SUMMARY FROM ALL BREAKOUT GROUPS

I. CONTENT

1. Critique of Current Federal Efforts

- Don't forget that content also includes video.

2. Suggestions for Future Federal Actions

- Work to make existing content available -- and emphasize the value of content that is available as relating to the real world -- in addition to emphasizing the need for new content
- Presidential challenge for the creation of new and better content, including courseware
- Federal government should help with the development of uniform technical standards for courseware (e.g.., PBS Mathline, Energy Star program)
- Declare the Web as the national standard for the development of educational content (Beach)
- Create an "Educational Yahoo," a federal initiative to index educational software, services and sites. (something like this exists at www.wentworth.com)
- The Federal Government should be funding the digitization of information, especially federal resources (Smithsonian, etc). Internet is the tool that can really make the difference.
- Lots of federally funded programs go for years without the education component being tapped into. Should put a requirement on federally funded research programs to have an education component and to work with schools early on.

3. Suggestions for Future Non-Federal Actions

Thoughts:

- **Barriers**: Software can be a tool for individualization but it is extremely difficult to create a mass market because of that.; Schools haven't effectively defined themselves as a niche market; Schools have not collaborated with other States; Private market isn't bound by certain outcomes; Purchases are line item in educational technology budget; No statewide centers that can give advice on software products or guides to purchasing software. Need credible source.
- Better cooperation between large purchasers of educational content (e.g., Florida, California, Texas) in order to spur development of better materials

- Schools should be driving the market more than they are now, teachers should know what they want and demand content that fits into their curriculum, not to work their curriculum around the content. It is the affluent home market that is driving educational content. (Twice as many computers in homes than in schools.

- A need for open-ended software. Curriculum needs to be rethought to be project centered --- standards can act as the guide. Standards need to be linked to the core curriculum. Changes can't happen on the periphery --- school reform is what is important and technology is part of that.

- Some group members believe that content-rich products do exist but we need to make teachers aware of what tools/products exist and how to use the technology. Problem is that people don't agree on the standards so there is no mass market.

- Many other group members believe content is not there based on survey done on standards and content. Majority of software is still "kill and drill" which is not effective for long term improvement. Need applications software related to the individual worksite learning and it should relate to the real world. Sees different types of products: 1) drill & kill, 2) tool software, 3) applications software, and 4) information resource software. Content is critical but doesn't exist.

- Parents would be willing to share the costs of software for schools if it also has applicability on home computers.

- Bundling software is the answer. For example, distribute all software for 9th grade biology to high schools.

- Students and parents need to be authoring content. The future is web publishing -- taking information from the Internet and customizing it for a certain curriculum.

- Companies can't just market to the computer whiz teachers, they must market to those teachers who want to change, but don't know how.

- State and local textbook budgets need to be opened up and made more flexible so that schools can buy software, video software and other multi-media content with textbook budgets. (This happened in Texas).

- Software should be relevant to real-life for students, will this help me get a job?

- Technology is changing very rapidly so there may be a need to develop software that can still work on low end equipment.

- Content must be contexualized, customized and standard-friendly.

Specific Suggestions:

- There should be workshops for schools to learn how to buy software.

- Cataloging Existing Content Resources: Gary Rowe of Turner examining means of "Dewey Decimal System" for Content resources (Also Beach will talk to Yahoo and Netscape if we ask him to)

- Work to make existing content available in addition to emphasizing the need for new content -- the group felt that there is a great deal of content already available to teachers, but no way to sort through it all and access what they need.

- Need to encourage more and better collaboration between industry and educators

- Tech Corps Open challenge to all K-6 classes in America to submit the most compelling learning unit they have that incorporates a baseline use of technology -- all submissions would be available on the Web (Beach with Silicon Graphics and Disney)

- There should be workshops for schools to learn how to buy software.

II. TEACHER TRAINING

1. Critique of Current Federal Efforts

- Emphasize process of teacher development: entry, adoption, adaptation, appropriation

- Use term "professional development" instead of "teacher training"

- We haven't sold teachers on the concept that teachers can't work without technology. (As most other professionals know, they can't work without technology).

- Pillar on teacher training needs to be expanded to cover all staff, ie. Principles, counselors, administrators, managers, etc.

2. Suggestions for Future Federal Actions

- Tie federal resources together through TeacherNet

- Work to encourage better accreditation standards that include technology

- Expanded use of Department of Education regional centers (perhaps available for companies to use for professional development; open them to communities, teachers, administrators and parents; and reach out to those groups).

3. Suggestions for Future Non-Federal Actions

Thoughts:

- Schools should be flexible in giving teachers time to go to training programs to learn technology.

- Teachers need to be skilled and knowledgeable about computers and software so that they become a resource for parents looking to buy for home use, thus leveraging their resources to the software developer.

- Teachers need computers at home.

- Lexis/Nexis gave its services to law school students for free, thus creating the demand on law firms to have Lexis/Nexis for their new lawyers. Computers with good software should be given to students, (or schools should require it) so that when the students are teachers they will demand good computers with good software from schools.

- Training should be in-school, not off-site.

- Teachers should be helped to use what they have, and understand what it can be used for, rather than pushing new and other technology and equipment on them.

- Teachers should be able to use the equipment and software they are trained on, they should be able to take it home from the training session.

- If there is technology in the classroom it's there for the students, not the teachers. We need to treat teachers as professionals, put a phone in the room, give them computers etc.

- Merit pay won't work, merit schools could work.

- Teachers need to know what's on there, and need to be taught critical analysis of the vast amount of information out there. Teachers need some sort of teacher assistant -- to sort out bad information -- like a DoD school ??

- Teachers need to be able to analyze and buy software, understand the trends and mission.

- Importance of providing for "off-time" professional development by, for example, providing E-mail and computers for home use

- Real need for national resources. Need a national marketing campaign with credible vision with list of stakeholders. President should act as major cheerleader.

- Getting the principle on board is the key. (Everyone in the group agreed with this.) Principles are usually isolated with no support and can't relate to teachers.

- K-12 should not be working in isolation. Schools of Education and Universities should be working along with K-12 to collaborate for teachers education for inservice and preservice. The NEA has a new teachers education initiative that includes work with higher education institutions. Also, the College Board is rethinking requirements for college to include technology literacy. Some in the group were worried about this requirement because there is no filter or resource to say what is a credible program.

- Resources should be put on line so teachers can have just-in-time resources and training as well as talk with experts on line. Don't need to pull teachers out of school to train them when you can provide them with the resources in school and possibly provide them with a laptop to take home.

- Need to focus on targeting the places with the most need and start there and really invest in those areas and improve them. Then you can scale out by making a case to the public by highlighting the success in those areas.

- Team approach is needed. Should broaden training so that training is used to change the teachers behavior on the way they teach. Relationships change between teachers and students and colleagues.

- Summer workshops to educate teachers are important. Time issue needs to be addressed.

Specific Suggestions:

- Creation of Teacher Corps, perhaps through Technology Corps, (and Students through American Technology Honor Society) but with recognition also including administrators

- Develop collaborative projects, a teachers version of Lotus Notes for teachers to talk about curriculum, software, what works, what doesn't.

- When a student goes to an Education College, he or she should be required to buy a computer, as engineering students often have to. On the other side, schools must only hire computer literate teachers.

- Performance standards for educators.

- Teachers need to be recognized more, more teachers awards etc

- ATT examining means of tying together private teacher-training efforts including TeacherNet

- How about audio training cassettes for teachers since many often drive to and from work.

- Needs to be a central depository for teachers to go to get good information either on-line or a center. There needs to be places to go for information that are local or state-wide. Community Colleges and Universities can be used for support as well as computing using educators organizations.

- **Florida model**: State facilitated training. They formed centers at Universities around the State and also have consortia driven centers. They have trained the trainers and have them agree o do the training back in the local districts.

- **Statewide multimedia technology team model** - 10 trainers assigned to a specific geographic area. They put on workshops, an educational technology conference, and serve as teacher trainers. Need to train those that keep up the network and train administrators.

- **Teacher/Student model** - Teacher and student take a 3 week training class and are given a computer

and software package to take back to the classroom and charged with having to complete a project using the new tools they have learned.

- **Accreditation**: NCATE is developing a new program of accreditation standards to include educational technology. Also State Boards are taking a more comprehensive and forward thinking approach. To license teachers, they will need accreditation in technology literacy.

III. CONNECTIONS & COMPUTERS

1. Critique of Current Federal Efforts

- NetDay: too "connection-oriented" without relationship to teachers and school; schools are raising logistical and safety issues. Suggest a series of events, not just connections, on NetDay and that local school districts be asked to identify a couple of schools in each district for NetDay models. NetDay would be focus that would include emphasis on in-service training, etc. -- for example, have NetDay lead off a "educational technolgy week" where many different events and activities take place (professional development workshops, etc)

- Expectations for NetDay need to be lowered considerably. It is likely that some schools will have a wire that is not be connected to anything.

2. Suggestions for Future Federal Actions

- Federal involvement in NetDay should be expanded to involve local teachers and school districts

- President should declare minimum bandwidth standard for classrooms (28.8)(Beach)

- The President should convene a summit of financial experts to figure out how to raise the money to pay for computers.

- There should be more incentives for companies to give computers to schools, for example the R&D credit could be extended into education.

- FCC spectrum request for spectrum sharing. Snowe/Rockefeller Amendment supported so that discounted rates can be applied to schools. Grants provided for wiring through NTIA, DOED and others

- President encourages voluntary "discount" program for donation of computers to schools, which frees up schools resources for client servers (Beach)

- President calls for the donation of used computers

- Make computer leasing easier

- Encourage flat, not hourly rates, for connection and look at interesting state efforts (Tennessee, Texas, Hawaii, Florida

3. **Suggestions for Future Non-Federal Actions**

Thoughts:

- Need internal connectivity (LAN) and Wide Area Network (WAN) and online service as well. All different types of technology are needed. Need to think about supporting low end technology like video equipment.

- Guidance for people at the local level is needed. There needs to be a portfolio of financing choices as well as examples of how different capabilities impact education and provide various benefits Should provide them with options, cost examples and open standards. Need to help the schools make wise choices. Many in group expressed the importance of standards and guidelines.

- The marketplace is already taking care of these connections, whether or not the government does anything or not.

- School districts should not own hardware, they should be only be leasing it.

- Schools need to be told what they can do with different kinds of technology.

- Totally opposed to giving schools used computers. -- it won't help drive the market, there is limited software for its use and sends a bad message.

- Some schools don't want used computers but feel they must accept them. ("Computers are the gifts that eat")

- What about giving used computers to students to take home? (But who gets them?)

- Local schools need to determine what they want.

Specific Suggestions

- Link NetDay with broader technology education effort (educate parents, communities)

- In Texas, the cost of de-regulation for companies like Southwestern Bell and GTE was that they had to put aside a certain amount of money to wire schools and rural areas.

- There must be a certain standard for used computers. Computers should be considered obsolete if you can no longer buy software for it.

- The costs could be lowered for schools, and paid back through home use. TCI is offering a package price to schools for 8 years and expects to have the costs reimbursed by home use.

- Nancy Larkin of Continental Cable reviewing possible cable contributions

- Have communication companies give away free modems for any school and home (Beach)
- Fee E-mail service being launched in January (Shaw & Co)

IV. WRAP-UP

1. Critique of Current Federal Efforts

- Our capstone shouldn't be "world class skills for all kids" it should be "world class citizens for the 21st century" focusing on what it means to learn.
- Focus on the promise of technology.
- Focus on the learner, not just the students, it's the parents grandparents etc. who have a stake in it.
- Focus on life-long learning -- according to the Chief State School Officers, only 27% of families have children in school today. We don't need knowers, we need learners
- Add in the "connection" to parents, the community, library, church etc. Schools could set up a series of information to be sent out to parents each night including, what was done in school that day and what the homework is for that night. (The vision is too narrow). Families and communities should be the interwoven lattice-work throughout the four pillars or the fifth pillar.
- Link the pillars and try not to talk about the pillars separately.
- Talk about "learners" not "students" and "learning environments" not schools.
- Home, school, community and business -- the four pillars. Have kids explain to their communities why technology is important.
- Keep the message simple, give people something "to do," like "designate a driver" did for drunk driving.
- Don't focus just on technology, it's about communities.

2. Suggestions for Future Federal Actions

- Need for broad, strong Presidential message in this area
- The White House should convene another Ed-Tech seminar or meeting on the issues of inner cities, families and minorities.
- In selling this vision, focus on the benefits the parents will have in being able to link to the school and teachers.

- De-bunk the myths about technology and explain that it's here to stay.

3. **Suggestions for Future Non-Federal Actions**

Thoughts:

- A coherent vision of learning will create the marketplace.
- Just FYI: According to TCI, 92% of homes in Baltimore that have kids who qualify for free or reduced lunches, subscribe to expanded basic cable services.
- Our strategy should reach out to people who don't know much about this issue.

Specific Suggestions:

- We should use the Chief State School Officers and NCC-TET to help resolve ideas and run ideas up the flag-poll, get feedback etc.
- Possibly a coalition of companies will do a commercial about the importance of technology -- "jointly, we see the future ...."
- A speaker's bureau type organization of retired teachers and industrialist to speak about the importance of technology to schools and communities.
- NCC-TET putting together comprehensive, national outreach plan
- Pro bono advertising campaign by private sector
- NIIAC considering future role in boosting Kickstart initiatives
- Outreach to through Parents' Associations (Laurie Lipper -- The Children's Partnership)
- National Parent Information Network
- Public Service Announcements
- "Professional Development" Week to be linked to NetDay
- Family "technology nights" sponsored by industry (already being done by Microsoft, similar to Apple's parent training seminars)

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Alex Stein

Content

Student Criticism ⇒ not enough application to real world

- most teachers don't even see the materials they need (CD-ROM -- etc)
- Don't know how to use it!

Shelly
- Transmission software (connections)
- End-user vs materials (cd-roms)

⇒ How do we integrate existing software

⇒ Industry must work with schools, content experts, curriculum designers

also - universities not working close enough with industry

Jennifer Byrne

Standards - Goals

How do you know good content when you see it?

Critical connection: What is it trying to do? What are we trying to accomplish?

- CA, TX, FL went together to develop "orphan" software that isn't being developed by market

↓ starts with standards setting
across & within states

Barbara NEA

supply-side problem

① Teachers not clear as to what they want & or how to use

→ need to get providers talking to practitioners at early stages of development

Gary

- Internet is changing everything
  - 3 yrs, all different
    soft. must be web compatible
  - how do providers make $

Alex Stein - Shaw

- Govt provide incentives to info holders (museums, etc) to publish, put info on web.
  - Smithsonian

- Software that allows browser to only browse from sites on web (kids can only browse Smithsonian, nothing else)
  - browse with depth, not breadth

Gait

LFP to software publishers to engage & build truly interactive software (web site)

(i.e. McGraw Hill, Creat new on-line physics book)

collaborative physics labs

small seed $ from Gait

Jodie Break

what's available now? How do we help teachers access existing software?

John Young - Access to content is problem

"what's available for 5th grade?"

we are in necessary "chaos" stage -- must bring order to chaos. Early adopter stage -- ready to move to "general adoption".

Address decision making process -- what do school board members need to ask?

Jeffrey Moore - "Crossing the Chasm"

Double Back

need tools to tell us what's there.

- we need groups who work with practitioners to sort thru and pass judgment on existing content

→ Government role -- common standards for archiving data & content

→ substantial problem here

Thurgood Marshall Who sets common standards that everyone uses.

- cable industry exploded because they came together around common infrastructure

- federal Role education Interconnectivity for technology

- states & local need to know how their system works to natural system

Assessment of what's being done now in terms of content.

Information flow - question

Distribution, standards, Interoperability are all Barriers to market entry

94% of teachers believe technology is vital to learning

Will content happen on its own? No
- too many demand-side barriers
- pursuing
re tooling of existing resources

resources laid out

Don't can do: instead of technology push, content pull

- let schools know what's out there

need to educate families & communities first, so then will spend $ to do what's needed

PBS – Distribution Rights is a real problem

Math

- wk with teachers to develop
- Standards
- Resource guide for users

President

- Lifelong learning, Aspect the
- we are all architects of our own learning

Think Content will evolve along Cable model

red bar - copyright issues, electronic credit,

Admin emphasis - must have our learning skills

- Challenge Business-learning compact to take long term view of tech learning

- Sally

Industry - R&D must and learning -> collective R&D

How do we move from chaos to order?

- Students
- "dewey decimal" system for content categorization
- Communities (like creation of interests)
- message -- hard time ~~[illegible]~~ to sell when all you hear is "smut on line"
- technology empowers - teachers - students
- incentive for teachers + priority to buy computers
- let's put videos on air -- work together to publicize

Teacher Training

Tech Corps

18 states actively pursuing

- OTA - Future visions
  - Teaching tech
- Conferences
- Bully Pulpit

Teacher advocates for change

- Pres Awards winners

- Link with Tech Corps would be great

Apple classroom need to change
- Talk about this

NEA

↘ How does this get done systemically
- build in systemic factors

↓

Do not exasterbate tensions
- must be collaborative

→ us west partnership
- they equip 1/2 teachers
- year of training
- college credit
- Teachers commit to Training to additional Teachers
- teacher has laptop & modem
- school support

West FUA
- Trained 10,000 teachers
- intrusive
- Answers @ Tan Key
- Trained Parents + administrators

- Why are we going to use technology
- Training goes beyond Teacher to Community

NSF - Funded Project
- mentoring

Easy but should be Training pre-service teachers

Accreditation is key
- must

Take Training word out of IT!!! No-one likes Being Trained -- insulting

Professional Readiness
↳ NCATE — Tech Standards

ATT - need to collaborate
- Bring together pedagogy
Know

- Teachers in tech institute
↳ Quality Main Principle

- What's wrong with Technology,
not teachers.

Focus sessions

Kids are key resources

Time is key - Teachers need time to learn & explore

- summer
- prep

Cut link efforts together to make it feel like natural effort

Florida - take a look at these

NCATE - Standards for what Teachers should know.

GMU accredited in this area

- Equity & Access Issues
  - Inner cities being left behind

- Markets -- what Prof Rec looks like
  - If you are going to train teachers outside classroom, must provide resources for subs

- Fed Govt - look at invest in future

What is the reward to use technology
what is incentive?

Fed fail -- incentives to State Governors to do the right thing

Incentive - $?

FL + TX have largest Teacher Networks

Do many? - Fragmented

Business Model - keep it simple

— must use as part of daily lives

Funding

↳ teachers need computers at home

↳ X yr tax credit for purchase of computers

↳ catalyst

↳ tax deduct for on-line services

— Smokey the Bear

Teacher corps

student

Summer/off time institutes

Teacher [illegible]

talk

— Technology [illegible] in inner cities

Dodd Regional Tech Support Centers

- Summit

If people who are signing don't use -- how will teachers use.

Microsoft
- Parents Buying / must complete
- school Laptop
- Family tech nights
- School Admin and Key

Connections and Computers

Definitions

↳ "computer" actually mean many things
computer games, TVs,
because of definition

↳ Trend towards client servers
Program - Gary Bach
↳ at certain level .. people donate computers at certain level - get computers

→ incentive program for businesses to donate computers

→ Net Dry
① local school districts not updated
② engenders suspicion with schools
③ safety issues (asbestos)

↳ Trying to pull schools in
↳ school districts donate list of schools

Sally, All users

Net Day

- What kinds of dynamics can we use so that schools have something to connect to
- Get RBOCs, Cable Companies

Dennis - whole range of activities
- Awareness issues,
- Inservice training
- Bells compete to hook up most schools

Net Day

Increase Awareness
- Showcase success stories
- Libraries included - expand
- connect computers to Internet
- remember to connect

federal role -
- unused infrastructure

Base closings → use existing technology, equipment, connect up communities, s
Reservations.

Next day cost saves

Access to Community

extended learning opportunities to communities

Crime Bill — use schools as Community centers
- security costs

Title I funding most important for inner city schools rt A

Gancy

Brent Pasch

What if phone companies gave away modems

- companies make up $ with phone charges

- DE Shaw - free internet e-mail service
  - advertiser supported

May 1996 - 500,000 people
Dec 1996 - 6 mill "
Dec 1997 - 35 mill "

(WV) - feds can do alot on Awareness

- minimum specs & guidelines
  - allow me to pick & choose
  - (liability laws a real problem for using schools after hrs)

- maybe no ~~down~~

modems - U. Tex - 75% of modems too expensive

Modern Day res

↓ Give decision makers

Vision statement?

- educating our schools about tech

- Create info so schools have info, variety of Applications

All put together blueprints, ideas

Fiscal

- Predictibility
- Budgets about - instruction

- Why do schools have to buy equipment?
- Why not lease things

- financial options must be explored
- predictable leasing costs would be helpful

- many states don't allow leasing
- chapt 1

- one-year budgets
- work with tech companies that work out funding options
- constant rate model
- TCI worked w Mississippi - PR spots to sell bad issue

- Models of state legs dealing with this -
  Mississippi - utility companies

Refinance for Ed market

Tennessee - ISDN and State paid for connection, flat rate in state, to schools

- PoC study of funding required by IASA

- Mosely Braun foundation

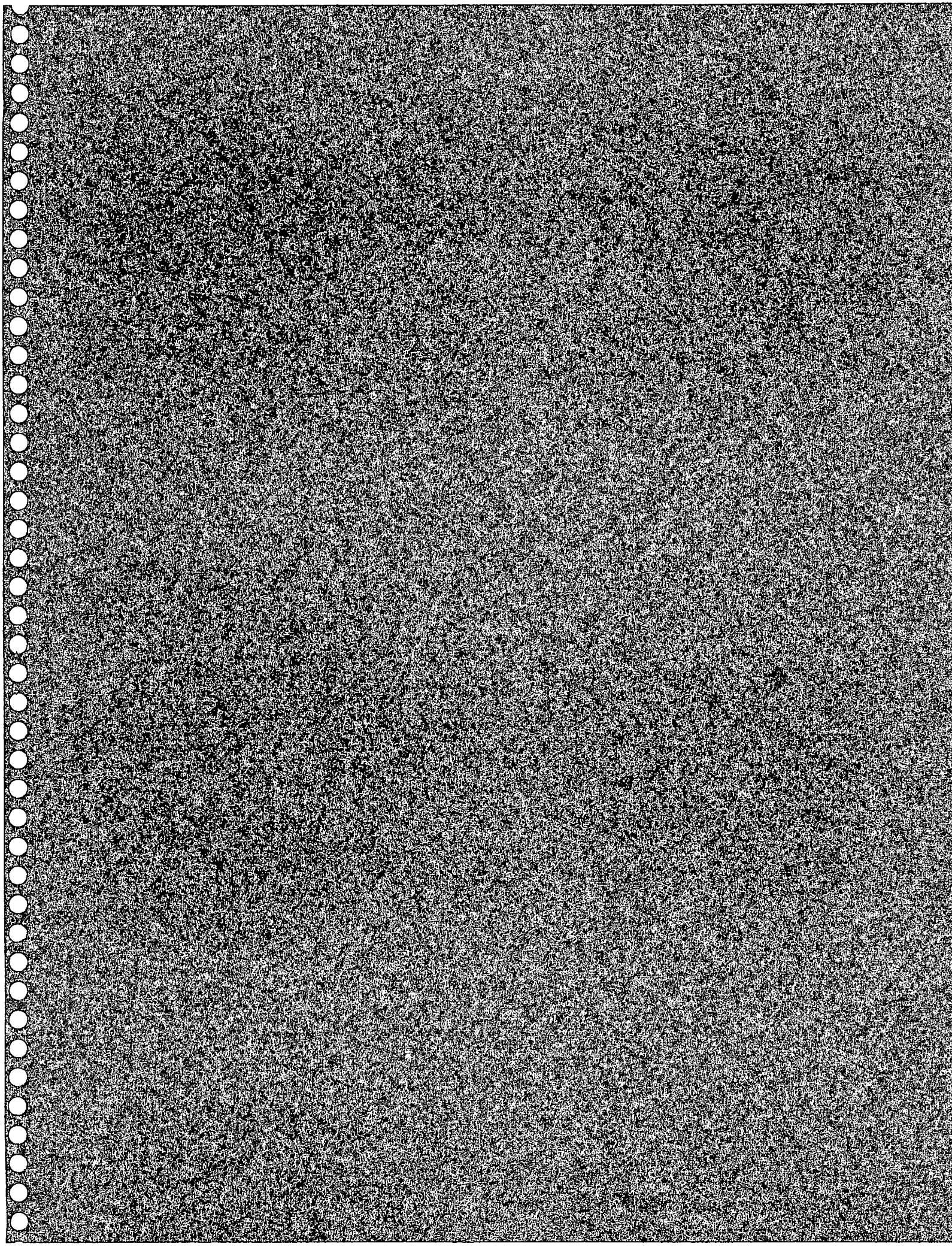
Most state ed depts don't know how to work with State Public Utility Comm.

PBS - interactive network

Do we need Dept of Tech funded?

- Prof Dev Day - NII Day

- information @ ~~Face m~~ ~~Face~~ Kanal company PSA?



UPDATE ON STATE EDUCATIONAL TECHNOLOGY INITIATIVES
1/15/96

STATE	INITIATIVES	COMP	CONN	TRAIN	CONT
Alabama					
Alaska					
Arizona					
Arkansas	• Arkansas has a non-profit organization, Project IMPAC, which has been working since 1986 to aid school districts in the incorporation of computers into the classroom and other technology efforts. IMPAC is designed to phase out of existence to allow the Arkansas Dept of Education to assume this responsibility. • The Arkansas Public School Computer Network (APSCN) provides Internet services to Arkansas public schools. By 1998, all public school buildings are to be connected. • ACT 280 was passed, which provides instructional materials, including technology-based products, at the kindergarten level to public schools.	X	X		X

STATE	INITIATIVES	COMP	CONN	TRAIN	CONT
California	• The 1995 Education Technology Act provides $13.4 million in funding for educational technology in CA schools. $6.5 million of this will be allocated through a competitive grant process, the remainder will go to existing technology projects. • The 1995-96 CA budget includes a block grant of $279 million for one-time spending for "instructional materials, deferred maintenance, and education technology, or any other non-recurring costs" in K-12 schools. School districts will receive lump-sum payments of approximately $52 per student no later than the end of October, 1996. • The 1995-96 CA budget includes a $10 million educational technology initiative designated for support of a program to refurbish and upgrade used, donated computers for CA schools. The CA Dept of Corrections receives this $ for parts, supplies,and training of inmates to do the refurbishing work.	X			X
Colorado					

STATE	INITIATIVES	COMP	CONN	TRAIN	CONT
Connecticut	• In declaring November, 1995 "Technology Month," Governor John Rowland has committed to every school in Connecticut being wired by the year 2000. • In 1995, $10.4 million was allocated from state bond funds to assist local and regional school districts with the infrastructure for technology. These funds will support activities related to upgrading electrical systems, hard-wiring school buildings, and acquiring equipment in order to be able to offer video, voice, and data communications throughout the state. Funding will be dispersed through a competitive grant process. • In 1995, the Educational Telecommunications Services Task Force was created. The TF has been charged with the responsibility of investigating methods for funding Connecticut's schools for the necessary infrastructure and modernization after installation of educational technologies. TF findings will be submitted to the legislature by January 1, 1996, for possible legislative action during the next legislative session.	X	X		
D.C.					
Delaware	• The Delaware Center for Educational Technology, created by state legislation, is spending $30 million in state money to wire all 7,000 Delaware classrooms with fiber optic cable by the fall of 1997.		X		

STATE	INITIATIVES	COMP	CONN	TRAIN	CONT
Florida	• Florida has increased appropriations for school technology from $5 million in 1993 to $135 million in 1994 and $117 million in 1995. • Florida appropriated $55 million for School Technology Incentive Awards. • The state also uses a venture capital fund to support private-sector development of software linked to statewide content standards. Florida schools receive a discount on the software, and the state receives a royalty for every copy sold outside the state. • The legislature enacted a bill creating the Florida Distance Learning Network, which will oversee an Educational Technology Grant Program and serve as the coordinating body for telecommunications and distance learning for all public education delivery systems.	X			X
Georgia	• In 1995, the state legislature enacted legislation creating a new Educators Technology Training Commission to undertake a comprehensive study of the state's needs with respect to training educators in the use of technology. A report on findings will be issued by 1/15/96. • The GA general fund budget included $12.8 million to hire technology specialists in schools.			X	
Hawaii	• Hawaii NetDay was launched on Jan 11, 1996.		X		

STATE	INITIATIVES	COMP	CONN	TRAIN	CONT
Idaho	• The Idaho legislature appropriated $14 million in 1994-95 for educational technology expenditures under the Idaho Technology Act. Of the $14 million, $10.4 million goes to K-12 schools by formula to support technology in the classroom. The rest was distributed through a competitive grant program. The legislation suggested that districts spend 50% on hardware, 25% on software, and 25% on training. All Idaho schools should be connected to the Internet within three years.	X	X	X	X
Illinois	• The General Assembly passed SB 941 which amends the school code to include instructional computer software within the state Textbook Loan Program, which is funded at $9 million for FY 1996.				X
Indiana	The Corporation for Educational Technology in Indiana raises money from the state and from private sources and uses it to promote learning outside the classroom by helping families install learning technologies in their homes.				
Iowa	• The Iowa Legislature approved a proposal to spend $18 million to begin extending the state's fiber-optic communications network to almost 500 high schools and 100 libraries, primarily those located in rural areas. Currently , the Iowa Communications Network links 125 sites across the state, of which approximately 60 are educational institutions. This four-year expansion project is projected to cost $96 million.		X		
Kansas					
Kentucky	• Kentucky's "master plan for education technology," released in 1992, calls for a communication system for voice, video, and data that will link the state's classrooms together. The plan calls for a telephone in each classroom, a computer for every six students, and a portable computer for every teacher. The total cost is expected to be $560 million over six years. So far, $137 million has been spent.	X	X		

STATE	INITIATIVES	COMP	CONN	TRAIN	CONT
Louisiana	• State regulatory commission requires that schools be charged at the residential rate rather than the commercial rate for telecommunications services.		X		
Maine	• Governor King signed into law a bill which authorizes a general bond fund issue in the amount of $15 million to raise funds to establish a distance learning network that would link the state's high schools and higher education facilities through an interactive television system. (A bond issue referendum was presented to Maine voters in Nov 95, not sure of outcome)		X		
Maryland	• The Maryland Department of Education has created a consortium known as the "Technology for Professional Development" to develop a technology-based system for teacher support and professional development. The consortium will offer standards-focused resources that employ technology in the delivery of staff development. Projected costs approximately $50,000 annually for development.			X	
Massachusetts					
Michigan	• Ameritech will provide discounted access rates for schools participating in their $10.5 million Education Avenue program. The program will also fund a resource center and an on-line help desk for teachers and students, as well as providing $500,000 to Michigan State University to create curricula for teachers who access the materials through the Internet. About 500 Michigan sites will be able to hook up to the Internet through the Education Avenue program.		X		

STATE	INITIATIVES	COMP	CONN	TRAIN	CONT
Minnesota	• MN H4, the K-12 education finance bill signed by Governor Carlson on 6/8/95 establishes a statewide telecommunications network intended to improve learning throughout the state. Separate grant programs are established for school districts and libraries. The bill also expands the Minnesota Education Telecommunications Council to include representatives of elementary and secondary education. The Council must recommend to the legislature by 12/15/96 a plan for long-term governance and a proposed structure for statewide and regional telecommunications. • The legislature has also funded a $2,7 million "Instructional Transformation Through Technology Grants Program" for 1996 and 1997 to help school districts build community partnerships and apply for technology grants to enhance teaching and learning, develop individual learner classroom-based teaching, and create a curriculum environment that is multi-platform.		X		X
Mississippi	• In 1995, the legislature created the Mississippi Science and Technology Commission to strengthen state awareness and support of science and technology innovations and to advise the legislature and Governor on such issues.				
Missouri	• Educational institutions receive a 20% discount on telecommunication rates. • In 1989, Missouri passed an earmarked tax on videotape rentals that provides funding for satellite dishes on schools, satellite course fees, laser disc players, and other educational uses. Revenue is about $4 million per year. • Since 1986, state lottery funds have provided almost $5 million per year to schools that can be used for technology.	X	X		
Montana					

STATE	INITIATIVES	COMP	CONN	TRAIN	CONT
Nebraska	• The Educational Telecommunications Act of 1995 created the Nebraska Educational Telecommunications Commission to facilitate the efficient and orderly use of facilities, networks, and equipment.		X		
Nevada	• In July of 1995, created the Trust Fund for Educational Technology within the state general fund (size of fund?). The Superintendent of Public Instruction will administer the fund, which may be used to obtain and maintain hardware and software for computer systems in the K-12 public schools.	X			X
New Hampshire					
New Jersey					

STATE	INITIATIVES	COMP	CONN	TRAIN	CONT
New Mexico	• During the 1996-97 school year, New Mexico will have a special fund to stimulate locally-developed and state-approved long-range educational technology planning. The state fund includes approximately $9 per student with an average local match of $36 per student. As of December 1, 1995, all 89 school districts will have a state-approved strategic plan for integrating appropriate educational technology into the learning process. • Professional Development in New Mexico includes participation in the National Online Internet Institutes, regional and state educational technology training sessions in March and April 1996, and a newly established cadre of teachers and administrators trained in cooperation with staff from Los Alamos National Lab. Each member of the cadre adopts a partner district and conducts staff development as requested by teachers. The state provides funding for travel, substitutes, and materials. On November 30, 1995, the New Mexico State Board of Education adopted, as part of the 1997 public school support package, phase one of a five-year plan to bring voice, video, and data connectivity to every classroom in the state.		X	X	X
New York					

STATE	INITIATIVES	COMP	CONN	TRAIN	CONT
North Carolina	• The North Carolina Instructional Technology Plan includes $381 million over 5 years, including $42 million for 1995-96. • North Carolina has broadened the definition of textbooks to encompass "instructional materials", including technology-based products. • The NC Technology Users Task Force has been created to develop a plan and a mechanism for determining existing technology competency levels. Expected outcomes include that by 1996 all graduates and faculty of NC teacher education programs will demonstrate basic competency levels; by 1997 they will demonstrate advanced competency levels.	X(?)	(?)	X	X
North Dakota					
Ohio	• In 1994, Ohio launched a 5 year, $95 million set of bond issues to support educational technology. These funds will be used to wire every classroom in the state to support voice, data, and interactive video. Almost half of these funds will support equipment purchases for the poorest 25% of schools. • In 1995, Governor Voinovich signed legislation that establishes the SchoolNet Plus Program. This program is designed to provide educational technology to school districts -- $125 million in 1995-96 will be distributed to school districts on a per-pupil basis, and will be used to fund purchases of computers for students in grades K-4. Another $275 million is included in the capital appropriations bill for FY 1997-98 which will be reconsidered when the legislature reconvenes in January.	X	X		
Oklahoma					

STATE	INITIATIVES	COMP	CONN	TRAIN	CONT
Oregon					
Pennsylvania					
Rhode Island					
South Carolina					
South Dakota					
Tennessee	• Since 1993-94, TN has provided $98 million in special appropriations earmarked for educational technology. This includes $74 million to provide training and state-of-the-art technology for 4,800 21st Century classrooms, and $3 million to provide yearly training, state salary support, and benefits for 212 local technology coordinators. • Tennessee launched the K-12 Web Project to celebrate the state's bicentennial. The state has already equipped every school library and central office with a text connection to the Internet. Additional funds have been identified to upgrade these connections to full graphics and video and to build the necessary infrastructure to connect all teachers and students. Using $5 million for start-up costs, which includes $1 million from private corporations, this initiative will provide Internet connections with full graphics, text, and video to all 1554 Tennessee public schools by the fall of 1996. • To help offset the cost of training teachers for the Web Project, the Commissioner of Education has directed every person in the Department of Education that holds an active teaching certificate to spend at least 5 days in the classroom substitute teaching during 1995-96. These 200 state employees will provide a pool of 1000 days that can be used for teacher training at no cost to the local school systems.		X	X	

STATE	INITIATIVES	COMP	CONN	TRAIN	CONT
Texas	• In 1995, an amendment to the Texas Public Utility Act created the Telecommunications Infrastructure Fund. Now, in addition to the requirement that Telecommunications services for distance learning must be provided at rates 25% below the normal level, the fund provides $150 million per year for ten years to award grants and loans to fund equipment purchases, wiring, materials, program development, training, and installation costs needed for distance learning or any statewide telecommunications network. These funds will be made available for K-12 schools. • In the spring of 1995, Texas completely overhauled its education code with the passage of S1. Included in this education reform bill was: the redoing of the textbook adoption program to include eligibility to technology-based materials; the allocation of $30 per pupil for technology purposes, which works out to almost $100 million per year; and a requirement that a long-range plan for technology be developed and updated regularly.	X	X	X	X
Utah					
Vermont					
Virginia	• In 1995, Governor Allen signed a measure to grant $46.5 million to schools to expand their access to technology. Interested schools will receive $10,000 grants to begin networking computers and developing automated school libraries and media centers.		X		
Washington					

STATE	INITIATIVES	COMP	CONN	TRAIN	CONT
West Virginia	• The Basic Skills/Computer Education Program will provide hardware and software for every K-6 classroom in the state to improve basic skills using technology. This program, begun in 1990, has placed nearly 16,000 student workstations in K-4 classrooms, over 4,000 classrooms have student utilization of technology, and over 10,000 educators have been trained. • Over $1.2 million worth of multimedia software is being distributed to select schools as part of a partnership between Microsoft Corporation and the West Virginia Department of Education. Forty demonstration sites have been established at schools across the state to assist teachers in understanding how to use multimedia in the classroom.	X	X	X	X
Wisconsin	• In 1995, Governor Thompson signed an education reform act that authorizes local Cooperative Educational Service Agencies (CESAs) to borrow from a $15 million trust fund on behalf of two or more school districts for the purpose of conducting a distance education project. • The reform act also created a new "Pioneering Partners" grant program, which includes $10 million in 1996-97 funding through a new, continuing appropriation for grants for educational technology.	X	X		
Wyoming					