DSL service or both services, only 303,313 households or 12.87% subscribe to the high-speed Internet service. That is assuming that North Carolina follows the national averages of a 11% subscription rate for cable modem service and a 4% subscription rate for DSL service. Expected "Take Rate" greatly affects business case results and impacts deployment plans for cable modem and DSL services.

3. Combining the provider business case issues of item 1 with the subscriber demand issues of item 2 presents another issue – **perceived or real value**. It is apparent that the vast majority of the public, with PCs, does not consider the value of high-speed Internet service to be worth the prices presently being charged for the services. This statement does not mean that the services are overpriced. It suggests the public does not justify paying the charges for applications and services offered by the Internet at this time.

1.3 Recommendations

Address the lack of high-speed Internet access through the review process of cable TV contracts. Normally franchise agreements provide for annual or bi-annual reviews of required reports, or reports can be requested at certain intervals during the contract. Municipal and county managers could address deployment issues such as upgrading infrastructure to handle digital TV, deployment of cable modem service, and timelines of upgrades. High-speed Internet deployment should definitely be a consideration in cases of franchise renewals.

(Note: In April of 1997 the Federal Communications Commission allocated DTV spectrum and announced the timetables for commencement of DTV services and the return of the "analog" spectrum. Congress did not adopt the Administration's proposed firm date of 2006 for the termination of analog broadcasting in the Balanced Budget Act of 1997. However, the current House Commerce Committee Chairman, Billy Tauzin (R-LA), still strongly supports the termination of analog broadcasting on December 31, 2006. The importance of this fact is that the 2006 date tends to be the driver for cable companies upgrading their infrastructure.)

Use elected local, state and federal officials to meet with the service providers and express the need for high-speed Internet access in their areas. Political persuasion normally receives attention by service providers.

Extend the life of the Rural Internet Access Authority beyond December 31,2003. The RIAA provides:

- on-line tools, such as the ISP database, the GIS site for high-speed Internet access and service provider information,
- training and support e-champions and e-communities,
- training on grant application processes and grant availability beyond those available through the RIAA,
- support and assistance to local governments, non-profit entities, and regional partnerships to address issues beyond the reach of any individual entity,
- information and recommendations to the Public Utilities Commission and legislature.

Although the RIAA has accomplished many goals, "High-speed Internet access available to every citizen of North Carolina within three years" will not be

accomplished by the end of 2003. This is not a failure of the RIAA, but a task that will require a forum, leadership and coordination of customers, service providers and government for several more years.

1.4 Definitions

High-speed Broadband Internet Access

"Internet access with transmission speeds of at least 128 kilobits per second for residential customers and at least 256 kilobits per second for business customers."

Defined by North Carolina Senate Bill 1343.

Since the Senate Bill did not state whether the rates was symmetrical (up and down rates are the same) or asymmetrical (up or down rate are different) the RIAA Technical Committee determine that if the service provided the 128 or 256 kilobits per second asymmetrical rate, it met the requirements of the Senate Bill.

Rural/Urban

Rural County – A county with a density of fewer than 200 people per square mile based on the 1990 United States decennial census.

Defined by North Carolina Senate Bill 1343.

Tiers

As provided in the William S. Lee Quality Jobs and Business Expansion Act, the N.C. Department of Commerce annually evaluates North Carolina's 100 counties and assigns each a tier designation ranking from 1 to 5.

Designations are based on each county's ranking in unemployment, per capita income, population growth, and population size. Counties in tiers 1,2, and 3 are considered "distressed" and are eligible for business incentive programs offered through the N.C. Department of Commerce.

Percentage

All percentages indicate the percentage of households that have access to the services, not the number of households that are subscribing to the services. The percentages include access that will be available from equipment that will be installed and placed in service by the end of 2002.

1.5 Methodology

1. High-Speed Internet access is defined by SB 1343 "Internet access with transmission speeds of at least 128 kilobits per second for residential customers an at least 256 kilobits per second for business customers". The RIAA Technical Committee has determined that any service that provides 128 KB – residential or 256 KB - business either transmitting or receiving (asynchronous) complies with the SB 1343 definition.

2. To assess the availability of high-speed Internet access in North Carolina, cable, telephone, satellite and wireless companies were interviewed. Extensive research on all providers was performed and compared with the interview information. The composite of the research is presented in this document.

3. Satellite and wireless companies provide access to a large area of North Carolina, especially the rural areas. Satellite companies would not provide information on the number of customers served in North Carolina, only stating that they served approximately 100,000 customers nationwide.

4. Wireless technology is a relative new service in providing high-speed Internet access. Only a few providers serve more than one county. Information on the number of households with access is hard to determine because wireless is a line of site service. Because of these reasons, satellite and wireless households and are not included in the composite ratings.

5. The composite rating is the percentage of households that have access to cable modem, DSL, or both services. In locations having access to both services, only the households of the service covering the largest number of households is used.

1.6 Technologies

The following technologies are used to provide high-speed Internet access in North Carolina: cable modem, DSL, satellite, and wireless.

1.6.1 Cable Modem

Cable Modem service is normally available in areas in which the cable TV company has upgraded its coax system to a Hybrid Fiber Coax (HFC) system. This upgrade provides bi-directional communications channels and increased channel capacity. Utilizing a broadband cable modem at the subscribers premise, the cable company can provide high-speed Internet access.

HFC is a shared medium and up to 2000 cable modems can share a set of upstream and downstream TV channels. Expect download speeds in the range 400Mbps to 2.9 Mbps. Uploads are advertised as "capable of 128KB to 384KB, expect less. Most companies limit upload speeds.

Deployment of cable modem service first occurred in the metropolitan areas and then spread to the larger towns. As the cable companies upgrade their systems, they have started to pick up smaller communities and crossroad areas, especially along their trunk routes. Cable companies usually require 15 to 20 households per route mile before installing service. This prohibits rural areas of North Carolina from having access to cable modem service. Deployment in rural areas is cable modem's most limiting factor.

A number of North Carolina's cable companies, Charter, Cox, Multimedia, Murphy, Time Warner, etc. have or are in the process of converting their systems to Hybrid Fiber Coax systems. Most of the others are in the planning or initial implementation stages, with deployment occurring in 2003 and 2004.

Residential			
Monthly Charge	Range - $42.50 to $55.95/m	Average	$49.03
Modem	Range – Provided	Average	$0
Installation	Range – Self Inst. to $100.00	Average	$99.50

Business			
Monthly Charge	Range - $59.95 to $199.95/m	Average	$118.95
Modem	Range – Provided	Average	Provided
Installation	Range – $44.95 to $199.95	Average	$165.84

Monthly charges were developed using a month-to-month basis, normally the worst case. Many companies offer promotions such as a free modem, waiving installation charges, a month of free service, or several months of service at a 50% discount. Some have lower monthly charges if you agree to a term contract. Compare a company's customer service pricing to their web page pricing. Check pricing from resellers such as AOL and Earthlink. There are differences with almost every provider.

1.6.2 ADSL/DSL

Broadband or high-speed service, normally offered by the Incumbent Local Exchange Carrier, is known as Asynchronous Digital Subscriber Loop (ADSL or DSL) service. DSL provides high-speed digital services on the existing twisted copper network without interfering with the traditional analog telephone service.

DSL has a maximum distance of 18,000 ft. from the central office or Digital Subscriber Line Access Multiplexer (DSLAM). Upstream/downstream speeds range from 1.7Mbps/76Kbps at 18,000 ft. to 8Mbps/1.5 Mbps at 9,000 ft, but are limited by most companies to 1.5Mbps to 384 KB on the downstream and 60KB to 512KB on the upstream. The subscriber has unshared access to the central office or the DSLAM, but service from that point is shared with many other subscribers and is therefore dependent upon trunk engineering, the number of other subscribers vying for access, and network conditions. DSL's limiting factors are its range of 12,000 to 18,000 ft. from the central office or DSLAM and the limited number of rural areas that it is presently deployed.

Internet service is usually provided with the DSL service by the telephone company, but can be provided by other ISPs. The ISPs may sell Internet service only or may resale the DSL and Internet service as a package.

Deployment of DSL has greatly increased in 2001 and 2002. All but three Telcos in North Carolina are deploying DSL service. The Telco installations have been in the central offices and environmentally controlled remotes, picking up approximately 50% of the customers served by these locations. Customers within 18,000 feet of these locations can usually receive DSL service. Deployment of DSL equipment into smaller remotes, DSLAMs, and digital subscriber carriers located further from the central offices will increase access to approximately 80% of the customers in 2003.

Customers in counties being served by most of the Rural Telephone Membership Corporations (RTMC) and Independent Companies have 67% to 100% coverage. The other companies are in the planning or implementation stages and should raise total coverage to the 80% to 100% range by late 2003 to early 2004.

Residential			
Monthly Charge	Range - $41.95 to $62.95/m	Average	$50.32
Modem	Range – Provided to $400.00	Average	$233.31
Installation	Range – Self Inst. to $199.95	Average	$106.33
Business			
Monthly Charge	Range - $41.95 to $159.95/m	Average	$72.64
Modem	Range – Provided to $400.00	Average	$233.31
Installation	Range – Self Inst. to $199.95	Average	$113.08

Monthly charges were developed using a month-to-month basis, normally the worst case. Many companies offer promotions such as a free modem, waiving installation charges, and a month of free service. Some have lower monthly charges if you agree to a term contract. Compare a company's customer service pricing to their web page pricing. Check pricing from resellers such as AOL and Earthlink. There are differences with almost every provider.

1.6.3 Satellite

Satellite is considered the ubiquitous service, capable of providing service everywhere. In actuality, Satellite requires an unobstructed view of the southern sky, making it unsuitable in some areas of the mountains, some metropolitan areas, and heavily wooded areas. Service is affected by the weather.

Satellite companies have improved their service by adding a transmitter to their product. Previously, customers had to use their telephone line to upload their request. Upon verification of subscription, their requested information was downloaded to them via satellite. With the addition of a transmitter, uploads and downloads are provided over the satellite service.
Satellites have been in service for six years and have approximately 100,000 subscribers. Direcway and Starband are the providers of satellite service and sell through Best Buys, Circuit City, Earthlink, and numerous independent resellers. At the present time, Starband is in Chapter 11 bankruptcy.

Speeds of 60KB for upload and 400KB for the download are the norm. Higher speeds are available for business customers.

Satellite service requires the purchase of hardware and incurs an installation fee. The FCC requires a professional installation because of the upload requires a one-watt transmitter and the dish must be mounted a least 6 feet above the ground.

<u>Residential Pricing</u>			
Monthly Charge	Range - $59.99 to $69.99/m	Average	$65.97
Equipment	Range – $379.98 to $699.99	Average	$495.59
Installation	Range – $180.00 to $200.00	Average	$195.40
<u>Business Pricing</u>			
Monthly Charge	Range - $89.99 to $129.99/m	Average	$106.66
Modem	Range – $379.98 to $799.00	Average	$525.99
Installation	Range – $199.00 to $299.00	Average	$232.67

New pricing plans are being developed to overcome the initial hardware charge. Monthly charges are increased to $99 per month for the first year to offset the hardware installation charges and reduced to the normal monthly charge

thereafter. Since there are only two providers of satellite service and numerous resellers, shop for price differences.

Satellite's limiting factors are the initial cost; a clear view of the southern sky and service is affected by weather. Considering these factors, high-speed Internet access via satellite may still be the only mean of service for some rural areas of North Carolina for several years.

1.6.4 Wireless – Unlicensed Frequencies

In September of 1999, the FCC allocated 300 MHz of spectrum for unlicensed operation in the 5-GHZ and 2-GHz block. Fast deployment, inexpensive equipment and IEEE 802.11 standards make unlicensed wireless attractive to ISPs.

Deployment of wireless service is in the early stage. Many are dial-up ISPs expanding their customer base by providing wireless high-speed Internet service in areas, which have neither cable modem, nor DSL service. In total, a number of areas of North Carolina are covered by wireless service, but deployment is rather spotted throughout the state. Most providers cover only a county or a portion of a county. Only a few have networks that serve several counties.

Wireless is a line of site service with trees, buildings and weather being its most limiting factors. Multiple systems in an area can degrade service. Interference is also a problem. Customers may have to purchase hardware and a professional installation is required.

Residential			
Monthly Charge	Range - $29.95 to $127.49/m	Average	$61.41
Equipment	Range – Provided to $699	Average	$374.75
	1 at $2,200		$739.80
Installation	Range – $99 to $300.00	Average	$171.00
Business			
Monthly Charge	Range - $89.95 to $199.00/m	Average	$130.50
Equipment	Range – Provided to $2,200	Average	$839.80
Installation	Range – $150.00 to $300.00	Average	$221.28

Customers have the least pricing options of all services. Few areas are covered by more than one provider. Although wireless has several limitations, it may be the only choice of service in some areas of North Carolina.

Digital Literacy Training

Session Law 2000-149, which created the Rural Internet Access Authority, states that closing the digital divide for the citizens of North Carolina is one of the key goals of the Rural Internet Access Authority. If this intent is to be accomplished, the digital/Internet literacy of North Carolinians must improve dramatically.

The term "Digital/Internet Literacy Training," is used by the NC Rural Internet Access Authority to refer to training courses or programs that are available to the general public, free or at low cost, through educational institutions, public sector agencies, libraries, and non-profit organizations. A variety of digital/Internet literacy training classes and programs can be found throughout North Carolina. Community colleges, K-12 schools, colleges and universities, community-based organizations, non-profit organizations, churches, public libraries, and for-profit vendors operate training programs.

Although some good things, including innovative approaches with records of success, are happening in the development and delivery of digital/Internet literacy training, many communities and individuals experience significant difficulty in accessing needed training. The current piecemeal approach is not adequate to meet the needs of North Carolinians, especially those in rural communities. The following problems are among the most significant:

- There is little widespread knowledge about the digital/Internet literacy training opportunities that do exist.
- The individuals and groups who most need such training are least likely to know about it.
- There is little knowledge and communication among training providers about what each other is doing and what is working well.
- There are many communities with few, if any, digital/Internet literacy opportunities/programs, and they are more likely to be in rural and low-wealth counties.
- Insufficient resources are allocated for digital/Internet literacy training.
- It is difficult to translate the successes of effective individual programs into a comprehensive approach that brings digital/Internet literacy opportunities and programs to scale across the state.

The Rural Internet Access Authority is working to make certain that all North Carolina citizens have access to basic skills training on computers and the Internet. To this end, the authority issued grants of up to $20,000 per county to establish or strengthen digital/Internet literacy. The Digital Literacy Training grants totaling $721,908 were awarded by the Commission on July 25, 2002, with grants contracts running through June 2003. The programs receiving funding were required to address all three levels of digital literacy as noted below:

Level I
- Introduces computers and computer terms.
- Develops basic computer use skills and a moderate comfort level with using computers.

Level II
- Introduces the Internet and develop email capabilities.
- Develops skills in navigating the Internet and using search engines, such as Yahoo and Google, to find specific information.

Level III
- Develops basic word processing skills, such as creating documents, sending documents, and using spell check.
- Develops skills in using more advanced applications such as Microsoft Word, Excel, and Access.
- Develops ability to use Internet applications such as Real Audio or Internet radio.

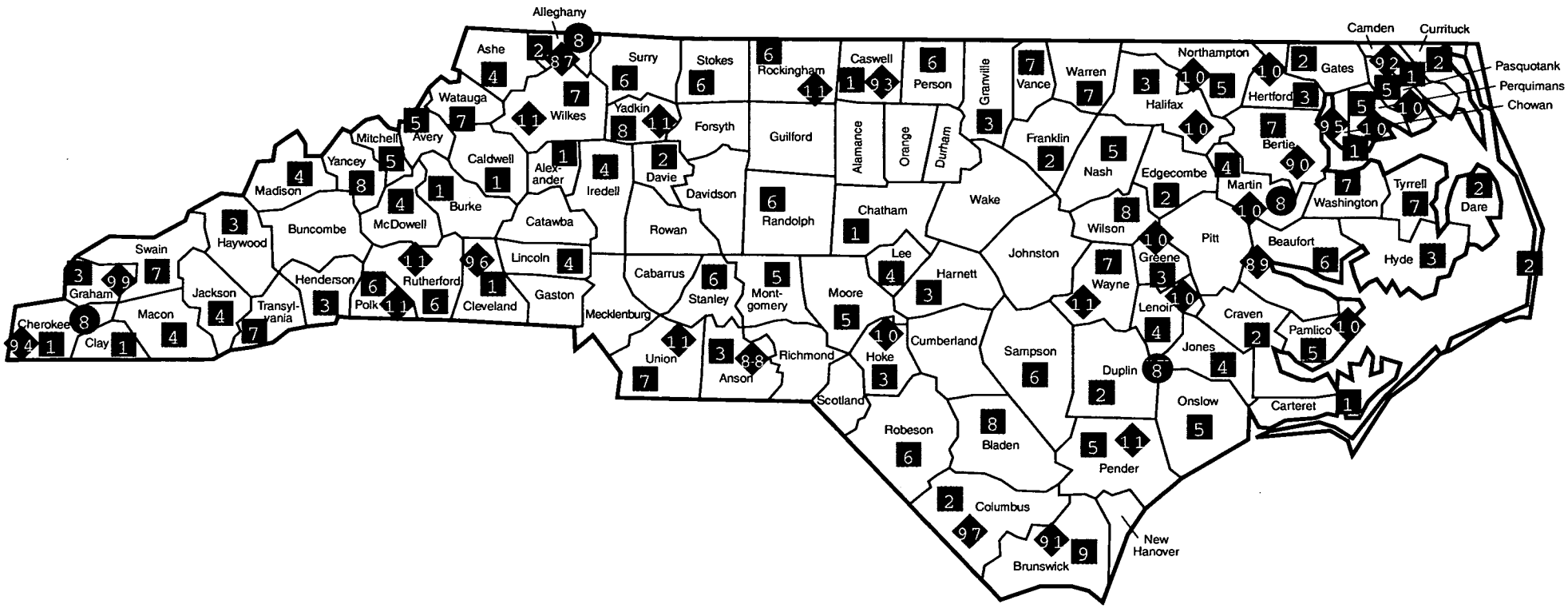
Public Internet Access

Through the e-NC initiative, the Rural Internet Access Authority is working to ensure Internet access to every citizen of North Carolina at reasonable rates, to promote widespread understanding of the potential benefits of the Internet and to substantially increase Internet literacy skills among North Carolinians, especially in rural North Carolina. Through the e-communities planning effort, counties across the state designed plans for public Internet access sites in their communities. These plans were then submitted to the RIAA for consideration as the first phase of e-communities implementation.

The RIAA recognizes public access to the Internet as a fundamental requirement to realizing its vision of vibrant, connected e-communities across North Carolina. Public access is the primary architecture for ensuring the delivery of training and important web applications to these communities. In July 2002, the Rural Internet Access Authority awarded $768,000 for public access site grants to 64 counties, as the first phase of the e-communities implementation grants. This grant program has allowed for the creation or expansion of approximately 140 public Internet access sites across the state. Each participating county received $12,000 for this effort, with the grants running from September 1, 2002-August 31, 2003. An additional $320,000 was recently reserved in order to extend these grants. The Authority has been very excited about the success of these centers. Public access sites are an essential part of making high-speed Internet available across the state, especially to communities that may not otherwise experience high-speed access.

The Rural Internet Access Authority is creating a database of public Internet access sites across North Carolina. Please go to: http://www.e-nc.org/publicaccess.asp to access this database and find a public access site in your county.

E-NC Programs



E-COMMUNITIES

E-champions are leading 100 NC e-Communities to connect locally to compete globally.

1. Alexander County
2. Alleghany County
3. Anson County
4. Ashe County
5. Avery County
6. Beaufort County
7. Bertie County
8. Bladen County
9. Brunswick County
10. Burke County
11. Caldwell County
12. Camden County
13. Carteret County
14. Caswell County
15. Chatham County
16. Cherokee County
17. Chowan County
18. Clay County
19. Cleveland County
20. Columbus County
21. Craven Count
22. Currituck County
23. Dare County
24. Davie County
25. Duplin County
26. Eastern Band of the Cherokee
27. Edgecombe County
28. Franklin County
29. Gates County
30. Graham County
31. Granville County
32. Greene County
33. Halifax County
34. Harnett County
35. Haywood County
36. Henderson County
37. Hertford County
38. Hoke County
39. Hyde County
40. Iredell County
41. Jackson County
42. Jones County
43. Lee County
44. Lenoir County
45. Lincoln County
46. Macon County
47. Madison County
48. Martin County
49. McDowell County
50. Mitchell County
51. Montgomery County
52. Moore County
53. Nash County
54. Northampton County
55. Onslow County
56. Pamlico County
57. Pasquotank County
58. Pender County
59. Perquimans County
60. Person County
61. Polk County
62. Randolph County
63. Robeson County
64. Rockingham County
65. Rutherford County
66. Sampson County
67. Stanley County
68. Stokes County
69. Surry County
70. Swain County
71. Transylvania County
72. Tyrrell County
73. Union County
74. Vance County
75. Warren County
76. Washington County
77. Watauga County
78. Wayne County
79. Wilkes County
80. Wilson County
81. Yadkin County
82. Yancey County

BUSINESS & TECHNOLOGY TELECENTER LOCATIONS

Bringing new businesses, entrepreneurship, and 21st Century jobs to rural North Carolina.

83. Blue Ridge Business Development Center
84. e-NC TeleCenter
85. Tri-County Community College TeleCenter
86. Northeast Business & Technology Center

TECHFORCE LOCATIONS

Harnessing the energy of High School & College volunteers, to bring cutting-edge technology to their e-Communities.

87. Alleghany County
88. Anson County
89. Beaufort County
90. Bertie County
91. Brunswick County
92. Camden County
93. Caswell County
94. Cherokee County
95. Chowan County
96. Cleveland County
97. Columbus County
98. Duplin County
99. Graham County
100. Greene County
101. Halifax County
102. Hertford County
103. Hoke County
104. Lenoir County
105. Martin County
106. Northampton County
107. Pamlico County
108. Pasquotank County
109. Perquimans County
110. Pender County
111. Polk County
112. Rockingham County
113. Rutherford County
114. Union County
115. Wayne County
116. Wilkes County
117. Yadkin County

VISITOR REGISTRATION SHEET

Science and Technology — **Name of Committee**

April 2, 2003 — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Angie Bailey	Rural Internet Access Authority Staff
Donna Sullivan	Rural Internet Access Authority Staff
Jane Patterson	Rural Internet Access Authority Exec. Dir.
Paul Ridgeway	Rural Internet Access Authority Commissioner
Albert Eckel	Corning
Darleene Heath	NCNC
Charles Johnson	NC House Dist. 4
Oppie Jordan	RIAA Commission member
Julie Allen	NC Statewatch
Stephanie McGarrah	NC Dept of Commerce
Rachel M. Jeyan	Nash Co, CSC

VISITOR REGISTRATION SHEET

Science and Technology — April 2, 2003

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Robyn Render	UNC
Frank Prochaska	UNC
Ben McLawhorn	OSC
Stan Pace	Verizon
Alan Sowards	Nortel
Angi Harris	Maupin Taylor
Kathie Austin	Fiscal Research
Billy Ray Hall	NC Rural Ctr
Jan Hamm	RIAA Comission / Sprint
Dan McAuley	RIAA staff
Deborah Watts	RIAA staff

VISITOR REGISTRATION SHEET

APPROPRIATIONS [redacted] SCIENCE & TECHNOLOGY Date: April 2, 03

VISITORS: PLEASE SIGN BELOW AND RETURN TO COMMITTEE ASSISTANT

NAME	FIRM OR AGENCY AND ADDRESS
Reid Parrott	Rocky Mt. - Nash Co.
George Bakolia	SCIO
David Knight	NC Sierra

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

April 9, 2003

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Bills to be Discussed:

House Bill 665 – Science and Technology Board – Rep. Miller

Presentation by George Bakolia, State Chief Information Officer

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

April 9, 2003

The House Committee on Science and Technology met on Wednesday, April 9, 2003, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson, Vice-Chair; Ellis, Jones, McMahan, Michaux and Walend.

Representative Miller called the meeting to order and introduced the pages and Sergeant-At-Arms. Shawn Guy from Edgecombe County was sponsored by Rep. Hall; and Trey Williams from Halifax County was also sponsored by Rep. Hall.

George Bakolia, State Chief Information Officer, was introduced and gave a presentation on Legacy Application Transformation (See Attachment **C**).

After the presentation, a short question and answer period followed.

Representative Miller turned the meeting over to Vice-Chairman Tolson in order to explain his bill, House Bill 665, *Science and Technology Board.* After explanation, Representative Michaux moved for a favorable report. The motion carried.

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

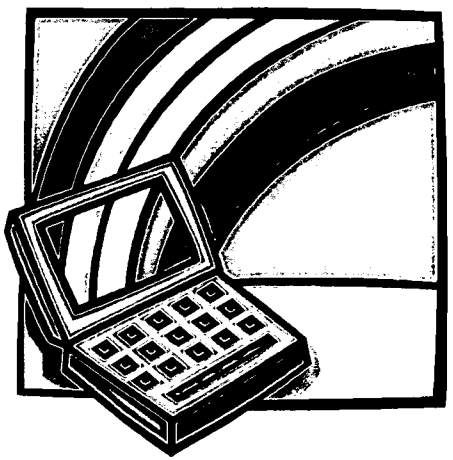
Respectfully submitted,

Representative Paul Miller
Chairman

Eryn Gee
Committee Assistant

ITS
Office of Information Technology Services

Legacy Application Transformation



State CIO
George Bakolia
April 9, 2003

Attachment C

ITS
Office of Information Technology Services

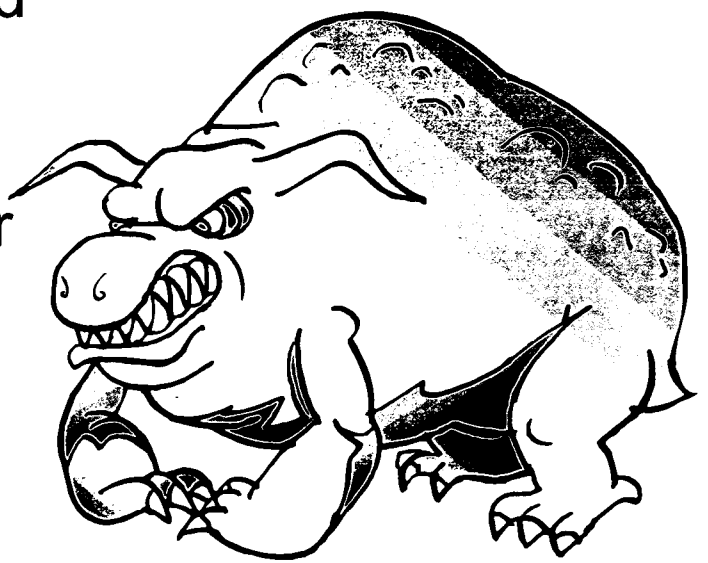
Old Stuff

- In Texas, the CIO says that they have applications "that are old enough to vote and buy whiskey"
- In North Carolina, we have applications that are almost old enough to run for President.

ITS
Office of Information Technology Services

Even Worse…

- Information Week, March 24th— "There's a foul and dangerous monster in the basement of most American businesses, and like the acid-dripping, stomach ripping nasty from the Alien files, most companies have no clue how to deal with it….This foul fiend is named Legacy, and it's strangling innovation and progress in American business because it sucks up ever-larger percentages of IT operating budgets."



ITS
Office of Information Technology Services

What is a Legacy Application?

- Legacy applications are computer business programs that are already in existence and are in danger of becoming obsolete or unsupportable
  - Age
  - Programming language
  - Dependence on hardware or software that cannot be maintained
  - Lack of availability of skills required to support the application
- Historically, programs were often developed in a customized manner and enhanced over time to meet business requirements
- The Y2K approach enabled us to allow these systems to continue to be used, in many instances it postponed addressing the replacement problem

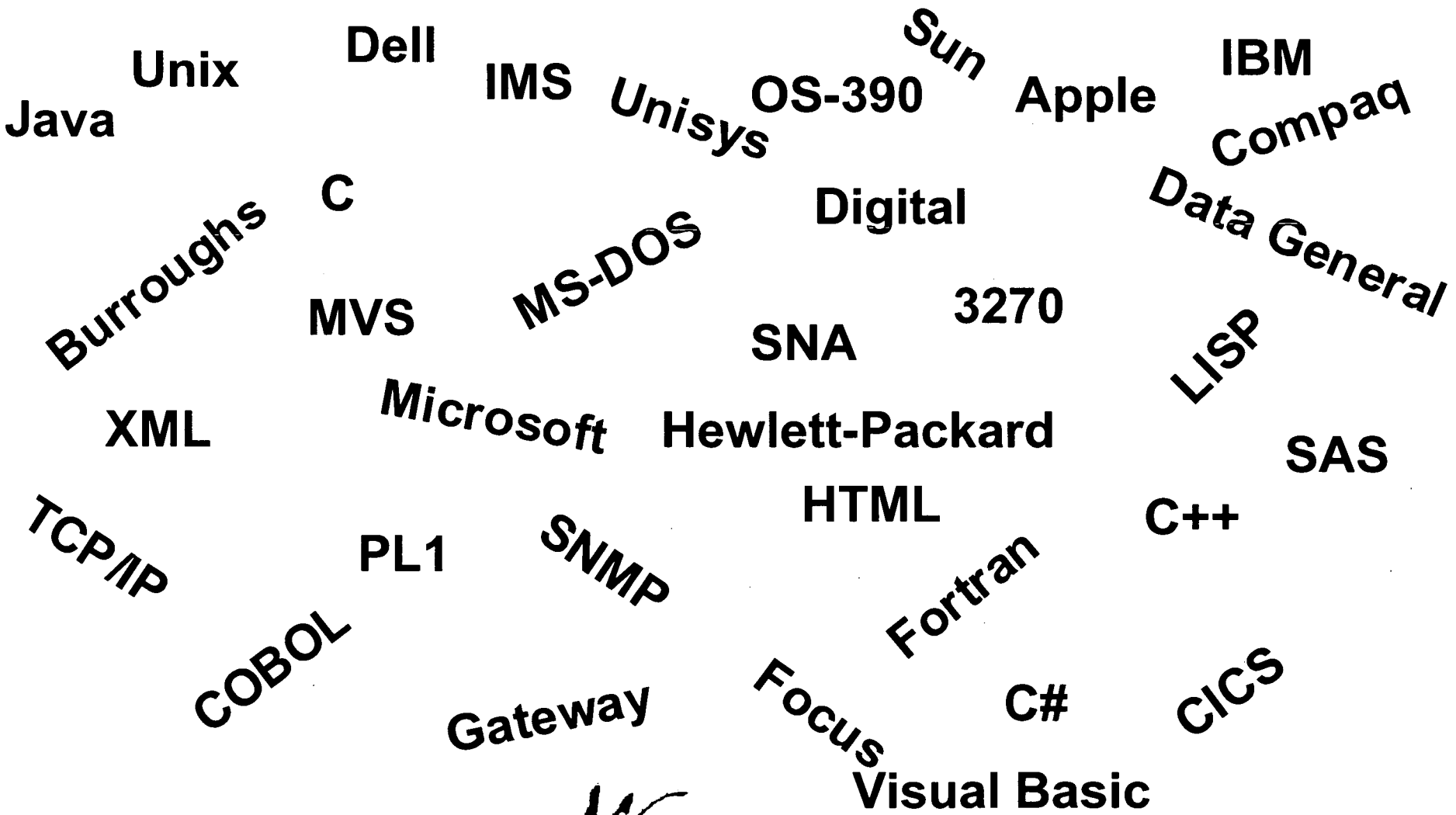
ITS
Office of Information Technology Services

A Perfect Storm

- The combination of staffing concerns and obsolescence of technology create the environment for the Perfect Storm of movie fame
- Staffing
  - Staff who support these applications are approaching retirement
  - Some retirees may be willing to keep working
- Technical Obsolescence
  - These applications reside on hardware, operating systems or software that receive limited support or may be expensive to maintain
  - The age of the operating systems and the database software will eventually place them at high risk
  - Lack of proper documentation may hamper work to replace a system

ITS
Office of Information Technology Services

IT Environment



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Office of Information Technology Services

IT Environment

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To Whom is this Important?

- State government services to citizens depend on the technology infrastructure and many rely on very old systems
  - Protecting life and citizens' safety
  - Enabling the neediest to receive services
  - Paying state employees
  - Ensuring students are appropriately educated
  - Taking care of those with health concerns
- All technology dependent enterprises—both private and public are affected.

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Why is this Important?

- The State faces risks
  - Systems may be unable to be changed to meet new business requirements.
  - Systems may fail due to hardware or software breakdowns.
  - Staff may no longer be available to complete routine maintenance
  - The expense of maintaining them may exceed their value or their replacement costs
- Interacting with other information systems is highly problematic
- Information and analysis capabilities required for management decision making are often not available

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Why Did it Happen?

- Applications are being used for a longer period of time than anticipated
- The organizational structure of state government and the budget process contribute to the problem
  - There is no mechanism for centralizing funding for projects
  - Agencies with small staffs and small budgets are often responsible for major enterprise wide applications
- Budget constraints make it difficult to replace applications

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Why did it happen? (continued)

- Hard to generate excitement while something is working
  - We often wait for failure before taking action
  - Unlike Y2K, there is no finite deadline to worry about.
  - Significant resources were already expended on these systems for Y2K
- State systems often meet unique business requirements that Commercial off the shelf systems will not replicate
  - Best practice is to buy off the shelf and re-engineer business practices
  - Entities are often reluctant to change

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Need for change

- In addition to the risk of system failure, there are other reasons change is needed
  - Introduction of e-commerce applications demands system replacement
  - Compliance with major laws requires changes
    - HIPAA
    - Legislative initiatives
    - Financial requirements
  - Globalization and increased competition drives efficiency that might not be feasible in legacy applications
  - Need increased ability to manage infrastructure efficiently
  - Provides impetus for necessary changes to business processes and implementation of best practices

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Need for Change (continued)

- It is expensive
  - Resources are being expended supporting inefficient environments
  - Retirees are being rehired as contractors to support systems no one else understands
  - The costs of a technology failure could be significant
  - Maintaining old and new technologies concurrently does not make good business sense

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Extent of the Situation in North Carolina is not Known

- Some Preliminary Work has been done. . .
  - Y2K
  - State's Business Infrastructure Study
  - Treasurer's Core-Banking and Retirement Study
  - Department of Justice Legacy Migration Project
  - Anecdotal information was gathered in discussions of a legislative provision for early retirement
- And is planned. . .
  - Required by legislation
  - Phase one of the Asset Inventory initiative that is currently underway will identify basic assets – 2nd quarter 2003
  - Phase two will identify applications – 3rd quarter 2003

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Measuring Susceptibility

- The state must begin by measuring susceptibility:
- Determine age and profile of mission critical systems such as Food Stamps, Drivers Licenses, Prisoner Information System (OPUS)
  - DOT Payroll is 35 years old!
  - Cash Management is 35 to 40 years old.
  - The state's accounting system (NCAS) is 28 years old.
- Determine how many mission critical applications are supported by small numbers of staff
  - Personnel (PMIS)
  - Budget
  - Payroll, etc.
- Determine employee skills needed and availability

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Opportunity

- In addition to resolving a costly problem, this presents tremendous opportunities for the business of state government
  - Re-engineer business processes, rather than conforming to antiquated software requirements
  - Establish enterprise initiatives so that the benefits of re-engineered processes and purchased software can be achieved statewide and expenditures made one time
  - Clearly define the core IT competencies of state government, establish a knowledge base, and determine appropriate places for outsourcing
  - Enable state resources to focus their energies on understanding the business of North Carolina state government

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Next Steps for State Government

- Receive legislative mandate for cooperation in analyzing size and scope of problem
- Conduct inventory and assessment and report to General Assembly
- Develop plan defining needs, costs, and timeframes to modernize State agency information technology
- Determine model for priority setting at a statewide level to include
  - Business process reengineering
  - Costs for remediation
  - Criticality of system
  - Risk
  - Opportunities for replacement/retirement
- Report to General Assembly

Information Technology Services
Enterprise Technology Strategies

Legacy Obsolescence in the State's Information Technology Infrastructure

Findings and Recommendations

Report Prepared for the State CIO

March 25, 2003

Table of Contents

Mission and Objectives of Research

As requested, the ETS staff has performed informal research on the issues surrounding system obsolescence in North Carolina state government. This research included discussions with key technology managers, a review of the problem with several research organizations and a literature/periodical review. In addition, last summer we did an informal telephone survey of key agencies to ask them about the potential impact of the proposed early retirement buy-out on the stability of the state's software applications and technical infrastructure. We spoke to key individuals in both large and small agencies, representing both the Cabinet and the Council of State. We also asked agencies to begin to identify their areas of concern in terms of application vulnerability from obsolescence in their agency technology plans.

For the purposes of discussion, we have classified "legacy" systems as those that are vulnerable due to one or several of the following factors: age, language, dependence on no longer vendor-supported software or hardware, or the skills required to support them being in limited supply.

Key Observations – Major Challenges

Our work resulted in several key challenges that are highlighted as follows:

1. We know that some of the key systems in agencies are chronologically old. Even if they are not formally "obsolete", they are and will experience continued breakdowns requiring increased maintenance.

2. The State is dealing with an aging workforce. The retirement buy-out proposal last year caused increased attention to the state's vulnerability, but even without early retirements, the state faces a skills crisis in the next two to five years. Concerns are being raised about the potential "brain-drain" through the loss of business and agency "institutional history" perspectives as well as technical knowledge of systems and data. For example, DOT has had to hire retired employees as contractors in order to implement the SAP financial system.

   The PMIS system in State Personnel can give reports on age of employees, personnel classifications, basic salary information and length of active state service. The Retirement system in the Department of the State Treasurer can indicate persons and number of years of service, but not classification, source of funds or salary. (Since individuals have the right to purchase local government service or military time, the PMIS records are not sufficient to determine length of eligible service.) So, there is no automated way to determine how many IT workers are between 55

and 62, have more than 25 years of service, and are ready to retire in the next few years.

3. A complicating factor in North Carolina is that only one or two individuals are supporting several enterprise, mission critical systems. This lack of depth in support makes them vulnerable no matter what the age or skill set of the persons assigned to them. These extremely vulnerable systems include the state's primary payroll system, the state budget system, the purchasing systems, and the Personnel Management System.

4. A review of agency technology plans and expansion budget submissions shows that the continuing state budget crisis is having an impact on the agencies ability to deal with the problems of legacy systems. Some departments even asked for expansion funds to pay for on-going maintenance and operations. This is one of those areas where the availability of money is not spread evenly between agencies. For example, the Department of the State Treasurer is able to use receipts to pay for new business systems, while OSC and OSP have no equivalent source of funds.

5. Employee skills are also unevenly divided, and to a great extent, are unknown. Again, anecdotally, we were told of one agency with a critical shortage in COBOL programmers, while another agency has a more than sufficient number of people with these skills.

6. As well as dealing with obsolete applications and hardware, the state must become more aware of the potential impact of the loss of mission critical data, either through lack of rigor in terms of data backup or age of the applications. In the last several weeks ETS has become aware of two data sets with critical data that are extremely vulnerable.

Key Observations – Favorable Considerations

After painting this dismal picture, it is also important to note that there is some good news, listed as follows:

1. The Business Infrastructure Study, being performed under the auspices of the Office of the State Controller, is documenting the status of the state's core business management systems; therefore, we have current and reasonably detailed information on these applications.

2. As a result of the state's efforts in the Y2K project, major strategic systems were identified, and many underwent significant rewrites, making them more contemporary. The Y2K effort identified approximately 1700 major state systems, and 125 were categorized as "mission-critical."

3. Federal mandates, such as HIPAA and tax law changes, have resulted in some applications being re-written or examined.

4. The state has several mission critical systems that were replaced or rewritten in the 90's, including ITAS, OPUS, STARs, and both DOT and the Office of the State Treasurer have system replacements underway.

Next Steps

The state must undertake an effort to determine how extensive the problem is. A legislative mandate to do this work would be most useful, as would a small appropriation for the survey efforts needed. Areas to be examined include type and degree of risk, business impact, hardware, operating systems, data base software, agency recommendations for remediation approach and costs, and skill sets necessary for maintenance.

Once the extent of exposure is known, then efforts can be undertaken to determine a priority setting process for fixing the problem. Applications can be re-written, converted to newer architectures, replaced, or eliminated, based on a series of metrics approved by the General Assembly or the State CIO and the IRMC. With Y2K, the priority setting was based on mean time to failure and number of citizens affected by the pending collapse of the application. The records from the Y2K work exist at ITS, and they could form a starting point for the assessment. Measures that are similar to those used in Y2K could be designed to determine legacy system remediation priorities. If we use a grid that plots the impact of failure on one axis and risk on another, it would be most logical to work on the high risk, high impact systems first.

Additional Consideration

This issue is another illustration of the need for current, accurate and complete information on the state's IT assets for the appropriate management of its IT applications and their supporting computing, data storage, and telecommunication infrastructures. Asset and portfolio management inventory systems are essential for you and the agencies to respond to legitimate questions from legislative and oversight bodies and to prepare useful and realistic IT plans (including appropriation requests) for meeting the state's business strategies.

This report is meant to prompt discussion. Further work will be required to determine resource requirements for collecting and organizing data and performing the required analyses.

2003 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. 665 A BILL TO BE ENTITLED AN ACT TO MODIFY THE DUTIES OF THE BOARD OF SCIENCE AND TECHNOLOGY.

☒ 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 (#), ☐ 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

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 2003

HOUSE BILL 665

Short Title:	Science and Technology Board.	(Public)
Sponsors:	Representative Miller.	
Referred to:	Science and Technology.	

March 25, 2003

A BILL TO BE ENTITLED

AN ACT TO MODIFY THE DUTIES OF THE BOARD OF SCIENCE AND TECHNOLOGY.

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 143B-472.80 reads as rewritten:

"**§ 143B-472.80. North Carolina Board of Science and Technology; creation; powers and duties.**

The North Carolina Board of Science and Technology of the Department of Commerce is created. The Board has the following powers and duties:

(1) To identify, and to support and foster the identification of, important research needs of both public and private agencies, institutions and organizations in North Carolina that relate to the State's economic growth and development;

(2) To make recommendations concerning policies, procedures, organizational structures and financial requirements that will promote effective use of scientific and technological resources in fulfilling the research needs identified and that will promote the economic growth and development of North Carolina;

(3) To allocate funds available to the Board to support research projects, to purchase research equipment and supplies, to construct or modify research facilities, to employ consultants, and for other purposes necessary or appropriate in discharging the duties of the Board;

(4) To advise and make recommendations to the Governor, the General Assembly, the Secretary of Commerce, and the Economic Development Board on the role of science and technology in the economic growth and development of North Carolina."

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

HOUSE BILL 665:
Science and Technology Board

BILL ANALYSIS

Committee:	House Science & Technology	**Introduced by:**	Rep. Miller
Date:	April 9, 2003	**Summary by:**	Brenda J. Carter
Version:	1st Edition		Committee Counsel

SUMMARY: ***House Bill 665 would authorize the North Carolina Board of Science and Technology to advise and make recommendations to the General Assembly on the role of science and technology in the economic growth and development of the State.***

CURRENT LAW: G.S. 143B-472.80 establishes the N.C. Board of Science and Technology in the Department of Commerce. The Board consists of the Governor, the Secretary of Commerce, and 17 appointed members. Fifteen of the members are appointed by the Governor in accordance with criteria set out in G.S. 143B-472.81 (copy attached), and two members are appointed by the General Assembly – one upon recommendation of the President Pro Tempore of the Senate, and one upon recommendation of the Speaker of the House. The Board is empowered to:

- Identify and support research needs of public and private agencies, institutions and organizations in North Carolina that relate to the State's economic growth and development;
- Make recommendations concerning policies, procedures, organizational structures and financial requirements that promote effective use of scientific and technological resources and promote the economic growth and development of North Carolina;
- Allocate funds available to the Board to support research projects, purchase research equipment and supplies, construct or modify research facilities;
- Advise and make recommendations to the Governor, the Secretary of Commerce, and the Economic Development Board on the role of science and technology in the economic growth and development of North Carolina.

BILL ANALYSIS: The Board of Science and Technology currently has the authority to advise and make recommendations to the Governor, the Secretary of Commerce, and the Economic Development Board on the role of science and technology in the economic growth and development of North Carolina. House Bill 665 amends the powers and duties of the Board of Science and Technology by extending that authority to include advice and recommendations to the General Assembly.

The act would be effective when it becomes law.

H665-SMRV-001

§ 143B-472.81. North Carolina Board of Science and Technology; membership; organization; compensation; staff services.

(a) The North Carolina Board of Science and Technology consists of the Governor, the Secretary of Commerce, and 17 members appointed as follows: the Governor shall appoint one member from the University of North Carolina at Chapel Hill, one member from North Carolina State University at Raleigh, and two members from other components of the University of North Carolina, all nominated by the President of the University of North Carolina; one member from Duke University, nominated by the President of Duke University; one member from a private college or university, other than Duke University, in North Carolina, nominated by the President of the Association of Private Colleges and Universities; one member from the Research Triangle Institute, nominated by the executive committee of the board of that institute; one member from the Microelectronics Center of North Carolina, nominated by the executive committee of the board of that center; one member from the North Carolina Biotechnology Center, nominated by the executive committee of the board of that center; four members from private industry in North Carolina, at least one of whom shall be a professional engineer registered pursuant to Chapter 89C of the General Statutes or a person who holds at least a bachelors degree in engineering from an accredited college or university; and two members from public agencies in North Carolina. Two members shall be appointed by the General Assembly, one shall be appointed upon the recommendation of the President Pro Tempore of the Senate, and one shall be appointed upon the recommendation of the Speaker of the House of Representatives in accordance with G.S. 120-121. The nominating authority for any vacancy on the Board among members appointed by the Governor shall submit to the Governor two nominations for each position to be filled, and the persons so nominated shall represent different disciplines.

(b) Members appointed to the Board by the General Assembly shall serve for two-year terms beginning 1 July of odd-numbered years. Vacancies in appointments made by the General Assembly shall be filled in accordance with G.S. 120-122. The two members from public agencies shall serve for terms expiring at the end of the term of the Governor appointing them. The other 13 members appointed to the Board by the Governor shall serve for four-year terms, and until their successors are appointed and qualified. Of those 13 members, six shall serve for terms that expire on 30 June of years that follow by one year those years that are evenly divisible by four, and seven shall serve for terms that expire on 30 June of years that follow by three years those years that are evenly divisible by four. Any appointment to fill a vacancy on the Board created by the resignation, dismissal, death, or disability of a member shall be for the balance of the unexpired term.

(c) The Governor or the Governor's designee shall serve as chair of the Board. The vice-chair and the secretary of the Board shall be designated by the Governor or the Governor's designee from among the members of the Board.

(d) The Governor may remove any member of the Board from office in accordance with the provisions of G.S. 143B-16.

(e) Members of the Board who are employees of State agencies or institutions shall receive subsistence and travel allowances authorized by G.S. 138-6. Legislative members of the Board shall receive subsistence and travel allowances authorized by G.S. 120-3.1.

(f) A majority of the Board constitutes a quorum for the transaction of business.

(g) The Secretary of Commerce shall provide all clerical and other services required by the Board.

VISITOR REGISTRATION SHEET

Science and Technology — April 9, 2003

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Giovanni Maduci	Capital City Consulting - Raleigh
Robert Powell	Office of the State Controller
Ben McLawhorn	" "
George Bakolia	ITS
Lee Mandell	NCLM
Denny McGuire	ITS
John Hardin	NC Board of Science & Technology
Woody Yates	IRMC
Camille Stell	KCLH
Don Hobart	NC DOC
Charles Marshall	Brooks, Pierce

VISITOR REGISTRATION SHEET

Science and Technology — April 9, 2003

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Lori Fuller	AGO
Doug Miskew	Capital Strategies
Rob Dugas [illegible]	NCStateWatch
Albert Eckel	CORNING
Alfred M Mays	UNC OP

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

April 16, 2003

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Bills to be Discussed:

House Bill 941 - Study IT Legacy Systems - Rep. Miller

House Bill 972 - Property Tax Certification Procedure - Rep. Culpepper

House Bill 1194 - Establish E-NC Authority - Rep. Tolson

House Bill 1176 - IT Funds Flexibility - Rep. Miller

House Bill 1003 - IT Security Changes - Tolson

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

April 16, 2003

The House Committee on Science and Technology met on Wednesday, April 16, 2003, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson, Vice-Chair; Creech, Ellis, Jones, Walend, and ex officio member Representative Culpepper.

Rep. Miller called the meeting to order and introduced the Sergeant-At-Arms and page. Ross Martin from Guilford County was sponsored by Rep. Jeffus.

There was a proposed committee substitute offered on House Bill 972, *Property Tax Certification Procedure*. Rep. Ellis moved to adopt and the motion carried. Rep. Culpepper was then recognized to explain his bill. Several questions were raised and after much discussion, the bill was held for staff to work on and resolve the concerns.

Rep. Tolson was recognized to explain his bill, House Bill 1003, *IT Security Changes*. Rep. Ellis offered an amendment and moved for adoption. The amendment passed. Rep. Walend moved for a favorable report on the bill as amended. The motion carried; the amendment would be engrossed into a committee substitute.

Rep. Tolson talked about his other bill on the agenda, House Bill 1194, *Establish E-NC Authority*. He gave a short explanation and said that he is still working on the bill and asked for support when it will be addressed next week.

Rep. Miller turned the meeting over to Vice-Chairman Tolson in order to explain his bill. He talked about House Bill 941, *Study IT Legacy Systems*, and asked for feedback from the committee as whether or not to pursue passage of the bill. The bill would be held over until the following meeting for members to look over.

With the hour drawing to a close, the meeting was adjourned.

Respectfully submitted,

Representative Paul Miller
Chairman

Eryn Gee
Committee Assistant

2003 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. 1003 A BILL TO BE ENTITLED AN ACT RELATING TO STATE INFORMATION TECHNOLOGY SECURITY.

☐ 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 ~~(#), ☐ 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

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 2003

H 2

HOUSE BILL 1003

Committee Substitute Favorable 4/22/03

Short Title: IT Security Changes. (Public)

Sponsors:

Referred to:

April 10, 2003

A BILL TO BE ENTITLED

AN ACT RELATING TO STATE GOVERNMENT INFORMATION TECHNOLOGY SECURITY.

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 147-33.82(f) reads as rewritten:

"(f) The head of each State agency shall cooperate with the State Chief Information Officer in the discharge of his or her duties by:

(1) Providing the full details of the agency's information technology and operational ~~requirements.~~requirements and of all the agency's information technology security incidents within 24 hours of confirmation.

(2) Providing comprehensive information concerning the information technology security employed to protect the agency's information technology.

(3) Forecasting the parameters of the agency's projected future information technology security needs and capabilities.

(4) Designating an agency liaison in the information technology area to coordinate with the State Chief Information Officer. The liaison shall be subject to a criminal background report from the State Repository of Criminal Histories, which shall be provided by the State Bureau of Investigation upon its receiving fingerprints from the liaison. If the liaison has been a resident of this State for less than five years, the background report shall include a review of criminal information from both the State and National Repositories of Criminal Histories. The criminal background report shall be provided to the State Chief Information Officer.

The information provided by State agencies to the State Chief Information Officer under this subsection is protected from public disclosure pursuant to G.S. 132-6.1(c)."

SECTION 2. Article 3D of Chapter 147 of the General Statutes is amended by adding a new section to read:

"**§ 147-33.89. Business continuity planning.**

(a) Each State agency shall develop and continually review and update as necessary a business and disaster recovery plan with respect to information technology. Each agency shall establish a disaster recovery planning team to develop the disaster recovery plan and to administer implementation of the plan. In developing the plan, the disaster recovery planning team shall do all of the following:

(1) Consider the organizational, managerial, and technical environments in which the disaster recovery plan must be implemented.

(2) Assess the types and likely parameters of disasters most likely to occur and the resultant impacts on the agency's ability to perform its mission.

(3) List protective measures to be implemented in anticipation of a natural or man-made disaster.

(b) Each State agency shall submit its disaster recovery plan on an annual basis to the Information Resource Management Commission and the State Chief Information Officer."

SECTION 3. This act is effective when it becomes law.

HOUSE BILL 1003:
IT Security Changes

BILL ANALYSIS

Committee:	House Science & Technology	**Introduced by:**	Rep. Tolson
Date:	April 16, 2003	**Summary by:**	Brenda J. Carter
Version:	1st Edition		Committee Counsel

SUMMARY: House Bill 1003 would make agency information technology liaisons subject to a criminal background check by the SBI. It would also require each State agency to develop and continually update a business and disaster recovery plan with respect to information technology.

CURRENT LAW: G.S. 147-33.82 sets out the powers and duties of the State Chief Information Officer (CIO) and the Office of Information Technology Services (ITS). The head of each State agency is required to cooperate with the CIO in the discharge of his or her duties by providing full details of the agency's information technology and operational requirements, and by designating an agency liaison in the information technology area to coordinate with the CIO.

BILL ANALYSIS: **Section 1** of the bill would require the head of each State agency to provide the CIO with full details of all the agency's information technology security incidents within 24 hours of confirmation. The bill also makes agency liaisons subject to a criminal background check by the State Bureau of Investigation. If the liaison has been a resident of this State for less than five years, the background report must include a review of criminal information from both the State and National Repositories of Criminal Histories. The criminal background report will be provided to the State Chief Information Officer.

Section 2 of the bill requires each State agency to develop and continually update a business and disaster recovery plan with respect to information technology. Each agency is to establish a disaster recovery planning team to develop and implement the plan. The team will consider the environment in which the disaster recovery plan will be implemented, assessing the types and extent of disasters most likely to occur along with the potential impact on the agency's ability to perform its mission, and will identify protective measures to be implemented in anticipation of a natural or man-made disaster. The bill requires each State agency to submit its disaster recovery plan on an annual basis to the Information Resource Management Commission and the CIO.

The bill will be effective when it becomes law.

VISITOR REGISTRATION SHEET

Science and Technology — April 16, 2003

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Pete Rodda	Forsyth County Tax Assessor/Collector Representing North Carolina Tax Assessors & Collectors
Pam Pate	Town of Garner Tax Collector for NC Tax Collector's Assn.
Gwen Canady	OSC
Crissy Porter	Smith Anderson.
Camille Stell	Kennedy Covington
Drew Edwards	CWA 3611
Susan M Smith	NC CWA Political Council
Doris Weaver	11
DAN WHITLEY	CWA 3611
Vicky Young	OSA
John Bell	NCDOR

VISITOR REGISTRATION SHEET

Science and Technology — April 16, 2003

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
David Baker	DOR
Kathie Austin	FRD
Denny McGuire	ITS
Danny Liveseay	ITS

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

April 23, 2003

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Bills to be Discussed:

House Bill 972 - Property Tax Certification Procedure - Rep. Culpepper

House Bill 1194 - Establish E-NC Authority - Rep. Tolson

House Bill 941 - Study IT Legacy Systems - Rep. Miller

House Bill 1176 - IT Funds Flexibility - Rep. Miller

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

April 23, 2003

The House Committee on Science and Technology met on Wednesday, April 23, 2003, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson, Vice-Chair; Earle, Jones, Walend and ex officio member Representative Culpepper.

Representative Miller called the meeting to order and introduced the Sergeant-At-Arms and pages. Alex O'Neill from Wake County was sponsored by Rep. Eddins and Austin Branch from Pitt County was sponsored by Rep. Tolson.

Rep. Culpepper was then recognized to explain his bill, House Bill 972, *Property Tax Certification Procedure*. He asked that a new proposed committee substitute be adopted for discussion. The motion carried. After some discussion Rep. Culpepper asked for an amendment, deleting some language. Rep. Tolson moved for adoption of the amendment; the motion carried. Rep. Tolson moved for a favorable report to an engrossed committee substitute of the bill; the motion carried.

Rep. Tolson was recognized to explain House Bill 1194, *Establish E-NC Authority*. He asked that a proposed committee substitute be adopted; the motion carried. Rep. Tolson offered an amendment on the bill, discussed and moved for adoption of the amendment. The motion carried. The committee voted in favor of the committee substitute with the amendment engrossed.

Rep. Miller turned the meeting over to Vice-Chair Tolson. Rep. Tolson recognized Rep. Miller to explain House Bill 941, *Study IT Legacy Systems*. There was much discussion, but no action taken on the bill.

With the hour drawing to a close, the meeting was adjourned.

Respectfully submitted,

Representative Paul Miller
Chairman

Eryn Gee
Committee Assistant

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 2003

H D

HOUSE BILL 972
PROPOSED COMMITTEE SUBSTITUTE H972-CSRV-6 [v.2]

4/23/2003 9:46:19 AM

Short Title: Property Tax Certification Procedure. (Public)

Sponsors:

Referred to:

April 9, 2003

A BILL TO BE ENTITLED

AN ACT TO ALLOW AN INTERNET-BASED ALTERNATIVE TO PROPERTY TAX CERTIFICATION PROCEDURES.

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 105-361 is amended by adding a new subsection to read:

"(e) Internet. – If the taxing unit maintains an Internet web site on which current information on the amount of taxes, special assessments, penalties, interest, and costs due on any real or personal property is available, the governing body of the taxing unit may adopt a resolution to allow a person to rely on information obtained from the web site as if it were a certificate issued pursuant to this section as of the date stated on the web site. The web site must clearly state the date as of which the information is current. The person who relies on the web site information must keep and present a copy of the information as necessary or appropriate, as if the copy were a certificate issued under subsection (a) of this section. The tax collector shall be liable on the tax collector's bond for any loss to the taxing unit arising from an understatement of the tax and special assessment obligations contained in the information available on the web site. The tax collector shall not be liable under this subsection if (i) the tax collector posts a clear disclaimer on the website indicating the date on which the posted information is current, and clearly states that the person accessing information on the web site is responsible for ensuring that all information is properly searched and recorded on the Internet certificate, or (ii) the tax collector, within 15 days of receipt of the Internet certificate generated pursuant to this subsection, gives notice to the person submitting the Internet certificate that the information contained in the certificate is inaccurate or understates the tax and special assessment obligations owed."

SECTION 2. This act becomes effective when it becomes law. Taxing units subject to this act shall comply with the provisions of this act within 3 months of the effective date.

NORTH CAROLINA GENERAL ASSEMBLY AMENDMENT

(Please type or use ballpoint pen)

EDITION No. _____

H. B. No. H972 DATE 4-23-03

S. B. No. _____ Amendment No. _____
(to be filled in by Principal Clerk)

COMMITTEE SUBSTITUTE ✓
H972-CSRV-6

Rep.)
) _____
Sen.)

moves to amend the bill on page 1, line 16-24

( ) WHICH CHANGES THE TITLE

by deleting language beginning with "The tax" and continuing through the end of line 24.

and on page 1, lines 25-27, by deleting the sentence that begins "Taxing units" and continuing through the end of line 27.

SIGNED _____

ADOPTED _____ FAILED _____ TABLED _____

GA-33-A

PRINCIPAL CLERK'S OFFICE (FOR ENGROSSMENT)

HOUSE BILL 972:
Property Tax Certification Procedure

BILL ANALYSIS

Committee:	House Science & Technology	**Introduced by:**	Rep. Culpepper
Date:	April 15, 2003	**Summary by:**	Brenda J. Carter
Version:	1st Edition		Committee Counsel

SUMMARY: ***House Bill 972 would amend the existing statute concerning the tax collector's statement of the amount of taxes due on real property, by adding a provision that allows a person to rely on information obtained from an Internet web site maintained by the taxing unit.***

CURRENT LAW: G.S. 105-361 provides that upon request of specified persons - including an owner or occupant of real property, a person holding a lien or legal interest in the property, a person with a contract to purchase or lease the property, or a person or firm that has contracted to make a loan secured by the property – the tax collector must furnish a written certificate stating the amount of any taxes and special assessments for the current year and any amounts still pending collection from prior years. When the certificate is issued, all taxes and special assessments that have accrued against the property for the period covered by the certificate cease to be a lien against the property, except to the extent of taxes and special assessments stated to be due in the certificate. This is applicable to all persons and entities who obtain the certificate and who rely on the certificate by either paying the amount of taxes and assessments stated in the certificate to be a lien on the real property, purchasing or leasing the real property, or lending money secured by the real property. The tax collector is liable on his bond for any loss to the taxing unit arising from an understatement of the tax and special assessment obligations in the preparation of a certificate.

BILL ANALYSIS: House Bill 972 would amend the existing statute concerning the tax collector's statement of the amount of taxes due on real property, by adding a provision that allows a person to rely on information obtained from an Internet web site maintained by the taxing unit. If the information is contained on the web site, the web site must clearly state the date as of which the information is current. The person could rely on information obtained from the web site as if it were a traditional certificate, and the tax collector would be liable on the tax collector's bond in the same manner as the traditional certificate.

The bill would become effective July 1, 2003.

2003 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. 972 A BILL TO BE ENTITLED AN ACT TO ALLOW AN INTERNET-BASED ALTERNATIVE TO PROPERTY TAX CERTIFICATION PROCEDURES.

☐ 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 ~~(#), ☐ 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

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 2003

H **D**

HOUSE BILL 1194
PROPOSED COMMITTEE SUBSTITUTE H1194-CSLR-13 [v.4]

4/22/2003 5:24:41 PM

Short Title: Establish e-NC Authority. (Public)

Sponsors:

Referred to:

April 10, 2003

A BILL TO BE ENTITLED

AN ACT TO CREATE THE "E-NC" AUTHORITY TO CONTINUE THE WORK OF THE RURAL INTERNET ACCESS AUTHORITY.

The General Assembly of North Carolina enacts:

SECTION 1. Article 10 of Chapter 143B of the General Statutes is amended by adding a new Part to read:

"Part 2F. e-NC Initiative.

"**§ 143B-437.44. Legislative findings.**

The General Assembly finds that:

(1) The North Carolina Rural Internet Advisory Authority (RIAA) was created by the General Assembly in S.L. 2000-149 and, in large measure, successfully accomplished the goals set forth for the RIAA, and then dissolved as required by law.

(2 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.

(3) 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.

(4) High-speed Internet access and the broadband applications it delivers are the necessary platforms that will support development of emerging technology-based sectors of great economic promise, for example, biotechnology and nanotechnology, as well as the continued competitiveness of traditional industries.

(5) The intent of the e-NC Authority is to continue the work of the North Carolina Rural Internet Access Authority and develop, promote, and

coordinate initiatives and public policy to foster and maintain universal broadband connectivity at affordable process for all citizens and businesses of North Carolina.

"**§ 143B-437.45. Definitions.**

The following definitions apply in this Part:

(1) Authority. – The e-NC Authority.

(2) Commission. – The governing body of the Authority.

(3) High-speed broadband Internet access. – Internet access with transmission speeds of at least 256 kilobits per second for downloading and 128 kilobits per second for uploading for residential and business customers.

(4) Rural county. – A county with a density of fewer than 250 people per square mile based on the 2000 United States decennial census.

(5) Distressed urban areas. – Areas where at least one of the following requirements is met: (i) more than ten percent (10%) of children enrolled in public schools meet the requirements for the Food Stamp Program of the United States Department of Agriculture, (ii) ten percent (10%) of the citizens meet the TANF guidelines of the United States Department of Health and Human Services, or (iii) twenty-five percent (25%) of the children in the public school district meet the requirements for a federal government-sponsored free lunch.

(6) Regional Partnerships. – As defined in G.S. 143B-437.21(6).

"**§ 143B-437.46. e-NC Authority.**

(a) Creation. – The e-NC Authority is created within the Department of Commerce for organizational and budgetary purposes only, and the Commission shall exercise all of its statutory authority under this Part independent of the control of the Department of Commerce. The functions of the Secretary of Commerce are ministerial and shall be performed only pursuant to the direction and policy of the Commission.

The purpose of the Authority is to manage, oversee, promote, and monitor efforts to provide rural counties and distressed urban areas with high-speed broadband Internet access. The Authority shall also serve as the central rural and urban distressed areas Internet access policy planning body of the State and shall 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.

(b) Commission. – The Authority shall be governed by a Commission. The Commission shall consist of nine voting members and two nonvoting ex-officio 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) Two ex officio, nonvoting members to include the State Chief Information Officer or that officer's designee and the President of the North Carolina Rural Economic Development Center, Inc., or that person's designee.

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.

(c) Oath. – As the holder of an office, each member of the Commission must take the oath required by Section 7 of Article VI of the North Carolina Constitution before assuming the duties of a Commission member.

(d) Terms; Commencement; Staggering. – Except as provided in subsection (f) of this section, all terms of office shall commence on January 1, 2004. The appointing officers shall designate one-half of their appointees to serve one-year terms. Members may serve up to four consecutive one-year terms. The appointing officers shall designate their remaining appointees to serve three-year terms. Members may serve up to two consecutive three-year terms.

(e) Chair. – The Governor shall designate one of the members appointed by the Governor as the Chair of the Commission.

(f) Vacancies. – All members of the Commission shall remain in office until their successors are appointed and qualify. A vacancy in an appointment made by the Governor shall be filled by the Governor for the remainder of the unexpired term. A vacancy in an appointment made by the General Assembly shall be filled in accordance with G.S. 120-122. A person appointed to fill a vacancy must qualify in the same manner as a person appointed for a full term.

(g) Removal of Commission Members. – The Governor may remove any member of the Commission for misfeasance, malfeasance, or nonfeasance in accordance with G.S. 143B-13(d). The Governor or the person who appointed a member may remove the member for using improper influence in accordance with G.S. 143B-13(c).

(h) Compensation of the Commission. – No part of the revenues or assets of the Authority shall inure to the benefit of or be distributable to the members of the Commission or officers or other private persons. The members of the Commission shall receive no salary for their services but may receive per diem and allowances in accordance with G.S. 138-5.

(i) Staff. – The North Carolina Rural Economic Development Center, Inc., shall provide administrative and professional staff support for the Authority under contract.

(j) Conflicts of Interest. – Members of the Authority shall comply with the provisions of G.S. 14-234 prohibiting conflicts of interest. In addition, if any member, officer, or employee of the Authority is interested either directly or indirectly, or is an officer or employee of or has an ownership interest in any firm or corporation, not including units of local government, interested directly or indirectly, in any contract with the Authority, the member, officer, or employee must disclose the interest to the Commission, which must set forth the disclosure in the minutes of the Commission. The member, officer, or employee having an interest may not participate on behalf of the Authority in the authorization of any contract.

"**§ 143B-437.47. Powers, duties, and goals of the Authority.**

(a) Powers. – The Authority shall have the following powers:

(1) To employ, contract with, direct, and supervise all personnel and consultants.

(2) To apply for, accept, and utilize grants, contributions, and appropriations in order to carry out its duties and goals as defined in this Part.

(3) To enter into contracts and to provide support and assistance to local governments, nonprofit entities, for-profit entities, Regional Partnerships, and Business and Technology Centers in carrying out its duties and goals under this Part.

(4) To review and recommend changes in all laws, rules, and programs, and policies of this State or any agency or subdivision thereof to further the goals of rural and distressed urban area Internet access.

(b) Duties. – The Authority shall have the following duties:

(1) To monitor and safeguard the investments made and contracts negotiated by the Rural Internet Access Authority in carrying out its functions under S.L. 2000-149, until such time as all contracts negotiated by the RIAA are complete.

(2) To maintain a website with accurate, current, and complete information about the availability of present telecommunications and Internet services with periodic updates on the deployment of new telecommunications and broadband Internet services, as well as information on public access sites and digital literacy training programs in North Carolina.

(3) To continue efforts to ensure that high-speed broadband Internet access remains available to every citizen of North Carolina at affordable prices in rural counties and urban distressed areas.

(4) To attract and coordinate funding of federal, foundation, and corporate dollars for regional and Statewide technology initiatives and to assist local government, including e-communities (the 85 rural counties and the Eastern Band of the Cherokee who have completed the e-communities process), in obtaining grants to futher enhance their technology infrastructure.

(5) To propose funding from other appropriate sources for incentives without technology bias for the private sector to make necessary investment to achieve the Authority's goals and objectives.

(6) To provide leadership, coordination, and support for grassroots efforts targeting technology-based economic development.

(7) To provide leadership, coordination, and support for telecommunications policy assessment as it relates to providing high-speed Internet access in rural counties and urban distressed areas.

(8) To promote collaborative technology projects, programs, and activities that reflect comprehensive efforts to develop technology-based economic development initiatives that utilize high-speed broadband Internet as a platform.

(9) To encorage replicable and scalable Internet applications in government, health care, education, and business that will assist the communities of North Carolina to remain competitive with respect to knowledge of, and use of, as well as affordable access to the high-speed Internet.

(d) Limitations. – The Authority shall not have the power of eminent domain or the power to levy any tax.

(e) Reports. – The Authority must submit quarterly reports to the Governor, the Joint Select Committee on Information Technology, the Joint Select Committee on Information Technology, and the Joint Legislative Commission on Governmental Operations. The reports shall summarize the Authority's activities during the quarter and contain any information about the Authority's activities that is requested by the Governor, the Committee, or the Commission."

SECTION 2. G.S. 120-123 is amended by adding a new subdivision to read:

"(72) The e-NC Authority created in Part 2F of Article 10 of Chapter 143B of the General Statutes."

SECTION 3. Section 5 of S.L. 2000-149 reads as rewritten:

"**SECTION 5.** This act is effective when it becomes law. The North Carolina Rural Internet Access Authority created in this act is dissolved effective December 31, 2003. This act is repealed effective December 31, 2003. Part 2E of Article 10 of Chapter 143B of the General Statutes and G.S. 120-123(71), as enacted by this act, are repealed effective ~~December 1, 2003.~~December 31, 2003."

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.

NORTH CAROLINA GENERAL ASSEMBLY
AMENDMENT
House Bill 1194

AMENDMENT NO. _____
(to be filled in by
Principal Clerk)

H1194-ARV-7 [v.2]

Date _____,2003

Comm. Sub. [YES]
Amends Title [NO]
H1194-CSLR-13

Representative Tolson

moves to amend the bill on page 2, line 37,
by rewriting that line to read:
"Commission shall consist of nine voting members and four voting ex officio"

and on page 3, lines 4- 7,
by rewriting those lines to read:
"(4) Four ex officio, voting members to include the State Chief Information Officer, the President of the North Carolina Rural Economic Development Center, Inc., the Executive Director of the North Carolina League of Municipalities, the Executive Director of the North Carolina Association of County Commissioners, or their designees."

SIGNED _____
Amendment Sponsor

SIGNED _____
Committee Chair if Senate Committee Amendment

ADOPTED _____ FAILED _____ TABLED _____

NORTH CAROLINA GENERAL ASSEMBLY AMENDMENT

(Please type or use ballpoint pen)

EDITION No. _____

H. B. No. 1194 DATE 4-23-03

S. B. No. _____ Amendment No. _____
(to be filled in by Principal Clerk)

COMMITTEE SUBSTITUTE ✓
H1194-CSLR-13

Rep.)
) _____
Sen.)

moves to amend the bill on page 3, line 21-22

( ) WHICH CHANGES THE TITLE

by rewriting the sentence that begins on that line to read: "Each appointing officer shall designate one appointee to serve a one-year term."

SIGNED Joe P. Tolson

ADOPTED _____ FAILED _____ TABLED _____

GA-33-A

PRINCIPAL CLERK'S OFFICE (FOR ENGROSSMENT)

2003 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. 1194 A BILL TO BE ENTITLED AN ACT TO CREATE THE "E-NC" AUTHORITY TO CONTINUE THE WORK OF THE RURAL INTERNET ACCESS AUTHORITY.

☐ 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 ~~(#),~~ ☐ ~~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

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

April 30, 2003

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Bills to be Discussed:

House Bill 940 Make E-Textbooks Available to Students - Miller

House Bill 941 - Study IT Legacy Systems - Rep. Miller

House Bill 1176 - IT Funds Flexibility - Rep. Miller

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

April 30, 2003

The House Committee on Science and Technology met on Wednesday, April 30, 2003, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson, Vice-Chair; Earle, Ellis, Jones, McMahan, and Walend.

Representative Miller called the meeting to order and introduced the Sergeant-At-Arms and pages. Precious Clemmons from Wake County was sponsored by Rep. Bernard Allen, and Vonda Walker from Pender County was sponsored by Rep. Justice.

Rep. Miller turned the meeting over to Vice-Chair Tolson. Rep. Tolson recognized Rep. Miller to explain his bills. House Bill 940, *Make E-Textbooks Available to Students*, was discussed. Rep. Ellis moved to adopt the proposed committee substitute for discussion and after discussion, moved for a favorable report; the motion carried. Next was House Bill 941, *Study IT Legacy Systems*. Staff member, Peter Capriglione gave a short explanation that addressed questions raised from the previous meeting. Rep. Ellis moved for a favorable report; the motion carried. House Bill 1176, *IT Funds Flexibility*, was the last bill to be discussed. Rep. Miller asked that this bill be re-referred to Appropriations and gave a quick explanation. Rep. Earle moved for a favorable report with a referral to Appropriations; the motion carried.

Rep. Tolson turned the meeting back over to Rep. Miller; Rep. Miller talked about upcoming presentations and with no further business, the meeting was adjourned.

Respectfully submitted,

Representative Paul Miller
Chairman

Eryn Gee
Committee Assistant

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 2003

H D

HOUSE BILL 940
PROPOSED COMMITTEE SUBSTITUTE H940-PCS30305-RV-23

Short Title: Make E-Textbooks Available to Students. (Public)

Sponsors:

Referred to:

April 8, 2003

A BILL TO BE ENTITLED

AN ACT AUTHORIZING THE LEGISLATIVE RESEARCH COMMISSION TO CONDUCT A STUDY REGARDING THE AVAILABILITY AND USE OF ELECTRONIC COPIES OF TEXTBOOKS FOR PUBLIC SCHOOL STUDENTS.

The General Assembly of North Carolina enacts:

SECTION 1. The Legislative Research Commission shall study issues related to the availability and use of electronic copies of textbooks for public school students. As part of the study, the Commission shall consider the feasibility of requiring that all textbook contracts include a clause requiring publishers to provide an electronic version of the textbook with any printed textbook they sell to the State Board of Education. The Department of Public Instruction shall provide the Commission any information it requires to conduct this study. The Commission shall make a report of the results of its study and any recommendations to the 2004 Regular Session of the 2003 General Assembly.

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

2003 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. 940 A BILL TO BE ENTITLED AN ACT REQUIRING TEXTBOOK PUBLISHERS TO MAKE ELECTRONIC COPIES OF TEXTBOOKS AVAILABLE TO PUBLIC SCHOOL STUDENTS.

☐ 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, ☒ 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

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 2003

HOUSE BILL 941

Short Title:	Study IT Legacy Systems.	(Public)
Sponsors:	Representative Miller.	
Referred to:	Science and Technology.	

April 8, 2003

A BILL TO BE ENTITLED

AN ACT PROVIDING FOR THE ANALYSIS OF THE STATE'S LEGACY INFORMATION TECHNOLOGY SYSTEMS.

The General Assembly of North Carolina enacts:

SECTION 1. Article 3D of Chapter 147 of the General Statutes is amended by adding a new section to read:

"**§ 147-33.89. Analysis of State agency legacy systems.**

(a) The Office of Information Technology Services, in conjunction with the Information Resources Management Commission, shall analyze the State's legacy information technology systems and develop a plan to ascertain the needs, costs, and time frame required for State agencies to progress to more modern information technology systems.

(b) In conducting the legacy system assessment phase of the analysis, the Office shall:

(1) Examine the hierarchical structure and interrelated relationships within and between State agency legacy systems.

(2) Catalog and analyze the portfolio of legacy applications in use in State agencies and consider the extent to which new applications could be used concurrently with, or should replace, legacy systems.

(3) Consider issues related to migration from legacy environments to Internet-based and client/server environments, and related to the availability of programmers and other information technology professionals with the skills to migrate legacy applications to other environments.

(4) Study any other issue relative to the assessment of legacy information technology systems in State agencies.

By March 1, 2004, the Office shall complete the assessment phase of the analysis and shall make a report of the assessment to the Joint Legislative Commission on

Governmental Operations (Commission). Thereafter, the Office shall make an ongoing annual report on these matters to the Commission by March 1 of each year.

(c) Upon completion of the legacy system assessment phase of the analysis, the Office shall ascertain the needs, costs, and time frame required to modernize State agency information technology. The Office shall complete this phase of the assessment by January 31, 2005, and shall report its findings and recommendations to the 2005 General Assembly. The findings and recommendations shall include a cost estimate and time line for modernization of legacy information technology systems in State agencies. The Office shall submit an ongoing, updated report on modernization needs, costs, and time lines to the General Assembly on the opening day of each biennial session."

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

North Carolina
General Assembly

Information Systems

Memorandum

To: Representative Paul Miller

From: Peter Capriglione

Date: 4/30/2003

Re: House Bill 941 - Study IT Legacy Systems

Representative Earle's concern towards an analysis of the State's legacy systems was aimed towards the requirement of an annual report. Her concern pertained to the cost of such a study, to begin with, but also the requirement to have a report submitted annually. I spoke with the CIO and he asked if I could help him clarify a few issues regarding her concern and pass my thoughts on to you.

The proposed study of IT legacy systems is grounded by the previous work that was performed for the Y2K initiative. The information compiled for the Y2K initiative was a comprehensive list of systems and applications in all areas of state government. This inventory provided the source from which Y2K system work was based. By having this information the CIO will have a foundation from which he can build upon. While it has been four years since Y2K, the list of computer systems and applications that was compiled at that time is still relevant today. In the event a system on that list has been retired or replaced, as some of them have, the information to indicate such should be available and probably contained in the Y2K information.

Additionally, the first phase of the "Business Systems Infrastructure Study" (link to report http://www.osc.state.nc.us/Business_Systems_Infrastructure_Project.html) contains information on the State's core business systems. Below is a list of the core business systems that were studied.

BPS ----------Budget Preparation System
BRS ----------Budget Revision System
BSIP ---------Business Systems Improvement Project (DOT)
CBS ----------Core Banking System
CMCS -------Cash Management Control System
CPS ----------Central Payroll System
DOT----------Dept. of Transportation [Payroll]
ELTS---------Employee Leave Tracking System
ITAS----------Integrated Tax Administration System
NCAS--------North Carolina Accounting System
PMIS---------Personnel Management Info. System
RCA----------Revenue Collection & Analysis System
RPS ----------Retiree Payroll System
SCS ----------Salary Control System

(Office of the State Controller, State of North Carolina, Business Systems Infrastructure Project, April 2003, page 5)

The main focus of this report was to "identify business and technical 'gaps' in current core systems capabilities." (Office of the State Controller, State of North Carolina, Business Systems Infrastructure Project, April 2003, page 4)

As with the Y2K information the CIO can use the "Business Systems Infrastructure Study" report to supplement the Y2K inventory information.

Lastly, the IRMC is charged with providing updated information as to the status of systems and applications within the State. The CIO could complement this annual report with the inclusion of his findings.

To conclude, since there is information that is readily available by way of the Y2K inventory and the report that was just released concerning core business systems within state government, the CIO has a solid foundation from which to begin his study and any new information he finds can be used to update existing information. Thus, the cost, if any, of such a study dealing with IT legacy systems should be nominal and should be able to be absorbed by ITS. After the initial report, the updating of the report annually should only be a matter of including readily available reports as provided to the IRMC concerning agency technology projects and initiatives. The requirement of determining a time-line and cost estimate for modernization of IT legacy systems and reporting those findings to the legislature in 2005 should not be very cost prohibited. This will be paralleled in the subsequent phases of the "Business Systems Infrastructure Study", and is and should be apart of the ongoing oversight of the IRMC.

There was an additional question raised by Rep. Earle concerning the definition of "state agencies." Here it is as defined in the statutes.

§ 147-33.81. Definitions.

(6) "State agency" means any department, institution, commission, committee, board, division, bureau, office, officer, or official of the State. The term does not include any State entity excluded from coverage under this Article by G.S. 147-33.80, unless otherwise expressly provided. (1999-434, s. 9; 2000-174, s. 2; 2001-424, s. 15.2(a).)

147-33.80. Exempt agencies. Except as otherwise specifically provided by law, this Article shall not apply to the General Assembly, the Judicial Department, or The University of North Carolina and its constituent institutions. These agencies may elect to participate in the information technology programs, services, or contracts offered by the Office, including information technology procurement, in accordance with the statutes, policies, and rules of the Office. (1999-434, s. 10; 2000-174, s. 2.)

If I can be of further assistance please let me know.

2003 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. 941 A BILL TO BE ENTITLED AN ACT PROVIDING FOR THE ANALYSIS OF THE STATE'S LEGACY INFORMATION TECHNOLOGY SYSTEMS.

☒ 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 (#), ☐ 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

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 2003

HOUSE BILL 1176

Short Title:	IT Funds Flexibility.	(Public)
Sponsors:	Representative Miller.	
Referred to:	Science and Technology.	

April 10, 2003

A BILL TO BE ENTITLED

AN ACT AMENDING THE EXECUTIVE BUDGET ACT TO PROVIDE FLEXIBILITY IN BUDGETING FOR THE STATE'S INFORMATION TECHNOLOGY NEEDS.

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 143-23(a2) reads as rewritten:

"(a2) Funds appropriated for salaries and wages are also subject to the limitation that they may only be used for:

(1) Salaries and wages or for premium pay, overtime pay, longevity, unemployment compensation, workers' compensation, temporary wages, moving expenses of employees, payment of accumulated annual leave, certain awards to employees, tort claims, and employer's social security, retirement, and hospitalization payments;

(2) Contracted personal services if (i) the contract is for temporary services or special project services, (ii) the term of the contract does not extend beyond the fiscal year, (iii) the contract does not impose obligations on the State after the end of the fiscal year; and (iv) the total of all overexpenditures for contracted personal services approved in a program for a fiscal year does not exceed the greater of five hundred thousand dollars ($500,000) or ten percent (10%) of the lapsed salary funds in the program for the fiscal year; and

(3) Uses for which overexpenditures are permitted by subdivision (2) of subsection (a1) of this section but the Director of the Budget shall include such use and the reason for it in his quarterly report to the Joint Legislative Commission on Governmental Operations.

(4) Information technology expenditures if (i) there is a critical need for the expenditure as determined by the Office of State Budget and Management in consultation with the State Chief Information Officer,

(ii) the expenditure will be fully funded for the fiscal year, and (iii) the expenditure will not continue into the next fiscal year."

SECTION 2. This act becomes effective July 1, 2003.

HOUSE BILL 1176:
IT Funds Flexibility

BILL ANALYSIS

Committee:	House Science & Technology	**Introduced by:**	Rep. Miller
Date:	April 16, 2003	**Summary by:**	Brenda J. Carter
Version:	1st Edition		Committee Counsel

SUMMARY: House Bill 1176 would amend the Executive Budget Act to allow the use of funds appropriated for salaries and wages for information technology expenditures.

CURRENT LAW: G.S.143-23 provides that all appropriations made for the maintenance of State departments or agencies are for the (i) purposes or programs and (ii) objects or line items enumerated in the itemized requirements of those departments, institutions and other spending agencies. G.S. 143-23(a) provides that funds appropriated for salaries and wages are also subject to the limitation that they may only be used for salaries and wages or benefits, for contracted personal services under specified conditions, and for other uses for which overexpenditures are permitted under applicable law.

BILL ANALYSIS: House Bill 1176 would allow funds appropriated for salaries and wages to be used for information technology expenditures if:

- There is a critical need for the expenditure as determined by the Office of State Budget and Management in consultation with the State Chief Information Officer;
- The expenditure will be fully funded for the fiscal year; and
- The expenditure will not continue into the next fiscal year.

The bill would become effective July 1, 2003.

2003 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. 1176 A BILL TO BE ENTITLED AN ACT AMENDING THE EXECUTIVE BUDGET ACT TO PROVIDE FLEXIBILITY IN BUDGETING FOR THE STATE'S INFORMATION TECHNOLOGY NEEDS.

☐ 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 (#), ☐ 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 & Technology — April 30, 2003

Name of Committee — Date

VISITORS: PLEASE SIGN BELOW AND RETURN TO COMMITTEE ASSISTANT

NAME	FIRM OR AGENCY
Mildred Spearman	NCDOC
Benny E. Hendrix	NC DPI
Ashley Thrift	WCSK
Danny Lieskey	DTS
Trena Wells	Rep Miller
Camille Stell	KCCH
Chris McClung	NCEITA
Mark Smith	BCC
Alfred M Mays	UNC-OP (IR)
Vicky Young	OSA
Don McCorquodale	SAS
Amy Dobson	NC StateWatch
John Goodman	MERCER & ASSOC.

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

May 7, 2003

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Presentation: **AUTROS POINT OF CARE**
by Allen Novak, Regional Manager of Baxter Healthcare Corporation

Presentation: **The Information Technology Industry in North Carolina**
by Joan Myers, President of North Carolina Electronics & Information Technologies Association

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

May 7, 2003

The House Committee on Science and Technology met on Wednesday, May 7, 2003, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Jones and Walend.

Representative Miller called the meeting to order and introduced the Sergeant-At-Arms and pages. Mia Woo and Jessica Brantley, both from Randolph County, were sponsored by Rep. Brubaker and Michael Todd from Wake County was sponsored by Rep. Creech.

Joan Myers, President of North Carolina Electronics and Information Technologies Association, was recognized to give a presentation (See Attachment **D**). A brief question and answer period followed.

Allen Novak, Regional Manager of Baxter Healthcare Corporation, was then recognized to give a presentation (a copy of this presentation was not obtainable, however some information is enclosed, See Attachment **E**). A brief question and answer period followed.

With the hour drawing to a close, the meeting was adjourned.

Respectfully submitted,

Representative Paul Miller
Chairman

Eryn Gee
Committee Assistant

NCEITA

Making Technology #1 in North Carolina
& North Carolina #1 in Technology

- Technology has contributed to almost half of our nation's long-term economic growth since World War II. *

* US Department of Commerce

Attachment D

NCEITA

Making Technology #1 in North Carolina
& North Carolina #1 in Technology

NCEITA

North Carolina Electronics & Information Technologies Association

- Represent all sectors of technology including:
  - Digital Content
  - Electronics
  - Internet Services
  - Research & Development
  - Bioinfomatics
  - Software
  - Telecommunications
  - IT Professional Services

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& North Carolina #1 in Technology

5 Lines of Business

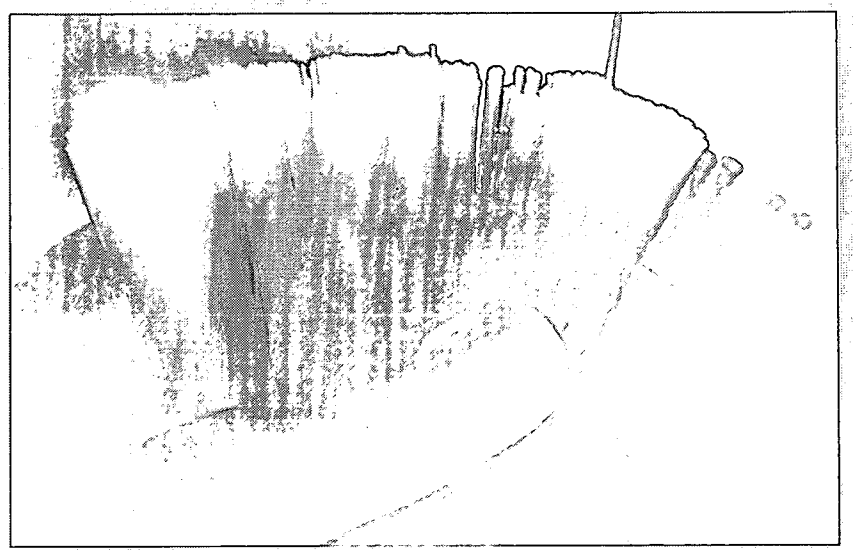
- Workforce Development/Education
- Economic Development
- Government Affairs
- Programs & Special Events
- Industry Promotion

NCEITA

Making Technology #1 in North Carolina
& North Carolina #1 in Technology

North Carolina and IT

- North Carolina has 2,349 IT companies
- North Carolina has 204,779 IT workers

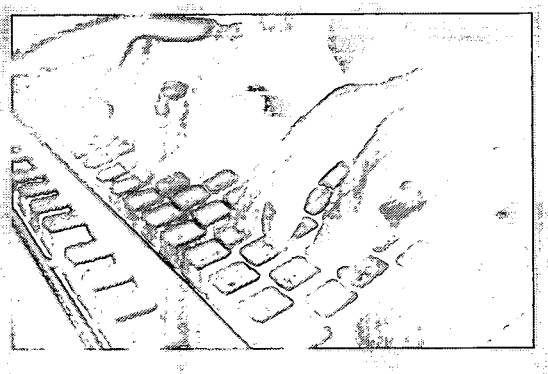


NCEITA

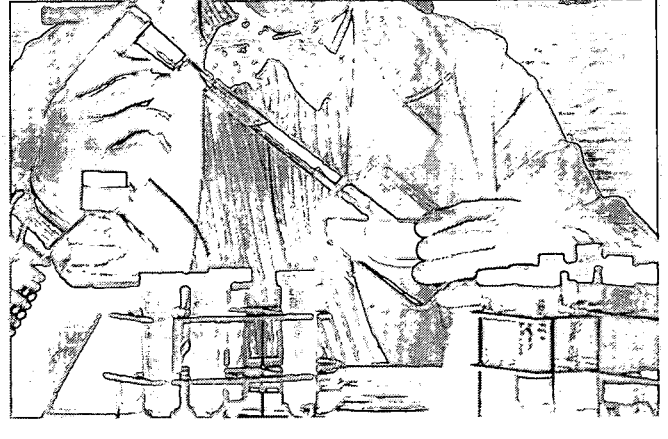
Making Technology #1 in North Carolina
& North Carolina #1 in Technology

Technology Jobs in North Carolina

- Average Technology wage in NC is $57,351



- Average Private Sector wage in North Carolina is $29,372



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What North Carolina has lost

- North Carolina has lost 1,962 or 46% of its IT Companies in the past 2 years

- North Carolina has lost 14,349 IT workers in the past 2 years

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4 Action Steps to Grow Jobs in NC

1. Tech Transfer
2. Qualified Business Venture Tax Credit
3. Research & Development
4. Workforce Investments

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& North Carolina #1 in Technology

Tech Transfer
What is it?

1. NC graduated students in NC Companies adding value through knowledge
2. R&D + Innovation = Commercialization + Jobs

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& North Carolina #1 in Technology

Tech Transfer & Creating Jobs

1. Keep the R&D pipeline stable/protect overhead receipts
2. More resources in University tech transfer offices
3. Focus on the commercialization- the Business side of the equation…=JOBS

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& North Carolina #1 in Technology

Qualified Business Venture Tax Credit

- What is it – Stimulus for Venture Capital investment
- What to do? Extend credit to 2007

  Senate Bill 944 – Sponsored by Senator Hoyle
- Include MCNC Ventures

R&D – Why Important?

- For every $1 invested in Research & Development you receive a $5 return to the economy

- It is the backbone of all technological development…The Knowledge Economy

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New R&D Tax Credit for Technology and Biotech Companies H865/S961

- Flat 5% credit that could be monetized for companies with up to $1 Million in revenue
- 5% credit for companies with up to $25 Million in revenue
- Flat 25% credit for companies that do R&D with a university
- 5% credit for companies in Tier 1,2,3 counties

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Workforce

- Technology-based companies locate and grow based on Workforce
- Currently we spend about $8 per child K-12 on technology in NC – the national average is $120!
- You can get that figure up to around $100 per child if you add the federal (e-rate) and local investments… then subtract the seven wealthiest counties and you are back to the base of $8 per child.

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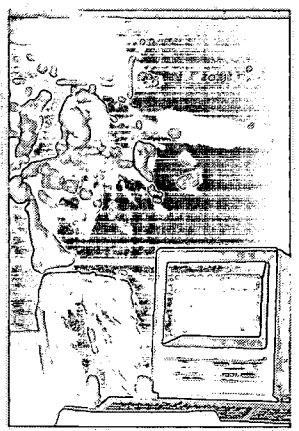
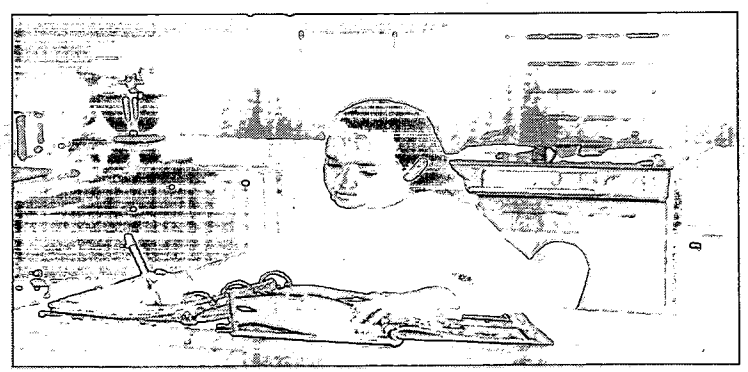
Workforce Investments

- Invest in K-12 Students in Tier 1 counties (79,908) to allow for $120 per child in technology investment (Presently $8 per child)
- Approximate Investment in Tier 1 Workforce $9.6 Million





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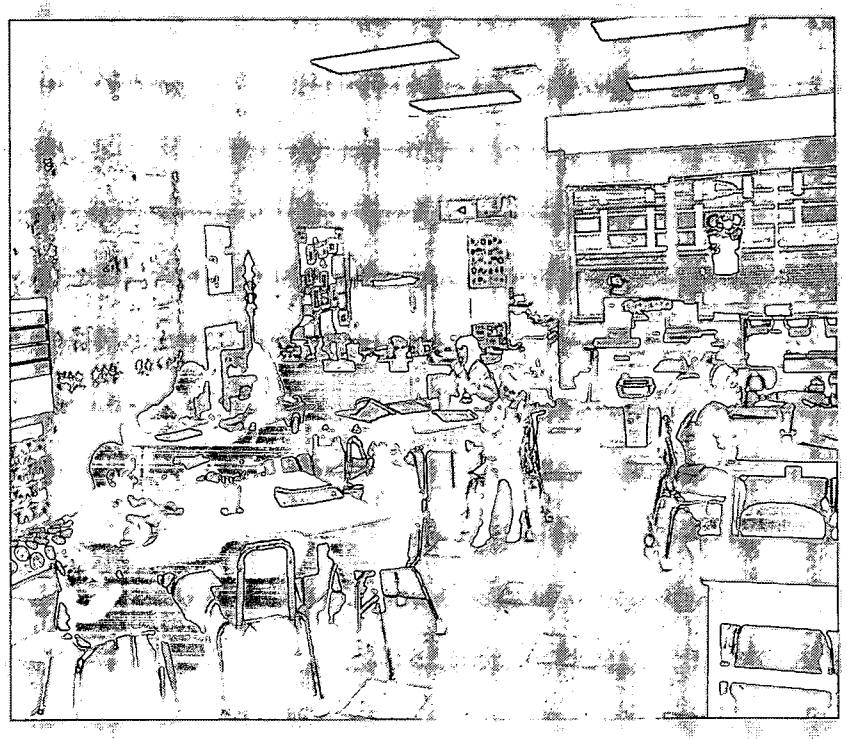
& North Carolina #1 in Technology

NCEITA and the IT Industries Commitment to Workforce Development

- Completing a Technology Demonstration Project at Elfland-Cheeks Elementary School
- Beginning a project at Oak Lane Elementary School
- Total investment will be $500,000 total



NCEITA

Making Technology #1 in North Carolina
& North Carolina #1 in Technology

Summary

- Fix business environment- We are not competitive
- Focus on Retaining and Growing NC Companies
- Invest in Tech Transfer, Venture Capital, R&D
- Invest in workforce in our most economically challenged counties TODAY to grow companies tomorrow.

NCEITA

Making Technology #1 in North Carolina
& North Carolina #1 in Technology

Today…

"Where we stand is not as important as the direction in which we are moving"

Oliver Wendell Holmes, Jr.

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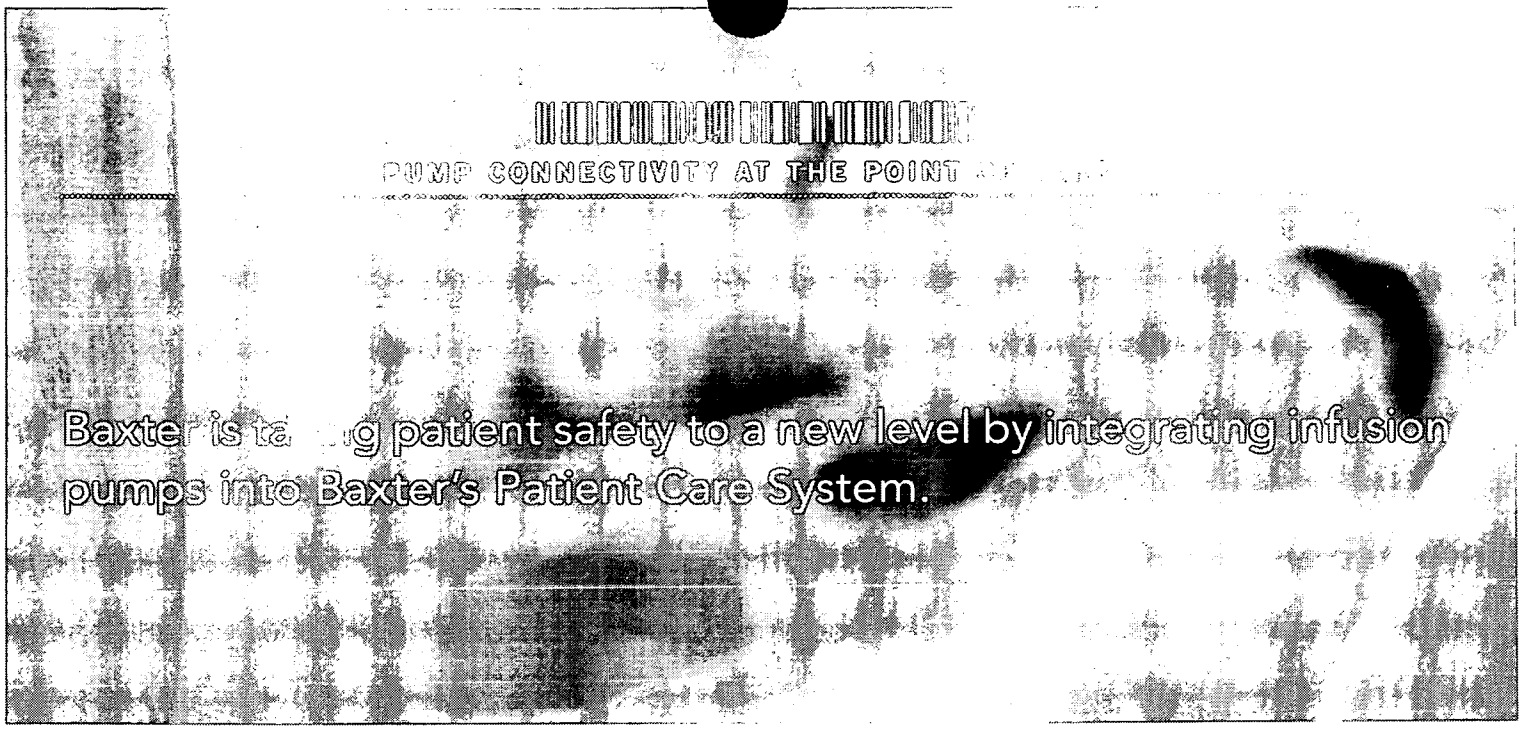
& North Carolina #1 in Technology

GROWING JOBS in North Carolina

North Carolina House of Representatives
Science and Technology Committee
May 7, 2003

Joan P.H. Myers
President & CEO
NCEITA
www.nceita.org

The North Carolina Electronics and Information Technologies Association



This system will offer additional assistance to nurses by performing a comparison of the infusion pump settings with the physician's order or pharmacy dispensing record to assist the caregiver in confirming the right dose. The system also will allow nurses to access infusion pump status remotely – providing a secondary indicator for alerts and alarms when the nurse is away from the patient's bedside*. And to help promote safety and efficiency, pump connectivity at the point of care will automatically alert the pharmacy of flow rate changes for timely supply of IVs. Fully integrated and ready to help hospitals deliver the best quality of care.

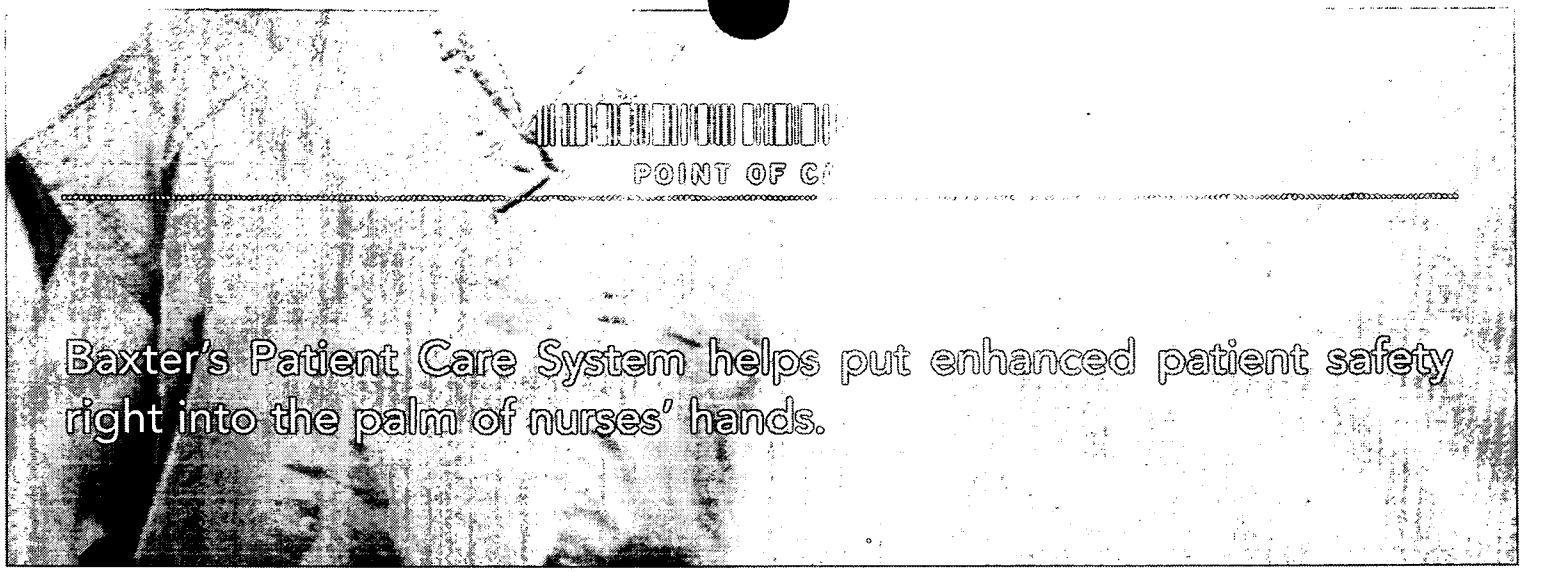
* System functionality dependant on network availability and response time.

Baxter

Patient +Care System

950016 04/03

Attachment E



Intuitive decision support combined with wireless real-time bar code scanning assists nurses in delivering improved patient care at the point of care. *Real-time automation helps improve workflow efficiency. It's powerful, integrated and enables caregivers to verify the 5 rights of medication management, right patient, right drug, right dose, right time and right route. All of which can lead to greater quality of care for patients and a more rewarding work experience for the hospital care team.

POINT OF CARE FEATURE HIGHLIGHTS

- Medication class verification to help the Clinician prevent accidental overdose of similar therapeutic agent
- Electronic real-time Medication Administration Record (MAR)*
- Electronic narcotic control
- Complete audit trail
- Missed dose monitoring and task oriented alert messaging
- Workflow management - shift assignments and to-do lists
- Pre-round check
- Charting
- Real-time inventory management*
- Stat medication administrations, pre-medication administration tasks
- Medication administration record along with PRN administration history
- IV work order for IV admixtures prepared on nursing floor
- Blood transfusion verification**
- Lab specimen status

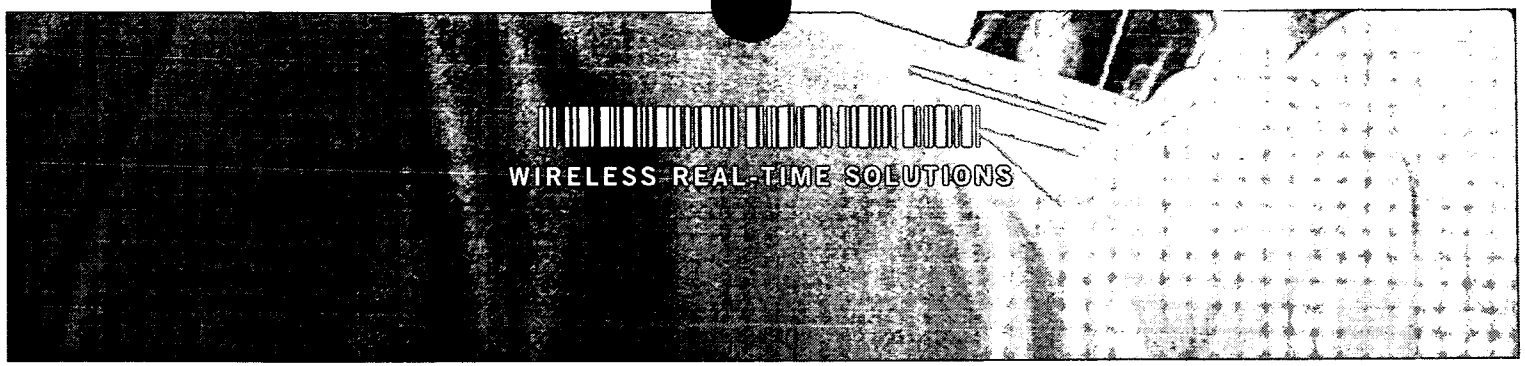
* System functionality dependant on network availability and response time.

** Future feature

Baxter

Patient Care System

950015 04/03



COMPUTERIZED PROVIDER ORDER ENTRY

Patient safety is at the core of Baxter's Patient Care System. That's why Baxter has designed revolutionary new tools to help caregivers deliver the best quality of care possible. Our Computerized Provider Order Entry (CPOE) technology replaces paper-based systems with a powerful new way to help physicians easily and quickly manage patient data – from charting to charge capture. Its power lies in wireless integration*, providing caregivers with real-time information on drug interactions, correct dosage and other possible errors. This vital data can be accessed in real-time from pharmacy and nursing units all from a hand-held device or mobile PC*.

Designed to be flexible, user-centric, and intuitive, Baxter's CPOE technology combines feature with function in an easy to use digital environment that helps save time. Caregivers can create orders, review alerts and access clinical documentation in real-time virtually anytime, anywhere. Baxter's CPOE technology helps provides the tools caregivers need to streamline workflow, help guard against medication errors and promote enhanced patient safety. See below for just some of its many features.

* System functionality dependant on network availability and response time.

CPOE FEATURE HIGHLIGHTS

ORDERING FEATURES

- Comprehensive physician-centric order capability
- Orders and order sets predefined by hospital, physicians, units, services and/or disease state(s)
- Supports complex orders including IV infusions and titration
- Robust real-time order editing capability*
- Search by item, predefined orders, order sets or items linked to disease state with Baxter's Patient Care System matrix
- Default order parameters

RESULTS VIEWING

- New results highlighted for patients
- Abnormal results color-coded for easy identification
- Ability to-retrospectively track patient results
- Multi field search ability including specific test/patient/result/date

CLINICAL MONITORING, ORDER INTERVENTION, DOCUMENTATION

- Dosage range validation
- Frequency of administration and duration of therapy
- Duplicate therapy

PATIENT PROFILE

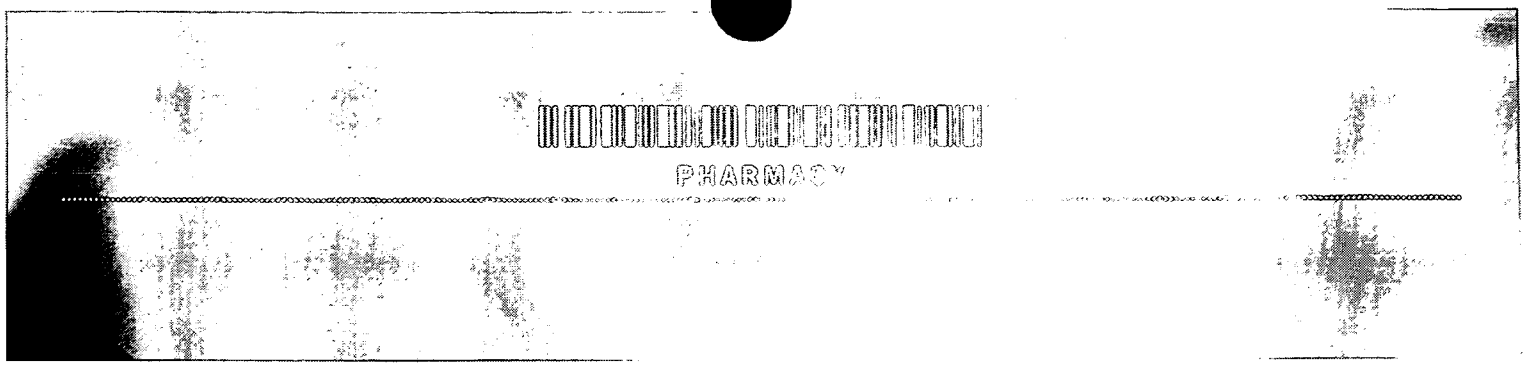
- General, audited notes, diagnosis test
- Existing history/physical/diagnosis
- Flexibility for user defined categories

* System functionality dependant on network availability and response time.

Baxter

Patient +Care System

950012 04/03



Baxter's Patient Care System touches virtually every aspect of hospital care. It's specifically designed to help the Clinician enhance patient care, improve workflow, and to assist caregivers in guarding against medication errors. Its presence is particularly evident in the pharmacy where Baxter's Patient Care System provides a powerful communication link between pharmacists, nurses, and physicians. Everything from medication orders to dispensing is automated – promoting safety, protocol compliance and direct best clinical practices. It is also designed for multi-disciplinary functionality, providing a logical migration path to integrated medication management. Plus, Baxter's Patient Care System helps simplify workflow management – offering report generation, audit trail, facilitated manu-facturing process, and enhanced admixture fulfillment. Which means more time can be spent on patient care. Just imagine the possibilities.

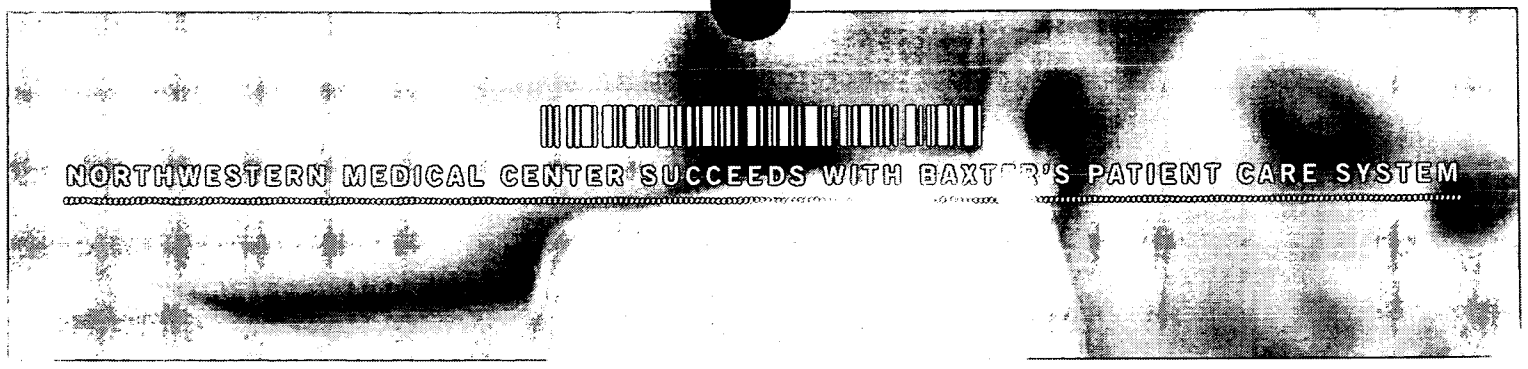
PHARMACY FEATURE HIGHLIGHTS

- Integrated inpatient and outpatient pharmacy
- Integrated automatic dispensing cabinets
- Multiple active encounters
- Access to patient medication profile, adverse drug reactions, clinical interventions and monitoring parameters
- Clinical checking across encounters
- Maintenance of allergies and height and weight at patient level
- Multiple units of measure
- Item equivalency
- Scanning algorithms
- Order and Administration Edubytes
- Allergy profile
- Duplicate therapy alert
- Default order type, dose, frequency, recommended duration of therapy, automatic substitution, default diluent, latency tolerance
- Standard orders and order sets
- Facility defined reference codes
- Facility defined infusion order types
- Advanced communication tool
- Multiple distribution

Baxter

Patient Care System

950014 04/03



NORTHWESTERN MEDICAL CENTER SUCCEEDS WITH BAXTER'S PATIENT CARE SYSTEM

In 2002, Northwestern Medical Center went looking for a computerized patient record system to help them deliver quality care, bolster patient safety, and provide them with an advantage in the fiercely competitive hospital marketplace. With Baxter's Patient Care System, they got much, much more.

Northwestern Medical Center now has an automated pharmacy and medication administration system, as well as a system in which physicians can perform order entry. Patient's clinical records are updated at the bedside using a wireless, real-time electronic patient medical chart*. The chart gives the doctor immediate access to the patient's medical history and clinical documentation. Plus, Baxter's Computerized Order Entry module automatically checks for drug interactions, correct dosage and other possible errors, then transmits this data in real-time to pharmacy.

The impact on medication safety is being felt throughout the entire organization – from the Administration offices right to the hospital floor. "*The system that we had previously was very unforgiving*", admits Clinical Implementation Specialist, Annette Trippany. "*With the barcode scanning and all the double checks that Baxter's Patient Care system offers, we have greatly improved medication safety here at Northwestern.*"

Being a hospital on the cutting edge of technology and patient care is having a tremendous impact both on hospital staff and the patients. The clinical staff feels proud using Baxter's Patient Care System.

Since implementing Baxter's Patient Care system, Northwestern Medical Center has never looked back. They have a system that helps deliver enhanced patient care. They also have a system that sets them apart from other hospitals. And that's a benefit you just can't measure. "*It's just more than we would have imagined*", claims Northwestern CEO, Peter Hofstetter.

* System functionality dependant on network availability and response time.

Baxter

Patient Care System

950017 04/03

SEE WHAT EXPERTS HAVE TO SAY

Baxter

Patient
Care System

950018 04/03

VISITOR REGISTRATION SHEET

Science and Technology — May 7, 2003

Name of Committee — Date

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Giovanni Masucci	Capitol City Consulting, Raleigh
John Withrow	NC Statewatch
Ron Kennedy	AOC
Rob Hillman	OSA
Tony Zapka	NC BIO
Elizabeth Fuller	Baxter
Allen Novak	Baxter
Joan Myers	NCEITA
Chris McClure	NCEITA
Alfred Mays	UNC OP(IR)
Tom Williams	Moore + Van Allen
Glenn Conway	Visage Solutions LLC

May 14, 2004 minutes, not complete

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

May 14, 2003

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Presentations - **DNA DATABASES TIED TO MEDICAL RECORDS**
by: Dr. Pradeep Chatterjee, Senior Research Assistant and Head of Genetics, NCCU
Dr. Ken Harewood, Director of the Biomedical Biotechnology Research Institute, NCCU
Dr. Jim Evans, Director of Cancer Genetics Services, UNC-CH

Bills to be Discussed:

House Bill 1254 DNA Felony Samples/Scientific Research – Rep. Miller

House Bill 1255 DNA Bank/Voluntary DNA Sample from Prisoners – Rep. Miller

House Bill 1256 Voluntary DNA Database – Rep. Miller

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

May 14, 2003

The House Committee on Science and Technology met on Wednesday, May 14, 2003, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson, Vice-Chair; Jones, Michaux and Walend.

Representative Miller called the meeting to order and introduced the Sergeant-At-Arms and pages. Jaculin Monroe from Cumberland County was sponsored by Rep. Dickson; Jennifer Walker from Cumberland County was sponsored by Rep. Lucas; and Margurita Jordan from Wake County was sponsored by Rep. Ross.

Rep. Miller introduced Dr. Pradeep Chatterjee, Senior Research Assistant and Head of Genetics at North Carolina Central University; Dr. Ken Harewood, Director of the Biomedical Biotechnology Research Institute at NCCU and Dr. Jim Evans, Director of Cancer Genetics Services, UNC Chapel Hill. Each spoke on the subject of DNA and genetics (See Attachments **F**, **G**, and **H**). A brief question and answer period followed.

With the hour drawing to a close, the meeting was adjourned.

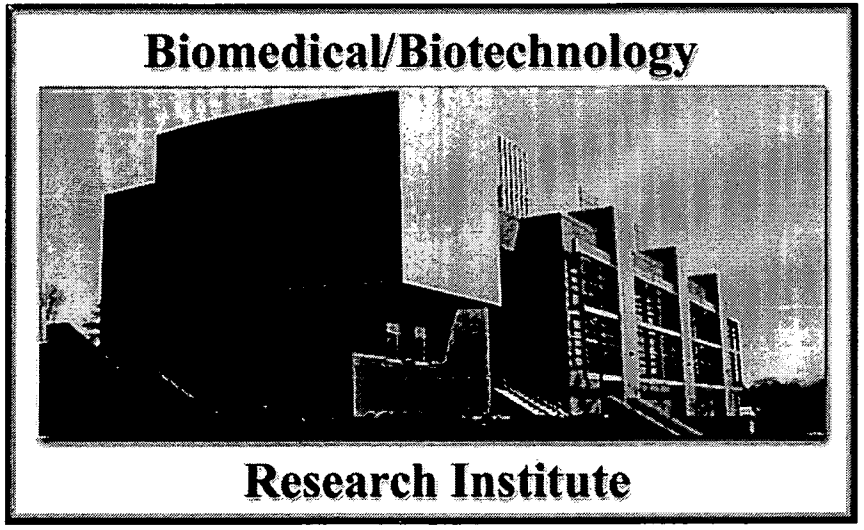
Respectfully submitted,

Representative Paul Miller
Chairman

Eryn Gee
Committee Assistant

NCCU JULIUS L. CHAMBERS BIOMEDICAL/BIOTECHNOLOGY RESEARCH INSTITUTE

Ken Harewood, Ph.D. Director

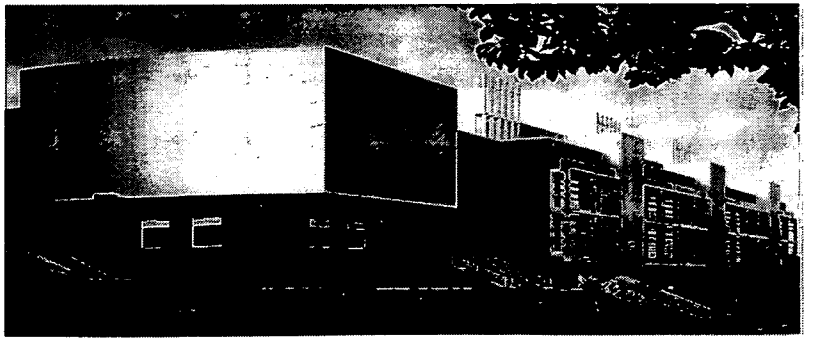


North Carolina Central University

Attachment F

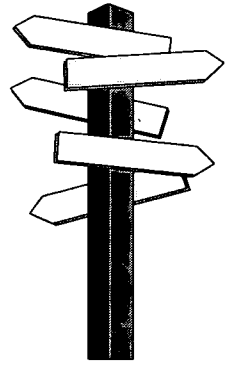
OUTLINE

- Landmarks in Genetics and Genomics
- Emergence of DNA Repositories
- Research Applications/Vision for the future



LANDMARKS IN GENETICS

- DNA underlies all aspects of human health
- 1953 - double helical structure (Watson/Crick)
- 1966 - genetic code (Khorana/Holley)
- 1971 - central dogma revised
- 1972 - Cohen/Boyer develop rDNA
- 1977 - DNA sequencing (Sanger/Gilbert)
- 1983 - first human disease gene mapped



LANDMARKS IN GENOMICS

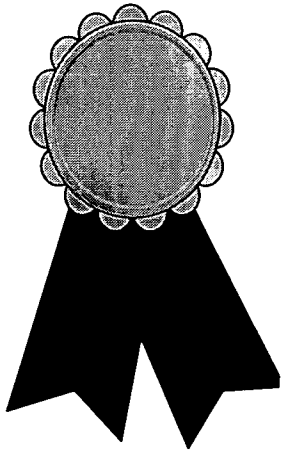
- 1990 - Human Genome Project launched
- 2001 - Draft sequence published
- 2003 - Finished version completed (99.9%)
- Understanding gene function key to health
- Commercial applications: new drugs/tests

EMERGENCE OF REPOSITORIES

- NIH a key player
  - Office of Resources and Logistics
  - cooperative human tissue network (NCI)
  - Cooperative breast cancer tissue resource (NCI)
  - clinical trials cooperative group (NCI)
  - clinical families registries (NCI)
  - specimen resource locator (NCI)

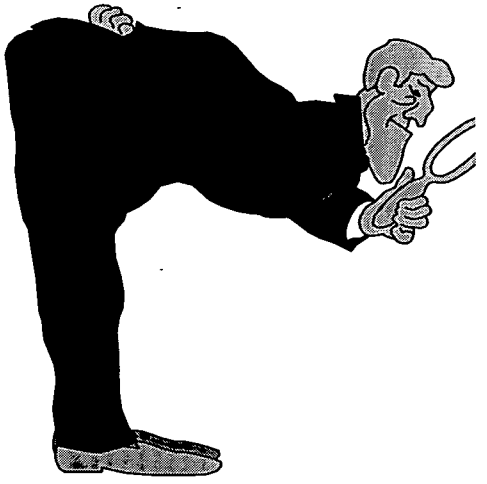
OTHER REPOSITORIES

- Human genetic cell repositories (NIGMS)
- Aging cell repository (1M vials, 100,000 DNA samples)
- Corielle cell repositories (900,000 units of DNA)
- American Type Culture Collection



DNA REPOSITORY MANAGEMENT

- Governance
- Sample collection (types/amounts)
- Infrastructure, research resources
- Processing, storage, preservation
- Costs (staff/equipment/supplies/etc)



USER GROUPS

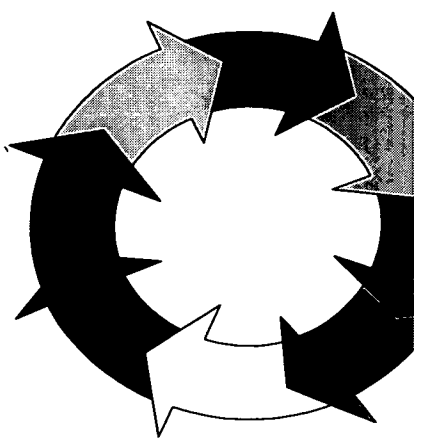
- Health Care
  - Academic/Clinical research groups
  - Pharmaceutical/Biotech Companies
  - Non-Profits/Government Agencies
- Other Potential Users
  - military, adoption agencies
  - life-, disability-, long-term care insurance

RESEARCH APPLICATIONS

- PCR amplification of "hotspots" for genetic change
- Cataloging genetic polymorphisms
- Validating novel therapeutic targets
- Expression cloning
- Promoter/reporter systems

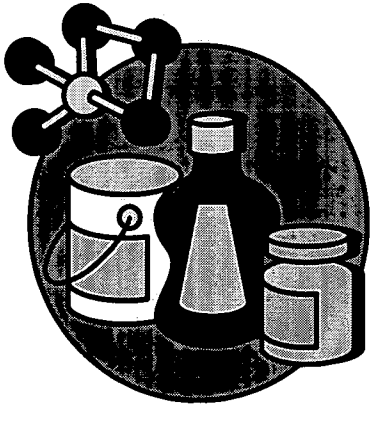
VISION FOR THE FUTURE

- Diagnosis, prognosis, risk prediction
- Identify genes associated with disease
- Rapid detection of mutations
- Highly selective therapies
- Roadmap to risk reduction
- Pharmacogenomics



PHARMACOGENOMICS

- >100K die/yr. from adverse reactions to drugs
- 2.2M experience serious reactions
- Others fail to respond to treatment regimens
- DNA basis for differences
- Customized therapy/pharmacogenomics



For More Information.....

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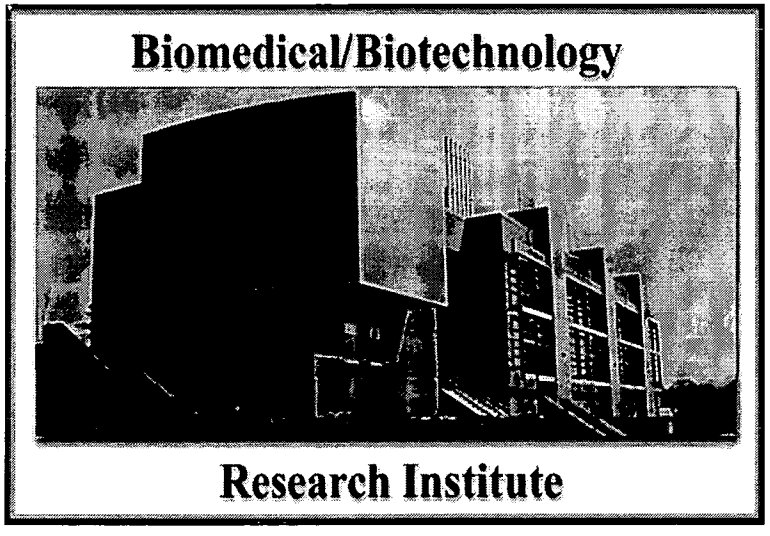
NCCU JULIUS L. CHAMBERS BIOMEDICAL/BIOTECHNOLOGY RESEARCH INSTITUTE

Pradeep Chatterjee, Ph.D. Head, Genomics



North Carolina Central University

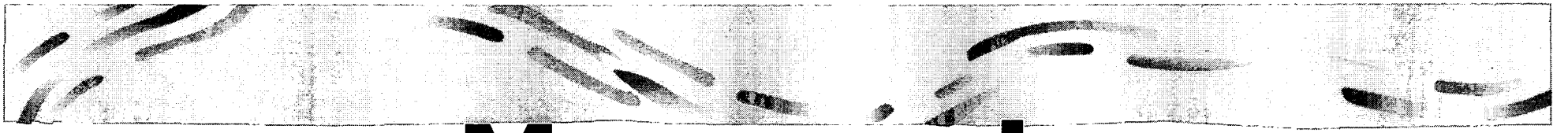
Attachment G

Susceptibility to Disease

Our Genetic Background

The Environment We Live In

Hereditary Diseases



Monogenic

Inheritance pattern simple. Correlates with mutations in one major gene, (Huntington, Cystic Fibrosis, Duchenne muscular Dystrophy, etc.)

Polygenic

Inheritance pattern complex. Changes in multiple genes involved. (Hypertension, insulin-dependent diabetes, multiple schlerosis, Alzheimer, etc.)

Understanding Diseases at the Molecular Genetic Level

No two patients have the exact same characteristics of a disease

Complex interactions between the environment and alterations in more than one gene contribute to specific characteristics of the disease in individuals

Goal of Molecular Medicine

Tailor made pharmaceuticals based on the exact genetic background of the patient

Pre-emptive treatment for those genetically predisposed to a certain condition

Steps to Attain That Goal

Identify all variations in the set of genes associated with a particular disease condition

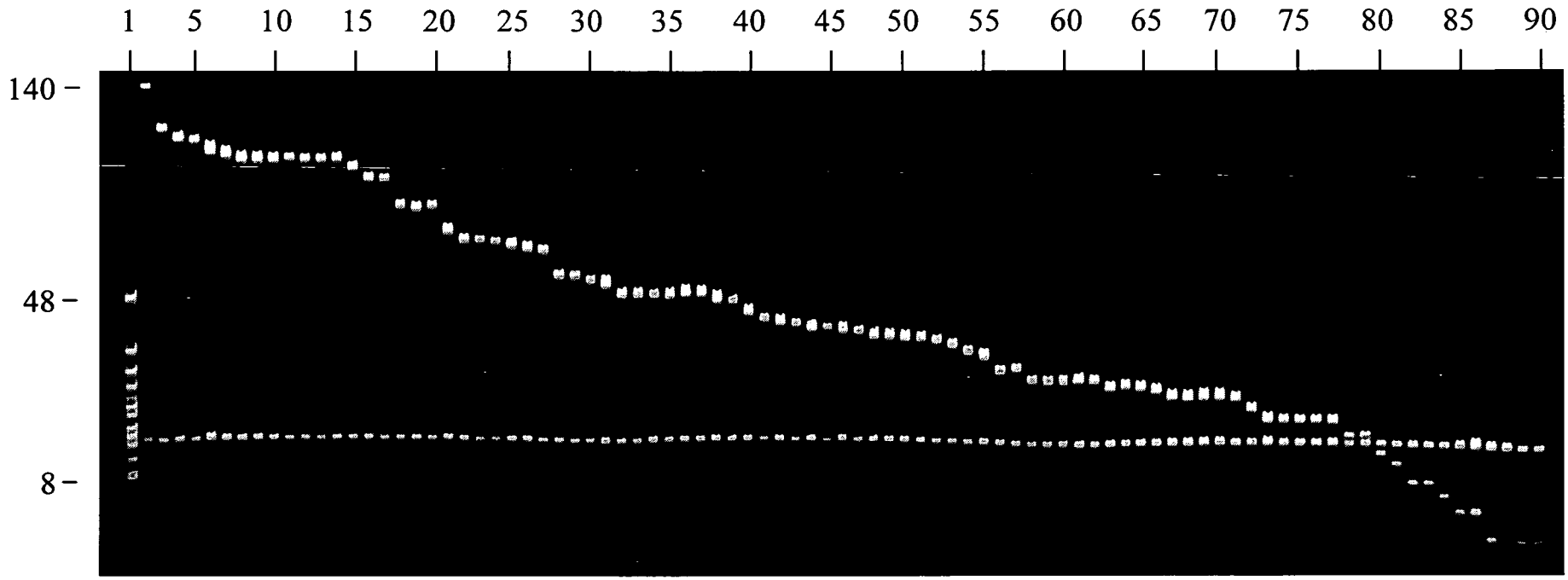
Identify patterns/ pathways of gene-environment interactions that lead to disease

Infrastructure Requirements

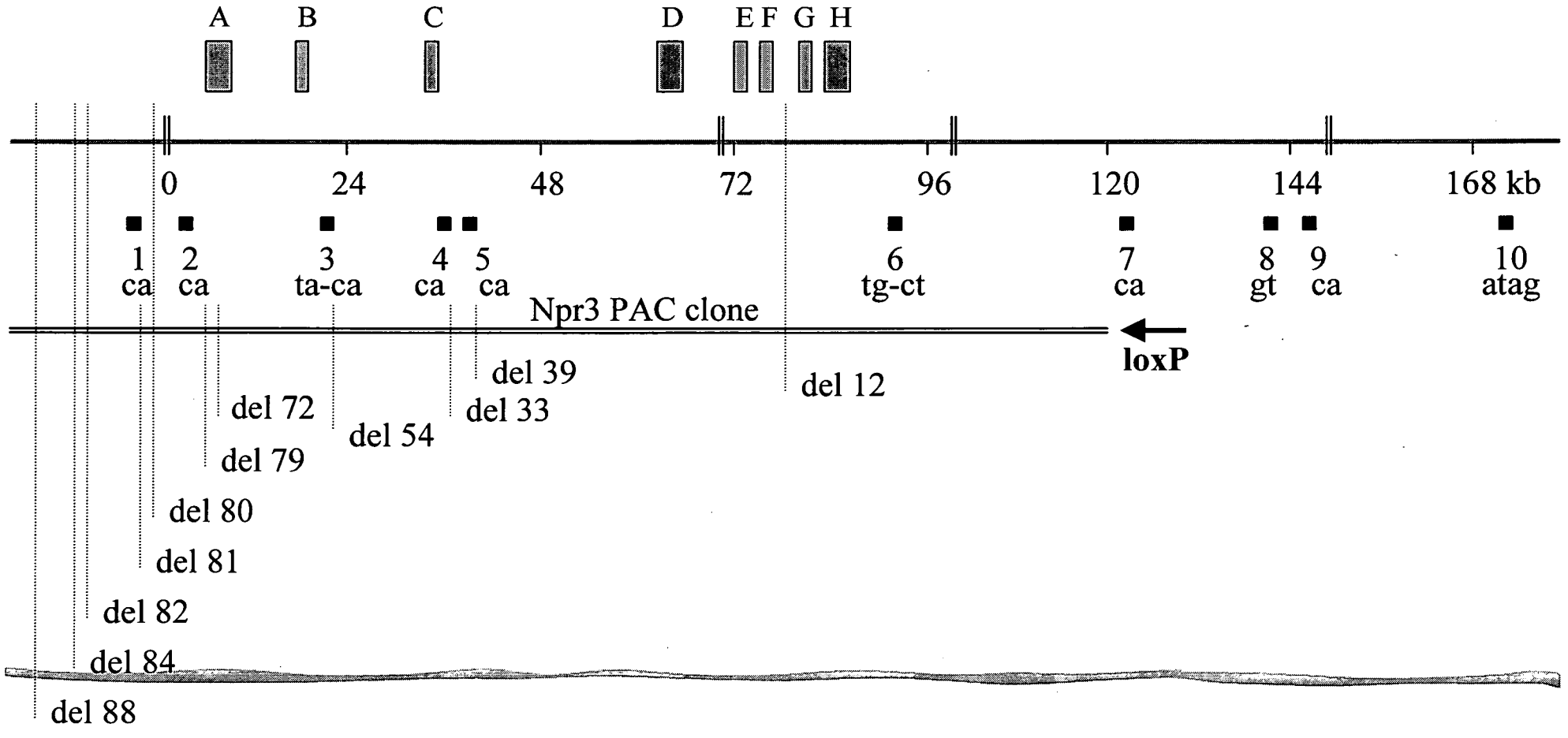
DNA bank of large numbers of individuals either currently with a disease condition, or with a family history of it

Accurate diagnosis and record of detailed history/ characteristics of the disease in the individual and family members if possible

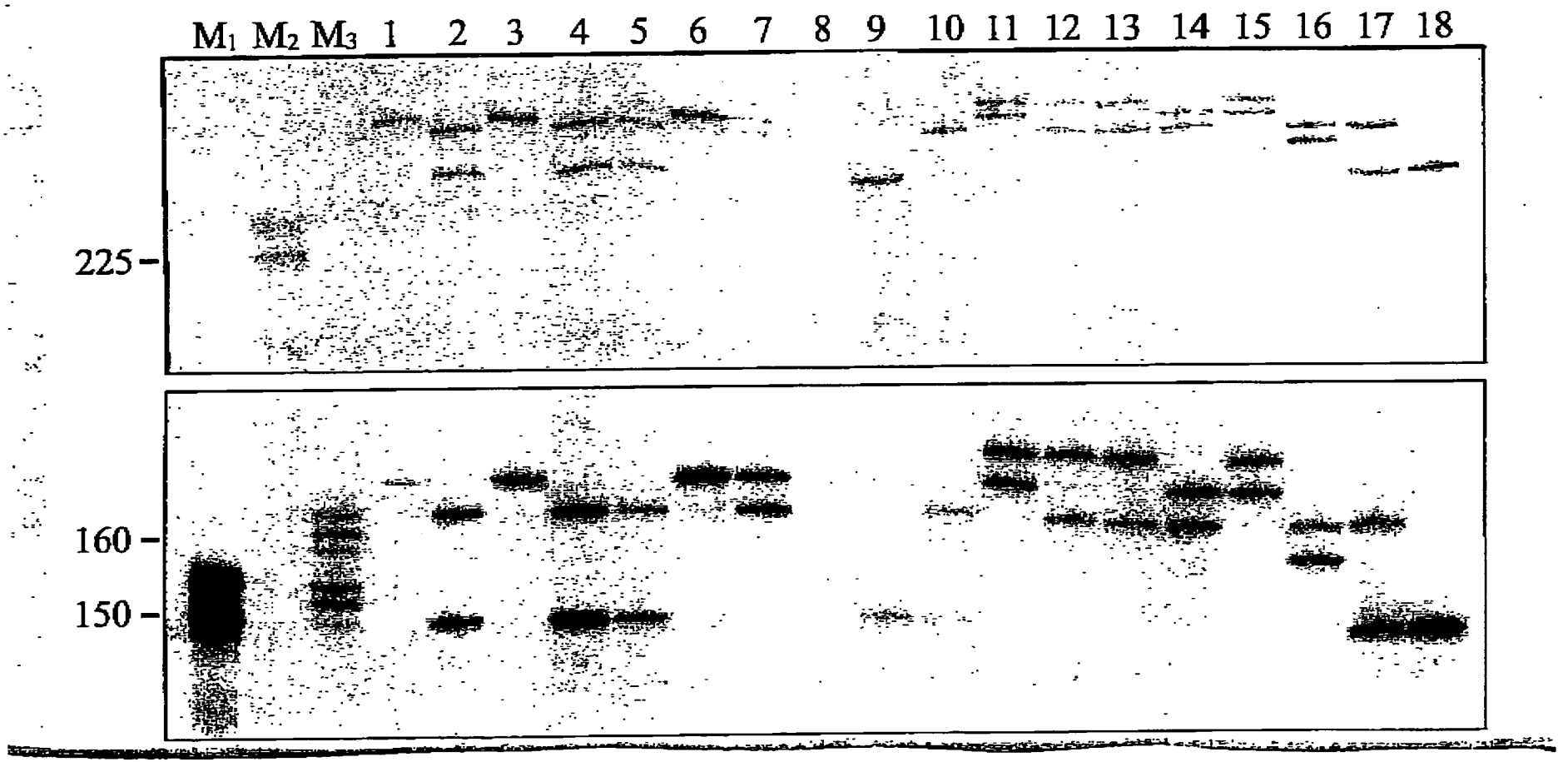
Nested Deletions In Npr3 PAC



Physical map of the Npr3 gene region



Length Polymorphism of the ATAG repeat



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

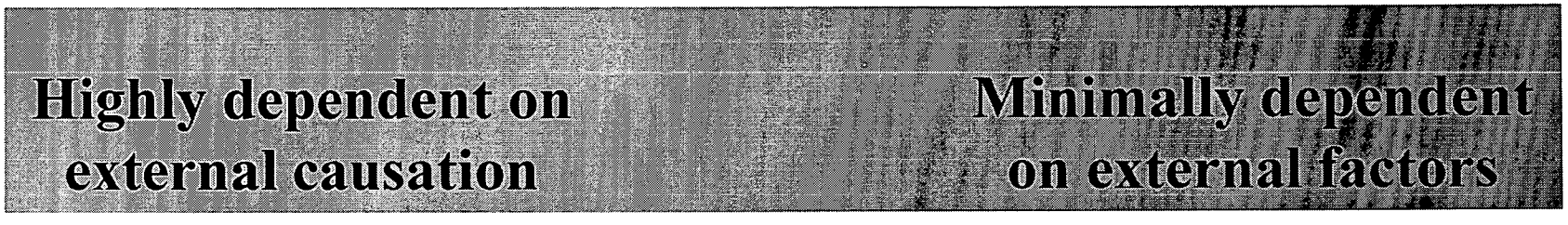
Attachment H

"Why did *I* get sick?"

- "Smoking causes cancer"
  - True, *but* ...
    - 15% of long-time smokers develop lung cancer
- "Drinking causes cirrhosis of the liver"
  - True, *but*...
    - 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

Cause and Effect in Medicine

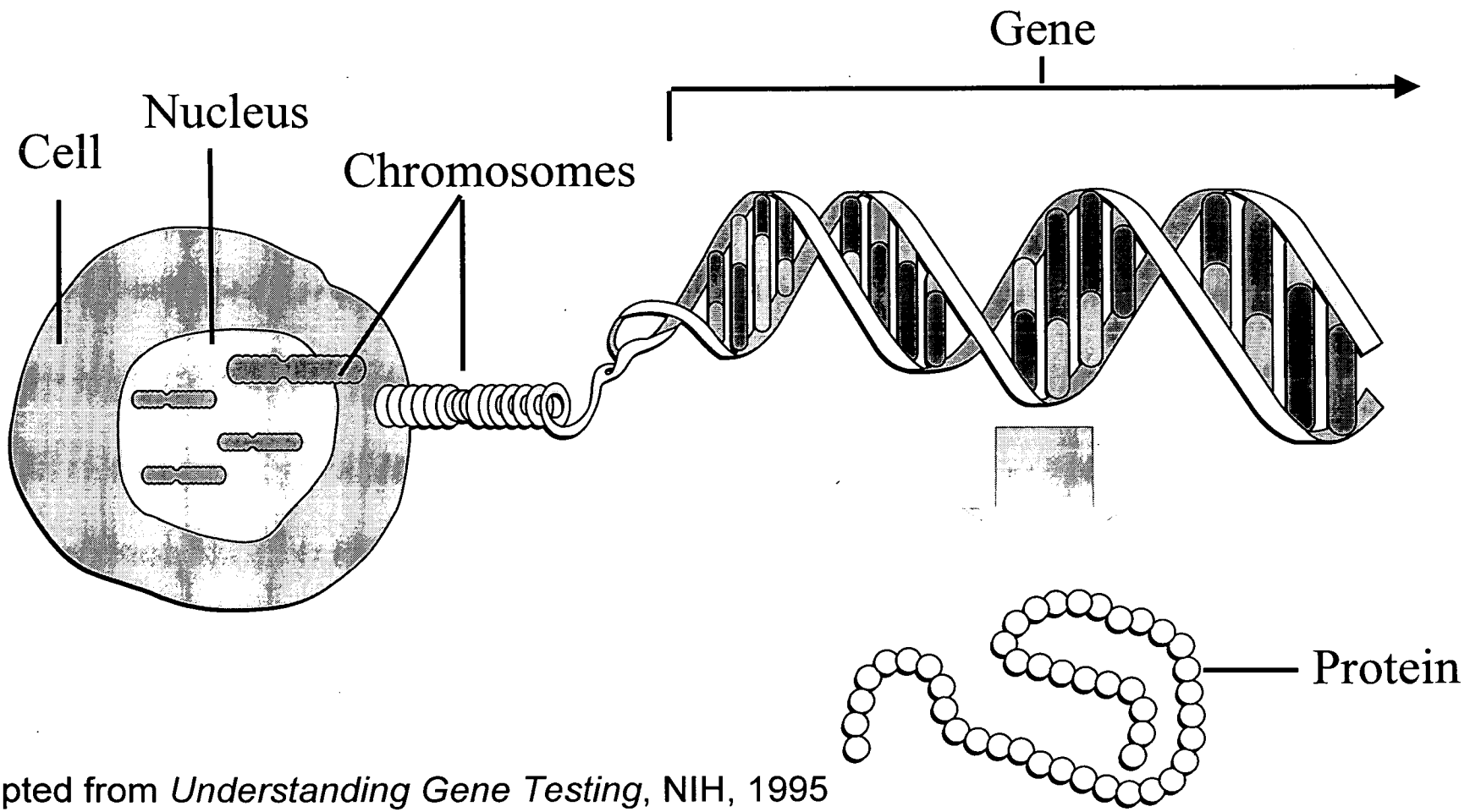
Only rarely is a single external agent sufficient to cause disease



AIDS ***TB*** ***Cirrhosis*** ***NSC Lung Cancer*** ***Cystic Fibrosis***

- Genetic differences between people explain much of the individual variation in who develops disease
- Modern genetics is beginning to give us the tools to identify these differing susceptibilites to disease

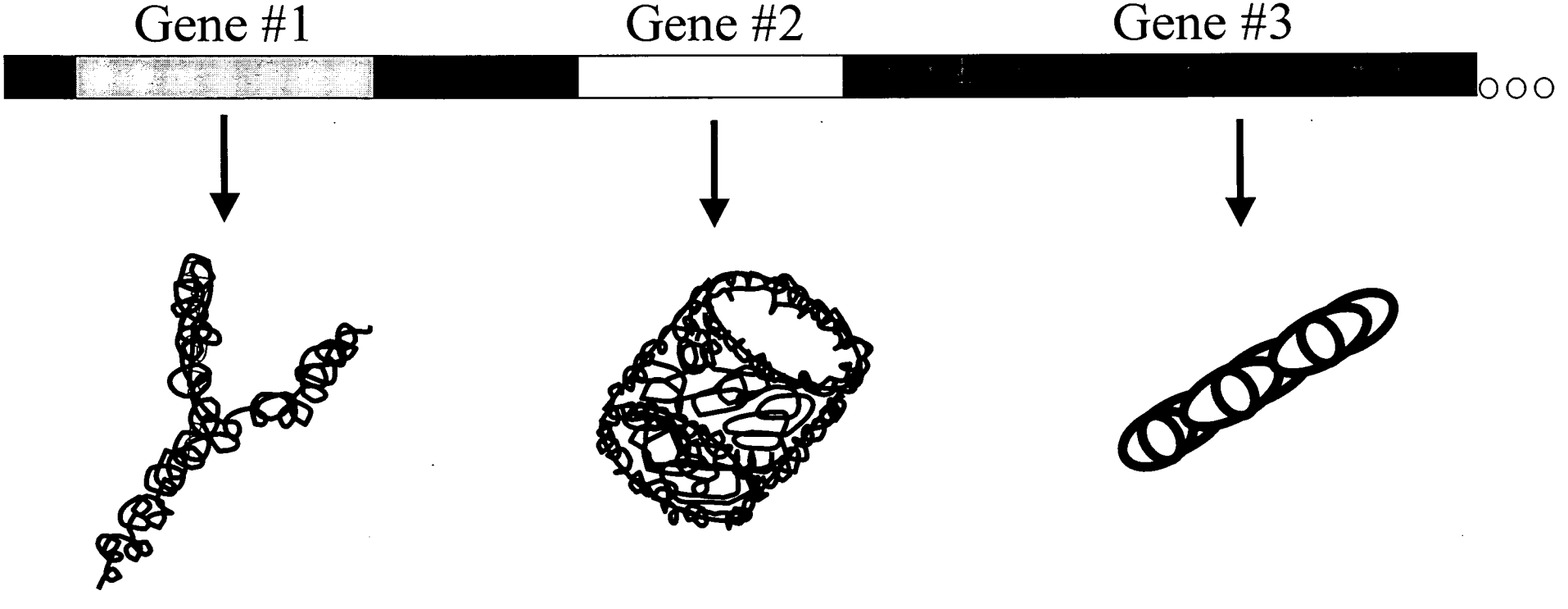
Chromosomes, DNA, and Genes



Adapted from *Understanding Gene Testing*, NIH, 1995

ASCO

A *Gene* is simply a segment of DNA that directs the synthesis of one functional component in our cells…

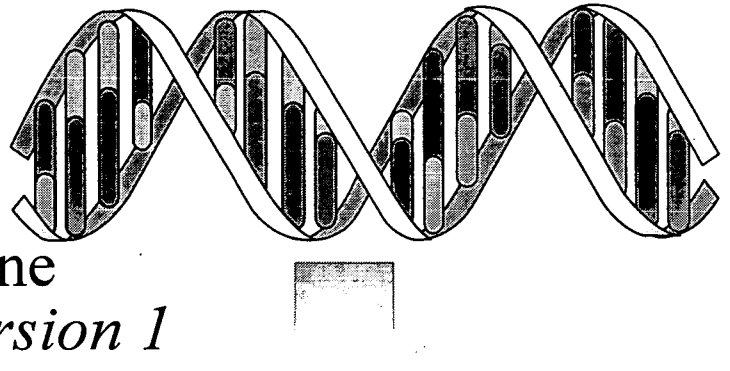


Genome

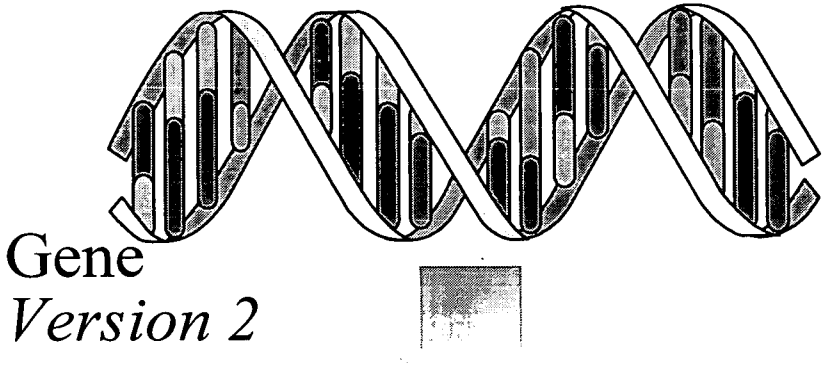
- A Genome is the total DNA of an organism which directs synthesis of all of the proteins necessary for its existence
  - As well as "extra" DNA that seemingly has no function, "junk DNA"
- Genes are lined up along the DNA strand like beads on a string
- The human genome consists of 3 billion pairs of nucleotides (20-50,000 genes)
  - now mostly sequenced
- A single error can result in disease

Polymorphisms

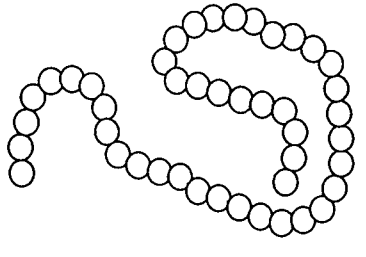
Differences in our DNA sequence that do not destroy protein function *but may alter it*



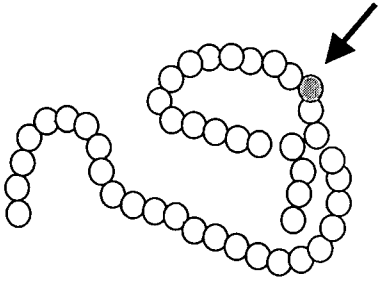
Gene
Version 1



Gene
Version 2



Functional protein



Functional but *altered* protein

Polymorphisms and Disease

- Polymorphisms are common and *contribute* to our susceptibility to common diseases
- Each human has a polymorphism about every 500-1000 basepairs
- 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*

The Promise of Individualized Medicine

- Currently Medicine is "one size fits all"
- By identifying and understanding polymorphisms, we can identify those of us at high risk for specific diseases
- Affording an opportunity to:
  - Undergo increased survellience to detect disease early
  - Take preventative measures
    - (e.g. with surgery or medications to prevent the disease)
  - Be treated with "personalized" medications that most effectively treat the disease in *the individual*
- *So far only a few such susceptibility polymorphisms have been identified*

DNA Banks

- By collecting DNA *and medical information* from large numbers of people,
- And correlating DNA changes with the presence or absence of diseases,
- Polymorphisms that are important in disease susceptiblity can be identified

Ethical Considerations

- DNA is seen as a special and very private resource
  - It contains potential information about us
    - Physically
    - Psychologically and Behaviorally
    - Medically
  - It also contains such information about our family members
- DNA and the information that it can provide gets to the essence of who we are…..“DNA R US”
- Thus, DNA is typically afforded special consideration with respect to privacy issues

DNA Banking in North Carolina
Important Considerations

- Making contributions to a DNA bank and keeping the contributions anonymous is a challenge
  - Since the material one is collecting, DNA, is itself the ultimate identifier!
- For such a DNA bank to be useful, at least some medical records must accompany the samples
  - The more medical records that are retained with each sample the more scientifically useful, but the less anonymous the samples then become

DNA Banking in North Carolina
Important Considerations

- Collection of DNA from prisoners creates special issues
  - Prisoners are seen as a vulnerable population b/o past abuses (e.g. Tuskegee)
  - The Federal Regulations on Human Subject Research, Part C, stipulates that prisoners be allowed to participate in research only if that research is directly beneficial to them
  - Prisoners represent a skewed population with respect to age, sex, race, income , prevalence of substance abuse, poor prior medical care, etc…)
    - Would the lessons learned from their DNA and medical records be applicable to the population at large?

VISITOR REGISTRATION SHEET

Science and Technology — May 14, 2003

Name of Committee — **Date**

Please Print: Thank You

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
John Hardin	NC Board of Science & Technology
DON HOBART	NC DOC
Kat McKelvey	UNC Geomatics
James P. Evans	UNC Chapel Hill
Don McCorquodale	SAS
Gary Mel[illegible]	NCABO
BILL WEIS	SBI CRIME LAB
Michael Budzynski	SBI CRIME LAB
Colleen Kochanek	Hafer & Caldwell, P.A.
Julie Allen	NC Statewatch
FD FESER	Commerce

VISITOR REGISTRATION SHEET

Science and Technology — May 14, 2003

Name of Committee — **Date**

Please PRINT. Thank you

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Tracy Little	NC DOC

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

May 19, 2004

The House Committee on Science and Technology met on Wednesday, May 19, 2004, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; McMahan and Walend.

Representative Miller called the meeting to order and introduced the Sergeant-At-Arms and pages. Danielle Bagley and Shannon Power, from Granville County, were sponsored by Rep. Crawford.

Rep. Miller introduced George Bakolia, State Chief Information Officer, to give a report assessing current Legacy Systems and estimated cost analyses needed to modernize the systems (See Attachments **K** and **L**). This report was given in accordance with House Bill 941, *Study IT Legacy Systems*.

After the presentation, a short question and answer period followed. One question asked pertained to the "Cost to Maintain" column. Rep. Miller asked if this was an annually recurring cost or if the cost was from inception. Mr. Bakolia did not have an answer at the time but later followed up, via email, that the "Cost to Maintain" figures were annual.

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

Respectfully submitted,

Representative Paul Miller
Chairman

Eryn Gee
Committee Assistant

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

May 21, 2003

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Bills to be Discussed:

House Bill 1256 Voluntary DNA Database – Rep. Miller

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

May 21, 2003

The House Committee on Science and Technology met on Wednesday, May 21, 2003, in room 425 of the Legislative Office Building at 11:00 am.

Representative Miller called the meeting to order and introduced the Sergeant-At-Arms and pages. Lauren Cottle and Anna Duke are both from Pender County and were sponsored by Rep. Wright.

Rep. Miller turned the meeting over to Vice-Chair Tolson who then recognized Rep. Miller to discuss House Bill 1256, *Voluntary DNA Database*. Rep. Walend moved to adopt a proposed committee substitute for the bill; the motion carried. After explanation of the bill, much discussion followed. Peter Capriglione gathered some information related to the subject (See Attachment **I**). Rep. Walend offered an amendment that adds the Director of Genomics/Science program at Western Carolina University to the list of those with access to the medical history questionnaire; it was adopted. Rep. Walend moved for a favorable report to the committee substitute and re-referral to the Finance committee; the motion passed.

With the hour drawing to a close, the meeting was adjourned.

Respectfully submitted,

Representative Paul Miller
Chairman

Eryn Gee
Committee Assistant

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 2003

H D

HOUSE BILL 1256
PROPOSED COMMITTEE SUBSTITUTE H1256-CSRV-25 [v.1]

5/21/2003 10:48:03 AM

Short Title: Voluntary DNA Database. (Public)

Sponsors:

Referred to:

April 24, 2003

A BILL TO BE ENTITLED

AN ACT TO DIRECT THE SECRETARY OF COMMERCE TO ESTABLISH A DNA DATABANK FOR THE VOLUNTARY SUBMISSION BY INDIVIDUALS OF DNA SAMPLES LINKED WITH THE INDIVIDUAL'S MEDICAL RECORD.

The General Assembly of North Carolina enacts:

SECTION 1. Article 10 of Chapter 143B of the General Statutes is amended by adding the following new Part to read:

"Part 19. Voluntary DNA/Medical Records Database.

"**§ 143B-472.85. Voluntary DNA Database established; purpose.**

(a) The Secretary of Commerce shall establish a DNA database for the recording of DNA data and related medical records submitted voluntarily by individuals for the purposes authorized in this Part. DNA data and related medical records stored in the database shall be stripped of all information that would personally identify the individual submitting the data. The Secretary may maintain the database in the Department of Commerce or another suitable location. The Secretary shall appoint the Director of the DNA database.

(b) The DNA database must be capable of classifying, matching, and storing the results of analyses of DNA and other biological molecules.

(c) The DNA database may contain DNA records and related medical records of individuals who have volunteered to provide the DNA sample and medical records. The Secretary may receive, analyze, store, and destroy a record, blood sample, or other specimen for the purposes described in subsection (d) of this section.

(d) The principal purpose of the Voluntary DNA Database is to advance scientific study of the links between genetics and common diseases in order to improve diagnosis and treatment of the diseases, provided that DNA samples and related medical records may only be stored in the database if all personal identifying information is removed. The information contained in the database may not be collected, analyzed, or

stored to obtain information about human physical traits or predisposition for disease unless the purpose for obtaining the information is authorized by this subsection.

(e) The Director may publish educational materials on the Voluntary DNA Database for dissemination to the general public. The materials shall describe the purposes for which data in the database will be used, who will have access to the database, the confidential nature of samples in the database, and other information.

"**§ 143B-472.86. Collection of DNA samples.**

(a) The Secretary shall adopt rules establishing procedures for the collection, preservation, analysis, and use of blood samples or other specimens in a manner that permits the exchange of DNA samples between DNA laboratories and the use of the data for the purposes authorized under this section.

(b) The Director of the DNA database may conduct DNA analyses or contract with a laboratory, other State agency, private entity, or institution of higher education for services to perform DNA analyses.

(c) The Director of the DNA database may not accept a blood sample or other specimen taken from a person that is submitted voluntarily unless the sample or specimen is collected in a medically approved manner by a physician or registered nurse or other person who is trained to properly collect samples or other specimens and supervised by a licensed physician. A person collecting a blood sample or other specimen under this section shall not be liable in any civil action if the person collects the sample or specimen in a reasonable manner according to generally accepted medical or other professional practices.

(d) The Director shall provide at no cost to the individual the specimen vials, mailing tubes and labels, report forms, and other instructions for collection of blood samples or other specimens from individuals voluntarily submitting DNA to the database.

(e) A person who collects a blood sample or other specimen under this section shall send the sample or specimen to the Director of the DNA database.

(f) A DNA laboratory may analyze a blood sample collected under this section or other DNA specimen only for the purposes authorized under this section.

"**§ 143B-472.86a. Collection of Medical History.**

The Director of the DNA database shall make available on the Internet a medical history questionnaire that shall be required as part of every voluntary submission to the database. Information from the questionnaire shall be automatically entered into the DNA database, and shall be coded in a manner that links it to the DNA record of the volunteer. The medical history questionnaire shall be developed by the Director, in consultation with the following persons, or their designees:

(1) The Director of the Genomic Science Program, North Carolina State University.

(2) The Chair of the Department of Genetics, University of North Carolina School of Medicine.

(3) The Director of the Biomedical/Biotechnology Research Institute, North Carolina Central University.

(4) The Chair of the Department of Pediatrics/Genetics, East Carolina University School of Medicine.

"**§ 143B-472.87. Access to Voluntary DNA Database information.**

(a) The Secretary shall adopt rules:

(1) To prevent unauthorized access to the DNA database.

(2) To release DNA records, specimens, or analyses from the DNA database for authorized purposes.

(3) Relating to the internal disclosure, access, or use of a sample, specimen, or DNA record in the Department of Commerce DNA laboratory.

(b) The Director may release a DNA sample, analysis, or record, only if personally identifiable information is removed, for:

(1) A population statistics database.

(2) Identification research and protocol development.

(3) Quality control.

(c) The Director may release a record of the number of requests made for a DNA record and the name of the requesting person. The Director shall maintain a record of requests made under this section.

"**§ 143B-472.88. Confidentiality of DNA records.**

(a) A DNA record stored in the Voluntary DNA Database is confidential and is not subject to disclosure except for the purposes authorized in this Part.

(b) A person who knowingly discloses information in a DNA record or information related to a DNA analysis of a blood specimen except as authorized by this Part is guilty of a Class 1 misdemeanor.

(c) A violation of this section constitutes official misconduct.

"**§ 143B-472.89. Segregation of records.**

The Secretary shall adopt rules providing for the segregation of DNA records created under this Part from records created under Article 13 of Chapter 15A of the General Statutes.

"**§ 143B-472.90. Fees; other funds.**

The Director may collect a reasonable fee for providing population statistics data or other research data as authorized by this Part. The Director shall charge to North Carolina-based biotechnology corporations and research institutions an equal portion of the cost to store and retrieve information in the database. The annual fee for each biotechnology corporation or research institution shall be twenty-five thousand dollars ($25,000) for the first year of operating the database. Thereafter, the charge to each corporation or research institution shall be based on the actual cost of maintaining the system, divided by the number of biotechnology corporations and research institutions that represents one half of the total number of biotechnology corporations and research institutions in the State. The Department of Commerce, on behalf of the Voluntary DNA Database, may accept grants, contributions, devises, bequests, and gifts, which shall be kept in a separate fund, which shall be nonreverting, and shall be used to fund the implementation and continuing operation of the Database.

"**§ 143B-472.91. Definitions.**

As used in this Part, unless the context clearly requires otherwise:

(1) 'Database' or 'DNA database' means the Voluntary DNA Database established under this Part for the recording of DNA samples and related medical records voluntarily submitted by an individual.

(2) 'Director' means the Director of the Voluntary DNA Database established under this Part.

(3) 'DNA' means deoxyribonucleic acid.

(4) 'DNA record' means DNA identification information stored in the Voluntary DNA Database for the purposes stated in this Part.

(5) 'DNA sample' means a blood sample or other specimen voluntarily submitted to the database by an individual."

SECTION 2. There is appropriated from the General Fund to the Department of Commerce the sum of one hundred thousand dollars ($100,000) for the 2003-2004 fiscal year. These funds shall be used to establish the Voluntary DNA Database in accordance with Section 1 of this act. The Department shall establish a schedule of implementation that ensures that the most cost effective plan is pursued. The following order of priorities shall serve as a guide for implementation of this Act:

(1) Development and implementation of the medical history questionnaire, test kits for volunteer submissions to the database, and collection and storage of DNA samples.

(2) Computerization of DNA data submissions.

(3) Availability of DNA database for marketing to North Carolina Research Institutions and Biotechnology companies.

SECTION 3. This act becomes effective July 1, 2003. Section 1 of this act becomes effective only if funds are appropriated to implement this act.

HOUSE BILL 1256:
Voluntary DNA Database

BILL ANALYSIS

Committee:	House Science and Technology	**Introduced by:**	Reps. Miller & Walend
Date:	May 21, 2003	**Summary by:**	Brenda J. Carter
Version:	1st Edition		Committee Counsel

SUMMARY: ***House Bill 1256 directs the Department of Commerce to establish a DNA database for the recording of DNA data and related medical records submitted voluntarily by participants, for the purpose of advancing scientific study of the links between genetics and common diseases.***

BACKGROUND: Deoxyribonucleic Acid (DNA) is the carrier of the genetic code for living organisms. In other words, it contains the blueprint for how humans, and other organisms, work. Advances in medicine, genetics, and forensic science can be attributed to the research done on DNA. In the late 1980s, DNA evidence began to play a major role in criminal trials. DNA testing has determined the innocence of accused persons and also verified the guilt of others.

BILL ANALYSIS: **Section 1** of the bill directs the Secretary of Commerce to establish a DNA database for the recording of DNA data and related medical records submitted voluntarily by individuals. The Secretary is authorized to receive, analyze, store, and destroy a record, blood sample, or other specimen. The principal purpose of the database is to advance scientific study of the links between genetics and common diseases in order to improve diagnosis and treatment of the diseases. All DNA data and related medical records stored in the database would be stripped of any information that would personally identify the individual submitting the data. The Secretary would maintain the database within the Department or in another suitable location, and would appoint a person to serve as Director of the database. The Director would be authorized to publish and disseminate educational materials on the database, describing the purposes for which the data will be used, and describing the confidential nature of samples in the database. The Director of the database is authorized to conduct DNA analyses or to contract with a laboratory, other State agency, private entity or institution of higher education for services to perform DNA analyses. Blood samples or other specimens must be collected in a medically approved manner by a physician, nurse, or other properly trained person supervised by a licensed physician. The Director will provide at no cost to the individual the necessary instructions along with specimen vials, mailing tubes and labels, and report forms.

The Secretary of Commerce is required to adopt rules to prevent unauthorized access to the DNA database, and to provide for the release of information from the database for authorized purposes. The Director of the database may release information from the database only if personally identifiable information is removed. A DNA record stored in the database is confidential and is not subject to disclosure except for authorized purposes; any person who knowingly discloses information in a DNA record or information related to a DNA analysis of a blood specimen except as authorized is guilty of a Class 1 misdemeanor. Violation also constitutes official misconduct. DNA records in the Voluntary Database shall be kept separate from records created under the Criminal Procedure Act.

The Director of the database is authorized to collect a reasonable fee for providing population statistics data or other research data, and may charge to North Carolina-gased biotechnology forporations and research institutions an equal portion of the cost to store and retrieve information in the database. The

annual fee for each biotechnology corporation or research institution is $25,000 for the first year of operating the database. Thereafter, the charge will be based on a formula that takes into account the actual cost of maintaining the system and the number of biotechnology corporations and research institutions in the State.

Section 2 of the bill appropriates $300,000 from the General Fund to the Department of Commerce for the 2003-2004 fiscal year, and an additional $300,000 for the 2004-2005 fiscal year. The funds are to be used to establish the Voluntary DNA Database, including the purchase of computer equipment.

Section 3 makes the act effective July 1, 2003, but only if funds are appropriated for its implementation.

FISCAL ANALYSIS MEMORANDUM

[This confidential fiscal memorandum is a fiscal analysis of a draft bill, amendment, committee substitute, or conference committee report that has not been formally introduced or adopted on the chamber floor or in committee. This is not an official fiscal note.]

BILL NUMBER: HB 1256 1st Edition

SHORT TITLE: Voluntary DNA Database

SPONSOR(S): Representatives Miller and Walend

FISCAL IMPACT

Yes (X) **No ( )** **No Estimate Available ( )**

	FY 2003-04	FY 2004-05	FY 2005-06	FY 2006-07	FY 2007-08
REVENUES					
Commerce	See assumptions and methodology; Dependent on number of participating firms: first year each firm pays $25,000 and subsequent years the fee is based on number of firms and costs to maintain the database.				
GENERAL FUND EXPENDITURES					
Commerce	Costs range per sample depending on option chosen and contracting alternatives; See assumptions and methodology				
Correction	Exact amount cannot be determined				
Judicial	Exact amount cannot be determined				
ADDITIONAL PRISON BEDS*	No significant impact anticipated				
POSITIONS: (cumulative)	Dependent on Commerce contracting options.				

PRINCIPAL DEPARTMENT(S) & PROGRAM(S) AFFECTED: Department of Commerce; Department of Correction; Judicial Branch

EFFECTIVE DATE: Section 1 is effective only if funds are appropriated. Other sections are effective July 1, 2003

**This fiscal analysis is independent of the impact of other criminal penalty bills being considered by the General Assembly, which could also increase the projected prison population and thus the availability of prison beds in future years. The Fiscal Research Division is tracking the cumulative effect of all criminal penalty bills on the prison system as well as the Judicial Department.*

BILL SUMMARY: The proposed legislation adds new Part 19 to Article 10 of GS Ch. 143B to create a databank of DNA and related medical records in the Department of Commerce for scientific research and study. The DNA databank will house voluntary submissions by individuals of DNA samples linked with the individual's medical record. The legislation states that the principal purpose of the DNA database is to advance scientific study of links between genetics and common diseases to improve diagnosis and treatment of these diseases. It contains provisions on the Department of Commerce's responsibilities regarding collection of samples, access to database information, confidentiality of records, and segregation of records. It establishes a Class 1 misdemeanor offense for knowing, unauthorized disclosure of DNA information. Fees that the Department of Commerce may charge for providing data to corporations and research institutions are set. The bill appropriates $300,000 from the General Fund to the Department of Commerce for each year of the 2003-2005 biennium to establish the database. The Act is effective only if funds are appropriated.

ASSUMPTIONS AND METHODOLOGY:

Department of Commerce

Revenues

The proposed legislation allows the Department of Commerce (Commerce) to collect reasonable fees equal to the cost of storing and retrieving information from the DNA database. North Carolina-based biotechnology corporations and research institutions will pay a fee of twenty-five thousand dollars ($25,000) for the first year of operating the database. Revenues associated with the DNA database will depend on the number of biotechnology corporations and research institutions choosing to participate. Fees in subsequent years will be based on the actual cost of maintaining the system divided by the number of biotechnology corporations and research institutions that represents one-half of the total number of such groups in the State. Not all biotechnology corporations and research institutions in the State may participate, thus the fees will not necessarily cover all costs associated with the Commerce DNA database.

Expenditures

The total cost of establishing and maintaining a DNA database includes the cost of collecting and processing the DNA samples and medical records, storing the DNA samples, purchasing and maintaining the supplies and computer equipment necessary for the DNA database, and performing analysis and testing on the DNA samples. One alternative would be for Commerce to contract out for portions of the handling and testing of DNA samples, whether with a state university or with a biotechnology/research organization. Three options for in-house vs. contracting out are detailed below.

The database implementation could be structured with three tiers of activities: 1) collection, storage and stain card transfer of DNA samples; 2) electronic transfer and testing of medical records and stain card samples; and 3) actual medical testing/research and usage of the DNA database. Funding levels could dictate the speed at which the Commerce DNA database effort progresses from one tier to another. The three options below are inclusive of all three tiers' activities.

Expenditures Relevant to All Options
It can be assumed that various media channels would pursue the DNA database because it is a new and emerging idea. However, Commerce would still require some funding for advertising to obtain volunteers for the database and promotion of the database for economic development purposes. **This fiscal note assumes approximately $10,000 for promotion and advertising.**

Commerce is granted the authority to adopt rules establishing the procedures for the collection of DNA samples from voluntary participants. Many alternatives exist for how to collect and handle the DNA. Individuals could volunteer to participate and be shipped individual collection kits or Commerce could establish collection sites across the State. This fiscal note assumes a single collection point where Commerce would establish an intake process for medical records and DNA samples, and individuals could volunteer to have a kit mailed to them to complete and return to Commerce.

A detailed medical interview/questionnaire must also be conducted while the DNA sample is being collected and/or submitted. If individuals are able to submit personal medical records with DNA samples, a detailed questionnaire and submission procedures must be established, taking into consideration individual privacy issues. It is assumed that a commission would be established for genomics institutions and researchers to participate in the formulation of the detailed medical questionnaire. Volunteers could request paper questionnaires and would then work with their physicians to fill out the detailed medical history. The paper questionnaire would then be returned to Commerce for inclusion in the DNA database. The paper responses would need to be input into the electronic database using a standard data entry FTE calculation. Each sample may require 20 to 30 minutes to enter electronically, depending on the level of information contained in the questionnaire. Costs of this alternative are listed in Option 1 below.

One alternative to the paper questionnaire may be to provide an online medical interview, which would allow for automated electronic data capturing. Without having detailed specifications, an initial estimate for software ranges between $5,000 and $15,000 with annual maintenance costs running around $2,000. ISD estimates that to write a custom application for this effort would involve a system analyst, programmer and database designer with average salaries in the range of $50 per hour. Design and implementation of such a project is estimated to take approximately six weeks. Thus, on the outset a six-week project with an average salary of $1,200 per week per employee (three employees) would present a total project cost of $21,600. Depending on the involvement of the staff this cost could be between $15,000 and $30,000. **This fiscal note assumes the software and design of an online process for medical interviewing and data collection will cost approximately $30,000.**

Various DNA collection methods are available to be used, such as blood, cheek swab or hair root samples, each with varying costs. Blood samples are the only samples that require stain card transfers, which could be performed in-house or outsourced (see options below.) Blood samples are also the most reliable method to collect DNA and are the most enduring sample that can be taken. Costs to other state agencies for DNA collection kits range from $2 to $4.50 per kit based on method and volume, and it is assumed that collection kit costs for Commerce will be similar. Postage to mail the kits to/from individuals back to the State for tracking is $0.50 each. **This fiscal note assumes a kit collection cost of $5 per sample.**

Option 1
Option 1 assumes that Commerce retains ownership and maintenance of the DNA database and performs most activities in-house.

A special laboratory freezer is required to store the DNA samples once collected, and the cost for a freezer that holds 10,000 samples is approximately $10,000. The price is dependent on the size, temperature limits, alarm systems, and recording devices selected. **It is assumed that Commerce would only require one freezer for $10,000 during the initial stages of the database implementation.**

A computer database would be necessary to house the DNA sample data as well as electronic medical records for participating individuals. Information submitted on paper questionnaires must be converted to electronic form and entered into the database. Commerce must hire staff *or* contract with another organization to perform this conversion/data entry. The computer system is estimated to store approximately 20,000 electronic medical records along with the relevant DNA data; however, the estimate is based on the size of DNA samples in the State Bureau of Investigation DNA database. The information stored in the Commerce database will be different records of DNA strands that have coding for genetic traits, thus the sizing may be different. **The staffing requirements and computer equipment necessary to track and maintain the Commerce DNA database will be approximately $22,000.** If an online medical history submission database were to be created (see above), the total computer equipment cost for the database minus any data entry needs would be approximately $42,000 ($30,000 + $12,000.)

Lab space and a lab technician would be required to transfer the DNA samples to stain cards to preserve them prior to medical testing. Commerce must hire staff/secure space *or* contract with another organization to perform these activities. If medical testing was to occur immediately and it was not required to preserve the DNA samples for further research, the stain card transfer step would not be necessary. It would be necessary to secure a sterile environment for lab space that includes proper countertops and biological hoods to protect from airborne pathogens. It has been recommended that lab technicians who will perform the stain card transfers have at least a two-year degree in a biological science to understand the safety and procedural issues associated with this process. **It is assumed that lab space and staffing for stain card transfers would require approximately $40,000 annually.**

To perform medical research testing in-house, whether for actual testing purposes or quality control checks, Commerce would need to purchase laboratory and analysis equipment, lease or purchase laboratory space, and hire a trained technician(s) to perform the testing. This effort would be substantial and costs would likely outweigh usefulness. Therefore, this fiscal note assumes that all analysis and testing of DNA samples will be outsourced to biotechnology corporations and research institutions in the State instead of performed at Commerce. The National Institute of Justice has negotiated a rate of approximately $50 per sample for the convicted offender DNA samples that many states outsource to private labs. **Due to volume considerations, it can be assumed that the Commerce DNA database testing would require higher outsourcing fees between $50 and $100 per sample.**

Option 2

Option 2 assumes that Commerce retains ownership and maintenance of the actual DNA database yet contracts out for storage, stain card transfer, and medical testing. The costs associated with computer equipment and data entry would be the same as those detailed in Option 1. Commerce would no longer require a freezer, lab space, or trained lab technician(s).

Option 2 assumes the stain card transfer, storage, analysis, and testing of the DNA samples will be wholly outsourced to biotechnology corporations and research institutions in the State instead of performed at Commerce. Contracting out the analysis testing would result in fewer in-house costs for Commerce. The National Institute of Justice has negotiated a rate of approximately $50 per sample for the convicted offender DNA samples that many states outsource to private labs. **Due to volume considerations and the additional storage and stain card activities, it can be assumed that the Commerce DNA database testing would require higher outsourcing fees between $75 and $150 per sample.**

Option 3

Option 3 assumes that Commerce wholly outsources the DNA database effort to biotechnology corporations and research institutions in the State instead of performing them in-house. Commerce would only be responsible for promoting the DNA database and coordinating the collection and medical record intake process. All DNA samples would be returned to the contracted organization for storage, computer entry, and medical testing. Due the to the privacy issues and scope of the effort, it can be assumed that the outsourcing fees would be higher than those associated with Option 2. **While no exact estimate can be established without entering into contract negotiations, it can be assumed that fees will be between $75 and $200 per sample.**

The table below details the three options as they relate to Commerce's responsibilities:

Option	Level of Responsibility	Estimated Costs	Activities Required by Commerce
Option 1	Mostly in-house at Commerce	*Set* - $82,000 *Per Sample* - • $5 / collection kit • $50-$100 / for testing & analysis	• Promotion and advertising • Detailed medical interview/questionnaire creation and data entry (online option would cost $20,000 more) • DNA collection kit process • DNA Computer Database requirements • Sample storage in freezer • Stain card transfer • Contract out for medical testing / usage
Option 2	Some in-house at Commerce; some outsourced	*Set* - $42,000 *Per Sample* - • $5 / collection kit • $75-$150 / for storage, testing & analysis	• Promotion and advertising • Detailed medical interview/questionnaire creation and data entry (online option would cost $20,000 more) • DNA collection kit process • DNA computer database requirements • Contract out for storage, stain card transfer, and medical testing / usage
Option 3	Fully outsourced	*Set* - $32,000 *Per Sample* - • $5 / collection kit • $75-$200 / for storage, testing, analysis & maintenance	• Promotion and advertising • Detailed medical interview/questionnaire creation and data entry (online option would cost $20,000 more) • DNA collection kit process • Contract out for computer database requirements, storage, stain card transfer, and medical testing / usage

Department of Correction

The Sentencing and Policy Advisory Commission prepares inmate population projections annually.[1] Based on the most recent population projections and estimated available prison bed capacity, *there are no surplus prison beds available for the five year Fiscal Note horizon and beyond.*

Because HB 1256 creates a new offense, the Sentencing Commission does not have any historical data from which to estimate the impact of this bill on the prison population. On average, for every seven convictions of a Class 1 misdemeanor, one offender receives an active sentence averaging 35 days to be served in a local jail. For 30-90 day sentences in local jails, the Department of Correction reimburses the county $18/day. If sentencing practice for this offense is similar to that of other Class 1 misdemeanors, for every 7 convictions the cost to the State would average $630 (=35*18). In addition, 82 percent of Class 1 misdemeanor convictions resulted in community

[1] The projections used for incarceration fiscal notes and fiscal memos are based on January 2003 projections. These projections are based on historical information on incarceration and release rates under Structured Sentencing, crime rate forecasts by a technical advisory board, probation and revocation rates, and the decline (parole and maxouts) of the stock prison population sentenced under previous sentencing acts.

sentences, and two percent resulted in intermediate sentences. Average daily cost for supervised non-active punishments range from $1.83 to $11.47.

Judicial Branch

For most criminal penalty bills, the Administrative Office of the Courts (AOC) provides Fiscal Research with an analysis of the fiscal impact of the specific bill. For these bills, fiscal impact is typically based on the assumption that court time will increase due to an expected increase in trials and a corresponding increase in the hours of work for judges, clerks and prosecutors. This increased court time is also expected to result in greater expenditures for jury fees and indigent defense.

HB 1256 creates a Class 1 misdemeanor offense for a person who knowingly discloses information in a DNA record or information related to a DNA analysis of a blood specimen except as authorized under the bill. Current G.S. 15A-266.11 makes the unauthorized use of the State DNA Database or Databank a Class 1 misdemeanor. Because the AOC does not have an offense code for current G.S. 15A-266.11, no data is available concerning the frequency of this offense under current law. The lack of an AOC offense code is some indication that these offenses are infrequently charged and/or infrequently result in convictions.

The AOC cannot estimate the number of new charges that would arise as a result of this bill. For Class 1 offenses that are brought to trial, the estimated court cost per trial is $3,144. For Class 1 offenses not brought to trial, and where a guilty plea is entered, AOC estimates the cost per guilty plea at $279.

SOURCES OF DATA: Department of Commerce; Department of Justice; Department of Correction; Judicial Branch; North Carolina Sentencing and Policy Advisory Commission; and, Office of State Construction.

TECHNICAL CONSIDERATIONS: There are three similar bills (HB 1254, HB 1255, HB 1256) that direct the Department of Commerce to establish a DNA database. Each bill has a corresponding fiscal note calculating the establishment of a DNA database separately. However, ultimately only one database would be required within Commerce to fulfill the legislative requirements.

FISCAL RESEARCH DIVISION: (919) 733-4910

PREPARED BY: Stephanie Schmitt and Chloe Gossage

Attachment I

Last week we discussed the medical and scientific advantages of DNA research.

Early on in this process I responded to a question (actually a three part question) that Rep. Miller posed on the existence of volunteer data banks for DNA research. He had the premise that a volunteer DNA databank would and could be used to track links between conditions or diseases and specific genomic patterns.

- He thought that there must be "something like this in order to do any research and to what extent of the existence and could anyone participate?
- Also, are these banks sponsored by the government or just through private/university efforts and also to what extent?

Therefore I did contact some experts within the field and did some follow-up research in this area.

I will speak to the following areas briefly.

1. What I know from my limited research:
2. Participation:
3. What can be gained by private concerns that do this type of work?
4. Privacy Concerns
5. Security of participant Information

What I know from my limited research:

- As Rep. Miller pointed out there are DNA data banks for the state and federal government to identify criminals.
- There are indeed volunteer DNA databanks, not only in the USA but also throughout the world.
    - As we heard last week the largest project that is government sponsored is the Human Genome Project.
- Ms. Maria Rapoza, PhD, who is the director of science and technology for the North Carolina Biotechnology Center provided me with the following information:
- At least six countries that have a genetic census underway, that involves the collection of DNA from their populations
    - The pioneer was Iceland, in collaboration with the company DeCode.
        - They have collected DNA samples from 80,000 related people
    - The most recent project is Britain's U.K. Biobank.
        - They will be collecting DNA from 500,000 individuals
    - In the US, there are a myriad of efforts to launch a genetic census
        - Some of these are privately initiated from the commercial sector

- An example is the company Gene Trust of DNA Sciences
  - Which has collected DNA from 10,000 volunteer from all 50 states
  - In Boston, there is an effort underway from Massachusetts General Hospital and Brigham and Women's Hospital. A new database at the Harvard Partners Center for Genetics and Genomics (HPCGG) will hold information on about 300,000 patients, including 200,000 DNA samples
- Other efforts are being launched from organizations such as the Mayo Clinic a database on the Mormon population and a study dealing with Amish infants.

Participation:

- Gene Trust
  - You can be put on their ***notification list via the Web***
- Mayo Clinic
  - As a study participant, you may be asked to
  - Participate in a brief family history interview, ***either by telephone or mail questionnaire.*** This would inquire about your medical health, and would also request information regarding the health of your family members. The telephone interview will be performed at the most convenient time for you. The mail questionnaire can be completed and returned to us at no cost to you.
  - Donate a small blood sample (10ml).
  - Take part in an optional study examination. This may involve basic questions about your thinking and memory abilities, and a physical assessment of walking, muscle strength, coordination, agility, reflexes, and sensory functions.
- DeCode
  - ***INFORMED CONSENT***
    All participants in deCODE's genetic studies give their informed consent before they give blood for DNA analysis. The consent form participants must read and sign sets out the objectives and procedures of the research, potential risks, and underscores the right of the participant to withdraw from the study at any time.

What can be gained by private concerns that do this type of work?

For example: deCODE's, the company that is doing the Icelandic research, entered into an agreement 1998 with Hoffmann-LaRoche Ltd., Basel, Switzerland, in February of 1998. The partnership could bring deCODE more than $200 million in the next five years. As part of the agreement, Hoffmann-LaRoche will hold exclusive rights to any drugs or

diagnostic devices developed from the research. However, they will have to provide these products to Icelanders free of charge.
Information on partnership: http://www.the-scientist.com/yr1998/june/hoffert_p1_980608.html

Privacy Concerns

- Use of information
  - By Insurance Companies
  - By perspective employers

Security of Information

- The database designers promise to strip varying amounts of biographical details from the data before they are shared with other scientists and to encrypt the data to protect against hackers - measures intended to safeguard the privacy of patients. In a "bill of rights" for Gene Trust volunteers, DNA Sciences states: "Your personally identifying genetic information will never, under any circumstances, be sold or shared with anyone outside the Gene Trust."

Great efforts are made to insure the anonymity of DNA Databank volunteers!

DNA Database Lineup

Sponsor	Noteworthy aspect	# of patient records	Key partner	Geographic scope
The Mayo Clinic	IBM middleware could bring together disparate sources of medical data	6,000,000	IBM	U.S.
Medical Research Council	Immigration could give Britain's database more ethnic diversity than Iceland's	500,000	Wellcome Trust	U.K.
Partners HealthCare	Company is getting bioinformatics assistance from deCODE	300,000	Harvard	Boston
deCODE Genetics	Its 12-year contract with Iceland costs $950,000 annually	280,000	Roche	Iceland
DNA Sciences	Patients in database have listed themselves voluntarily via the Internet	13,000	Bristol-Myers Squibb	U.S.

NORTH CAROLINA GENERAL ASSEMBLY AMENDMENT

(Please type or use ballpoint pen)

EDITION No. _____

H. B. No. 1256 DATE 5-21-03

S. B. No. _____ Amendment No. _____ (to be filled in by Principal Clerk)

COMMITTEE SUBSTITUTE H1256-CSRV-25

(Rep.) Walend

Sen.)

moves to amend the bill on page 3, line 2-3

( ) WHICH CHANGES THE TITLE

by inserting between those lines the following:

"(5) The Director of the Genomics Science Program, Western Carolina University."

SIGNED Trudi Walend

ADOPTED _____ FAILED _____ TABLED _____

GA-33-A

PRINCIPAL CLERK'S OFFICE (FOR ENGROSSMENT)

2003 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. 1256 A BILL TO BE ENTITLED AN ACT TO DIRECT THE SECRETARY OF COMMERCE TO ESTABLISH A DNA DATABANK FOR THE VOLUNTARY SUBMISSION BY INDIVIDUALS OF DNA SAMPLES LINKED WITH THE INDIVIDUAL'S MEDICAL RECORD.

☐ 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, ☐ ~~which changes the title~~, unfavorable as to the original bill, and recommendation that the committee substitute bill be re-referred to the Committee on Finance.

☐ 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

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 2003

H D

HOUSE BILL 1256
PROPOSED COMMITTEE SUBSTITUTE H1256-PCS50287-RV-25

Short Title: Voluntary DNA Database. (Public)

Sponsors:

Referred to:

April 24, 2003

A BILL TO BE ENTITLED

AN ACT TO DIRECT THE SECRETARY OF COMMERCE TO ESTABLISH A DNA DATABANK FOR THE VOLUNTARY SUBMISSION BY INDIVIDUALS OF DNA SAMPLES LINKED WITH THE INDIVIDUAL'S MEDICAL RECORD.

The General Assembly of North Carolina enacts:

SECTION 1. Article 10 of Chapter 143B of the General Statutes is amended by adding the following new Part to read:

"Part 19. Voluntary DNA/Medical Records Database.

"**§ 143B-472.85. Voluntary DNA Database established; purpose.**

(a) The Secretary of Commerce shall establish the Voluntary DNA Database for the recording of DNA data and related medical records submitted voluntarily by individuals for the purposes authorized in this Part. DNA data and related medical records stored in the database shall be stripped of all information that would personally identify the individual submitting the data. The Secretary may maintain the database in the Department of Commerce or another suitable location. The Secretary shall appoint the Director of the DNA database.

(b) The DNA database must be capable of classifying, matching, and storing the results of analyses of DNA and other biological molecules.

(c) The DNA database may contain DNA records and related medical records of individuals who have volunteered to provide the DNA sample and medical records. The Secretary may receive, analyze, store, and destroy a record, blood sample, or other specimen for the purposes described in subsection (d) of this section.

(d) The principal purpose of the Voluntary DNA Database is to advance scientific study of the links between genetics and common diseases in order to improve diagnosis and treatment of the diseases, provided that DNA samples and related medical records may only be stored in the database if all personal identifying information is removed. The information contained in the database may not be collected, analyzed, or

stored to obtain information about human physical traits or predisposition for disease unless the purpose for obtaining the information is authorized by this subsection.

(e) The Director may publish educational materials on the Voluntary DNA Database for dissemination to the general public. The materials shall describe the purposes for which data in the database will be used, who will have access to the database, the confidential nature of samples in the database, and other information.

"**§ 143B-472.86. Collection of DNA samples.**

(a) The Secretary shall adopt rules establishing procedures for the collection, preservation, analysis, and use of blood samples or other specimens in a manner that permits the exchange of DNA samples between DNA laboratories and the use of the data for the purposes authorized under this section.

(b) The Director of the DNA database may conduct DNA analyses or contract with a laboratory, other State agency, private entity, or institution of higher education for services to perform DNA analyses.

(c) The Director of the DNA database may not accept a blood sample or other specimen taken from a person that is submitted voluntarily unless the sample or specimen is collected in a medically approved manner by a physician or registered nurse or other person who is trained to properly collect samples or other specimens and supervised by a licensed physician. A person collecting a blood sample or other specimen under this section shall not be liable in any civil action if the person collects the sample or specimen in a reasonable manner according to generally accepted medical or other professional practices.

(d) The Director shall provide at no cost to the individual the specimen vials, mailing tubes and labels, report forms, and other instructions for collection of blood samples or other specimens from individuals voluntarily submitting DNA to the database.

(e) A person who collects a blood sample or other specimen under this section shall send the sample or specimen to the Director of the DNA database.

(f) A DNA laboratory may analyze a blood sample collected under this section or other DNA specimen only for the purposes authorized under this section.

"**§ 143B-472.87. Collection of medical history.**

The Director of the DNA database shall make available on the Internet a medical history questionnaire that shall be required as part of every voluntary submission to the database. Information from the questionnaire shall be automatically entered into the DNA database and shall be coded in a manner that links it to the DNA record of the volunteer. The medical history questionnaire shall be developed by the Director, in consultation with the following persons, or their designees:

(1) The Director of the Genomic Science Program, North Carolina State University.

(2) The Chair of the Department of Genetics, University of North Carolina School of Medicine.

(3) The Director of the Biomedical/Biotechnology Research Institute, North Carolina Central University.

(4) The Chair of the Department of Pediatrics/Genetics, East Carolina University School of Medicine.

(5) The Director of the Genomic Science Program, Western Carolina University.

"**§ 143B-472.88. Access to Voluntary DNA Database information.**

(a) The Secretary shall adopt rules:

(1) To prevent unauthorized access to the DNA database.

(2) To release DNA records, specimens, or analyses from the DNA database for authorized purposes.

(3) Relating to the internal disclosure, access, or use of a sample, specimen, or DNA record in the Department of Commerce DNA laboratory.

(b) The Director may release a DNA sample, analysis, or record, only if personally identifiable information is removed, for:

(1) A population statistics database.

(2) Identification research and protocol development.

(3) Quality control.

(c) The Director may release a record of the number of requests made for a DNA record and the name of the requesting person. The Director shall maintain a record of requests made under this section.

"**§ 143B-472.89. Confidentiality of DNA records.**

(a) A DNA record stored in the Voluntary DNA Database is confidential and is not subject to disclosure except for the purposes authorized in this Part.

(b) A person who knowingly discloses information in a DNA record or information related to a DNA analysis of a blood specimen except as authorized by this Part is guilty of a Class 1 misdemeanor.

(c) A violation of this section constitutes official misconduct.

"**§ 143B-472.90. Segregation of records.**

The Secretary shall adopt rules providing for the segregation of DNA records created under this Part from records created under Article 13 of Chapter 15A of the General Statutes.

"**§ 143B-472.91. Fees; other funds.**

The Director may collect a reasonable fee for providing population statistics data or other research data as authorized by this Part. The Director shall charge to North Carolina-based biotechnology corporations and research institutions an equal portion of the cost to store and retrieve information in the database. The annual fee for each biotechnology corporation or research institution shall be twenty-five thousand dollars ($25,000) for the first year of operating the database. Thereafter, the charge to each corporation or research institution shall be based on the actual cost of maintaining the system, divided by the number of biotechnology corporations and research institutions that represents one-half of the total number of biotechnology corporations and research institutions in the State. The Department of Commerce, on behalf of the Voluntary DNA Database, may accept grants, contributions, devises, bequests, and gifts, which

shall be kept in a separate fund, which shall be nonreverting, and shall be used to fund the implementation and continuing operation of the Voluntary DNA Database.

"**§ 143B-472.92. Definitions.**

As used in this Part, unless the context clearly requires otherwise:

(1) 'Database' or 'DNA database' means the Voluntary DNA Database established under this Part for the recording of DNA samples and related medical records voluntarily submitted by an individual.

(2) 'Director' means the Director of the Voluntary DNA Database established under this Part.

(3) 'DNA' means deoxyribonucleic acid.

(4) 'DNA record' means DNA identification information stored in the Voluntary DNA Database for the purposes stated in this Part.

(5) 'DNA sample' means a blood sample or other specimen voluntarily submitted to the database by an individual."

SECTION 2. There is appropriated from the General Fund to the Department of Commerce the sum of one hundred thousand dollars ($100,000) for the 2003-2004 fiscal year. These funds shall be used to establish the Voluntary DNA Database in accordance with Section 1 of this act. The Department shall establish a schedule of implementation that ensures that the most cost-effective plan is pursued. The following order of priorities shall serve as a guide for implementation of this act:

(1) Development and implementation of the medical history questionnaire, test kits for volunteer submissions to the database, and collection and storage of DNA samples.

(2) Computerization of DNA data submissions.

(3) Availability of DNA database for marketing to North Carolina research institutions and biotechnology companies.

SECTION 3. This act becomes effective July 1, 2003. Section 1 of this act becomes effective only if funds are appropriated to implement this act.

VISITOR REGISTRATION SHEET

Science & Technology — May 21, 2003
Name of Committee — Date

VISITORS: PLEASE SIGN BELOW AND RETURN TO COMMITTEE ASSISTANT

NAME	FIRM OR AGENCY
Amy Dobson	NC Statewatch
[illegible]	AP
DON HOBART	NC DOC
Mildred Spearman	Correction
Jennifer Haygood	FRD Staff

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

June 4, 2003

Opening Remarks and Introductions
Rep. Paul Miller, Chair

Bills to be Discussed:

House Bill 820	**Traveling Science and Technology Funds** **Reps. Miller, Walend and Insko**
Senate Bill 622	**Promote E-Commerce & E-Government** **Sen. Reeves**

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

June 4, 2003

The House Committee on Science and Technology met on Wednesday, June 4, 2003, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson, Vice-Chair; Creech, Ellis, Jones McMahan and Michaux.

Representative Miller called the meeting to order and introduced the Sergeant-At-Arms and pages. Krystle Wiggins from Gates County was sponsored by Rep. Culpepper; Jennifer Carpenter from Wake County was sponsored by Rep. Black; Elizabeth Beavers from Rockingham County was sponsored by Rep. Sexton; and Travis Thompson from Wake County was sponsored by Rep. Munford.

Rep. Miller said that House Bill 820 will not be discussed today. Then he recognized Senator Reeves to discuss Senate Bill 622, *Promote E-Commerce & E- Government.* After some discussion and questions, Rep. Michaux moved for a favorable report. The motion carried.

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 2003

S 2

SENATE BILL 622

Judiciary I Committee Substitute Adopted 4/16/03

Short Title: Promote E-Commerce & E-Government.	(Public)
Sponsors:	
Referred to:	

April 1, 2003

A BILL TO BE ENTITLED

AN ACT TO FURTHER PROMOTE E-COMMERCE AND E-GOVERNMENT.

The General Assembly of North Carolina enacts:

SECTION 1. G.S. 66-58.4 reads as rewritten:

"**§ 66-58.4. Use of electronic signatures.**

~~(a)~~ All public agencies may accept electronic ~~signatures.~~signatures pursuant to this Article, pursuant to Article 40 of this Chapter (the Uniform Electronic Transactions Act), or pursuant to other law.

~~(b) Signatures that require attestation by a notary public may not be in the form of an electronic signature.~~"

SECTION 2. G.S. 66-58.5 reads as rewritten:

"**§ 66-58.5. Validity of electronic signatures.**

(a) An electronic signature contained in a transaction undertaken pursuant to this Article between a person and a public agency, or between public agencies, shall have the same force and effect as a manual signature provided all of the following requirements are met:

(1) The public agency involved in the transaction requests or requires the use of electronic signatures.

(2) The electronic signature contained in the transaction embodies all of the following attributes:

a. It is unique to the person using it;

b. It is capable of certification;

c. It is under sole control of the person using it;

d. It is linked to data in such a manner that if the data are changed, the electronic signature is invalidated; and

e. It conforms to rules adopted by the Secretary pursuant to this Article.

(b) A transaction undertaken pursuant to this Article between a person and a public agency, or between public agencies, is not unenforceable, nor is it inadmissible

into evidence, on the sole ground that the transaction is evidenced by an electronic record or that it has been signed with an electronic signature.

(c) This Article does not affect the validity of, presumptions relating to, or burdens of proof regarding an electronic signature that is accepted pursuant to Article 40 of this Chapter or other law."

SECTION 3. G.S. 55-16-22 reads as rewritten:

"**§ 55-16-22. Annual report.**

(a) Except as provided in subsections (a1) and (a2) of this section, each domestic corporation and each foreign corporation authorized to transact business in this State shall deliver an annual report to the Secretary of ~~Revenue.~~Revenue in paper form or, in the alternative, directly to the Secretary of State in electronic form as prescribed by the Secretary of State under this section.

(a1) Each insurance company subject to the provisions of Chapter 58 of the General Statutes shall deliver an annual report to the Secretary of State.

(a2) A domestic corporation governed by Chapter 55B of the General Statutes is exempt from this section.

(a3) The annual report required by this section shall be in a form jointly prescribed by the Secretary of Revenue and the Secretary of State. The Secretary of Revenue shall provide the form needed to file an annual report. The Secretary of State shall prescribe the form needed to file an annual report electronically and shall provide this form by electronic means. The annual report shall set forth all of the following:

(1) The name of the corporation and the state or country under whose law it is incorporated.

(2) The street address, and the mailing address if different from the street address, of the registered office, the county in which its registered office is located, and the name of its registered agent at that office in this State, and a statement of any change of such registered office or registered agent, or both.

(3) The address and telephone number of its principal office.

(4) The names, titles, and business addresses of its principal officers.

(4a) Repealed by Session Laws 1997-475, s. 6.1.

(5) A brief description of the nature of its business.

If the information contained in the most recently filed annual report has not changed, a certification to that effect may be made instead of setting forth the information required by subdivisions (2) through (5) of this subsection.

(b) Information in the annual report must be current as of the date the annual report is executed on behalf of the corporation.

(c) An annual report ~~required~~ eligible to be delivered to the Secretary of Revenue is due by the due date for filing the corporation's income and franchise tax returns. An extension of time to file a return is an extension of time to file an annual report. At the option of the filer, an annual report may be filed directly with the Secretary of State in electronic form. An annual report required to be delivered to the Secretary of State is due by the fifteenth day of the third month following the close of the corporation's fiscal year.

(d) If an annual report does not contain the information required by this section, the Secretary of State shall promptly notify the reporting domestic or foreign corporation in writing and return the report to it for correction. If the report is corrected to contain the information required by this section and delivered to the Secretary of State within 30 days after the effective date of notice, it is deemed to be timely filed.

(e) Amendments to any previously filed annual report may be filed with the Secretary of State at any time for the purpose of correcting, updating, or augmenting the information contained in the annual report.

(f) Expired.

(g) When a statement of change of registered office or registered agent is filed in the annual report, the change shall become effective when the statement is received by the Secretary of State.

(h) If the Secretary of State does not receive an annual report within 120 days of the date the return is due, the Secretary of State may presume that the annual report is delinquent. This presumption may be rebutted by receipt of the annual report from the Secretary of Revenue or by evidence of delivery presented by the filing corporation."

SECTION 4. The Department of the Secretary of State may study and make recommendations to the 2004 Regular Session of the 2003 General Assembly regarding what changes are desirable to the Notary Public Act, Chapter 10A of the General Statutes, to further facilitate electronic notarization and make other changes to that Chapter.

SECTION 5.(a) This act is enacted or adopted after the date of the enactment of the Electronic Signatures in Global and National Commerce Act, 15 U.S.C. § 7001, et seq., and hereby makes specific reference as required by that law.

SECTION 5.(b) This act is effective when it becomes law, with Sections 1, 2, and 3 applying to all filings made on or after that date.

SENATE BILL 622:
Promote E-Commerce & E-Government

BILL ANALYSIS

Committee:	House Science & Technology	**Introduced by:**	Senator Reeves
Date:	June 4, 2003	**Summary by:**	Brenda J. Carter
Version:	2nd Edition		Committee Counsel

SUMMARY: Senate Bill 622 provides that all electronic signatures created pursuant to law may be accepted by State agencies, even those that require attestation by a notary. The bill also allows a corporation's annual report to be filed with the Secretary of State electronically.

CURRENT LAW: In 1998 the General Assembly enacted the **Electronic Commerce Act**, to facilitate electronic commerce with public agencies and to regulate the use of electronic signatures when used in commerce with public agencies [Article 11A, G.S. Chapter 66]. In the Electronic Commerce Act, an "*electronic signature*" is defined as *"any identifier or authentication technique attached to or logically associated with an electronic record which is intended by the party using it to have the same force and effect as the party's manual signature."* [G.S. 66-58.2(2)] A *"transaction"* is defined as *"an electronic transmission between a person and a public agency, or between public agencies, including, but not limited to, contracts, filings, and legally operative documents."* [G.S. 66-58.2(6)]. The Electronic Commerce Act provides generally that all public agencies may accept electronic signatures, but does not permit electronic signatures where the signature requires attestation by a notary.

In 2000 the General Assembly enacted the **Uniform Electronic Transactions Act (UETA)**, an act adopted by more than half the states and intended to establish the legal equivalence of electronic records and signatures with paper writings and manually-signed signatures, removing barriers to electronic commerce in both the public and private context [Article 40 of Chapter 66]. UETA covers some of the same territory as the Electronic Commerce Act, but has a more expansive definition of *"electronic signature" ("an electronic sound, symbol, or process attached to, or logically associated with, a record and executed or adopted with the intent to sign the record").* UETA specifically permits electronic signatures in notarized documents [G.S. 66-321].

Also in 2000, Congress passed the **Electronic Signatures in Global and National Commerce Act (E-SIGN)**, which covered some of the same territory. In an intricate interplay of federal and State law, E-SIGN allowed some State law to prevail in cases involving UETA. UETA permits some State acts later than the passage of E-SIGN only if the State act "makes specific reference to this Act." [15 U.S.C. § 7002(a)].

BILL ANALYSIS: **Section 1** of the bill amends a provision of the Electronic Commerce Act to make it clear that electronic signatures may be accepted by State agencies as long as the electronic signatures were pursuant to law. It also removes from the Electronic Commerce Act the prohibition on electronic signatures where notarization is required, making that act consistent with UETA. **Section 2** of the bill amends the Electronic Commerce Act to provide that the act does not affect the validity, presumptions, or burdens of proof regarding an electronic signature that is accepted pursuant to UETA or other law. **Section 3** of the bill allows a corporation to file its annual report electronically. **Section 4** of the bill authorizes the Secretary of State to study and make recommendations to the 2004 Short Session about further changes that might be made in the Notary Public Act to facilitate electronic notarization. **Section 5** makes the act effective when it becomes law, and applicable to filings made on or after that date.

S622-SMRV-002 *(*Bill Gilkeson, counsel to Senate Judiciary I, contributed substantially to this summary)*

2003 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
S.B. 622 A BILL TO BE ENTITLED AN ACT TO FURTHER PROMOTE E-COMMERCE AND E-GOVERNMENT.

☒ 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 (#), ☐ 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 & TECHNOLOGY — Name of Committee

JUNE 4, 2003 — Date

PLEASE PRINT LEGIBLY

VISITORS: PLEASE SIGN BELOW AND RETURN TO COMMITTEE ASSISTANT

NAME	FIRM OR AGENCY
Robert Wilson	S.O.S.
Haley Montgomery	SOS
Scott Templeton	DOT Staff
Camille Stell	KCLH
[illegible]	NCLM
Amy Dobson	NC Statewatch
Chad Essick	Edmisten & Webb
Giovanni Maracci	Capitol City Consulting
Don McConnochie	SAS
Kathleen Smith	Alpha Kappa Alpha
Lauren Miller	NC Board of Science & Technology
John Hardin	NC Board of Science & Technology

AGENDA

SCIENCE AND TECHNOLOGY COMMITTEE

June 11, 2003

Opening Remarks and Introductions
Rep. Paul Miller, Chair

To be Discussed:

Presentation by Skip Bollenbacher of UNC Chapel Hill
Executive Director of the Partnership for Minority Advancement in the Biomolecular Sciences (PMABS)

House Bill 820 **Traveling Science and Technology Funds**
Reps. Miller, Walend and Insko

Other Business

Adjournment

MINUTES

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

June 11, 2003

The House Committee on Science and Technology met on Wednesday, June 11, 2003, in room 425 of the Legislative Office Building at 11:00 am. The following members were present: Representatives Miller, Chair; Tolson, Vice-Chair; Creech, Ellis, Jones and Walend.

Representative Miller called the meeting to order and introduced the Sergeant-At-Arms and pages. Rachel Care from Forsyth County was sponsored by Rep. Decker; and Dave Magie from Buncombe County was sponsored by Rep. Goforth.

Rep. Miller turned the meeting over to Vice-Chair Tolson. Rep. Tolson recognized Rep. Miller to discuss House Bill 820, *Traveling Science and Technology Funds*. Rep. Miller spoke briefly about the bill then introduced Skip Bollenbacher, the Executive Director of the Partnership for Minority Advancement in the Biomolecular Sciences at UNC Chapel Hill, to give a presentation (See Attachment **J**). A teacher, Anita Crowley, also spoke in favor of the program. After some discussion, Rep. Creech moved that the bill be reported favorably and re-referred to Appropriations; to 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 2003

HOUSE BILL 820

Short Title:	Traveling Science and Technology Funds.	(Public)
Sponsors:	Representatives Miller, Walend, and Insko (Primary Sponsors).	
Referred to:	Science and Technology, if favorable, Appropriations.	

April 1, 2003

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 2003-2004 fiscal year and the sum of one million dollars ($1,000,000) for the 2004-2005 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:

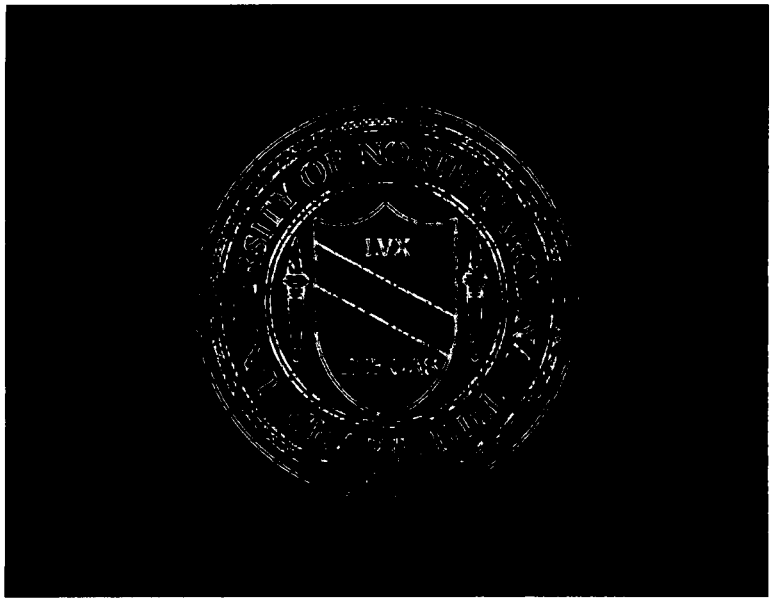
(1) $550,000 for the 2003-2004 fiscal year to purchase and equip a bus for use as an additional mobile laboratory.

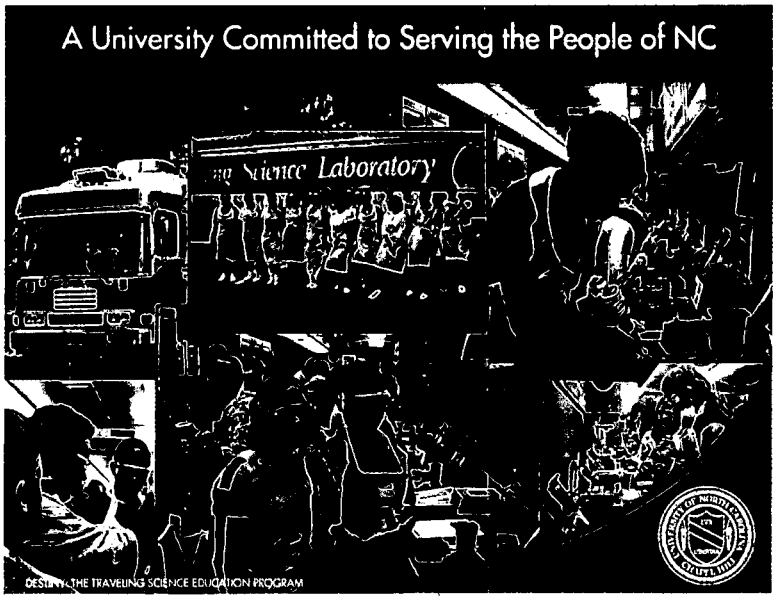
(2) $450,000 for the 2003-2004 fiscal year to provide partial funding for the Program.

(3) $1,000,000 for the 2004-2005 fiscal year to maintain the additional bus and to provide partial funding for the Program.

SECTION 2. This act becomes effective July 1, 2003.

JUNE 11, 2003
DESTINY: TRAVELING SCIENCE EDUCATION LABORATORY
HOUSE BILL 820





Why Science Education is Essential for North Carolina's Prosperity

- Creates a knowledge-centric populace
- Generates economic competitiveness
- Fosters health awareness and improvement
- Supports social values and ethics
- Increases quality of life

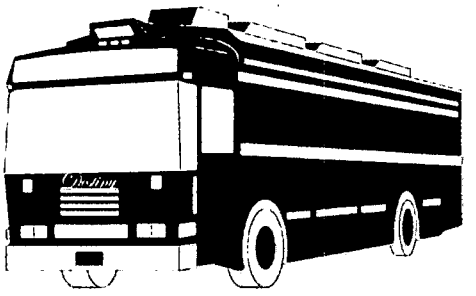
Key Science Education Challenges Confronting North Carolina

- Inequity of access to educational resources
- Cultural misperceptions
- Misinformed policy making
- Isolation of education organizations
- Decline of science teachers
- Immediacy of "No Child Left Behind" legislation
- Curricula lacking practical knowledge and skills

DESTINY: The Traveling Science Education Program

DESTINY: THE TRAVELING SCIENCE EDUCATION PROGRAM

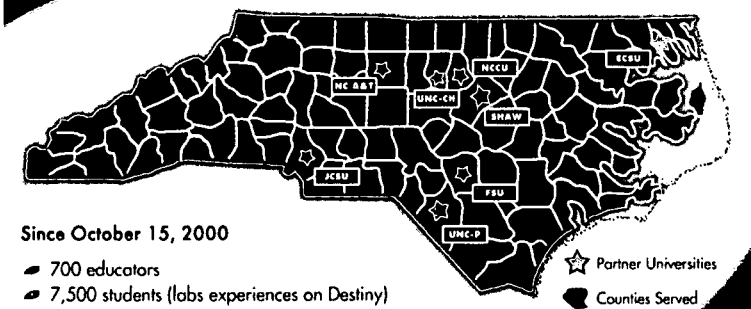
Lets See the Bus in Action



DESTINY: THE TRAVELING SCIENCE EDUCATION PROGRAM

Destined For Success

A Science Education Roadmap for NC



Since October 15, 2000

- 700 educators
- 7,500 students (labs experiences on Destiny)
- 21,000 students (Destiny's innovative classroom curriculum)
- 250 schools
- 90 school systems
- 88 counties

☆ Partner Universities

Counties Served

DESTINY THE TRAVELING SCIENCE EDUCATION PROGRAM

What Teachers are Saying about Destiny

- **Anita Crowley**
  Teacher, Lee County Schools

DESTINY THE TRAVELING SCIENCE EDUCATION PROGRAM

DESTINY: Meeting NC's Science Education Challenges

- Ensures access for ALL to quality education
- Fosters cultural acceptance
- Promotes economic development
- Builds educational collaborations
- Cultivates diversity
- Improves quality of life

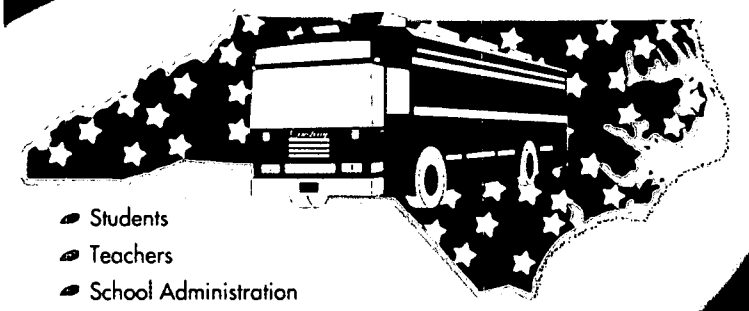
DESTINY THE TRAVELING SCIENCE EDUCATION PROGRAM

DESTINY: Meeting NC's Science Education Challenges

- Supports informed policy-making
- Translates higher education's knowledge and research through innovation, vision and leadership
- Provides interdisciplinary student-centered learning
- Engenders interest in science careers
- Addresses "No Child Left Behind" legislation
- Offers NC a proven, innovative model for science education reform

DESTINY THE TRAVELING SCIENCE EDUCATION PROGRAM

Join The Journey

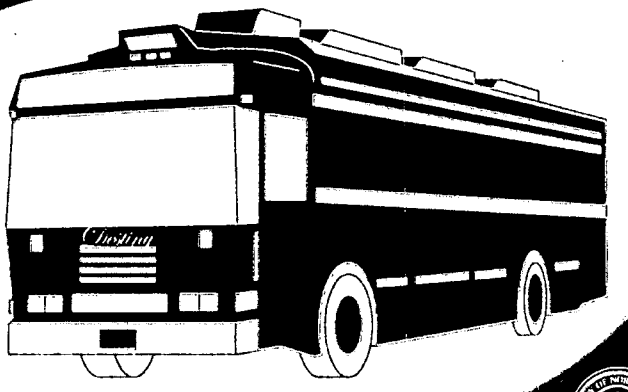


- Students
- Teachers
- School Administration
- Parents and families
- Community
- Elected Officials

NORTH CAROLINA...

DESTINY THE TRAVELING SCIENCE EDUCATION PROGRAM

DESTINY: The Traveling Science Education Program



DESTINY THE TRAVELING SCIENCE EDUCATION PROGRAM

2003 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. 820 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~~.

☐ 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 & TECHNOLOGY — 11 JUNE 2003

Name of Committee — Date

VISITORS: PLEASE SIGN BELOW AND RETURN TO COMMITTEE ASSISTANT

NAME	FIRM OR AGENCY
Anita Crowley	Destiny and Lee County Schools
Skip Bollenbacher	UNC Chapel Hill
Martin Vernon	Office of the State Auditor
Amy Dobson	NC Statewatch
Ellie Scoggin	KCCH
Michael Cato	UNC-Chapel Hill