

NTID Center on ACCESS TECHNOLOGY

For Students Who Are Deaf or Hard-of-Hearing

James J. DeCaro E. William Clymer

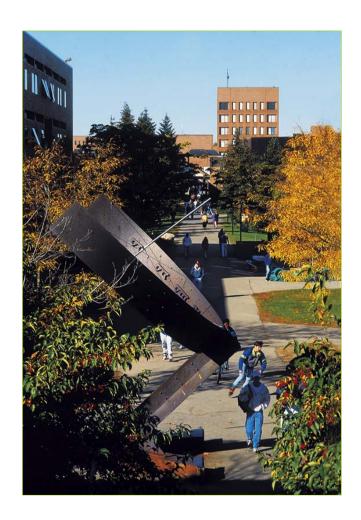
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The Challenge

- 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 Firsthand 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."

Strategic Vision 2010 Creating our Future $R \cdot I \cdot T$ NATIONAL TECHNICAL INSTITUTE FOR THE DEAF February 2005

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 (<u>CERP</u>)
 - Center on Access Technology (<u>CAT</u>)
- 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



Action Steps to Develop a Business Plan

1 May 2005 - 15 January 2006

Establishment of a

Center on Access Technology in Deaf Education: For Students Who Are Deaf or Hard-of-Hearing

An NTID/RIT Center of Excellence

This document describes a brief action plan for formulating a detailed needs and market potential document, and subsequent business plan, for a Center on Access Technology in Deaf Education, at NTDORIT.

- 1. Goal
 - a. NTD will establish a collaborative research, development and implementation support network at this university that includes faculty for the colleges of RIT, researchers from other universities, industries, professional organizations and access service providers. The network will promote research and development that exploits technology for "access to education" for individuals who are deaf or hard-of-hearing.
 - i. "Access to education" refers to unencumbered and enhanced access to classroom, laboratory and associated experiences; and unencumbered access to overall personal, social and co-curricular realms of the educational environment where assistive or augmentative technologies can improve access for individuals who are deaf or hard-of-bearing.
 - ii. The Center will provide leadership and support to those individuals researching, developing, implementing and evaluating technologies as they pertain to enhancing the educational experience of persons who are deaf or hard-of-hearing.
- 2. Background
 - a. The business plan for the establishment of the Center on Access Technology in Deaf Education will cover a two and one-half year period of time; 15 January 2006 to 31 December 2008.
 - The business plan will incorporate work already completed as part of the deafness related First-in-Class efforts at RTT
- 3. Initial Team
 - James J. DeCaro, Director and E. William Clymer, Coordinator of PEN-International, will work closely with Peter Lalley on the development of the business plan and its subsequent implementation.

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Focus Groups

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

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

Strands of Activities

- Classroom Access Technologies
- Mobile Technologies
- Training and Evaluation Services
- Audio & Sound Technologies



Classroom Access Technologies

- Captioning
- NoteTaking
- Interpreting
- Assistive Listening Technology
- Team & Group Learning
- On-Line & Blended Learning



Mobile Technologies

- Wireless
- Cellular
- Messaging & Email Systems
- Emerging Mobile Technologies



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.



Audio & Sound Technologies

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

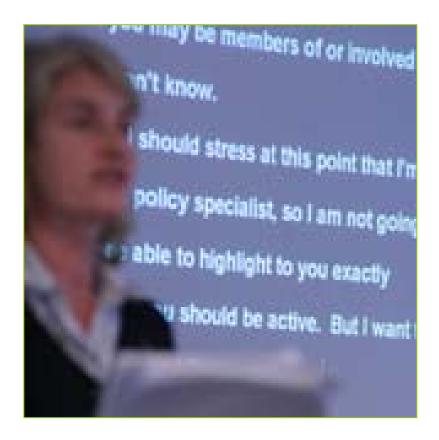


Center Activities & Operating Guidelines

- 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

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



"Proposal Submitted" Project

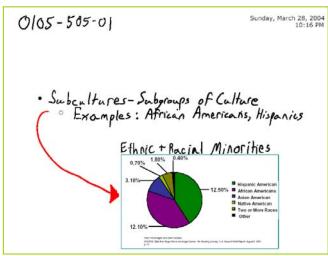
- Viability Study of Remote Video Interpreting (RVI): Technical Readiness and Best Practice Guidelines.
 - This project will address the issues of implementing an internet-based computer system to provide live, videobased, interpreting to educational settings.



"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.





"Proposal Submitted" 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-ofhearing students.



Projects "In Development"

- General Motors OnStar Access Project
- Remote Captioning in Large Venues
- 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

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



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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