The
Carolina Computing Initiative

What?

“My goal is to put a computer on the desk of every faculty, staff, and student.”
-- Michael Hooker, Chancellor,
University of North Carolina at Chapel Hill

• Ubiquitous Nomadic Computing
• Universal Access to Information Resources
• A standard computer in the hands of every student, faculty, and staff member
Why?

Because...

- of the benefits for students and educators

...because of the benefits for students and educators

- Increases the ease of both intra-university and world-wide collaboration
- Allows the integration of technology into the curriculum with the confidence that students have the equipment required to access it
- Provides access to a wealth of information
Why?

Because...

- of the benefits for students and educators
- of the increasing value of campus real estate

...because of the increasing value of campus real estate

- Space is increasingly difficult to provide.
  - Demand for additional large lecture halls can be reduced by placing large class lectures on CD-ROM, supplemented with recitation sessions.
  - Existing space can be used more efficiently by creating multi use spaces, such as library carrels, with network and power connections.
  - Space for additional computer labs becomes less of a necessity.
Why?

Because...

- of the benefits for students and educators
- of the increasing value of campus real estate
- of the competition

...because of the competition

“I don’t think we should take any comfort in being ahead of some schools. In technology, if you’re not a front runner you’re not even a runner.”
-- James Hynes, Trustee, University of North Carolina at Chapel Hill

- Wake Forest University
  - Implemented universal access in 1996
  - Will reach steady state by 1999
  - Initial results include an 8% increase in applications, 27.5% increase in early decisions, and a substantial increase in student retention.
- Western Carolina University
- Announced PC requirement for entering freshmen in fall of 1998
- Has begun vendor negotiations
Why?

Because...

- of the benefits for students and educators
- of the increasing value of campus real estate
- of the competition
- of the changing expectations of students

...because of the changing expectations of students

“Students will have so many options for learning that traditional formats, void of much technology, will have little to offer in the marketplace of the next century. I believe the clock is ticking for higher education, and it may be a wired bomb unless we act fast to take advantage of the opportunities, and avoid the threats, of a fully digital, networked, multimedia world.”

-- Thomas W. West, Associate Vice Chancellor for IT
California State University System Office

- 5300 students have a campus home page on www.unc.edu.
- This summer there were over 500 inquires into buying a PC through ResNet.
- There are 500 computers in 15 centrally supported labs with over 500,000 visits/year.
Why?

*Because...*

- of the benefits for students and educators
- of the increasing value of campus real estate
- of the competition
- of the changing expectations of students
- we are doing it already

...because we are doing it already

Currently at Carolina there are:

- 552 distance education classes and teleconference events per year, growing at 20% per year.
- 26,000 e-mail accounts, 80% are used daily during the semester.
- 100,000 e-mail messages a day, growing at 5% per week during the semester.
- 72 million hits per year on the central University web server, growing at over 50% per year.
- A PC requirement for Medical and Dental students.
- 50% of residence halls connected to the network now, remaining by January 1999.
...because we are doing it already

“We will not have to pull the student to the technology, our students will arrive expecting to use the full range of information technologies...and we had better be ready for them. In a few years the laptop in the backpack will be the equivalent of the three ring binder in the arms of my generation.”

-- Carole A. Barone, Associate Vice Chancellor, Information Technology
University of California, Davis (May 1996)

• 53.6% of entering students in 1996 came to campus with a computer.

...because we are doing it already

“We are doing it. We're just doing it so inefficiently.”

-- Marian Moore, Chief Information Officer
University of North Carolina at Chapel Hill (October 7, 1997)

• 3,455 personal computers were purchased by the University in 1997.
Why?

Because...

• of the benefits for students and educators
• of the increasing value of campus real estate
• of the competition
• of the changing expectations of students
• we are doing it already
• we could be doing it better

...because we could be doing it better

Currently at Carolina there are:

• 3,400 computers that were purchased in the last year.
  68% were purchased in lots of less than 10.

• 486 faculty members who have incorporated technology into the classroom through the Simple Start program.
  This represents less than 20% of the total faculty.

• 6800 Individual Home Pages on www.unc.edu.
  Student home pages outnumber faculty home pages by more than 20 to 1.
The Carolina Computing Initiative

• A four year purchase plan for students, faculty, and staff (a quarter of the faculty and staff machines recycled each year)

• A menu of financing options for students:
  – Purchase through the student store
  – Four year, low interest financing
  – Student aid based on need

• A mixture of desktops and laptops for faculty and staff

Where to Start?

• Phase One: The College of Arts and Sciences
• Survey the College
• Choose a timeframe:
  – Equip all faculty and staff in Phase One in the next two years
  – Require entering freshmen to purchase a machine by 2000
Arts and Sciences
Faculty Computer Status

- 92% UNC asset computer
- 2% Personal asset computer
- 6% No Computer

Arts and Sciences
Faculty Computer Assessment

- 47% Adequate
- 47% Inadequate
- 6% No Computer

*Faculty with Ethernet Connectivity: 78%
Arts and Sciences
Faculty Processor Distribution

Arts and Sciences
Staff Computer Assessment

*Staff with Ethernet Connectivity: 82%
Arts and Sciences
Staff Processor Distribution

<table>
<thead>
<tr>
<th>Processor Type</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>386 or less</td>
<td>8%</td>
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<tr>
<td>486</td>
<td>4%</td>
</tr>
<tr>
<td>P&lt;90</td>
<td>3%</td>
</tr>
<tr>
<td>P&gt;=90</td>
<td>31%</td>
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<tr>
<td>Mac&lt;601</td>
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<td>Mac&gt;=601</td>
<td>29%</td>
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<tr>
<td>Unix</td>
<td>7%</td>
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Teaching Graduate Student
Computer Assessment

<table>
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<tr>
<th>Assessment Type</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Adequate</td>
<td>36%</td>
</tr>
<tr>
<td>Inadequate</td>
<td>41%</td>
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<tr>
<td>No Computer</td>
<td>23%</td>
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Teaching Graduate Student Processor Distribution

Arts and Sciences Survey Results

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<thead>
<tr>
<th></th>
<th>FTEs</th>
<th>&gt;P90</th>
<th>&lt;P90</th>
<th>Total Machines</th>
<th>% &gt;P90</th>
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<tbody>
<tr>
<td>Faculty</td>
<td>827</td>
<td>390</td>
<td>389</td>
<td>779</td>
<td>47%</td>
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<tr>
<td>Staff</td>
<td>432</td>
<td>212</td>
<td>220</td>
<td>432</td>
<td>49%</td>
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<tr>
<td>TAs</td>
<td>560</td>
<td>100</td>
<td>189</td>
<td>289</td>
<td>18%</td>
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<tr>
<td>Total</td>
<td>1819</td>
<td>702</td>
<td>798</td>
<td>1500</td>
<td>39%</td>
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Phase One:
Annual Equipment Expense

3,400 entering freshmen * .40 = 1,360
(assumed maximum financial aid)

1,819 total A & S FTEs * .25 = 455
Annual computer requirement: 1,815

Cost: 1,815 * $2,200 = $3,993,000
Maint & Net (15%) 598,950
Insurance (2%) 79,860
$4,671,810

Phase One:
Estimated Startup Cost

Assuming 1,100 units purchased in 1998 and 1999 and an additional $1.5M for networking (98-00)
Technology Spending and Some Potential Sources of Funds

• By the University --

- $2,000,000 for Chancellor’s Classroom Improvement Initiative
- $2,000,000 for building wiring and networking
- $2,000,000 for Chancellor’s Grants in technology
- $3,700,000 for Academic Enhancement Technology Initiatives
- $1,700,000 from student fees to support computer labs
- $7,400,000

• By Students --

- $4,400,000 at a minimum for PCs (3276 * .536 * $2,500)

Where do we go from here?

With University acceptance of the general plan:
- Determine professional school participation and phasing
- Reallocate funding
- And then commence vendor selection