

**THE UNIVERSITY OF TEXAS AT AUSTIN  
INFORMATION TECHNOLOGY ADVISORY COMMITTEE**

**Accessibility Institute Vision Plan**

**SUMMARY OF REQUESTS**

*(Summarize funding requests concisely)*

The Accessibility Institute requests a total of \$107,223.50. Funds will be used for the following:

1. **Upgrade our Accessibility/Usability Lab** to increase our capacity for rigorous user testing of online instructional resources. User testing includes participants with and without disabilities. Including test participants with and without disabilities: (a) makes the subject pool more accurately representative of the student population; (b) enables greater accuracy in identifying how accessibility and usability barriers affect actual users; and (c) yields more comprehensive and useful recommendations to developers.
2. **Establish a Student Web Accessibility Team** to assist in creating online instructional resources that achieve accessibility for students with disabilities through the application of cutting-edge technologies and strategies to meet the latest international standards for accessibility

**OVERVIEW OF CURRENT IT PROGRAMS AND INFRASTRUCTURE**

Vision/Mission/Goals of Unit

The Accessibility Institute integrates technology, accessibility, and learning for everyone through research, education, advocacy, consulting, training, and service. The Accessibility Institute promotes all aspects of Web accessibility by providing free training and consulting to the UT community, by conducting cutting edge research, and by proactively incorporating accessibility into all educational research and development activities.

**Goal:**

To ensure that UT Austin is the world leader in providing online instructional resources that are accessible to all students, including students with disabilities. This will be a significant extension of our current #1 ranking among US research universities, as measured by a 2003 University of Washington study that examined informational and administrative pages of the top 102 research universities in the United States.

**Methods:**

- Raise awareness and reward achievement through annual events such as the AIR University competition, which has been organized since 2000 in partnership with the Austin-based nonprofit Knowbility. Expand participation to include faculty and others creating instructional resources as well as developers of administrative and informational sites. Seek support for an IITAP-style award specifically for accessibility.
- Perform regular assessments of online instructional resources against national and international standards for Web accessibility
- Provide accessibility training to faculty, students, and staff developing online instructional materials
- Assist developers in integrating accessibility into project planning and design

- Carry out user testing to measure impact of accessibility barriers on students with and without disabilities
- Develop online resources to support creation of accessible course materials

Some of our clients (Fall 2004)

- General Libraries (major redesign of UT Library Online)
- College of Engineering (major redesign of College Web site, including sections for current and prospective students)
- Office of the Registrar (major redesign of Online course schedule)
- Undergraduate Writing Center (Virgil, an interactive writing tutor; winner of the 2004 IITAP award)

In addition, we have made presentations in a wide range of classes taught by faculty in Computer Sciences, the School of Information, Design, Rhetoric, Education, and the Center for Instructional Technologies, and have offered full- and half-day accessibility training open to UT faculty, students, and staff. Slatin teaches an academic course on accessibility which is open to both graduate and undergraduate students; the course is crosslisted in English, Information, RTF, and STS (Science, Technology, and Society), and approval is being sought for additional crosslistings in Curriculum & Instruction and the LBJ School.

Programs (*programs requiring recurring funds for salaries, operations, etc.*)

- Accessibility/Usability lab (user studies that include student participants with and without disabilities). We believe this to be the only lab of its kind in the US.
- Compliance checking (evaluation of online resources against national and international standards for Web accessibility)
- Accessibility training (face to face and online)
- Standards and policy: participate in development of the World Wide Web Consortium's Web Content Accessibility Guidelines 2.0 ; chair Accessibility and Usability Domain committee for the state of Texas Department of Information Resources; advise Provost on accessibility policy

Infrastructure (*overview of IT system – facilities, CPUs, servers, networking, security, IT-Accessibility/Usability lab:*

*Desktop PC (Windows XP)*

*PC laptop*

*Video cameras*

*Scan converter*

*Mixer board*

*Session monitoring equipment*

*Video recorder*

*Morae remote usability testing software*

*JAWS and Window-Eyes screen readers (for use by people who are blind)*

*ZoomText screen magnifier (for low vision)*

Current and proposed funding sources for IT programs and infrastructure (*describe sources of funds – ITAC allocations, fee income, endowments, donations, etc.*)

Current: annual allocation from Provost's office, plus one small grant from Humanities Texas to develop online training about making humanities materials accessible

Proposed: Actively seeking grants from private foundations and government agencies, including Mitsubishi Electric America Foundation, NEC Foundation, NSF, NEH, and others.

Best Practices (*identify any "best practices" that have significantly improved IT programs, infrastructure, operations, cost efficiencies, etc. since the last Vision Plan*)

N/A

## **USE OF PREVIOUS ACADEMIC YEAR ALLOCATIONS**

N/A

Programs (*describe stated purpose of funds allocated in previous Vision Plan and how they were actually used; explain deviations*)

N/A

Infrastructure (*describe stated purpose of funds allocated in previous Vision Plan and how they were actually used; explain deviations*)

N/A

One-time Projects (*describe stated purpose of funds allocated in previous Vision Plan and how they were actually used; explain deviations*)

N/A

## **NEEDS AND PROPOSED USE OF FUNDS**

Programs (*identified high priority needs, how they fit with the Vision/Mission/Goals of the Unit, the funding requested, and how it will be used*)

### **Upgrade our Accessibility/Usability Lab**

- 2 PCs: One will replace existing outdated equipment; the second will provide an environment for testing Web and desktop applications in their early, crash-prone stages without jeopardizing ongoing user testing
- 1 Macintosh: A new screen reader for the Macintosh is now in beta testing. Adding a screen reader-equipped Macintosh to the Lab will augment our ability to conduct user testing with equipment in actual use by students and other members of the University community.
- 5-user license for JAWS screen reader
- 5-user license for Window-Eyes screen reader
- 5-user license for ZoomText screen magnifier

The licenses for assistive technology (screen readers and screen magnifier) will increase our effectiveness by allowing members of the SWAT team (see below) to demonstrate assistive technology and perform accessibility evaluations at remote sites while other activities that require these tools are conducted at the Accessibility Institute.

## **Establish Student Web Accessibility Team (SWAT)**

We propose to establish a Student Web Accessibility Team (SWAT) to assist in development of online instructional resources that are accessible to all students, including students with disabilities. Members of the SWAT team will:

- Work with faculty and instructional designers to develop solutions for challenging academic content such as mathematics, mapping, foreign languages, and interactive demonstrations. Solutions that are most effective will often involve cutting edge technologies such as Mathematics Markup Language (MathML), Scalable Vector Graphics (SVG), Synchronized Multimedia Integration Language (SMIL), Resource Description Framework (RDF), etc., as well as more conventional technologies such as XHTML, CSS, and client- and server-side scripting.
- Evaluate new and existing instructional resources for compliance with national and international Web accessibility standards (Section 508, Web Content Accessibility Guidelines).
- Publish working examples and techniques in the How-Tos and Demos section of the Accessibility Institute site.
- Demonstrate techniques and examples in face to face training classes.

## ***Accessibility evaluation***

Members of the SWAT will be trained to participate in the following aspects of accessibility evaluation according to their experience and other qualifications:

- Use of **automated tools** such as Bobby and WebXM, to identify accessibility errors that can be detected algorithmically (e.g., missing text alternatives for images, missing labels for form controls, data tables without appropriate markup for headers and/or data cells);
- **Manual checks** of items identified by automated tools as requiring human judgment (e.g., use of color as only means of conveying information; need for extended description of complex graphics; presence of captions and audio descriptions for multimedia; accessibility of Flash content)
- **User testing:** representative groups of target users, including individuals with and without disabilities, attempt to perform tasks typical of those for which the site is designed. Test facilitators guide the subjects through the test scenarios, while observers register their observations and impressions to supplement the videotaped record of each session.

Developers are welcome to observe user testing. Data from these sessions helps developers identify and correct problems, leading to enhanced user experience for individuals with and without disabilities. Data also provide the basis for conference presentations, publications, and updated training materials as well as participation in international standards-setting activities.

## **The need**

Federal law, including the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, requires that University programs and activities be accessible to qualified students with disabilities. The US Department of Education's Office of Civil Rights has consistently held that this requirement applies to instructional materials that are provided online as well as those in

print or other media such as video. In addition, Texas law requires state agencies, including institutions of higher education, to make online resources that are available to members of the public accessible to individuals with disabilities. An accessibility policy for the University of Texas at Austin is currently under review.

As a working definition, online resources may be considered accessible when people with disabilities can use them as effectively as people without disabilities. From the technical standpoint, accessibility is defined by two related sets of standards:

- Web Content Accessibility Guidelines (international standards published by the World Wide Web Consortium, May 1999). Adopted by many nations, including the European Union and member states, Canada, Australia, New Zealand, and others; these are the basis for the US Section 508 standards and others.
- Section 508 (federal standards established by the US Access Board). These standards apply directly to federal government resources, and have been adopted by many other organizations including state and local governments, universities, and corporations. UT Austin’s Web Accessibility Guidelines currently recommend Section 508 as a minimum standard for accessibility.

A new international standard, the Web Content Accessibility Guidelines 2.0, is currently under development by the World Wide Web Consortium, with publication expected in 2005. Accessibility Institute director John Slatin serves as an Invited Expert in the Web Content Accessibility Guidelines Working Group and is co-editor of General Techniques for Web Content Accessibility Guidelines 2.0, a major supporting document that will be published together with the new standard.

Members of the SWAT team will be trained to use the new Web Content Accessibility Guidelines 2.0 in evaluating and creating Web-based instructional resources. This offers another way to sustain and enhance the University’s reputation for innovative uses of instructional technology, especially because (as noted above) the most effective accessibility solutions for challenging academic content often involve use of cutting-edge technologies and innovative implementations.

Requested resources

1) Two (2) Graduate Research Assistants, 20 hours/week each

			(\$17,808 x 2)
<b>Grad. Res. Assist.</b>	Sept. - Aug. '05	Salaries	35,616
		Fringe @	(\$2,315 x 2)
	\$35,616/12 mos. Base	13%	4,630.00

2) Tuition and fees reimbursement for GRAs

			(\$5304.00 x 2)
<b>Tuition and Fees</b>	\$2,652/sem/2sem/s		10,608

3) Student Technical Assistants, \$10/hour, 2 STAs 10 hours/week each

			\$10,400
<b>Undergrad. Assist.</b>	Sept. - Aug. '05	Salaries	
		Fringe @	
	\$20,800/12 mos. Base	13%	\$1,352

Total salaries, fringe, and Tuition: \$62,606.00

Infrastructure (*identified high impact, short-term projects and how they fit with the Vision/Mission/Goals of the Unit*)

- 2 PC laptops
- 1 Macintosh laptop
- Macromedia Studio MX
- Adobe Illustrator, Photoshop

This equipment will support the SWAT team. It will expand the Accessibility Institute's outreach capability in important ways, raising awareness and making accessibility more "visible" on campus by allowing SWAT members to visit with Web developers in their offices or other campus sites where they work and thus lowering barriers to participation in accessibility initiatives. The equipment will also increase our capacity to conduct accessibility testing at remote sites.

Requested Infrastructure

1) Equipment

<b>2 PC Desktops</b> (Lab)	(\$1,488 x 2)	\$2,976.00
<b>2 PC laptops</b> (SWAT)	(1,899.00 x 2)	\$3,798.00
<b>1 Macintosh Desktop</b> (Lab)		\$2,999.00
<b>1 Macintosh Laptop</b> (SWAT)		\$2,799.00

2) Software and licenses

<b>5-user license for JAWS</b> (Lab and SWAT)	\$3,613.50
<b>5-user license for Window-Eyes</b> (Lab and SWAT)	\$2,385.00
<b>5-user license for ZoomText</b> (Lab and SWAT)	\$2,395.00
<b>Macromedia Studio MX</b> (SWAT)	(\$191.00x3) 573.00
<b>Adobe Illustrator</b> (SWAT)	(\$89.00x3) 267.00
<b>Adobe Photoshop</b> (SWAT)	(\$272.00x3) 816.00

3) Tech support for Accessibility/usability lab, contract with ITS User Services, 9 hrs/week @ \$47/hour

<b>Tech Supp for Usability</b>	58.5/da/\$376/da	\$21,996.00
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Total Infrastructure: \$44,617.50

One-time Projects (*identified high priority needs, how they fit with the Vision/Mission/Goals of the Unit, the funding requested, and how it will be used*)