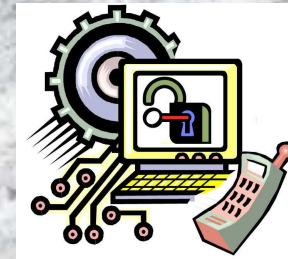
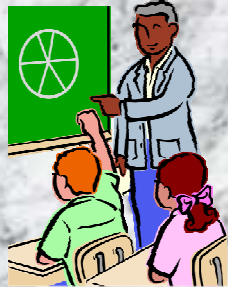


Building the IT Talent Pipeline



Neal Grandgenett

Professor, University of Nebraska at Omaha

Elliott Ostler

Professor, University of Nebraska at Omaha

Nancy Mawson

TANN Academy, Northeast Community College

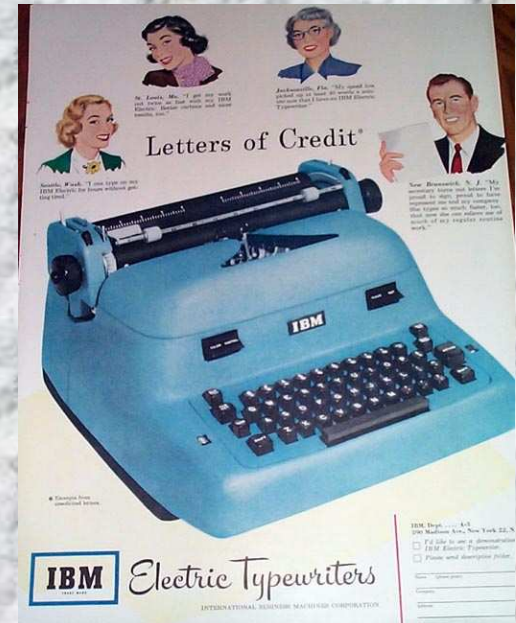
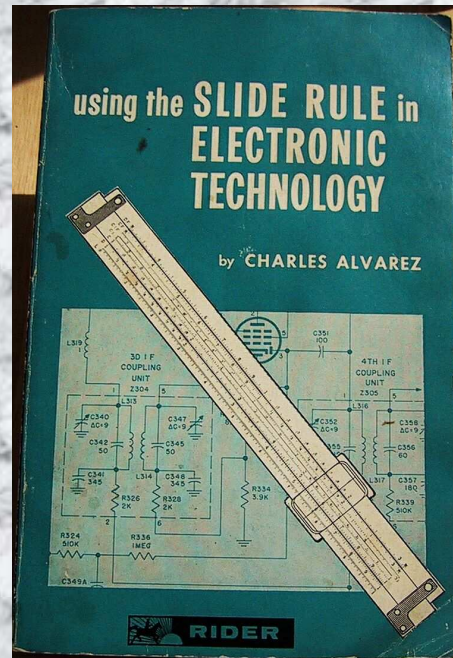
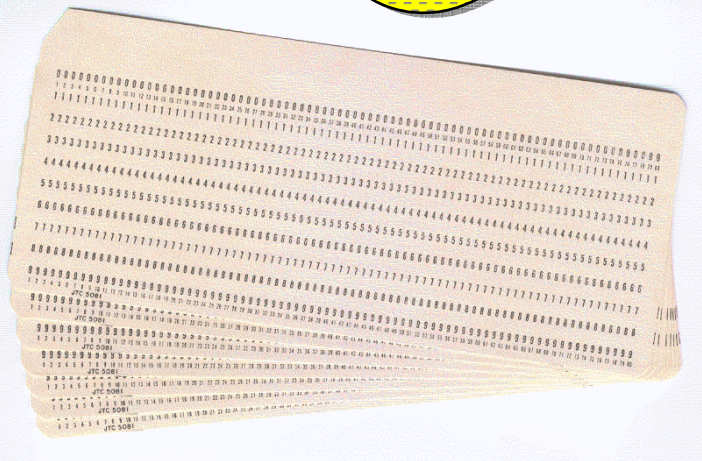
Lynn Spady

Technology Specialist, Westside Community Schools

Robert Jensen

Technology Specialist, Omaha Public Schools

Old IT



New IT

Blogs
Wikis
iPods
Google
Text message
Twitter
LAN
Podcasting
Facebook
Wikipedia

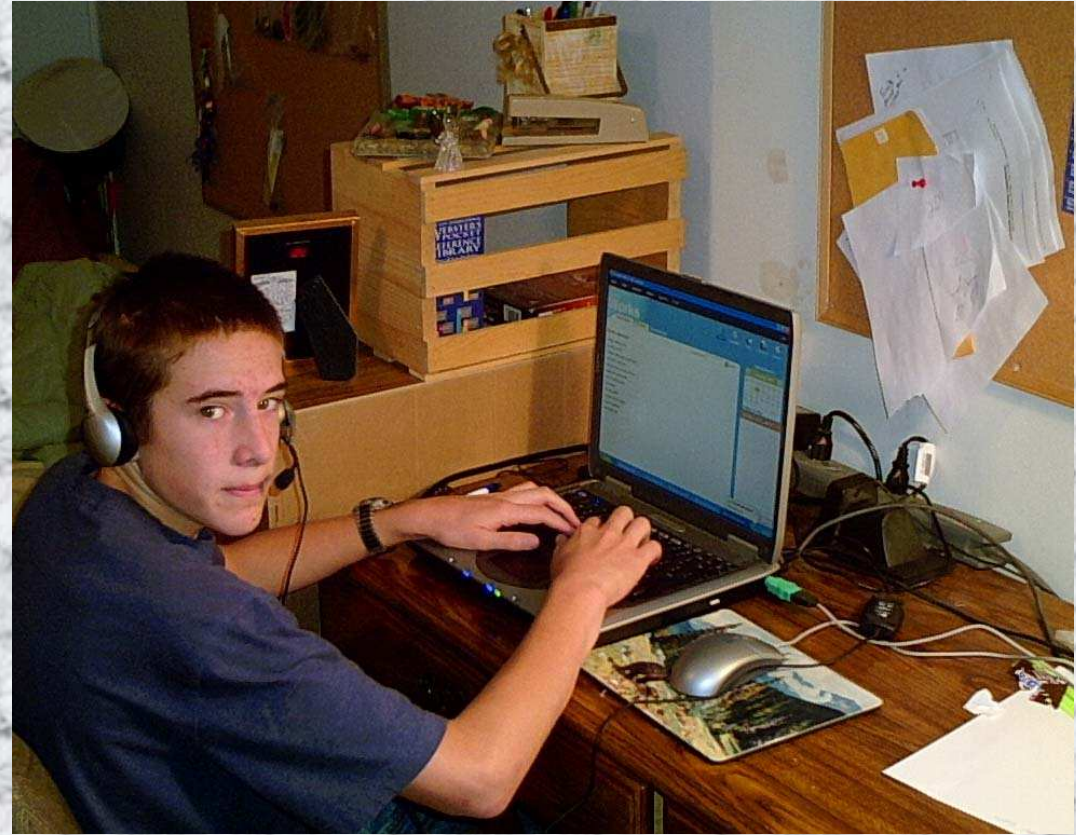
Second Life
JAVA
PDA
Playstation
iTunes
Webquest
xbox
Flickr
Skype
Tomagotchi
Vcasting



Pipeline Raw Material

Digital Natives
Net Generation
Millennials
Digital Kids
Generation D
Generation NeXt

Kids Today Are Different



Tomorrow's 21 yr old Student:

20,000 Hrs- Television

11,000 Hrs- School

10,000 Hrs- Video Games

5,000 Hrs- Reading

and

2,000,000 – Text Messages

More than 98,000 K12 Students in Omaha
There are 188 public school buildings in
Omaha

- 99.5% classrooms have Internet
- 97% have Internet computer
- 99.8% have a computer labs

Building The Pipeline



UNIVERSITY OF
Nebraska
Omaha

“My secret to success is I skate to where the puck is going to be, not to where it has been.”

-- Wayne Gretzky

New Tools

K12 Pipeline Tools

Elliott Ostler

Graphing Calculator Robots



The Happy Function Graphing Robot

Interpret a Representation	Graphing Calculator, Spreadsheets, Dynamic Geometry Software, Data Visualization Programs
Create a Process	Programming, Graphing Calculator, WordProcessing
Do a Demonstration	Robotics, IMovie, Podcasts

Westside's 1 to 1 Initiative

District Efforts

Lynn Spady

Westside Community Schools

- Schools
 - Westside High School
 - Westside Career Center
 - Westside Middle School
 - 10 Elementary Schools
- 6000 students K-12



1-to-1 Initiative

- In 2004, all high school students had 24/7 access to a notebook computer.
- This school year, the 1-to-1 program expanded to include 8th grade students.
- There are currently 63 laptop carts at the elementary level providing a 2-to-1 ratio of students to notebook computers.

Information Systems

- Westside has adopted the Blackboard Learning System to provide instructional delivery and course management.
- PowerSchool is our student information system. Parents and students have 24-7 access to attendance, grades, school bulletins, and other important school information.

Technology Support

- Westside Community Schools is an Apple Self Service Center.
- Highly skilled and certified technicians are able to do warranty and non-warranty work.

Technology Integration

- Teachers continue to develop new and innovative ways to integrate technology. These ideas have been shared locally, nationally, and internationally.
- A technology integrationist is available to help teachers try new technologies while not having to be an expert in the technology tool.

Innovative Ideas

- 8th Grade Music
- 7-8th Grade Math on Blackboard
- Podcasts
- Elementary Students Graphing Data
- Student Portfolios
- World Languages
- Book Talks

The TANN Academy

Collaborative
Coursework Efforts
Nancy Mawson

THE BEGINNING 2002



Battle Creek High School



Stanton High School

Five Rural High Schools Cooperated to Create a Technology Academy



Madison High School

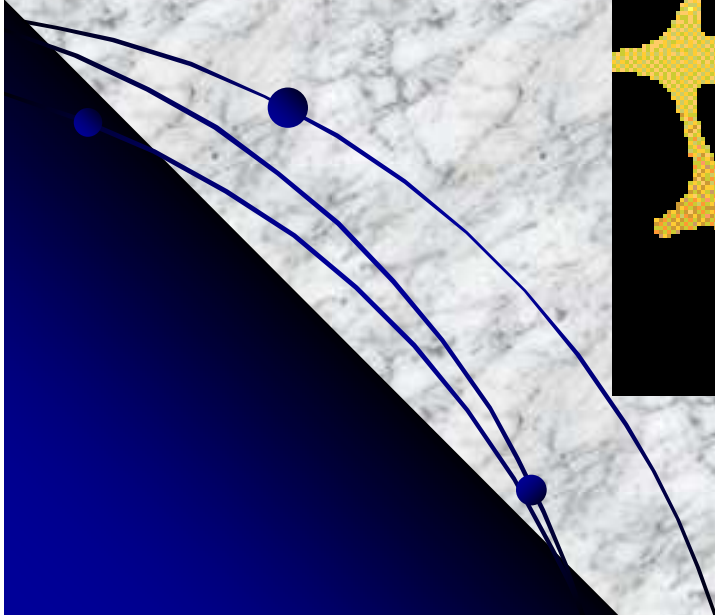


Pierce High School



Norfolk High School

**2005 TANN Awarded A Three-Year
Grant From the National Science
Foundation**



Four Goals

1. To increase the capacity of secondary teachers & community college faculty to integrate rigorous academic & industry standards into the targeted curricula.
2. To increase the number of students, especially females and students of color entering & completing the targeted technical programs of study.
3. To strengthen students' academic and technical skills in order to better meet the needs of business & industry & increase four-year college transfer & graduation rates.
4. To disseminate proven practices and strategies so technology education in rural areas might be improved.

Training for Teachers

- Cisco Academic Fundamentals
- IT Essentials I
- Working Connections (Dreamweaver, Digital Video, Photoshop, Programming, Advanced ANGEL, Online & Hybrid Course Strategies, etc.)
- Digital Design by Corporate Partner
- Robotics Training by NECC faculty member
- Job-shadowing/Internships

EXPANSION—O'NEILL REGION 2006

O'Neill High School



St. Mary's High School



EXPANSION—WEST POINT REGION 2007

West Point-Beemer High



Central Catholic High School



Pender High School



Awareness Activities

- TANN provides annual 8th grade technology career day
- TANN provides a Summer Teen Technology Camp for 8th & 9th grade, primarily underserved youth
- TANN has partnered with Northeast Community College for a Career Camp for high school girls
- TANN partners with Upward Bound to reach high school at risk students
- TANN provides a Robotics Competition for 9th through 12th high school students

Curriculum

- ***Dreamweaver, Flash, Fireworks**
- **Advanced Web Page Development**
- **Programming in Visual Basic**
- **Microcomputer Applications II**
- ***Digital Media (Movies)**
- ***Digital Design (Still Pictures)**
- ***PC Systems Maintenance & Repair**
- ***Programming in C++ with Vex Robots**

Student Benefits

- Opportunity for classes not offered in local school
- Earn college credit on an NECC transcript
- Attend class and work in a college environment
- Develop relationships with students from area schools
- Use equipment not available in local school
- Develop skills to enter a technology career field and/or to continue education in a technology related area

What Next for TANN?

- Preliminary plans for NECC to continue the 8th grade tech career day & robotics competitions
- Several high schools now have trained teachers & will continue classes in their schools
- Several schools are meeting & working together to offer classes in the fall of 2009—planning to do this in an on line platform and/or through distance learning, reaching out to several schools

"Smart" School

School Building Efforts

Robert Jensen

Questions?



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A Final Quote

„We have not succeeded in answering all of your problems. The answers we have found only serve to raise a whole set of new questions. In some ways we feel we are as confused as ever, but we believe we are confused on a higher level and about more important things.“

Omni Magazine, 1992