

The Challenge

- Technology to Assist Deaf & Hard-of-Hearing Students To....
 - Acquire and Share Information
 - Communicate
 - Participate in Educational Opportunities
 - Classroom/Lectures and Team Experiences
 - Online Learning Technologies
 - Laboratory Experiences
 - Non-educational Experiences
- Benefit NTID Students Directly Through Improved Access Services
 - Benefit Other Students Through Dissemination Efforts to Improve Best Practices

RIT/NTID

- NTID is Located on the RIT Campus, Rochester NY USA
- 1 of 8 Colleges of RIT
- Internationally Recognized Leader in Postsecondary Deaf Education
- Over 1200 Deaf and Hard-of-Hearing Students on Campus with 14,000 Hearing Peers
- Unique Position to Study First-hand the Uses, Challenges and Needs of Deaf Students When Using Access Technologies

NTID Strategic Vision 2010

- *“The large, diverse community of deaf, hard of hearing, and hearing individuals comprising RIT, coupled with the array of scientific and technological expertise at RIT should position us well to develop cutting-edge access technologies for deaf students.”*
- *“We will become a Center of Excellence in Access Technology as a part of RIT’s First-in-Class initiative.”*

February 2005

University Wide Research Priority

- NTID Research Programs are an Integral and Approved Component of RIT’s Research Strategic Initiatives
- NTID Strategic Research Structure
 - Department of Research & Teacher Education ([R&TE](#))
 - Center for Education Research Partnerships ([CERP](#))
 - Center on Access Technology ([CAT](#))
- NTID Areas of Research
 - Teaching & Learning
 - Technology, Access & Support Services
 - Job Success & Mobility
 - Faculty & Staff Communication Skill Development

Development of Business Plan

- Plan for a Plan
 - ...a brief action plan for formulating a detailed needs and market potential document, and subsequent business plan, for a Center on Access Technology
- Focus Groups
 - An open and informal discussion for participants to share ideas on which emerging technologies they believe have the potential to enhance access to education for students who are deaf and hard-of-hearing

Focus Groups

Target Group/Date	Agenda/Participants	Summary Notes
Technology Specialists at Symposium June 28, 2005	PDF	PDF (Same as Agenda)
Technology Specialists/Organizations September 16, 2005	PDF	PDF
NTID National Advisory Group October 28, 2005	PDF	PDF
RIT/NTID Community November 8, 2005	PDF	PDF
NTID/RIT Students December 14, 2005	PDF	PDF


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- ### Focus Group Recommendations
- Move Research to the Marketplace Faster
 - Improve Efficiency of Text Systems
 - Measure Impact of Access Technologies
 - Develop Access Technology to Enhance Interaction & Participation
 - Provide Options and Redundancy for Access
 - Attend to Expressive as Well as Receptive Needs for Access
 - Work Closely with Industry
 - Disseminate Finding Widely Support Services on Campuses Understand Options
 - Group Priority Areas Into "Strands" to Maintain Focus
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- ### Strands of Activities
- Classroom Access Technologies
 - Mobile Technologies
 - Training and Evaluation Services
 - Audio & Sound Technologies
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- ### Classroom Access Technologies
- Captioning
 - NoteTaking
 - Interpreting
 - Assistive Listening Technology
 - Team & Group Learning
 - On-Line & Blended Learning
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- ### Mobile Technologies
- Wireless
 - Cellular
 - Messaging & Email Systems
 - Emerging Mobile Technologies
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- ### Training & Evaluation Services
- Assess New and Emerging Technologies for Adoption or Adaptation.
 - Conduct Comparison Evaluation of Access Systems for Decision Makers.
 - Disseminate Findings
 - Develop and Disseminate Modular Training Packages Related to Access Issues for Deaf and Hard-of-Hearing Students.
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Audio & Sound Technologies

- Address the Needs of Hard-of-Hearing Students
- Monitor Emerging Audiological and Audio – Sound Technologies for Potential for Improving Access



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Center Activities & Operating Guidelines

- Encourage and Support RIT/NTID Faculty to Submit Proposals
- Three Year Time Frame to Establish “Critical Mass”
- Senior Research and Development Associate
- Adapt/Adopt Existing Technologies
- Utilize Network
- Education & Training

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Funded Project

- Speech to Text Systems: Comparative Analysis of Text Generation and Display Methods. (Funded by NSF)
 - This project will evaluate computer-based and Automatic Speech Recognition (ASR) applications when used to present captioned information in classroom setting



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Supported Project

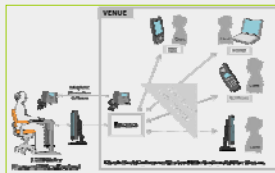
- HyperSonic Sound Technology as Assisted Listening Devices for Deaf and Hard-of-Hearing Students
 - In a classroom setting, a hyper focused sound device, can place sound directly to the proximity of deaf or hard-of-hearing students.



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Proposal Submitted Project

- Remote Captioning in Large Venues. (Submitted to NIDRR)
 - This project will explore solutions to providing real time captions, via wireless technology, to wireless enabled devices such as mobile phones, PDA's and computers.



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“Proposal Submitted” Project



- Viability Study of Remote Video Interpreting (RVI): Technical Readiness and Best Practice Guidelines.
 - This project will address the issues of implementing an internet-based computer system to provide live, video-based, interpreting to educational settings.



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"Proposal Submitted" Project

- Tablet PC Technology and Classroom Support for Deaf Students.
 - This project will investigate the use of Tablet PC technology to support Classroom Note Taking.



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Projects "In Development"

- General Motors OnStar Access Project
- Sprint Nextel and Rave Wireless Technology to Expand Student Communication Options
- Creating Line Drawings of Sign Language
- Use of Innovative Sound Technologies in Mainstreamed Classrooms

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Areas of Interest

- Automatic Speech Recognition
- "Video Telephone" Technology
- Messaging Systems
- Automatically Index and Caption Web Multimedia Presentations
- Access Issues Related to e-Learning
- Remote Access Support Systems
- Captioning & Text Systems



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Future Activities

- Bring a Senior Research Associate to the Team
- Secure Funding for 6-10 Projects that Address the Strands
- Support Funded Projects
- Report/Review Status with Original Focus Groups and Advisory Teams
- Honestly Appraise Efforts and Modify the Center's Strategy as Necessary.

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Instructional Technology and Education of the Deaf Symposium

- June 23 – June 26, 2008
- Sponsored by:
 - NTID
 - Nippon Foundation
 - PEN-International
- Over 250 Participants
 - 20 Countries



<http://www.rit.edu/~techsym>

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NTID Center on
ACCESS TECHNOLOGY
For Students Who Are Deaf or Hard-of-Hearing

www.ntid.rit.edu/cat