

NASA

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007350

Network Resources and Training Site
Elizabeth City State University
Elizabeth City, NC 27909

(919) 335-3696

<http://www.ecsu.edu/nrts.html>

Secondary Schools and Programs

- Douglass Park Earth and Space Elementary School
- Emily Spong Earth and Space Elementary School
- I.C. Norcom Aerospace Technology Magnet School
- The ECSU Talent Search Program

HBCU/MI Partners

- Fayetteville State University
- Virginia State University
- Pembroke State University
- Hampton University
- Norfolk State University
- Bennett College

NASA Partner:
Industrial Partner:

NASA Langley
ADNET Systems Inc.

Annual Report 1996

Program funded by:

*Minority University - Space Interdisciplinary Network (MU-SPIN)
Office of NASA - Goddard Space Flight Center*

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Elizabeth City State University

Elizabeth City, North Carolina 27909

5/27/96

Mr. James Harrington
MU-SPIN Deputy Project Manager
National Aeronautics and Space Administration
Goddard Space Flight Center
Greenbelt, MD 29771

Dear Mr. Harrington;

Enclosed you will find the annual report for the Network Resources and Training Site at Elizabeth City State University. The format of the annual report follows the same format as the quarterly report. In the annual report ECSU has included responses to the items listed in the "Critique of Quarterly Report Summary". and the "Technical Recommendations for Consideration to NRTS/ECSU".

A budget for FY96-97 is included requesting \$500,000.00 to cover the operating expenses of the NRTS and its current partners as outlined in the original grant.

The final attachment is a proposal to expand the partnerships and services of the NRTS at ECSU. This proposal would increase the number of predominantly minority attended secondary schools that this NRTS services and to support participation of these secondary schools in the GLOBE, ATLAS and Skymath projects.

The proposal would also make Bennett College a full partner in the NRTS and it would increase the networking funds available to Virginia State University (HBCU/MI partner). Funds to increase the NRTS staff size to support the new partners and extended services is included in the extension budget. The NRTS Office Staff provides training and technical expertise to all its partners.

In the appendix of the report, you will find technical soundness questionnaires and campus LAN Diagrams for the HBCU/MI Partners.

Regards,

Dr. Linda Bailey Hayden

Dr. Linda Bailey Hayden, Principal Investigator
Regional Network Resources and Training Site

Dr. Mickey Burnim, Interim Chancellor

Elizabeth City State University is a constituent institution of the University of North Carolina
An Equal Employment Opportunity/ Affirmative Action Employer

NASA BUDGET INFORMATION

The amount of expenditures paid as of May 29, 1996 totalled \$172,135.88. This represents 38.25% of the total budget of \$450,000. The amount encumbered as of this date totalled \$248,897.52. The combined totals of expenditures and encumbrances represent 93.56% of the total budget.

R. Smith
5/29/96

Annual Report

I. Technical Soundness:

Lead Institution: Elizabeth City State University (ECSU)

Technical Representative: Dr. Linda Hayden

SMET Department connected/Type of Connectivity/Speed:

Elizabeth City State University:

All buildings housing all SMET departments are wired with twisted pair wiring/10Mbps

Virginia State University :

Buildings connected with twisted pair wiring/100Mbps

Norfolk State University :

Category 5, 10/100 Mbps in the department, 10Mbps fiber to Academic Computing router

Pembroke State University :

All SMET buildings are connected to the internet with fiber optics using twisted pair premises distribution system.

Hampton University :

All science buildings connected via fiber running 10Mbps. The University is connected to the Internet via T1

Bennett College:

Ethernet Connectivity 10Mbps

Fayetteville State University :

Connected by Ethernet at 100Mbps

Number of Faculty with general access: as of 5-28-96

Elizabeth City State University	120
Virginia State University	60
Norfolk State University	370
Pembroke State University	160
Hampton University	50
Fayetteville State University	231
Bennett College	63

Number of Administrators/Staff with general access: as of 5-28-96

Elizabeth City State University	200
Virginia State University	14
Norfolk State University	380
Pembroke State University	250
Hampton University	35
Fayetteville State University	412
Bennett College	10

I. Technical Soundness:(cont)

Number of Students with general access: as of 5-28-96

Elizabeth City State University	2000
Virginia State University	2000
Norfolk State University	2445
Pembroke State University	2800
Hampton University	5700
Fayetteville State University	210
Bennett College	620

Network Service(s)/Platform Used: as of 5-28-96

Elizabeth City State University:

General Internet and Web access
Unix, VMS, Windows, MacOS

Virginia State University:

General Internet , Web access, and Novell Networking
Windows

Norfolk State University:

Domain Name Services and Web access
Unix, Linux, Windows, MacOS

Pembroke State University:

General Internet , Web access, and Novell Networking
Windows

Hampton University:

General Internet , Web access, and Novell Networking
Sunsparc Workstations, Next Cube, Windows and MacOS

Fayetteville State University:

General Internet and Web access
Linux and Windows

Bennett College

General Internet and Web access
Windows NT and Novell

I. Technical Soundness:(cont)

Number of User's Access services: as of 5-28-96

Elizabeth City State University - 7
i.e (Mosaic/Netscape, Email, Telnet, FTP,....)

Virginia State University - 6
i.e.(Mosaic/Netscape, Email, Telnet, FTP,.....)

Norfolk State University - 10+
i.e. (Internet Surfing,Email, Novell Office Suite,....)

Pembroke State University - 4
i.e (Mosaic/Netscape, Email, Telnet, FTP)

Hampton University - 5
i.e.(Mosaic/Netscape, Email, Telnet, FTP,....)

Fayetteville State University - 6
i.e (Mosaic/Netscape, Email, Telnet, FTP,....)

Bennett College - 7
i.e (Mosaic/Netscape, Email, Telnet, FTP,....)

Note: Need clarification of this section

WWW Homepage Established/Outline of Information and Links: as of 5-28-96

Elizabeth City State University
<http://www.ecsu.edu>
(See appendix for ECSU Homepage Links)

Virginia State University
<http://www.vsu.edu>
(Partner Links will be available next report)

Pembroke State University
<http://www.pembroke.edu>
(Partner Links will be available next report)

Fayetteville State University
<http://www.fsufay.edu/>
(Partner Links will be available next report)

Norfolk State University
<http://cyclops.nsu.edu/>
(Partner Links will be available next report)

Hampton University
<http://www.cs.hamptonu.edu/>
(Partner Links will be available next report)

Bennett College
<http://www.bennett.edu>
(Partner Links will be available next report)

I. Technical Soundness:(cont)

Technical Support Method of Access: as of 5-28-96

Elizabeth City State University:

Hours of Operation: M - F 8 am to 5 pm Phone support
Users can send e-mail 24 hours via terminals
accessible on-campus and remotely

Number of Users Inquiries - not yet tracked.

Documentation or Literature Produced/Distributed

Introduction to the Internet	-	335 Copies
Using the World Wide Web and HTML	-	335 Copies
TCP/IP Networks	-	50 Copies
Network Starter Kit	-	9 Copies
GLOBE	-	15 Copies
PC's in Space	-	15 Copies
Skymath	-	15 Copies
Training Workshop Flyers	-	1500 Copies

Technical Support Team Composition:

Elizabeth City State University:

Network Analyst:	1FTE
Miscellaneous ECSU staff:	Part Time
Network Trainer:	1FTE

Pending Infrastructure Enhancements/Estimation of Completion Date:

Elizabeth City State University:

Twisted pair wiring in Lester Hall complete
Upgrade router in Lester Hall with ATM interface 45% Complete
Change all host interface to ATM 8-14-96
J.R. Jenkins Science Complex twisted pair wiring by end of year
Twisted pair wiring in Lane Hall complete
Dixon Hall twisted pair wiring by June 1996

Remote Network Management Access Established and Mechanism:

SNMP to be implemented June 1996

II. Partnerships and Collaborations:

Lead Institution: ECSU

Education/Research Program(s) Enhanced via Technology (Local, State, Federal, Pvt Industry, and Non-Profit)

Program Name: Norfolk State University
Principal Investigator or Director / Institution: Dr. Jim Kung
Funding Source (e.g, Federal/NASA, State/Dept. of Ed.): NASA/NRTS
Funding Level/Year(s): \$13K in year #2
Program Objective: Enhance campus connectivity and mentor DPES
Number of Faculty/Staff/Student Participants: All SMET faculty , staff and Students
Date Alliance/Partnership Established: 8/15/95

Program Name: Hampton University
Principal Investigator or Director / Institution: Dr. Mary Ellis
Funding Source (e.g, Federal/NASA, State/Dept. of Ed.): NASA/NRTS
Funding Level/Year(s): \$16K in year #2
Program Objective: Enhance campus connectivity and mentor ESES and NHS
Number of Faculty/Staff/Student Participants: All SMET faculty , staff and Students
Date Alliance/Partnership Established: 8/15/95

Program Name: Fayetteville State University
Principal Investigator or Director / Institution: Dr. Leo Edwards
Funding Source (e.g, Federal/NASA, State/Dept. of Ed.): NASA/NRTS
Funding Level/Year(s): \$10K in year #2
Program Objective: Enhance campus connectivity and training
Number of Faculty/Staff/Student Participants: All SMET faculty , staff and Students
Date Alliance/Partnership Established: 8/15/95

Program Name: Virginia State University
Principal Investigator or Director / Institution: Dr. George Wimbush/Dr. Moadab
Funding Source (e.g, Federal/NASA, State/Dept. of Ed.): NASA/NRTS
Funding Level/Year(s): \$10K in year #2
Program Objective: Enhance campus connectivity and training
Number of Faculty/Staff/Student Participants: All SMET faculty , staff and Students
Date Alliance/Partnership Established: 8/15/95

Program Name: Pembroke State University
Principal Investigator or Director / Institution: Jose D'Arruda
Funding Source (e.g, Federal/NASA, State/Dept. of Ed.): NASA/NRTS
Funding Level/Year(s): \$10K in year #2
Program Objective: Enhance campus connectivity , hardware and training
Number of Faculty/Staff/Student Participants: All SMET faculty , staff and Students
Date Alliance/Partnership Established: 8/15/95

II. Partnerships and Collaborations (con't):

Lead Institution: ECSU

Education/Research Program(s) Enhanced via Technology (Local, State, Federal, Pvt Industry, and Non-Profit)

Program Name: Bennett College
Principal Investigator or Director / Institution: Ms. Mary Stuart
Funding Source (e.g, Federal/NASA, State/Dept. of Ed.): NASA/NRTS
Funding Level/Year(s): \$50K in year #1
(\$10K proposed in year #2)
Program Objective: Enhance campus connectivity ,
hardware ,software and training
Number of Faculty/Staff/Student Participants: All SMET faculty , staff and Students
Date Alliance/Partnership Established: 8/15/95

Program Name: Douglass Park Earth and
Space Elementary School
Principal Investigator or Director / Institution: Ms. Louise Jones
Funding Source (e.g, Federal/NASA, State/Dept. of Ed.): NASA/NRTS
Funding Level/Year(s): \$18,750 in year #2
Program Objective: Enhance campus connectivity ,
hardware and training
Number of Faculty/Staff/Student Participants: All SMET faculty , staff and Students
Date Alliance/Partnership Established: 8/15/95

Program Name: Emily Spong Earth and Space
Elementary School
Principal Investigator or Director / Institution: Mrs. Stephanie Johnson
Funding Source (e.g, Federal/NASA, State/Dept. of Ed.): NASA/NRTS
Funding Level/Year(s): \$18,750 in year #2
Program Objective: Enhance campus connectivity,
hardware and training
Number of Faculty/Staff/Student Participants: All SMET faculty , staff and Students
Date Alliance/Partnership Established: 8/15/95

Program Name: ECSU Talent Search Program
Principal Investigator or Director / Institution: Dr. Cheryl Lewis
Funding Source (e.g, Federal/NASA, State/Dept. of Ed.): NASA/NRTS
Funding Level/Year(s): \$18,750 in year #2
Program Objective: Enhance campus connectivity,
hardware and training
Number of Faculty/Staff/Student Participants: All SMET faculty , staff and Students
Date Alliance/Partnership Established: 8/15/95

Program Name: I.C. Norcom High School
Principal Investigator or Director / Institution: Mrs. Anne Gunter
Funding Source (e.g, Federal/NASA, State/Dept. of Ed.): NASA/NRTS
Funding Level/Year(s): \$18,750 in year #2
Program Objective: Enhance campus connectivity,
hardware and training
Number of Faculty/Staff/Student Participants: All SMET faculty , staff and Students
Date Alliance/Partnership Established: 8/15/95

II. Partnerships and Collaborations (con't):

Pending Partnerships:

Program Name: Albermarle Hospital Center
Principal Investigator or Director / Institution: Staff
Funding Source (e.g, Federal/NASA, State/Dept. of Ed.): NASA/NRTS
Funding Level/Year(s): 0
Program Objective: training
Number of Faculty/Staff/Student Participants: As selected
Date Alliance/Partnership Established: 11-3-95

Program Name: U.S. Coast Guard National
Strike Force Command
Principal Investigator or Director / Institution: Staff
Funding Source (e.g, Federal/NASA, State/Dept. of Ed.): NASA/NRTS
Funding Level/Year(s): 0
Program Objective: training
Number of Faculty/Staff/Student Participants: As selected
Date Alliance/Partnership Established: 11-3-95

Program name: W.E. Waters Middle School
Principal Investigator or Director/Institution: Rosa Wells-Garris
Funding source (e.g. Federal/NASA, State/Dept of Ed.): NASA/NRTS
Funding Level/Year(s) \$18,750.00 Proposed in year #2
Program Objective: Enhance campus connectivity,
hardware and training
Number of Faculty/Staff/Student Participants: As selected
Date Alliance/Partnership Established: 8-15-96

Program name: Hunt-Mapp Middle School
Principal Investigator or Director/Institution: C. R. Bailey, Jr.
Funding source (e.g. Federal/NASA, State/Dept of Ed.): NASA/NRTS
Funding Level/Year(s) \$18,750.00 proposed in year #2
Program Objective: Enhance campus connectivity,
hardware and training
Number of Faculty/Staff/Student Participants: As selected
Date Alliance/Partnership Established: 8-15-96

Program name: 9 Pasquotank County Schools
Principal Investigator or Director/Institution: Dr. Bradshaw
Funding source (e.g. Federal/NASA, State/Dept of Ed.): NASA/NRTS
Funding Level/Year(s) \$18,750.00 proposed in year #2
Program Objective: Enhance campus connectivity,
hardware and training
Number of Faculty/Staff/Student Participants: As selected
Date Alliance/Partnership Established: 8-15-96

II. Partnerships and Collaborations (con't):

Pending Partnerships:

Program name:	College of the Albemarle
Principal Investigator or Director/Institution:	Staff
Funding source (e.g. Federal/NASA, State/Dept of Ed.):	NASA/NRTS
Funding Level/Year(s)	0
Program Objective:	training
Number of Faculty/Staff/Student Participants:	As selected
Date Alliance/Partnership Established:	11-3-95

Program name:	Roanoke River Valley Consortium Schools(35 schools total)
Principal Investigator or Director/Institution:	Shirley Turnage
Funding source (e.g. Federal/NASA, State/Dept of Ed.):	NASA/NRTS
Funding Level/Year(s)	0
Program Objective	training
Number of Faculty/Staff/Student Participants:	As selected
Date Alliance/Partnership Established:	8-15-96

III. Education Plan:

Institution: ECSU

Network Training Workshop Date(s): 8/15 - 8/18 1995

Workshop Title: **Annual Fall Faculty/Staff Conference**
Workshop Training Site: ECSU
Network Training Personnel: Computer Science Faculty

Description of Training Workshop/Attendees: ECSU faculty and staff
Total attendance: 120

Number of Faculty Attendance: 100
Number of Student Attendance: 0
Number of Staff Attendance: 20
Institutions participating: ECSU
Special Presenters with unique Research and/or Education Initiative: None

Network Training Workshop Date(s): 11/1 - 11/3 1995

Workshop Title: **MU-SPIN/NRTS Fall Training**
Workshop Training Site: ECSU
Network Training Personnel: MU-SPIN staff/NRTS staff

Description of Training Workshop/Attendees: Total attendance: 64

Number of Faculty Attendance: 35
Number of Student Attendance: 25
Number of Staff Attendance: 4
Institutions participating: ECSU, VSU, PSU, FSU, BC

Special Presenters with unique Research and/or Education Initiative:

Roger Hathaway/ NASA Langley
James Harris/NASA HQ
Ashok Jha/ ADNET Systems, Inc.
James Harrington, Jr./NASA GSFC

Network Training Workshop Date(s): 11/10 1995

Workshop Title: **Math/CS Department Training**
Workshop Training Site: ECSU
Network Training Personnel: NRTS staff

Description of Training Workshop/Attendees: FTP, Telnet, email
Total attendance: 10

Number of Faculty Attendance: 3
Number of Student Attendance: 6
Number of Staff Attendance: 1
Institutions participating: ECSU
Special Presenters with unique Research and/or Education Initiative: None

III. Education Plan:(cont)

Network Training Workshop Date(s): 11/30-12/1 1995

Workshop Title: **NASA Spacelink: The Internet and Education**
Workshop Training Site: ECSU
Network Training Personnel: Dr. Willard Smith/Tennessee State U.

Description of Training Workshop/Attendees: NASA Spacelink
Total attendance: 23

Number of Faculty Attendance: 4
Number of Student Attendance: 17
Number of Staff Attendance: 2
Institutions participating: ECSU and local secondary schools
Special Presenters with unique Research and/or Education Initiative: None

Network Training Workshop Date(s): 12/7 - 12/8 1995

Workshop Title: **Network Addressing: An overview**
Workshop Training Site: ECSU
Network Training Personnel: Damley Archer

Description of Training Workshop/Attendees:
Total attendance: 4

Number of Faculty Attendance: 0
Number of Student Attendance: 0
Number of Staff Attendance: 4
Institutions participating: ECSU
Special Presenters with unique Research and/or Education Initiative: None

Network Training Workshop Date(s): 12/2 - 12/8 1995

Workshop Title: **Network Addressing:
System Administration Concerns**
Workshop Training Site: ECSU
Network Training Personnel: Sunil Punnoose

Description of Training Workshop/Attendees:
Total attendance: 31

Number of Faculty Attendance: 1
Number of Student Attendance: 28
Number of Staff Attendance: 2
Institutions participating: ECSU
Special Presenters with unique Research and/or Education Initiative: None

III. Education Plan:(cont)

Network Training Workshop Date(s): 12/7-12/8 1995

Workshop Title: Network Addressing Issues: LAN/WAN planning issues

Workshop Training Site: ECSU

Network Training Personnel: NRTS staff/Jerry Trott, Network System Mgr. , UNC General Administration

Description of Training Workshop/Attendees: Network Addressing,Sysadmin,LAN/WAN Planning

Total attendance: 20

Number of Faculty Attendance: 3

Number of Student Attendance: 15

Number of Staff Attendance: 2

Institutions participating: ECSU

Special Presenters with unique Research and/or Education Initiative: None

Network Training Workshop Date(s): 12/12 - 12/14 1995

Workshop Title: WWW Conference Tutorial In Boston

Workshop Training Site: Boston, Mass.

Network Training Personnel: WWW Conference Staff

Description of Training Workshop/Attendees:

Total attendance: 2

Number of Faculty Attendance: 1

Number of Student Attendance: 1

Number of Staff Attendance: 0

Institutions participating: ECSU

Special Presenters with unique Research and/or Education Initiative: None

Network Training Workshop Date(s): 1/8 - 4/25 1996

Workshop Title: Instructional Strategies for Distance Learning

Workshop Training Site: ECSU Video Conferencing Center

Network Training Personnel: East Carolina U. Personnel

Description of Training Workshop/Attendees:

Total attendance: 229

Number of Faculty Attendance: 20

Number of Student Attendance: 204

Number of Staff Attendance: 5

Institutions participating: ECSU

Special Presenters with unique Research and/or Education Initiative: None

III. Education Plan:(cont)

Network Training Workshop Date(s): 1/10 - 4/5 1996

Workshop Title: **Technology and Distance Learning**
Workshop Training Site: ECSU Video Conferencing Center
Network Training Personnel: NC State U Extension Program

Description of Training Workshop/Attendees: Total attendance: 4

Number of Faculty Attendance: 0
Number of Student Attendance: 0
Number of Staff Attendance: 4
Institutions participating: ECSU
Special Presenters with unique Research and/or Education Initiative: None

Network Training Workshop Date(s): 2/5 1996

Workshop Title: **Java Training**
Workshop Training Site: Atlanta, Georgia
Network Training Personnel: Sunsoft

Description of Training Workshop/Attendees: Total attendance: 3

Number of Faculty Attendance: 1
Number of Student Attendance: 0
Number of Staff Attendance: 2
Institutions participating: ECSU
Special Presenters with unique Research and/or Education Initiative: None

Network Training Workshop Date(s): 2/21 1996

Workshop Title: **Talent Search Internet Training**
Workshop Training Site: ECSU
Network Training Personnel: NRTS staff

Description of Training Workshop/Attendees: Total attendance: 93

Number of Faculty Attendance: 1
Number of Student Attendance: 90
Number of Staff Attendance: 2
Institutions participating: ECSU
Special Presenters with unique Research and/or Education Initiative: None

III. Education Plan:(cont)

Network Training Workshop Date(s):	02/22-23/96
Workshop Title:	MU-SPIN Spring Training
Workshop Training Site:	ECSU
Network Training Personnel:	MUSPIN/NRTS Staff
Description of Training Workshop/Attendees:	Integration of Internet into Classes; Using HTML; TCP/IP; Network Start-up Kit; Network Management GLOBE
	Total attendance: 64
Number of Faculty Attendance:	40
Number of Student Attendance:	13
Number of Staff Attendance:	11
Institutions participating:	ECSU, PSU, FSU, VSU, NASA/LaRC, Perquimans County Public Schools; Emily Spong Science and Earth Elementary School; Gates County Public Schools
Network Training Workshop Date(s):	03/15/96
Workshop Title:	Sonia Kovalevsky Mathematics Day for Girls
Workshop Training Site:	ECSU
Network Training Personnel:	NRTS Staff
Description of Training Workshop/Attendees:	Introduction to the Internet; Using the World Wide Web
	Total attendance: 50
Number of Faculty Attendance:	3
Number of Student Attendance:	47
Number of Staff Attendance:	0
Institutions participating:	Manteo High School; Columbia High School; Perquimans County Public Schools
Network Training Workshop Date(s):	03/22-23/96
Workshop Title:	Internet and World Wide Web Training
Workshop Training Site:	ECSU
Network Training Personnel:	NRTS Staff
Description of Training Workshop/Attendees:	FTP, Telnet, E-Mail, Usenet, Using World Wide Web; Writing HTML
	Total attendance: 36
Number of Faculty Attendance:	16
Number of Student Attendance:	13
Number of Staff Attendance:	7
Institutions participating:	ECSU, College of the Albermarle, Camden County Public Schools, Currituck County Public Schools, Camden County Public Library, North Carolina Department of Motor Vehicles

III. Education Plan:(cont)

Network Training Workshop Date(s): 04/26/96

Workshop Title: **Designing Faculty Web Pages**
Workshop Training Site: VSU
Network Training Personnel: H. Moadab, T. Chamberlain

Description of Training Workshop/Attendees: Using HTML editors; using the world wide web

Total attendance: 12

Number of Faculty Attendance: 12
Number of Student Attendance: 0
Number of Staff Attendance: 0
Institutions participating: VSU faculty

Network Training Workshop Date(s): 05/5-8/96

Workshop Title: **ATM Conference**
Workshop Training Site: San Jose, CA
Network Training Personnel: ATM Conference Staff

Description of Training Workshop/Attendees: Total attendance: 3

Number of Faculty Attendance: 1
Number of Student Attendance: 1
Number of Staff Attendance: 1
Institutions participating: ECSU

Network Training Workshop Date(s): 05/6-10/96

Workshop Title: **Spring Faculty Institute**
Workshop Training Site: ECSU
Network Training Personnel: NRTS Staff and Academic Computing Staff

Description of Training Workshop/Attendees: Introduction to the Internet; Using the World Wide Web and HTML; Creating Faculty Web Pages; Introduction to Powerpoint; Introduction to Word-Perfect 6.0 for Windows; Introduction to Windows/Mousing Skills

Total attendance: 122

Number of Faculty Attendance: 110
Number of Student Attendance: 0
Number of Staff Attendance: 12
Institutions participating: ECSU Faculty and Staff departments included are: Art; Biology; Business; Education; General Studies; Geosciences; International Studies; Language, Literatures, Communication; Mathematics and Computer Science; Physical Sciences; Psychology; Radio Station; ROTC; Social Sciences; Special Programs; Talent Search Program

III. Education Plan:(cont)

Planned Network Training:

Title: **NRTS Precollege Summer Program**
Date: June 24-July 19, 1996
Site: ECSU
Staff: NRTS Staff, and other special guests

Title: **MUSPIN 96 Conference**
Date: Sept 18-22, 1996
Site: El Paso
Staff: NRTS-UTEP

Title: **Mathematica, a scheme for doing math by computer**
Date: TBD
Site: ECSU
Staff: NRTS staff

Title: **WWW/HTML Training**
Date: Fall 96 and Spring 97
Site: To be conducted at a North Carolina HBCU to be determined at a later date
Staff: NRTS Staff

Title: **Internet Training**
Date: Fall 96 and Spring 97
Site: Virginia State University
Staff: NRTS Staff

Title: **Internet Training**
Date: Fall 96 and Spring 97
Site: Norfolk State University
Staff: NRTS Staff

IV Organization and Management Structure:

Institution: ECSU

Network Committee Chairperson: Mr. John Smith

IDepartment Representative/Department Name

Dr. Claude Green
Mr. Shelton Spence/Telecommunications Equipment Supervisor
Dr. Linda Hayden/Professor of Computer Science
Mr. Derrick Wilkins/Director of Wilkens Computer Center
Mr. Darnley Archer
Mr. Tim Barclift/Computer Technician
Dr. Abdul Choudhury
Ms. Zina McCoy/Director of Computing and Information Systems
Mrs. Marsha McLean/

NRTS Advisory Board:

Mr. John Smith, Chancellor's Asst. ECSU	Dr. Jim Kung, CS Professor, NSU
Dr. Leo Edwards, Dir. Math & Sci. Acad. FSU	Dr. M Moadab, Network Mgr., VSU
Dr. James Harris, NASA-MTPE Manager	Dr. Mary Ellis, Chair CS Dept., HU
Ms. Mary Stuart, MIS Director, Bennett College	Dr. Jose D'Arruda, Chair Phy Sci., PSU
Mr. Darnley Archer, NRTS Network Manager	Dr. Ellis Lawrence, Co-PI NRTS, ECSU

SMET Training Committee:

Dr. Linda Hayden
Mr. William Barker
Dr. Ellis Lawrence
Dr. Abdul Choudhury
Dr. Johnny Houston
Mrs. Tracy Chamberlain

Number of Users Supported: 135 Effective August 15, 1996

Number of Support Personnel (Faculty, Students, Contractors): 20

ECSU:

Staff	2
Faculty	7
Contractors	2
Students	9

IV Organization and Management Structure (con't):

Number of Meetings / Date(s) / Location:

Committee Met:

Nov. 2-4, 1995
Dec. 5, 1995
Feb. 22-23, 1996

Planned Meetings:

Advisory Board will meet during the MUSPIN Conference Sept 19-22, 1996
Training Committee will meet Fall 96 and Spring 97
Network Committee will meet Fall 96 and Spring 97

Issues/Concern and Status:

Compatibility of ATM network and components
Availability of training at HBCU/MI Partner Sites
Joint proposals from the NRTS Consortium
Extension of the existing LAN inside of the Science Complex, Dixon Hall, and Lane Hall
ECSU Homepage Design

V University Commitment:

Institution: ECSU

Use of SMET resources (i.e., computer facilities, meeting facilities, data products) interconnected to LAN:

ECSU:

Provided office space and furnishings for the staff and students working on the NRTS grant.
Provided space for the MU-SPIN training workshops and for the Hands-on labs.
Provided computer services and connections for use of the Internet for the faculty, student, and NRTS staff.

Use of existing network support services and/or advisory groups:

ECSU:

WAN connectivity.
ECSU Telecommunications Committee

Shared cost of resources (i.e., Faculty release time, students, contractor support staff) required to support NRTS:

ECSU:

University providing for release time for faculty.

Shared cost of equipment required to establish and/or enhance infrastructure:

ECSU:

Workstations in NRTS Lab.
ATM connectivity.

Established plans and/or resources required to secure long term funding of NRTS:

ECSU:

Planning in progress.

Public School Partners(4): Norcom Aerospace Technology Magnet High School,
Emily Spong Earth and Science Elementary School, Douglas Park

1996-97

Telecom Center(computers, modem, cables) (\$15000 /equipment)	60,000.00
Software \$2k/SCHOOL	8,000.00
Travel (\$500 yrs)	2,000.00
Teacher Coordinator Honorarium \$1000.00	4,000.00
Refreshments for visits @ (\$50.00/visit, 5 visits)	1,000.00
total	75,000.00
Budget for each secondary school:	18,750.00

NRTS at ECSU

Number undergraduate scholarship students	10
Servers,upgrades, printers,perpherals	30,000.00
Networking Infrastructure	50,000.00
Software	5,000.00
computer furnishings	2,000.00
training supplies & copying	5,211.00
Network Trainer	38,000.00
Network Manager	44,000.00
clerical support - one full time	15,000.00
PI salary & release	9,000.00
Co-PI salary & release	7,000.00
student scholarships	50,000.00
travel for training	18,000.00
Fringe Benefits 21%	23,730.00
Indirect Cost 30% (ECSU & ADNET)	41,019.00
Students (non-scholarship)	23,040.00
Refreshments for training	5,000.00

HBCU/MI Partners

Hampton University*	16,000.00
Norfolk State University*	13,000.00
Fayetteville State University	10,000.00
Virginia State University	10,000.00
Pembroke State University	10,000.00
Bennett College	0.00
TOTAL	500,000.00

*Expansion
of
Partnerships
and
Services*

Expansion of Partnerships and Services Network Resources and Training Site at ECSU (PROPOSAL)

The purpose of this proposal is to expand the partnerships and activities of the Network Resources and Training Site housed at Elizabeth City State University.

Several predominantly minority attended secondary schools in the NRTS region will become partners. Three secondary schools in the Virginia Region will join the ECSU-NRTS. Resources made available to these schools will include training, connectivity and hardware. Two entire school districts in North Carolina will join the NRTS. These two school districts will be actively involved in training activities for teachers, students and staff. All new secondary school partners will be invited to apply for the summer precollege institute.

Task #1

Extension of services for the NRTS at ECSU will involve supporting secondary school partner participation in the GLOBE, ATLAS and Skymath projects.

Task #2

This proposal would also make Bennett College a full partner in the NRTS and the networking funds available to Virginia State University (HBCU/MI partner) will be increased.

Task #3

Finally, the staff of the NRTS at ECSU will be expanded to adequately service the new partners and to provide them the required network training.

The following predominantly minority attended secondary schools have requested to be included in the ECSU-NRTS partnerships. Each of these secondary schools is in the area assigned to the ECSU-NRTS.

Hunt-Mapp Middle School (Virginia)

W.E. Waters Middle School (Virginia)

Lakeview Elementary School (Virginia)

All Nine Pasquotank County Public Schools (North Carolina)

All Thirty-five Roanoke River Valley Consortium Schools (North Carolina)

The services offered by the NRTS at ECSU to the secondary school partners will be expanded to include support for their involvement in the GLOBE program, the ATLAS project and the SKYMATH project. Extensive training and network support services to the secondary schools were outlined in the original CAN proposal. Those services will remain a part of the planned activities for secondary school partners. Further, support for representatives from each of the secondary schools to attend the MU-SPIN annual conference will be provided in this proposal.

Goal #1: Increase the number of predominately minority secondary school partners and services offered to these schools.

Three secondary schools in Virginia and two secondary schools systems in North Carolina will join the NRTS consortium. All 35 schools in the five counties which constitute the Roanoke River Valley Consortium will receive the training as well as all nine schools in the Pasquotank Public Schools. Support from the NRTS at ECSU will be made available for all secondary school partners to implement the **GLOBE, ATLAS, and Skymath** programs where appropriate. Specially designed workshops will be conducted for the secondary school partners throughout the academic year. Further technical assistance from the NRTS Office staff will be made available to each of the new secondary school partners.

All Secondary School partners will also be invited to participate in a 4-week summer program. The summer program will be designed with two weeks devoted to learning HTML and WWW search techniques. The remaining two weeks will be devoted to learning Computer Network basics and multimedia authoring. A stipend of \$720 is allocated for 6 secondary school students and \$1200 for 12 secondary school teachers. Field trips and NASA visiting lecturers will be a part of the summer program.

Contact information for each of the proposed Secondary Schools partner.

1. Hunt Mapp Earth and Space Middle School, Dr. Carroll Bailey, Principal, 3701 Willett Drive Portsmouth, VA 23707 (804) 393-8806.
2. William E. Waters Middle, Rosa Wells Garrett, Principal, 600 Roosevelt Blvd, Portsmouth, VA 23701 558-2813
3. Lakeview Elementary School, Mr. Issac Askew, 1300 Horne Ave. Portsmouth, VA 23701, (804) 465-2901.

4. Pasquotank Public Schools, Dr. Diane Bradford (919) 335-2974 Elizabeth City, NC 27909
5. Roanoke River Valley Consortium, Dr. Shirley Turnage, Executive Director, 222 Country Farm Road, Windsor, NC 27963 (919) 358-1761

Affordable Technology to Link America's Schools (ATLAS)

Vicki K. Crisp, Technology Applications Group
Jeffrey M. Seaton, Research and Technology Group

The NRTS at ECSU proposes to provide connectivity to each of its secondary school partners, who do not now have connectivity, by implementing the ATLAS program. The implementation plan for the ATLAS Initiative involves providing a server at the ECSU-NRTS Central Sites. Phone lines will be made available to K-12 school networks.

Critical considerations for K-12 Network Architecture Design include scalability, supportability and sustainability. Scalability issues consider the fact that in all likelihood, the school's network will start small (<30 networked computers) but may grow larger (>200 computers). Supportability issues involve insuring that system components must be reliable and easily managed by school personnel. Sustainability issues consider that schools must be able to support all recurring cost once the grant expires.

Schools servers connect to the Centers using low-cost network connection methods. The centers serve as internet providers paying the cost for high speed leased lines, Unix system administrators and providers fees. Elizabeth City State University, Norfolk State University and Hampton University will serve as Centers for the Secondary schools involved.

Global Learning and Observations to Benefit the Environment (GLOBE)

Gloria Brown-Simmons, MU-SPIN Research and Education Coordinator

The goals of the GLOBE program are to increase environmental awareness of individuals throughout the world; to contribute to a better scientific understanding of the earth; and to help students reach higher levels of achievement in science and mathematics.

As GLOBE schools, students conduct an array of measurements and observations at their schools and share their data via the Internet with other students and scientists around the world to detail an environmental picture of the globe. Teachers instruct students on how to take measurements, help students understand the relevance of their observations, and explain the significance of the global visualizations. Scientists analyze the data in conjunction with information obtained from other sources to help all of us develop a better understanding of the earth systems.

Each of the secondary school partners will complete the registration form and agreement to meet the basic requirements of the GLOBE program. Each secondary school partner will designate a teacher coordinator who will attend a GLOBE provided 3-day training workshop with GLOBE scientists, educators and technology experts. The GLOBE Lead Teacher will oversee the work of the GLOBE students and other participating teachers in the school.

Funds available through this grant will be used to make available a suitable school computer configuration for students to use approximately an hour a day to support participation in the program. Students will use the computer, accessing the Internet by use of the World Wide Web, to enter and transmit their measurement data and to view environmental images and related information generated from GLOBE student data and other scientific sources. Grant funds will also be used to acquire the necessary scientific measurement instruments, that meet GLOBE specifications.

University Corporation for Atmospheric Research(SKYMATH)

Beverly Lynds, SKYMATH Coordinator, UCAR
Tracy Chamberlain, ECSU-NRTS Trainer

The goal of the Skymath project is to demonstrate that acquiring and using current environmental and real-time weather data in middle school classrooms, in ways that embrace the dynamic and the uncertain natures of these data, will promote the teaching and learning of significant mathematics, consistent with the standards set by the National Council of Teachers of Mathematics. Skymath educational strategies and materials have been prepared by the Educational Development Center, Inc. (EDC) of Newton, MA, a nonprofit research and development organization, in a flexible curriculum module that includes guidance and tools for exploration plus a collection of resources and activities that use weather and real-time data to teach math concepts.

Elizabeth City Junior High School and Harry Hunt Junior High School will participate in the Skymath project. These schools will utilize software and data dissemination methods developed in the University of Michigan's Blue skies program, an endeavor developed under a NSF grant. Blue Skies software offers an extraordinarily simple interface so that users with minimal computer experience can easily and quickly obtain needed information. Access is provided to hundreds of real-time weather and environmental images by using the client-server protocol developed for the Univ. of Minnesota's gopher system. Unlike the typical gopher counterpart, the Michigan client software handles special Blue Skies documents that provide high levels of graphically-oriented interactivity.

Predominantly Minority Elementary and Secondary Schools

Five elementary and secondary schools/programs will be included in training and networking activities of the NRTS at ECSU. Douglass Park Earth and Space Elementary School, Emily Spong Earth and Space Elementary School, I.C.Norcom High School, and the ECSU Talent Search Program. ECSU Talent Search Program currently has dial-up modem access to the Internet through ECSU's alpha.ecsu.edu Node. Their service will be upgraded to a dedicated line to Lane Hall which houses this program. All other schools currently have dedicated lines by which they can access the internet. Each school/program has a need for computer hardware and are in dire need of training.

Norfolk State University will assume primary responsibility for mentoring Douglass Park Earth and Space Elementary School. Hampton University will assume primary responsibility for mentoring Emily Spong Earth and Science Elementary School and Norcom High School. Elizabeth City State University will assume primary responsibility for mentoring the staff and the 1000 students in the Talent Search Program.

Public Schools/programs will be visited by their mentoring University five times each year in September, November, January, March and May. Each visit will be an "event" which allows student teams to showcase results of their activities (as directed by the worksheets). The visit will also facilitate communication between the teacher coordinator and the university mentor. At each visit the university mentor will provide information to the schools on Internet Essentials such as netiquette, internet resources and tools, and NASA databases which are designed for educational use. A representative of the NRTS at ECSU will be present during the initial visit each year and at least one subsequent visit. Refreshments will follow the team oral reports, teacher coordinator written report and university mentor presentations. The refreshment period will allow informal interaction between the mentors, teacher coordinator and students.

University mentor will confer with teacher coordinator on network access and usage issues. Also, during the meetings, the University mentor will listen to student teams make reports on their recent activities. More frequent contact will be possible since the university mentor will provide on-line e-mail assistance to the teacher coordinator.

The University mentor will assist the teacher coordinator and students to construct their own home page on the World Wide Web. Teams will be encouraged to add hot links to NASA data bases; include photos of students and teacher coordinator; include School description data; Directions to the School; and FAQ. Other information which has the approval of the teacher coordinator can also be included on the home page. Students will initially be encouraged to explore and critique home pages of other schools on the world wide web. They will then use software provided to create their own home page.

The initial visit each year will focus on:

- 1) Organizing the Earth and Science Internet Center for the year;
- 2) Designing student activities to be completed between visits;
- 3) Explaining the style and content of student team oral reports.
- 3) Explaining the style and content of teacher coordinator written reports.

Subsequent Bimonthly meetings will be structured to include:

- 1) Oral reports by student teams on worksheet results.
- 2) Written report by the teacher coordinator.
- 3) Instruction from the University Mentor on Internet Resources and Internet Usage.

University Mentor Presentations at Bimonthly Meetings will cover:

- 1) Introduction to the Internet;
- 2) Netetiquette and ethical use of the internet;
- 3) Use of Network tools such as gophers;
- 4) NASA data bases available for educational exploration and use;
- 5) Network resources; and
- 6) Creation and Updating the Schools Home Page.

Teacher Coordinator written reports will cover:

- 1) Internet access status;
- 2) Student team activities;
- 3) Activity plans for the next two months;
- 4) Use of NASA data bases;
- 5) Use of Network resources;
- 6) Difficulties experienced in implementing the program; and
- 7) Status of the Schools Home Page.

Goal #2: Increase the number of HBCU/MI partners and the amount of networking funds available to HBCU/MI partners.

Bennett College was not one of the partners proposed in the original CAN. Bennett College was however added to the NRTS at ECSU, for one year only, by assignment from MU-SPIN. The proposal now is to make Bennett College a full partner in the NRTS. Bennett College would receive all technical assistance, training and funds available to the original partners.

Bennett College will receive \$10,000 during FY96-97. NRTS staff will travel to Bennett College to conduct training for MSET faculty from Fayetteville State University, Pembroke State University and Bennett College. In addition, Bennett College SMET faculty will be invited to attend all training activities conducted at the NRTS training center and use the technical expertise of the NRTS Network managers.

In addition to increasing the number of HBCU/MI partners, ECSU is proposing to increase the amount of networking funds available to Virginia State University (HBCU/MI partner) during FY95-96 by \$15,000.00. VSU will use these funds to complete wiring of the Dept. of Mathematics Computing Lab located in the basement of McDaniels/Hunter building. There is now one 486PC that is connected. That lab has over 25 486 PCs that are ready for the ethernet cards and connection. One faculty office in hunter McDanial Bldg. has connectivity. The original funds for VSU will be used to connect faculty offices while the proposed funds will be used for the lab.

Goal 3: To expand the staff of the NRTS to adequately service the new partners and to provide them the required network training.

35 Roanoke River Valley Schools; 9 Pasquotank Count Schools and 3 Virginia Schools will be added to our NRTS partnership as a result of this proposal. Requested are one additional trainer and one additional network manager. The additional staff will permit us to adequately provide training and networking expertise to the new partners. Trainers and Network personnel will conduct workshops on use of the internet; World Wide Web, Networking Essentials, Network Management, and integration of the Web into the classroom. Staff will also assist with the implementation of the GLOBE, ATLAS and Skymath programs.

CURRENT NRTS at ECSU SECONDARY SCHOOL PARTNERS

Enrollment in Targeted Elementary and/or Secondary School(s)

Current enrollment in targeted public elementary and/or secondary school(s) by level and ethnicity. Provide number and percent of total school enrollment. Note with an asterisk those categories with individuals with disabilities and indicate in parenthesis the number of students.

Douglass Park	African American		American Indian		Hispanic		Native Alaskan Pacific Islander		Other (specify)		White		Total
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	
Secondary													
Elementary	775	88.4%							3	0.3%	99	11.3%	877
Total	775	88.4%							3	0.3%	99	11.3%	877

Talent Search	African American		American Indian		Hispanic		Native Alaskan Pacific Islander		Other (specify)		White		Total
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	
Secondary	730	73%							10	1%	260	26%	1000
Elementary													
Total	730	73%							10	1%	260	26%	1000

Norcom High	African American		American Indian		Hispanic		Native Alaskan Pacific Islander		Other (specify)		White		Total
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	
Secondary	1247	95%									65	5%	1312
Elementary													
Total	1247	95%									65	5%	1312

Emily Spong	African American		American Indian		Hispanic		Native Alaskan Pacific Islander		Other (specify)		White		Total
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	
Secondary													
Elementary	204	98%									4	2%	208
Total	204	98%									4	2%	208

PROPOSED NRTS at ECSU SECONDARY SCHOOL PARTNERS

Enrollment in Targeted Elementary and/or Secondary School(s)

Current enrollment in targeted public elementary and/or secondary school(s) by level and ethnicity. Provide number and percent of total school enrollment. Note with an asterisk those categories with individuals with disabilities and indicate in parenthesis the number of students.

HUNT-MAPP MIDDLE SCH	African American		American Indian		Hispanic		Native Alaskan Pacific Islander		Other (specify)		White		Total no.
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	
Secondary	877 / 73%								11 / 1%		313 / 26%		1201
Elementary													
Total	877 / 73%								11 / 1%		313 / 26%		1201

W.E. WATERS MIDDLE SCH	African American		American Indian		Hispanic		Native Alaskan Pacific Islander		Other (specify)		White		Total no.
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	
Secondary	616 / 77%								8 / 1%		176 / 22%		800
Elementary													
Total	616 / 77%								8 / 1%		176 / 22%		800

ROANOKE RIVER VALLEY (35 Schools)	African American		American Indian		Hispanic		Native Alaskan Pacific Islander		Other (specify)		White		Total no.
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	
Secondary	9360 / 78%		123 / 1%		25 / .2%						2437 / 20%		11945
Elementary	3509 / 77%		83 / 1.8%		10 / .2%						927 / 20%		4529
Total	12869 / 79%		206 / 1.2%		35 / .2%						3364 / 20%		16474

Lakeview Elem. Sch	African American		American Indian		Hispanic		Native Alaskan Pacific Islander		Other (specify)		White		Total no.
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	%	
Secondary													
Elementary	637 / 99.7%										2 / .3%		639
Total	637 / 99.7%										2 / .3%		639

NEW Public School Partners(6):

Elizabeth City Public School System - NC

Roanoke River Valley Consortium Schools-NC (35 schools)

W. E. Waters Middle School-VA

Lakeview Elementary School-VA

Hunt-Mapp Middle School-VA

	<u>1996-97</u>
Atlas Network(computers, modem, cables) (\$15000 /secondary school)	\$45,000.00
Software \$2k/SCHOOL	\$6,000.00
Travel (\$500/SCHOOL)	\$1,500.00
Teacher Coordinator Honorarium \$1000.00/SCHOOL	\$3,000.00
Refreshments for visits @ (\$50.00/visit)(5 visits/school)	\$750.00
Stipends for summer program:12 teachers+ 6 students	\$18,720.00
Total	\$74,970.00
Budget for each school:	\$18,750.00

NRTS at ECSU

Number undergraduate scholarship students	2
Networking Infrastructure-Servers,upgrades, printers,dial up lines	\$80,000.00
Software	\$5,000.00
Training supplies & copying	\$5,000.00
Network Trainer + fringe + overhead (ADNET)	\$67,760.00
Network Manager(ECSU)	\$44,000.00
Refreshments for training	\$7,500.00
PI release time (ECSU)	\$5,000.00
Fringe Benefits 21% (ECSU)	\$16,640.40
Indirect Cost 40% (ECSU)	\$33,744.16

ECSU STUDENTS

Scholarships (2 @ \$7500.00)	\$15,000.00
Students (two non-scholarship) (2 students)(\$8/hr)(20 hr/wk)(36wks)	\$11,520.00

HBCU/MI Partners

participant travel for training & MUSPIN Conference	\$8,000.00
Virginia State University	\$15,000.00
Bennett College	\$10,000.00

HBCU/MI PARTNERS

\$33,000.00

ECSU NRTS

\$264,644.56

STUDENTS AND SECONDARY SCHOOL PARTNERS

\$101,490.00

TOTAL

\$399,134.56

\$399,134.56

ADNET SYSTEMS, INC.*Information Systems and Telecommunications Services*

Dr. Linda Hayden
Department of Computer Science
Elizabeth City State University
Elizabeth City, NC

May 30, 1996

RE: NASA CAN-GSFC-95-1

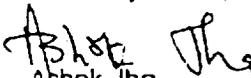
Dear Dr. Hayden,

This letter is in support of your Regional Network Training Center (RNTC) at Elizabeth City State University under NASA's Cooperative Agreement Notice (CAN). ADNET is willing to provide you continuous support for the Network Manager and Trainer at your campus. In addition, ADNET is willing to provide you an additional Network Engineer/Network Manager for your proposed Atlas program with secondary shoals in your area. ADNET Systems Inc., is a small disadvantaged company based in Washington DC metropolitan area. ADNET has received small disadvantaged business certification under the US Small business Administration's 8(a) program. ADNET possesses superior technical ability in the area of data communications, computer networking, information management system, system analysis, system engineering and system integration.

ADNET has extensive knowledge in various local as well as wide area network topologies and schemes. The company is well versed in DECnet, TCP/IP, XNS, SNA and AppleTalk protocols. The company has provided Network design, implementation, maintenance for several NASA's facilities as well as projects. ADNET provides communication systems design analysis and integration services, and has developed a series of network application documents/tools, and network training materials for NASA's MU-SPIN project.

ADNET has been working with HBCUs (Historically Black Colleges and Universities) for last four years, and these additional project with ECSU would give us an opportunity to better utilize our expertise and experiences. We sincerely hope that your proposal is successful.

Sincerely Yours,


Ashok Jha

Director of Engineering



Portsmouth Public Schools
1994 U. S. Senate Productivity & Quality Award Recipient



Office of the Principal
W. E. Waters Middle School
600 Roosevelt Boulevard • Portsmouth, Virginia 23701-4099
(804) 558-2813 • FAX (804) 485-2829

May 28, 1996

To whom it may concern,

I, Rosa Wells-Garris, Principal of William E. Waters Middle School, am excited about the possibility of being included in a grant written by the personnel of Elizabeth City State University. We at Waters are honored and delighted to be a part of this endeavor.

As we work as a team to prepare our students for the twenty first century, we are cognizant of the significance of technology and teamwork. This project does both for our students and our school.

The entire administrative staff, faculty, and support staff await further quests from you. We stand ready to assist you in whatever ways we can to make this happen.

Thanks again and remember that we are as close to you as your nearest telephone.

Sincerely yours,

Rosa Wells-Garris,
Principal

Elizabeth City Middle School



308 North Road Street • Elizabeth City, N. C. 27909
(919) 335-2974

Diane Bradford, Ed. D.
Principal

May 31, 1996

TO WHOM IT MAY CONCERN:

Elizabeth City Middle School is most supportive of this project and is grateful for the opportunity to participate in the NASA Project with Elizabeth City State University.

Sincerely,

Diane Bradford



Portsmouth Public Schools
 1994 U. S. Senate Productivity & Quality Award Recipient



Office of the Principal
Hunt-Mapp Middle School
 3701 Willet Drive • Portsmouth, Virginia 23707-1295
 (804) 393-8806 • FAX (804) 393-5169

May 28, 1996

TO WHOM IT MAY CONCERN:

I am pleased to write this letter of support for the Elizabeth City State University grant for technology. The Hunt-Mapp Middle School is committed to helping our children reach their full potential. To do this we have invested in the goal of school-wide use of technology integrated in classroom instruction.

Through the use of technology, we hope to increase problem solving skills by hands on tutorial programs, telecomputing projects, and integrated use of all computer applications. Teachers will work directly with the students to develop the necessary skills to be successful in this area. We want to increase the number of students who will be computer literate by the end of their 8th-grade year, and who will be able to create their own home page on the Internet.

We look forward to working with Elizabeth City State University to enable these young people to become problem solvers and future leaders in the field of technology.

Thank you for your consideration. We hope to hear from you soon.

Sincerely,

C. R. Bailey, Jr.

Dr. C. R. Bailey, Jr.
 Principal

*Executive
Summary*

Executive Summary

I. Technical Soundness

- All HBCU/MI partners have general internet and Web access.
- All partners have user access services which range from Mosaic/Netscape to Novell Office Suite.
- All HBCU/MI partners have homepages for their universities.
- ECSU has recently been the recipient of a grant from the National Security Agency for \$16000 to enhance ECSU's electronic presence on the Web.
- ECSU NRTS office staff consist of a full time trainer, full time network manager (both supplied from ADNET Systems, Inc. our industrial partner) and a clerical assistant (part time)
- ECSU NRTS office is available M-F 8-5pm. Twenty-four hours access is possible via the internet.
- Technical Soundness Questionnaires and campus LAN diagrams appear in the appendix for HBCU/MI partners.

II. Partnerships and Collaborations

- NRTS at ECSU has two NASA partners: MUSPIN office of GSFC and LARC.
- NRTS at ECSU has one industrial partner: ADNET Systems, Inc.
- NRTS at ECSU has 5 HBCU/MI partners: VSU, NSU, HU, PSU, FSU
- NRTS at ECSU has one HBCU special partner assigned for one year only: Bennett College
- NRTS at ECSU has 4 secondary schools/program partners: Emily Spong Earth and Space Elementary School, Douglass Park Earth and Space Elementary School, ECSU Talent Search Program, and the I.C. Norcom Aerospace Technology High School.

III. Educational Plan

- NRTS at ECSU has conducted or assisted in 16 training workshops.
- One workshop in the Fall and one workshop in the Spring were conducted by the staff and MUSPIN with assistance from the NRTS staff.

- Six training workshops are scheduled for the FY96-97. Also scheduled is travel to the MUSPIN annual conference.
- A summer precollege workshop is planned for Summer'96 (June 24- July 19, 1996) which will involve secondary school teachers and students in activities including creation of a Web page for their schools; Internet and WWW training; and an introduction to Networking.

IV. Organization and Management Structure

- ECSU NRTS is managed by a Principal Investigator, a Co- PI, and three committees: network Committee, NRTS Advisory Board, and the MSET Training Committee. These committees met at the MUSPIN Conference, and at both the Fall95 and Spring96 Training sessions conducted by MUSPIN staff.
- Issues and Concerns expressed at the meetings range from Compatibility of ATM Network and current LAN Components; Extension of the existing ECSU LAN; ECSU Homepage design; Joint proposals from the NRTS consortium.

V. Budget for FY96-97

- A budget request in the amount of \$500,000.00 is provided.
- This budget includes \$50,000 in scholarships and \$23,040.00 in work assistance for ECSU students.
- This budget includes a request for \$10,000 for each HBCU/MI partner to use on network infrastructure.
- This budget includes a request for \$18750.00 for each secondary school partner to use on network infrastructure and teacher coordinator honorarium and software.
- This budget includes a request for funds to support the current NRTS staff and training activities.
- This budget includes a request for funds to support partners travel to the annual MUSPIN conference at UTEP.

VI. Proposal for Expansion of Partnerships and Services.

- Goal #1: To increase the number of predominately minority secondary school partners and services offered to these schools. Two school districts (Pasquotank Public Schools-NC and Roanoke River Valley Consortium Schools- NC) will receive training assistance from the NRTS. Three schools in Virginia will receive assistance with training,

networking infrastructure and hardware (Lakeview Elementary, Hunt-Mapp Middle School, and W. E. Waters Middle School). Extended services will include support for secondary school partners participation in the NASA sponsored ATLAS Program, Skymath program, and the GLOBE program.

- Goal #2: To increase the number of HBCU/MI partners and the amount of networking funds available to Virginia State University. During Fy95-96 Bennett College was awarded a one time amount of \$50,000.00 This new proposal will establish Bennett College as a NRTS partner the same as the other HBCU/MIs. Funds available to Virginia State University will be increased to allow VSU to expand their network connections, which are now severely limited).
- Goal #3: To expand the staff of the NRTS at ECSU so that the NRTS staff office can service the training and networking needs of the new partners.
- Funds in the amount of \$399,134.56 are requested over and above the \$500,000 to support the proposal for "Expansion of Partnerships and Services".

Executive Summary (continued)

The following are responses to the critique of the last quarterly report:

Technical Soundness

MUSPIN Comments on Last Quarterly Report	See Page #
The report lacked any information on partnering institutions. Please get someone on your staff to survey the partners PI and get information (even if it is a guesstimate) for all items under the technical soundness metric. Please make sure you include the plans for improving the partners networking status.	Appendix Page 41
Try to create campus SMET connectivity maps for yourself and partners. Even if you can't substantively influence all your locations, it helps our funding vision when we can see what is needed.	Appendix Page 52
You did a great job of describing the infrastructure plans for your buildings, but I need to know which departments, faculty and students are affected.	Technical Soundness Pages 1-3

Partnerships and Collaborations

MUSPIN Comments on Last Quarterly Report	See Page #
Your vision with the secondary school partners is clear and shows that you have given this area great thought and preparation. Please continue your excellent work in this area. Also be specific with progress made in identifying PIs for projects and the descriptions of projects (i.e. Globe, etc.)	Extension of Partners and Services Page 20 Partnerships and Collaborations Page 5
You did a wonderful job describing the other institutions and their PIs, but I need more information about what has been accomplished in this area and if nothing yet, more detailed plans about the future (e.g. training dates, strategic planning meetings, identified joint projects, etc.) I know with the first report, you did not have sufficient time to complete your outreach to your partners, however, the program managers thought this was completed prior to the proposal submittal, therefore, we must try to fill this area in with some substantive information.	Appendix Page 41
I know you have recently visited some of your partners to get this type of information. Please give details of your accomplishments and plans. If a site or PI does not respond as expected, please give details of non-response and we shall make adjustments as necessary.	Partnerships and Collaborations Page 5
Please indicate which PIs and institutions other representatives have participated in the workshops.	Education Plan Page 9

Education Plan

MUSPIN Comments on Last Quarterly Report	See Page#
I know you have made great strides in this area for including the partners more. please give details for these advancements(i.e. dates for training at VSU, NSU, etc.)	Education Plan Page 9

Organization and Management Structure

MUSPIN Comments on Last Quarterly Report	See Page #
Excellent work here. Please indicate the successfulness of your committee and meeting plans and who is participating.	Organization and Management Page 17

University/Consortium(NRTS) Commitment

MUSPIN Comments on Last Quarterly Report	See Page #
Good work here. Try to get what information you can about partners (i.e. use of labs for training, use of video conference facility for distance learning, etc.)	University/Consortium (NRTS) Commitment Page 18

Technical Recommendations for considerations to NRTS/ECSU

MUSPIN Comments on Last Quarterly Report	See Page #
Need to provide interim Internet access to all the NRTS's partner institutions within the next few months.	Currently working with HU and NSU on this matter.
Need to identify technological approach and schedule for making available the network infrastructure accessible to all SMET departments. Get your SMET faculty involved in the workshops by giving presentations of their involvement using the Internet or similar computer technology and networks for their department and students	Education Plan Page 9
Reportable statistical items related to Remote Network Management will be determined and sent to the NRTS's within the next 60 days(two months).	Awaiting information from MU-SPIN

Appendix

Current Partner Mailing List

Jose D'Arruda
Pembroke State University
University Computing and Information Services
One University Drive
Pembroke, NC 28372-1510

Mary Stuart
Bennett College
900 East Washington Street
Greensboro, NC 27401-3239

H. Moadab
G. Wimbush
E. Smith
Virginia State University
Department of Mathematics
PO Box 9068
Petersburg, VA 23806

Leo Edwards
Tat Chan
Mathematics and Science Education Center
Fayetteville State university
Fayetteville, NC 28301-4298

Jim Kung
Department of computer Science
Norfolk State University
Norfolk, VA 23504

Louise Jones
Douglass Park Earth and Space Elementary School
34 Grand Street
Portsmouth, VA 23701

Mary Ellis
Computer Science Department
Hampton University
Hampton VA 23668

Stephanie Johnson
Emily Spong Earth and science Elementary School
2200 Piedmont Avenue
Portsmouth VA 23704

Erma Curtis-Evans
Port Norfolk Public School
PO Box 998
Portsmouth VA 23705-0998

Anne Gunter
IC Norcom High School
2900 Tumpike Road
Portsmouth VA 23707

Cheryl Lewis
Talent Search
Box 911 ECSU
1704 Weeksville Road
Elizabeth City NC 27909

Linda Hayden
Box 672 ECSU
1704 Weeksville Road
Elizabeth City NC 27909

Technical Soundness Questionnaire Elizabeth City State University

1. Technical Representative (Principal Investigator): Dr. Linda Hayden
2. SMET Department Connected/Type of Connectivity/Speed:
All buildings housing all SMET departments are wired with twisted pair wiring/10Mbps.
3. Number of Faculty with General Access: 120
4. Number of Administrators/Staff with General Access: 200
5. Number of Students with General Access: 2000
6. Network Service(s)/Platform Used:
General Internet and Web Access
Unix, VMS, Windows, MacOS
7. Number of Users Access Services: 7
8. WWW Homepage Established/Outline of Information and Links:
<http://www.ecsu.edu>
(See Appendix for diagram of Outline)
9. Technical Support Method of Access:
Hours of Operation: M-F 8:00 a.m. to 5:00 p.m. phone support
Users can send e-mail 24 hours via terminals
accessible on-campus and remotely
10. Technical Support Team Composition:
Network Analyst: 1FTE
Network Trainer: 1FTE
Miscellaneous ECSU Staff: Part Time
11. Pending Infrastructure Enhancements/Estimation of Completion Date:
Twisted pair wiring in Lester Hall complete. Upgrade router in Lester Hall with ATM interface 45% complete. Change all host interface to ATM to be completed 8/14/96.
12. Remote Network Management Access Established and Mechanism:
SNMP to be implemented June 1996.

13. Network Training Workshops. Dates?

8/15-18/95	Annual Fall Faculty/Staff Conference
11/1-3/95	MU-SPIN NRTS/Fall Training
11/10/95	Math/CS Department Training
11/30-12/1/95	NASA Spacelink: The Internet and Education
12/7-8/95	Network Addressing: An Overview
12/7-8/95	Network Addressing: System Administration Concerns
12/7-8/95	Network Addressing: LAN/WAN Planning Issues
12/12-14/95	WWW Conference in Boston
1/8-4/25/96	Instructional Strategies for Distance Learning
1/10-4/5/96	Technology and Distance Learning
2/5/96	JAVA Training
2/21/96	Talent Search Internet Training
2/22-23/96	MU-SPIN Spring Training
3/15/96	Sonia Kovalevsky Mathematics Day for Girls
3/22-23/96	Internet and World Wide Web Training
4/29/96	Designing Faculty Web Pages
5/5-7/96	ATM Conference
5/6-10/96	Spring Faculty Institute

14. Does your institution have a Telecommunications Committee or Advisory Board? If so who are the member and when do they meet?

Network Committee:

Mr. John Smith, Chairperson
Dr. Linda Hayden, Institutional Lead
Dr. Claude Green
Mr. Shelton Spence
Mr. Derrick Wilkens
Mr. Darnley Archer
Mr. Tim Barcliff
Dr. Abdul Choudhury
Ms. Zina McCoy
Mrs. Marsha McLean

Met 11/2-4/95; 12/5/95; 2/22-23/96
Planned Meetings for Fall 96 and Spring 97

Technical Soundness Questionnaire Bennett College

1. Technical Representative (Principal Investigator): Ms. Mary Stuart
2. SMET Department Connected/Type of Connectivity/Speed:
Ethernet Connectivity at 100Mbps
3. Number of Faculty with General Access: 63
4. Number of Administrators/Staff with General Access: 18
5. Number of Students with General Access: 620
6. Network Service(s)/Platform Used:
General Internet and Web access
Linux and Windows
7. Number of Users Access Services: 7
8. WWW Homepage Established/Outline of Information and Links:
<http://www.bennett.edu>
9. Technical Support Method of Access: Technical support is provided by the PI
10. Technical Support Team Composition:
Technical Support Team is presently composed of the PI, 1 computer science major and 1 engineering major.
11. Pending Infrastructure Enhancements/Estimation of Completion Date:
Installation of a Campus-Wide FDDI - Estimated Date of Completion Summer 1996
12. Remote Network Management Access Established and Mechanism:
Our remote network management tools are Windows 95 Netmon and Windows NT SQL Executive and SNMP.
13. Network Training Workshops. Dates?
We attended the training sessions during the opening of the ECSU NRTS. We also attended Internet training sessions at MCNC in Fall 1996. Training sessions have been provided for 140 students enrolled in the Technical Literacy Classes and 6 sessions were conducted for faculty and staff on May 23, 1996.

14. Does your institution have a Telecommunications Committee or Advisory Board? If so who are the member and when do they meet?

Committee:

Dr. Ray Treadway

Mrs. Ida Johnson

Mr. Bruce Clark

Mrs. Andrena Coleman

Ms. Mary Stuart

Meet once during each semester.

Technical Soundness Questionnaire Pembroke State University

1. Technical Representative (Principal Investigator): Dr. Jose D'Arruda
2. SMET Department Connected/Type of Connectivity/Speed:
All SMET buildings are connected to the Internet with fiber optics using premises distributed system.
3. Number of Faculty with General Access: 160
4. Number of Administrators/Staff with General Access: 250
5. Number of Students with General Access: 2800
6. Network Service(s)/Platform Used:
General Internet and Web Access
Windows, Novell Networking, MacOS
7. Number of Users Access Services: 4
8. WWW Homepage Established/Outline of Information and Links:
<http://www.pembroke.edu>
9. Technical Support Method of Access:
10. Technical Support Team Composition: 13 people
11. Pending Infrastructure Enhancements/Estimation of Completion Date:
Update and expand student access to computers in physics and chemistry labs. This will be accomplished over a 3-4 year period.
12. Remote Network Management Access Established and Mechanism: None
13. Network Training Workshops. Dates?

9/6/95	Windows 3.1
9/20/95	Pegasus (P-Mail) for Windows
10/3/95	Windows 3.1
10/4/96	Internet Tools
10/17/95	Pegasus (P-Mail) for Windows
11/1/95	Kermit
11/2/95	Telnet/FTP
11/29/95	Netscape
2/14/96	Windows 3.1
2/21/96	Pegasus (P-Mail) for Windows

13. Network Training Workshops. Dates? (cont'd)

3/5/96	Windows 3.1
03/12/96	Netscape
03/12/96	Netscape
3/19/95	Pegasus (P-Mail) for Windows

14. Does your institution have a Telecommunications Committee or Advisory Board? If so who are the member and when do they meet?

Committee:

Faculty representatives from all divisions and several staff members.

Meet on a regular basis.

Technical Soundness Questionnaire Fayetteville State University

1. Technical Representative (Principal Investigator): Dr. Leo Edwards
2. SMET Department Connected/Type of Connectivity/Speed:
Connected by Ethernet at 100Mbps
3. Number of Faculty with General Access: 231
4. Number of Administrators/Staff with General Access: 412
5. Number of Students with General Access: 210
6. Network Service(s)/Platform Used:
General Internet and Web access
Linux, Windows
7. Number of Users Access Services: 6
8. WWW Homepage Established/Outline of Information and Links:
<http://www.fsufay.edu>
9. Technical Support Method of Access: On-site
10. Technical Support Team Composition:
Staff of the Management Information Systems Department.
11. Pending Infrastructure Enhancements/Estimation of Completion Date:
Upgrade of PC's for the Faculty and a Workstation Laboratory for students.
12. Remote Network Management Access Established and Mechanism: SMTP, Novell Netware
13. Network Training Workshops. Dates? April 1996
14. Does your institution have a Telecommunications Committee or Advisory Board? If so who are the member and when do they meet?

Committee:

Dr. Booker T. Anthony
Dr. Sherman Brooks
Dr. Robert James
Dr. Bertha Miller, Chair
Mr. Bobby Wynn

Dr. Donna Benson
Dr. Charles Davis
Dr. Denise Mahone Wyatt
Dr. LaDelle Olion
Mr. Robert Shuler

Dr. Annette Billie
Dr. Harry Ghee
Dr. Perry Massey
Mr. Benson Otovo
Mr. Leo Tayler

This committee meets twice a semester.

Technical Soundness Questionnaire Hampton University

1. Technical Representative (Principal Investigator): Dr. Mary Ellis
2. SMET Department Connected/Type of Connectivity/Speed:
Connected via fiber running 10Mbps. The university is connected to the Internet via T1.
3. Number of Faculty with General Access: 50
4. Number of Administrators/Staff with General Access: 35
5. Number of Students with General Access:
The opening of the Academic Technology Mall on the 5th floor of the Harvey Library allows all HU students/staff/faculty to access the Internet. The labs in the sciences are open practically 24 hours a day to all science majors.
6. Network Service(s)/Platform Used:
General Internet and Web access
Suns
7. Number of Users Access Services:
8. WWW Homepage Established/Outline of Information and Links:
<http://www.cs.hampton.edu>
9. Technical Support Method of Access:
10. Technical Support Team Composition:
11. Pending Infrastructure Enhancements/Estimation of Completion Date:
Upgrade from 10 Mbps to 100 Mbps (August 1996)
Provide connectivity to 4 dorms. (August 1996)
12. Remote Network Management Access Established and Mechanism:
13. Network Training Workshops. Dates?
14. Does your institution have a Telecommunications Committee or Advisory Board? If so who are the member and when do they meet?

Technical Soundness Questionnaire Norfolk State University

1. Technical Representative (Principal Investigator): Dr.Jim Kung
2. SMET Department Connected/Type of Connectivity/Speed:
Category 5, 10/100 Mbps in the department, 10Mbps fiber to Academic Computing router.
3. Number of Faculty with General Access: 370
4. Number of Administrators/Staff with General Access: 380
5. Number of Students with General Access: 2445
6. Network Service(s)/Platform Used:
Domain Name Services and Web access
Windows, Unix, Linux, MacOS
7. Number of Users Access Services: 10
8. WWW Homepage Established/Outline of Information and Links:
<http://cyclops.nsu.edu>
9. Technical Support Method of Access:
Phone and e-mail for problem reporting.
10. Technical Support Team Composition:
External contracted service, Academic Computing personnel, and Computer Science Laboratory technicians.
11. Pending Infrastructure Enhancements/Estimation of Completion Date:
Only a few buildings are left for fiber connections: Police Station, Physical Plant, Fine Arts, Wilder Center, Echols Hall. The fiber is currently being installed.
12. Remote Network Management Access Established and Mechanism: External contracted support.
13. Network Training Workshops. Dates?
Workshops on Internet Surfing, PC Office software, E-mail are scheduled regularly. They average twice a month.

14. Does your institution have a Telecommunications Committee or Advisory Board? If so who are the member and when do they meet?

Committee:

Vice President for Academic Affairs chairs the committee. Committee members comprised of department heads and academic computing personnel.

Technical Soundness Questionnaire Virginia State University

1. Technical Representative (Principal Investigator): Dr. Hadi Moadab
2. SMET Department Connected/Type of Connectivity/Speed:
Buildings connected with twisted pair wiring/100Mbps
3. Number of Faculty with General Access: 60
4. Number of Administrators/Staff with General Access: 14
5. Number of Students with General Access: 2000
6. Network Service(s)/Platform Used:
General Internet and Web Access
Windows, Novell Networking
7. Number of Users Access Services: 6
8. WWW Homepage Established/Outline of Information and Links:
<http://www.vsu.edu>
9. Technical Support Method of Access: OIT
10. Technical Support Team Composition: OIT
11. Pending Infrastructure Enhancements/Estimation of Completion Date: Fall 1996
12. Remote Network Management Access Established and Mechanism: None
13. Network Training Workshops. Dates?
4/12-13/96; 4/19-20/96; 4/26-27/96
14. Does your institution have a Telecommunications Committee or Advisory Board? If so who are the member and when do they meet?

Committee:
Dr. Hadi Moadab; Dr. Emma Smith; Dr. George Wimbush

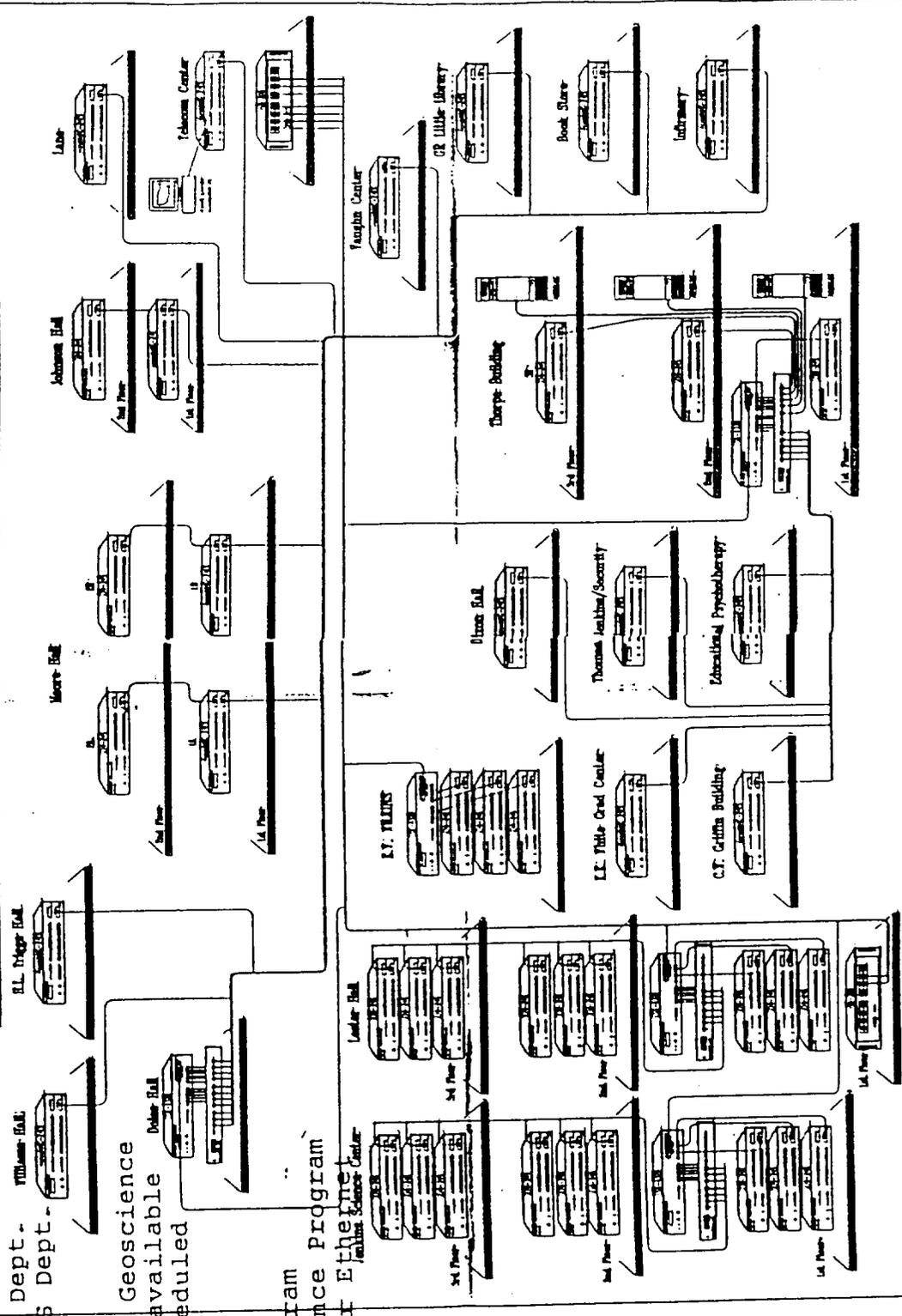
Meet once a month.

ELIZABETH CITY STATE UNIVERSITY

June 30, 1996

Dixon: Technology Dept.
 Lester: Math and CS Dept.
 Jenkins Science
 Complex: Biology, Geoscience
 Physical Science, available
 cat 3 wiring now, available
 cat 5 upgrade scheduled
 for 97-98

Lane: ECSU Talent
 Search Program
 Airway Science Program
 T1 Connection over Ethernet



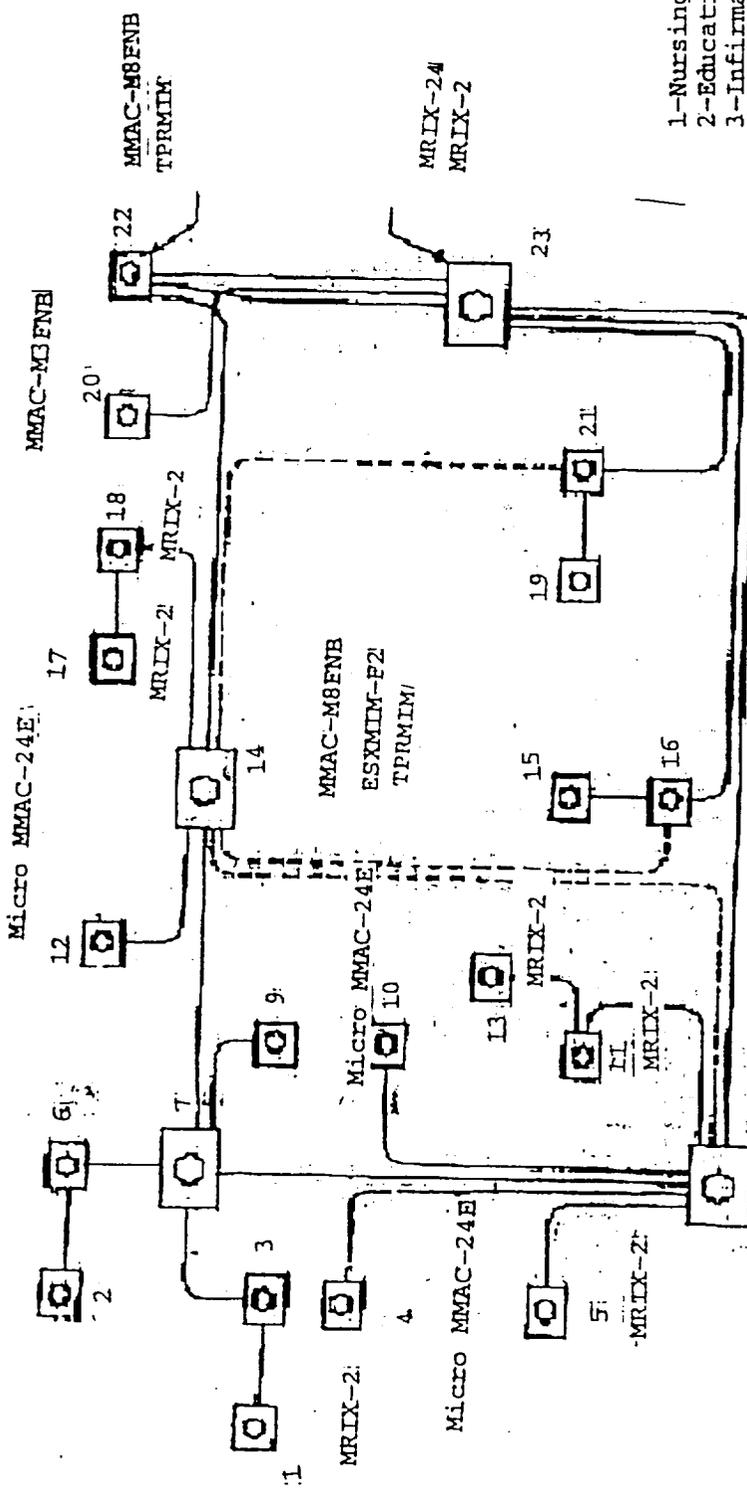
GRAPHIC

Elizabeth City State University
 Planning Office
 1/27/95
 11/19/95
 11/19/95

CONNECTIONS

FIBER OPTIC CABLE (ETHERNET)
 FIBER OPTIC CABLE (LAN)
 SHIELDED TWISTED PAIR CABLE

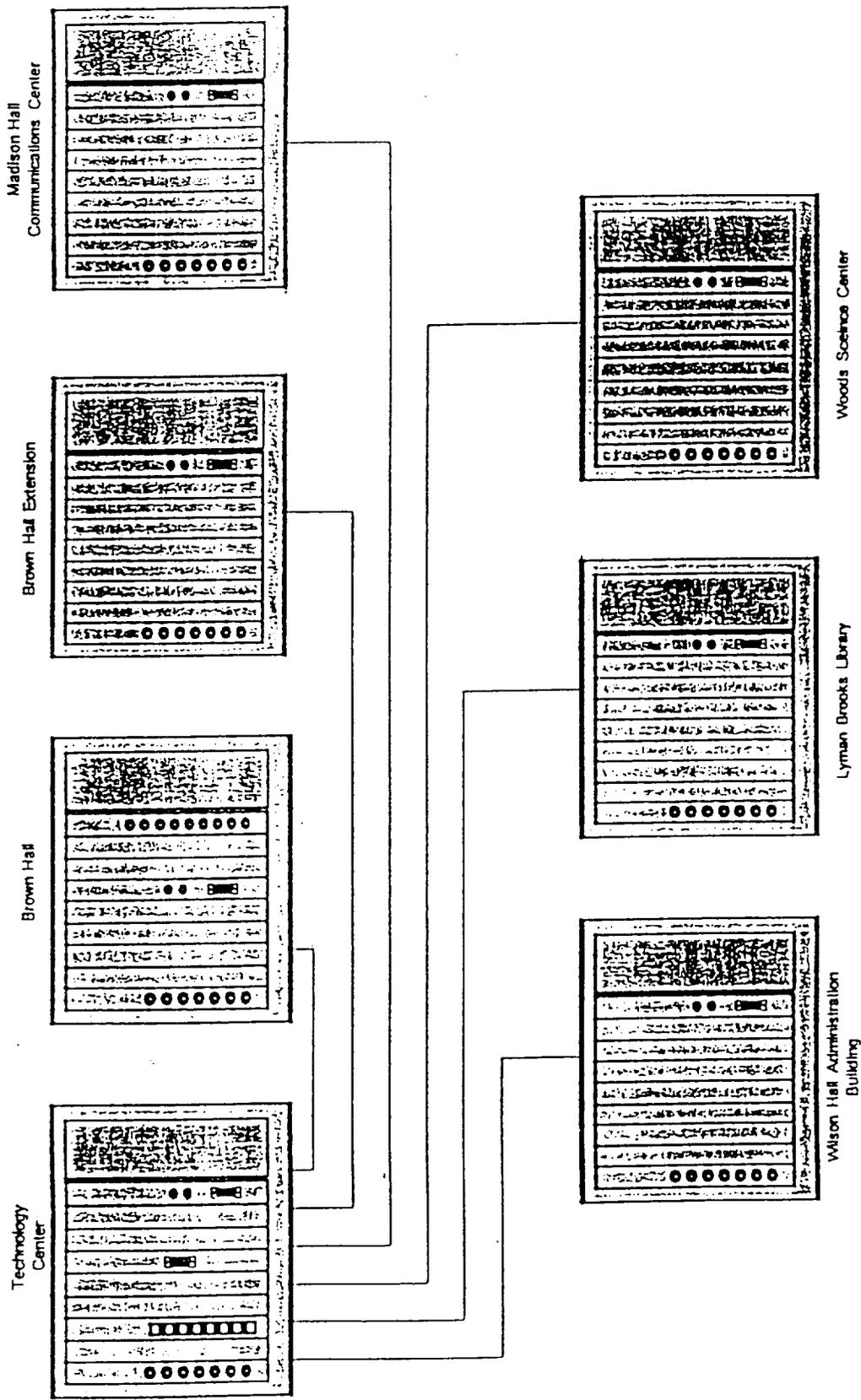




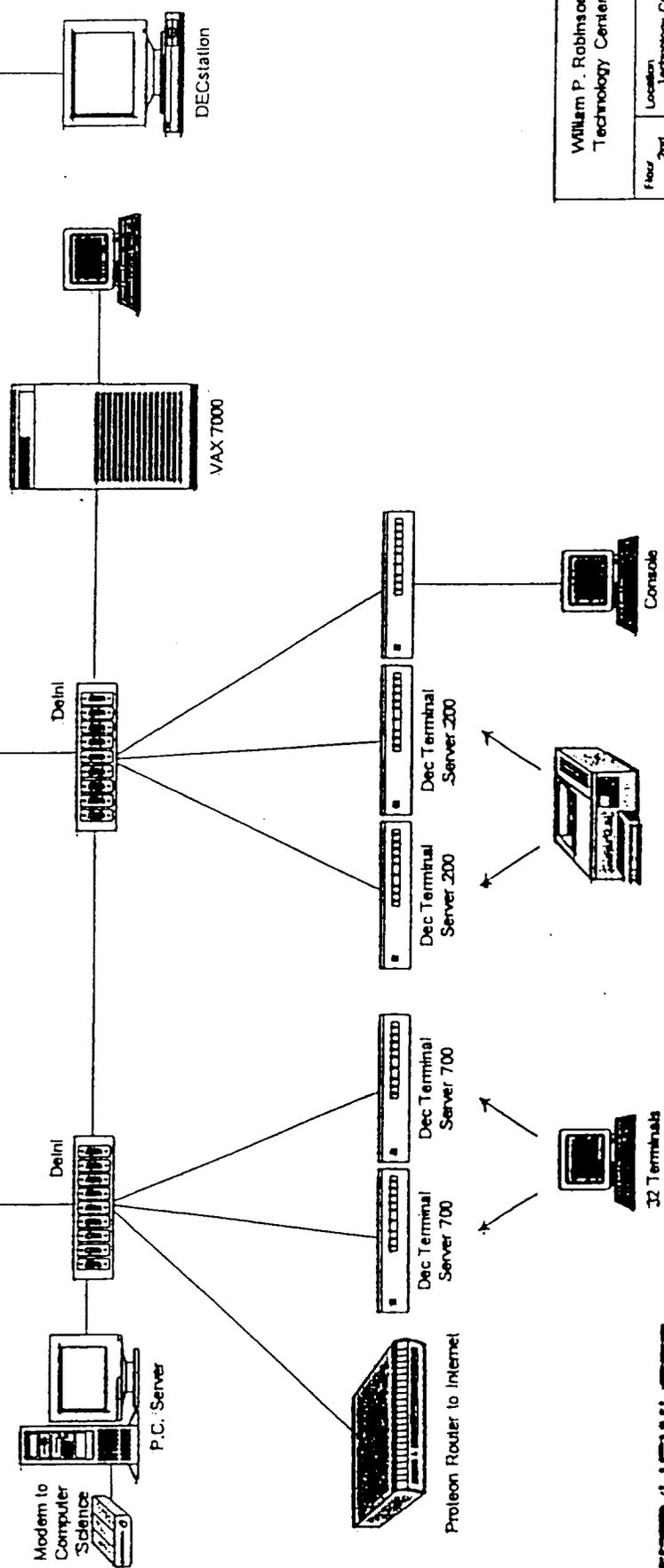
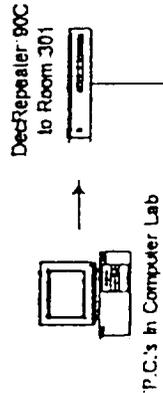
- 1-Nursing
- 2-Education Center
- 3-Infirmery
- 4-Library
- 5-Old Main
- 6-West Hall
- 7-Belk Hall
- 8-Science Building
- 9-North Hall
- 10-Lowery Building
- 11-Moore Hall
- 12-Education Building
- 13-Locklear Hall
- 14-Business Building
- 15-Wellons Hall
- 16-Jacobs Hall
- 17-Motor Pool/Central Stores
- 18-Maintenance Building
- 19-Chavis University Center
- 20-Jones Health and PE
- 21-Performing Arts Center
- 22-New Administration Building
- 23-North Classroom

8:
 MMAC-3
 Micro MMAC-24E
 NG20E

Norfolk State University Campus Backbone



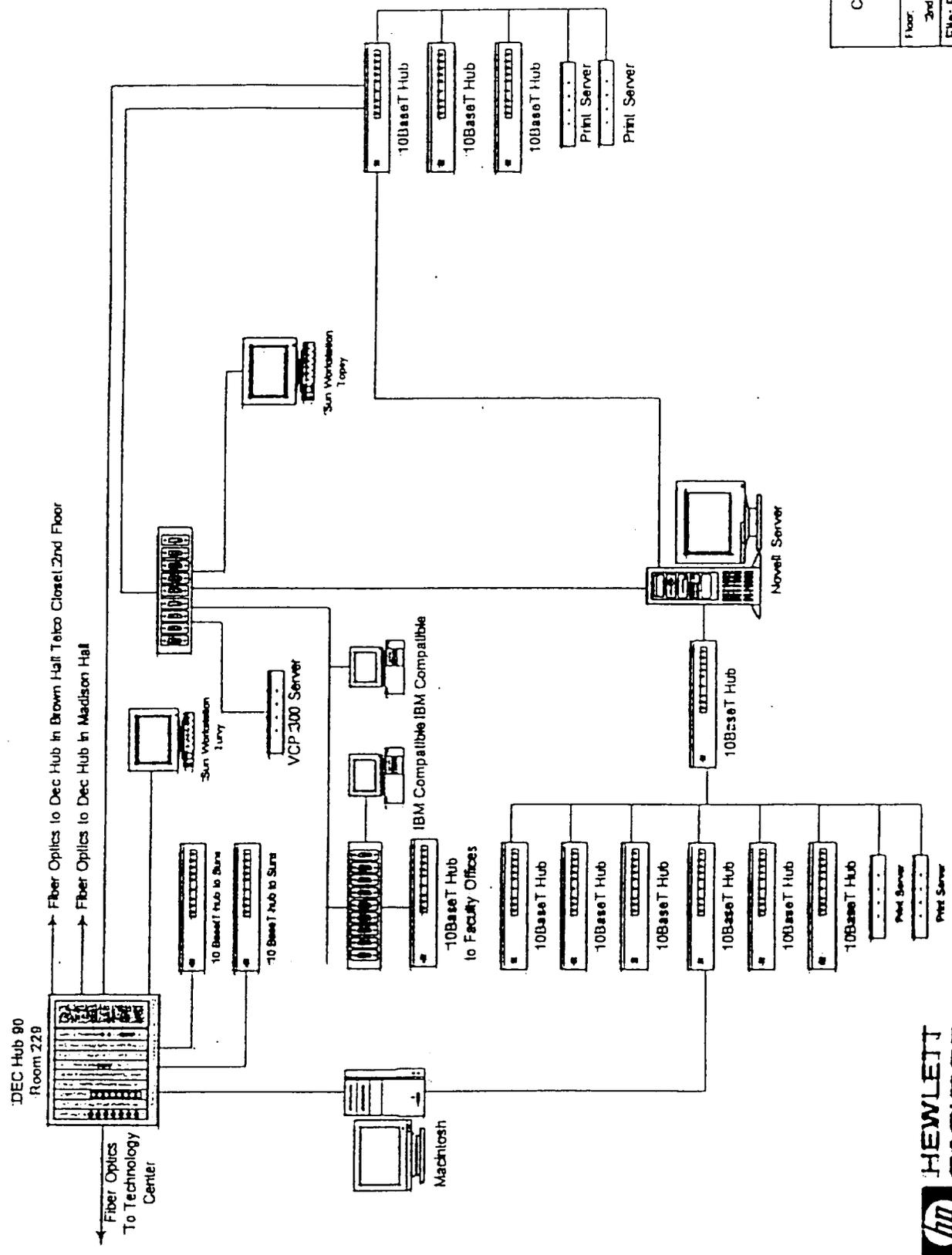
Robinson Technology Center



William P. Robinson Technology Center		
Flow	2nd	Location
		Technology Center
File: NSUTECH1		



Brown Hall Computer-Science Network

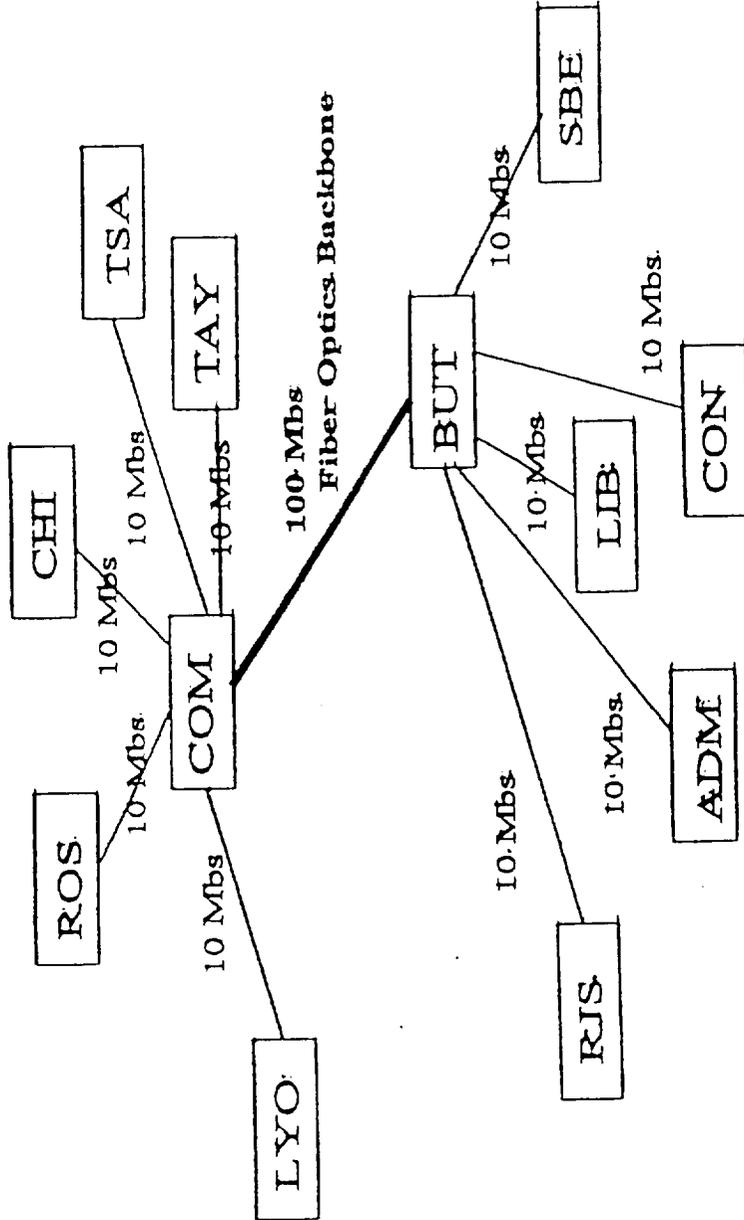


Computer Science Department	
Floor: 2nd	Location: Computer Science
File: Brown1	

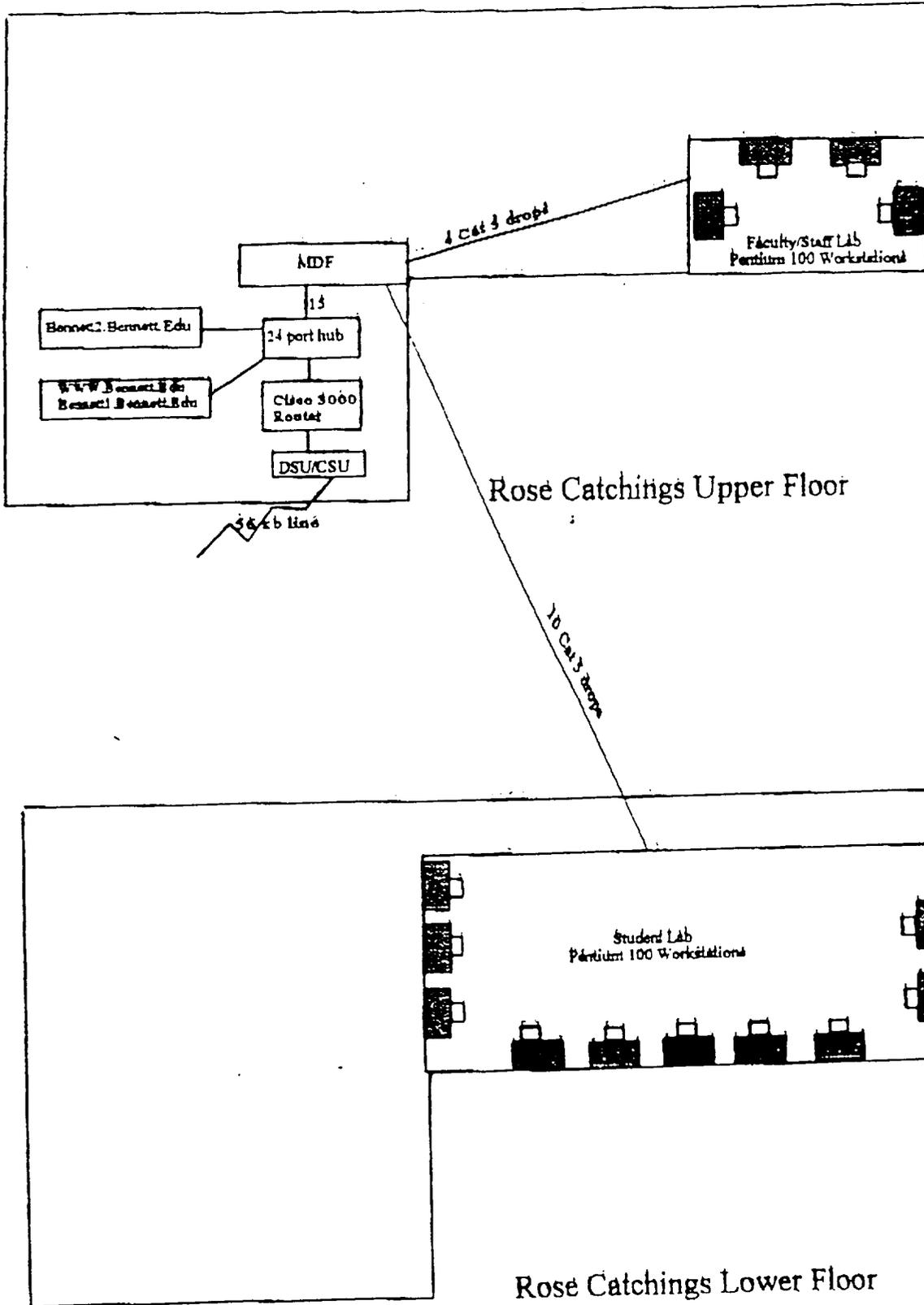


Campus Local Area Network Diagram

- ADM: E.E. Smith Administration Complex
- BUT: G.L. Butler Building
- CHI: Helen T. Chick Building
- COM: Communications Center
- CON: Continuing Education Building
- LIB: C.W. Chesnut Library
- LYO: Lyons Science Building
- RJS: Rudolph Jones Student Center
- ROS: Rosenthal Building
- SBE: School of Business & Economics
- TAY: Taylor Science Building
- TSA: Taylor Science Annex



All connections use Fiber Optics Technology





Summer 1996 Research and Training Project June 24, 1996 - July 19, 1996

This NASA ECSU NRTS Summer 1996 Research and Training Project, supports the five elementary and secondary schools/programs that are included as part of the NRTS at ECSU. Schools in the Roanoke Valley/Camden/Pasquotank/Perquimans Counties will also be considered. This 4-week summer research and training project will focus on Internet essentials, creating a web page, networks tools and resources. In addition to offering a meaningful summer study experience, the program will offer field trips and lectures.

Does the Project Provide Remuneration?

The project will provide funding for 12 precollege students at \$6.00/hour and 5 precollege faculty (hourly rate to be determined). They will work 6 hours a day 5 days a week. All training will be at the NASA NRTS site located at 113 Lester Hall. Participants must arrange their own transportation. Lunch will be provided.

How do I Apply?

There are no formal application forms. For students to be guaranteed full consideration, all materials must be received by **May 3, 1996**. Please send the following application materials to the address below:

1. Full name and address with telephone numbers.
2. Social security number and citizenship.
3. Current grade level, GPA, and intended major.
4. Well-written statement of career goals and reasons for interest in the project.
5. Letter of reference from math or science teacher and letter from your parents.
6. Copy of your recent transcript.

To be given full consideration, faculty members must complete steps 1 and 2 above, submit a resume, cover letter, and letter from principal or other school official by **May 3, 1996**.



Application Materials and Requests for Additional Information Should be Directed to:

Dr. Linda Hayden
Mathematics and Computer Science Department
ECSU Campus Box 672
Elizabeth City, NC 27909
Phone: 919-335-3696
Fax: 919-335-3487

ECSU NASA-NRTS Service Awards

Congratulations to the students on winning the NASA-NRTS Service Awards. The award consists of a Certificate and \$50.00 and were based on nominations from the NRTS System Administrators and the NRTS Network Trainer.

The following criteria was used in selecting the awardees: must be in good academic standing; currently enrolled as a fulltime undergraduate student; made outstanding contributions to the operation of the NASA-NRTS; recommended by NASA-NRTS staff member.



Curtis Felton



Felica Bowser



Chonda Gayle



Derrek Burrus



Todd Peterson

Stacia McFadden

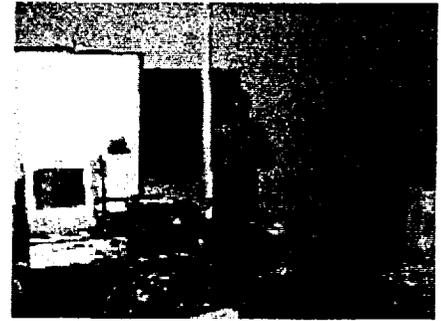


Shanita Powell

Internet Training



System Administration Team with mentor Darnley Archer



James Harrington of the MU-SPIN Coordination Office instructs on SNMP.



Gloria Brown Simmons, James Harrington, Vicent Hale enjoy a working lunch.



Ellis Lawrence enjoys the hands-on training sessions along with other attendees



Attendees listen to James Harrington's presentation on SNMP

Darnley Archer conduct a session on Introduction to the Internet



Attendees in this Introduction to the Internet workshop included Dr. Sachdev the Chairman of the Math and Computer Science Department.

Internet Training



NASA researchers analyze the screen.



Darnley Archer shows high school students around.



Wayman and Gilford attend a lecture on network management taught by James Harrington of MU-SPIN.



Courtney Fields viewing a homepage.



High school students tour the training center.

Wayman White assists Lakisha Mundon with her trial homepage.



Shanita and Antonio surf the net on the 'Indys'.



Fred Sessoms analyzes open GL.

<http://www.ecsu.edu>
 (Chancellor's Welcome and leveled information)

Other Units as Specified
 - Programs
 - Activities
 - Athletes
 - Center for Teaching Excellence

Administration Units
 - Student Affairs
 - Planning/Development
 - Admissions
 - Alumni Affairs
 - Business and Finance

Programs
 - Talent Search
 - Honors Program
 - Honor Societies
 - Upward Bound
 - MSEN

Board of Trustees
 - Statement from Chairman
 - Board Member Homepage in List Format

Academic Departments
 - Biology
 - Physical Science
 - Industrial Technology
 - Math & Computer Science
 - Other Academic Department
 - Research Programs

* Unit Description
 * Personnel List
 * Director's Home Page

* Unit Description
 * Personnel List
 * Vice Chancellor's Home Page

* Unit Description
 * Personnel List
 * Director's Home Page

Catalog Description
 Courses Offered
 Faculty List

Standard Home Page
 Photo
 Email address
 Resume
 Links to other home pages

OUTSIDE
 WORLD

DIAGRAM A