



New ADAAG Moves Forward

At its meeting on Sept. 10 the U.S. Architectural & Transportation Barriers Compliance Board (Access Board) voted to approve a revised Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Guidelines. The content of the guidelines won't be known until the Office of Management and Budget reviews the rule and publishes it in the Federal Register. Once it receives the rule, OMB has 90 days to complete its review.

For the substance of the Board's guidelines to be enforceable under the ADA, the Department of Justice (DOJ) and the Department of Transportation (DOT) must publish a Notice of Proposed Rulemaking and Final Rule amending their ADA regulations and standards. While the Board's guidelines are the statutory minimum baseline for the standard-setting agencies, they are not the actual standards under the ADA or the ABA. In the past, DOJ has used the Board's guidelines as Appendix A to its ADA Title III regulation. However, DOJ and DOT are free to issue more stringent standards if they deem it necessary. "We do not know how long it will take DOJ and DOT to issue final rules," said Marsha Mazz, technical access coordinator with the Access Board. "DOJ and DOT do not have statutory time limits by which they must respond to a change in the Board's minimum guidelines. However, we hope that it will not take more than one year."

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Coming to Terms with Tolerances *Courts and Industry Address Tolerance Issues*

With construction tolerances related to accessibility being determined by courts across the country, the construction industry is beginning to address this issue and its challenges.

The Americans with Disabilities Act Accessibility Guidelines (ADAAG) does little to address tolerances, except to simply note that "All dimensions are subject to conventional tolerances for field conditions."

While the concept of tolerances, acceptable as-built deviations from certain specifications and drawings, is common throughout the construction industry, the level of acceptability may vary from individual to individual and may so be affected by such factors as the weather, soil differences, material and other variables.

Early On

Construction tolerance issues appeared in accessibility related litigation in 1997 with *Independent Living Resources v. Oregon Arena Corp.*, a case in which an attorney with disabilities and a non-profit advocacy organization for people with disabilities filed a suit against the owners and operators of a sports facility in Portland, OR for alleged ADA violations. In this case, the judge stated that neither party

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The Universal Design Education Online Project reaches out to students and teachers. See story on Page 8.

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Several years ago, I wrote an editorial in this newsletter about the hierarchy of importance among safety, accessibility and choice. At that time I proposed that safety was the most basic right, followed by accessibility and then choice (Universal Design Newsletter, Jan. 2000, Vol. 5, No. 1).

This issue has taken on an increased meaning since 9.11.01. Articles in mainstream and disability/access media have covered the difficulties experienced by travelers with disabilities at airport security checkpoints, and the increased “run around” experienced by mobility impaired people in accessing buildings where entrance security has affected accessible routes.

Like almost every other county in the country, Montgomery County, MD, (just outside of Washington, DC), has reassessed its vulnerability to terrorism. In this process, the decision was made to make the parking garage below the 20-story Executive Office Building (the site of many public meetings and offices) a “permit only” parking area. This meant that the public parking garage and its accessible parking had to be relocated elsewhere in downtown Rockville. The result is a dramatic concentration of publicly available accessible parking to a relatively inconvenient, but secure, parking garage about two blocks from the Executive Office Building.

The county has done a good job of trying to remedy the situation by allocating on-street parallel parking for qualified vehicles. It's only a matter of time until the necessary modifications have not been built to connect each of these on-street “accessible” parking spaces with the sidewalk via access aisles and curb ramps in the boulevard and public right-of-way.

I am sure that the county will ultimately satisfy the demand in a fully accessible manner, but unfortunately, the safety and convenience of underground accessible parking has fallen victim to security considerations.

9.11.02

Here, the rubber meets the road between the war on terrorism and providing accessibility. I think Montgomery County is doing a good job of balancing need against security. But, I think we must all ask ourselves, at what point are we willing sacrifice our civil right of accessibility to national security.

jsalmen@UniversalDesign.com

Letter to the Editor

Visitability is About Community Building

Dear Editor:

I must speak out on the apparent “issue” of visitability. I know of no other aspect of universal design that cuts so quickly to the core of the problems in America today. Because visitability is not about accessible housing. It is not about civil rights. It is about community building. Visitability says any member of the community should be able to “visit” any other member of the community.

Let me give you a peek at how the lack of visitability has affected my life as a disabled person and the father of two, now grown, children.

When my daughters were in their grade-and middle-school years, they were also involved in Girl Scouts. Of course, we sold cookies door-to-door in our neighborhood. Can you imagine sending your 7-year-old daughter up a flight of steps to a stranger's house, with the knowledge and fear that all you could do was watch?

Later, when the girls were in high school we had to develop some special rules for their

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Beefed up Laws in California

Earlier this year, the California Legislature gave some teeth to California laws that protect people with disabilities.

Effective Jan. 1, 2002, under California Civil Code section 52 (the Unruh Act), statutory damages were increased to a minimum of \$4,000 from the previous \$1,000. This amount is not discretionary with the judge, but should be automatic every time a violation is proven. Also now, under the Fair Employment and Housing Act it is illegal for an employer to ask about an employee's or applicant's disability at any stage (pre-offer, post-offer, or post-hire). It will allow a post-offer or post-hire inquiry only if it is job-related and consistent with business necessity. This differs from the Americans with Disabilities Act which will allow any inquiry at the post-offer, pre-hire stage.

Board Issues New Accessibility Guidelines for Recreation Facilities

On Sept. 3, the Access Board published new guidelines that address access for persons with disabilities to a variety of recreation facilities. The guidelines specify the minimum level of accessibility required in the construction or alteration of amusement rides, boating facilities, fishing piers and platforms, golf courses, miniature golf courses, sports facilities, swimming and wading pools, and spas.

The published guidelines will add a new Chapter 15 to the Americans with Disabilities Act Accessibility Guidelines (ADAAG). The ADAAG, as originally published, covered many types of buildings and facilities, but did not specifically address recreation facilities in detail. The newly published guidelines provide new requirements for such facilities and also clarify some existing requirements in ADAAG.

"The development of the accessibility guidelines for recreation facilities has been a long time in the making," said Jennifer Skulski, director of marketing and special projects for the National Center on Accessibility. "The new guidelines should further assist in planning accessible recreation facilities. However, similar to ADAAG, it is important to remember that these recreation guidelines are minimum guidelines. Application of the guidelines will provide minimum access. Therefore, whenever you can design beyond the mini-

um guidelines and apply the principles of universal design, you will be able to facilitate access for a wider spectrum of people."

According to the Board, the final guidelines are not mandatory on the public. Instead, they set the minimum baseline for enforceable standards maintained by the Department of Justice (DOJ) under the ADA and other agencies under the ABA. It suggests that in the interim, the public use the new guidelines as a resource in addressing access to the types of facilities covered until they are made part of the standards used to enforce the ADA and ABA. The new guidelines are posted on www.access-board.gov.

Board Invites Comments on Public Rights-of-Way Guidelines

On June 17, the Architectural & Transportation Barriers Compliance Board (Access Board) released for public comment draft guidelines on accessible public rights-of-way. The guidelines cover pedestrian access to sidewalks and streets, including crosswalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way.

The new provisions would supplement the Board's Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) accessibility guidelines by adding a new chapter specific to public rights-of-ways.

New trends in roadway design, such as the growing use of traffic roundabouts, pose additional challenges to access, while various technological innovations, particularly those pertaining to pedestrian signaling devices, offer new solutions, according to the Board. The new guidelines address these and other issues by providing criteria for public rights-of-way that are definitive and enforceable so that local jurisdictions and others can understand their obligations when constructing or altering streets and sidewalks.

The draft guidelines are based on recommendations from an advisory committee chartered by the Board. Since the draft guidelines depart from the advisory committee's recommendations in several areas, the Board is making an advance copy available for comment by the public, including industry groups, State and local governments, and advisory committee members. The deadline for written comments is Oct. 28. 

... "whenever you can design beyond the minimum guidelines and apply the principles of universal design, you will be able to facilitate access for a wider spectrum of people."

Jennifer Skulski,
National Center on
Accessibility

New ADAAG, *from page 1*

The Harmonization Window

It became apparent in the last few years that there would be an opportunity to make changes in the ADAAG and the model building codes so that the documents could have many of the same requirements. There was a push for harmonization of the ADAAG and the ANSI A117.1 Standard to the end.

The Access Board's move to publish the draft final rule in April gave the American National Standards Institute (ANSI) A117 Committee a preview of the final rule and another chance to make changes in its 2003 A117.1 Standard.

ANSI A117 Committee member Mark Wales, AIA, appreciated the Board's efforts at harmoni-

zation. "I believe publishing the final draft was a good idea," he said. "The private codes and standards development groups took the opportunity seriously and [worked] toward incorporating changes that agree with the Access Board's work, where appropriate. And, if the Access Board makes changes to the Final Draft based on the work done in the private world, it will prove to be a positive effort toward harmonization."

In May, the Access Board's Mazz noted that changes to the draft final rule were expected before the final vote. "There will be changes," she said. "I anticipate changes to things so that they will conform to the ANSI/ICC; things that come to light because of new information; things that we think the Board should take a look at." She noted that the final rule wouldn't have requirements that are "new." "We can't harmonize in things that we didn't give the public to comment on," she said. But in areas where the Board has received comments but made a different decision, she noted the staff might ask the Board to reconsider its position.

According to Wales, harmonization is a worthy goal that would solve many of the building industry's current problems. "There is no reason to have this country's designers, builders, building owners and business and industry struggle with multiple sets of requirements addressing the same issue – accessibility," he said. "Differing requirements only lead to confusion; confusion to mistakes; mistakes to an inaccessible environment; inaccessible environments to claims against people; claims to feelings of being wronged; those feelings to anger against stereotyped groups; and this all leads to a breakdown in the effort toward accessibility to all people," he said. 

"I believe publishing the final draft was a good idea."
Mark Wales, AIA

A Better Way?

There has to be a better way to develop accessibility guidelines -- is a common feeling among many who have observed the development of the Americans with Disabilities Act Accessibility Guidelines (ADAAG). American National Standards Institute (ANSI) A117 Committee Member Mark Wales, AIA, recently shared some of his thoughts on the roles of the US Architectural & Transportation Barriers Compliance Board (Access Board) and the organizations that develop model building codes:

"What I would like to see happen is for the Access Board to turn over the writing of the technical provisions and scoping for the built environment, developed thus far, to the private world, but to stay intimately involved with the development of the private codes and standards. The Board's staff has done an exceptional job of working within the private development process and its efforts have had a huge impact on those codes and standards. This is not because the staff has any special power or authority, but because they bring valid ideas, input, and reasoning, and they understand the process and work well within the process.

The private codes and standards writing organizations and committees have proved they are responsive and capable of developing a comprehensive and forward thinking product. There is no need for duplicating the effort and adding an additional layer of effort for purposes of harmonizing the various documents.

Additionally, there would not be unsynchronized development cycles to contend with. The private codes and standards writing organizations are geared to respond more quickly than the federal process. This allows for a faster response to technology development and revisions to other codes and standards as they develop.

The Access Board could then focus its time more on developing other areas that still need attention for purposes of accessibility. Many issues and subjects are not appropriate for inclusion in the building codes and standards. However, those future Access Board projects that are appropriate could then be brought forward to the private codes and standards development groups." 

Position Available: CENTER DIRECTOR

The Center for Universal Design, an initiative of the College of Design, North Carolina State University, is a national design innovation, research, technical assistance, and training center focusing on the design of products and environments that are usable by all persons regardless of age, ability, or circumstance. For details about the position, visit www.ncsu.edu/www/ncsu/design/sod5/cud/position.html. The position was available as of Sept. 1 and will remain open until filled.

EUROPE: e-Europe Creates Network

The latest European-wide effort for Design for All is focused on information technology (IT). In July 2002, the European Union launched the European Design for All e-Accessibility Network (EDeAN). EDeAN addresses a goal of the eEurope 2002 Action Plan: the integration of older people and people with disabilities into the information society through the design of mainstream products and services to be accessible by as broad a range of users as possible. The network will make recommendations for curricula; provide a forum for Design For All; and facilitate idea sharing through conferences, symposia, and student exchange programs.

The Danish Centre for Technical Aids for Rehabilitation and Education in Copenhagen, Denmark was selected to be the lead organization, the secretariat that will coordinate the network comprised of more than 15 national centers throughout Europe. Each national center is the contact point for organizations within its own country. There are more than 90 organizations already involved with the growing network. For more information about the European Design for All e-Accessibility Network or the Danish national network, contact the Secretariat Manager Cathy Toscan c.toscan@hmi.dk or visit the EDeAN website at www.e-accessibility.org.

UNITED KINGDOM: Two Design Competitions Address Social Needs

Both the Helen Hamlyn Research Center (HHRC) at the Royal College of Art (RCA) and the Royal Society of Arts (RSA) successfully engage design students in high-profile opportunities to solve social problems by design. Approximately 30 percent of all graduating RCA design students entered the 2002 Design for our Future Selves competition. The RSA Student Design Awards annually involve more than 2,000 students from the UK and mainland Europe. Each program has strong real-world ties with industry and social

agencies to provide practical challenges and commercial opportunities for the students.

The 2002 Design for Our Future Selves Competition at the HHRC recently awarded more than \$7,500 to the designers of nine winning projects. Awards were made in five categories - two addressed the socially invisible groups of older people and young disabled people; two investigated the challenges of work-life balance and urban mobility; and there was also a new section for communication projects. In addition, a special Helen Hamlyn Award for creativity and innovation across all categories was awarded jointly to Mark Champkins for his self-heating crockery that significantly reduces cooling of food and to Richard Mawle for LifeShell, a personal protection device, worn by motorcycle and moped riders to minimize spinal injury from collisions.

The annual Snowdon Award for Disability Projects was given to a height-adjustable



The Brobdingnag light & Lilliput table gives workers at home some privacy.



The spring wash basin is free standing and height adjustable, usable in a variety of settings.

washbasin designed by Owen Evans. Lord Snowdon, the Provost of the Royal College of Art and a long-time supporter of the rights of disabled people commented: "This is a totally new, free-standing concept which is easy to install and with benefits for everyone, not just disabled people."

The Brobdingnag light & Lilliput table by Jun Takagi won first prize in the work category. Inspired by Gulliver's Travels, the height-adjustable lampshade creates a secure space as people get inside; the table has a quiet space under the top for a restful read. Other winners include an urban park farm, a plug-in car, a new sans-serif type, an ear protector for rugby players and a media campaign for water conservation. There were 58 short listed projects, each of which received HHRC grants of \$115 from to help support user testing and development costs. The competition and all the projects

...the integration of older people and people with disabilities into the information society through the design of mainstream products and services to be accessible by as broad a range of users as possible.

"World Update" is written by Elaine Ostroff, founding director of Adaptive Environments Center. If you have information about international universal design efforts that you would like to see published in Universal Design Newsletter, write to us at: 6 Grant Ave., Takoma Park, MD 20912; or contact publisher@universaldesign.com.

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Tolerances, from page 1

had provided information about what acceptable dimensional tolerances were in aspects regarding the accessibility of toilet stalls.

In the follow-up case, *Independent Living Resources v. Oregon Arena Corp.* in March 1998, which addressed some additional issues, the judge again ruled in several instances regarding lavatories that the defendant had not presented evidence about what the acceptable construction tolerances were.

The judge wrote in the case opinion: “‘Dimensional tolerances’ is not a mantra that, when chanted, automatically excuses all deviations from the Title III Standards.” Furthermore, the judge emphasized that tolerances that render a facility inaccessible are not acceptable.

New Ground

Last year, the case *Access Now Inc. v. Ambulatory Surgery Center Group Ltd.* broke new ground when a federal district court judge in Florida ruled that some variations from ADAAG are acceptable (see *Universal Design Newsletter*, Oct. 2001). That case addressed numerous tolerance issues with the exception of sloping in parking lots and sidewalks. On the remaining issue, the court denied the motion of a blanket tolerance but said it would consider each slope on a case-by-case basis, according to Brett Ruzzo, an associate attorney with defense counsel Ford & Harrison LLP.

Since then, a court has accepted slope and other tolerances as part of a consent decree in a case filed by the Association for Disabled Americans and others against Amoco Oil Co., BP Exploration and Oil Inc. and Atlantic Richfield Co., subsidiaries of BP America Inc.

In the BP Amoco case, the plaintiffs asserted that Amoco’s gas stations and convenience stores were not accessible to persons with disabilities for a number of reasons, including access to gas pumps, cashiers, restrooms and other accessibility issues.

The case was settled by consent decree in February, not surprising given the environment where similar cases against Chevron and Shell had been settled via consent decree in federal court in California, according to Jonathan E. Perlman, partner with Genovese Joblove & Battista and counsel for Amoco. The settlement covers approximately 4,000 pre- and post-ADAAG Amoco, ARCO and BP gas stations and convenience stores across the country.

“The plaintiffs were extremely happy,” said Perlman, “because the consent decree provides relief that Amoco was not required to provide by the [Americans with Disabilities Act]. Many of these facilities pre-date the ADA, but the consent decree requires full accessibility even on the old ones.”

Perlman said that lawsuits like this one are prevalent. “A lot of small businesses pay to make these issues go away. When larger companies are hit, they often go to court,” said Perlman. “Many of these cases, if just brought to the owner’s attention, would be fixed without suing. Many of these problems are just operational.”

Industry Action

As construction tolerance issues are appearing in court, industry has been involved in addressing these issues as well.

“While construction tolerances will not make the difference between accessibility and inaccessibility, they can make a facility more accessible or less accessible,” explained Craig Haney, a specifications consultant with Restoration Technology. Haney led the effort to develop guidelines for tolerances for ramp and exterior walking surfaces as part of a research project for the U.S. Architectural & Transportation Barriers Compliance Board (Access Board), the independent federal agency responsible for developing accessibility requirements for the built environment.

The Access Board asked the Construction Specifications Institute (CSI), a technical society headquartered in Alexandria, Va., to develop the limited-scope document. The eight-month process, conducted entirely in cyber-space, culminated in a proposed guideline, which the Access Board is currently reviewing. The project involved input from contractors, subcontractors, trade organizations, architects, code officials, manufacturers and other industry representatives.

According to Scott Windley, accessibility specialist at the Access Board, the resultant document will be used as a technical assistance document, and not incorporated into the ADAAG. Haney believed the document would be used more at the state and local level. “I hope it just doesn’t sit there,” Haney said.

At this time, the Access Board has no plans for research projects to develop additional tolerance guidelines. Windley noted that a significant prob-

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“‘Dimensional tolerances’ is not a mantra that, when chanted, automatically excuses all deviations from the Title III Standards.”

New Urbanism and Visitability

More in Common than Meets the Eye

New Urbanism and Visitability are complementary not competitive, movements, according to speakers at a meeting in Miami of the Congress of New Urbanism (CNU).

Held in June, the gathering featured a program on Visitability intended to open a dialogue between Visitability advocates and the architects, planners and developers that make up the CNU.

The concepts of New Urbanism aim to reform all aspects of real estate development in order to rein in urban sprawl and make communities more livable. Neighborhoods designed to New Urbanist principles have all amenities within walking range of each home; they contain diverse housing types, promote a balance of residential, industrial and commercial development and reduce reliance on automobiles. Proponents of New Urbanist development also share a desire to create communities that support a diverse population along many dimensions, including age and income.

The perceived conflict with Visitability ideals arises from the New Urbanism emphasis on higher density housing. This calls for townhouses or single-family houses with smaller lots and shallow front yards. Because shallow front yards reduce privacy, New Urbanists advocate raising the first floor of homes off the ground about 30".

The lack of dialogue between the two groups contributed to the New Urbanists belief that Visitability proponents would oppose townhouses. At the CNU 2001 last fall, Visitability advocate Eleanor Smith and others encouraged the CNU Board to have a session on Visitability at the 2002 conference in order to open up a dialogue. Ray Gindroz, a board member and a principal in Urban Design Associates, took the lead in getting the session on the program.

Smith, founder of Concrete Change, presented

the rationale for Visitability, and Ed Steinfeld of RERC on Universal Design at Buffalo presented Visitability basics, illustrated by examples from several projects. Gindroz presented examples of how, over the last year, his firm has been adopting Visitability in its work.

The presentation showed that Visitability does not mean all houses have to be on grade and that townhouses are acceptable. Examples were shown in which ramps to rear decks were used to provide access to the first floor, accessible single story apartments were built underneath two story units and single story homes on grade were designed with porches and landscaping that compensated for the privacy lost by eliminating the grade change. By using attractive examples, the fear that the appearance of New Urbanist communities would suffer from Visitability was allayed.

During the session, one of the founders of the CNU, Andres Duany, reported that rigid zoning laws, planning ordinances, and building codes restrict many New Urbanist developments. He said that, in some cases, accessibility codes are being interpreted in a rigid or overzealous manner that block good projects, such as constructing housing above stores. He voiced a concern of many that Visitability ordinances will add yet another set of regulations that could be interpreted incorrectly, but noted that advocates would work together with New Urbanist designers to improve neighborhoods for all.

At the end of the program, many members of the audience voiced support for introducing Visitability as an integral part of the New Urbanist movement. Some noted that they are already working closely with independent living centers to promote more accessibility in the new communities.

Gindroz, Smith and Steinfeld are currently planning to develop a publication on New Urbanism and Visitability.

...Visitability does not mean a standardized approach to housing design where all houses have to be on grade and no townhouses are allowed.



An example of an elevated front porch with ramp to the rear.

The contents of this insert are provided by the Rehabilitation Engineering Research Center (RERC) on Universal Design at Buffalo, which is sponsored by a grant from the National Institute of Disability and Rehabilitation Research (NIDRR) U.S. Department of Education (DOE). These contents, however, do not necessarily represent the policy of DOE. Readers should not assume an endorsement by the federal government.



Universal Design Education Online

by Molly Story, Beth Tauke, and Elaine Ostroff

The site is organized into two primary sections, "teach" and "learn."

The goal was to make the concepts of universal design an integral component of design education. The result was the Universal Design Education Materials Online project, to create a resource for students and teachers of universal design. With origins in the Universal Design Education Project developed by Elaine Ostroff in 1989, the Universal Design Education Online web site, at www.udeducation.org, is designed to meet the growing demand for more readily available universal design educational materials. Its objective is to develop and disseminate universal design education materials online for use by design educators, practitioners and students.

The project is being conducted cooperatively by the Center for Universal Design at North Carolina State University, the Center for Inclusive Design and Environmental Access at the University at Buffalo, and the Global Universal Design Educator's Network.

Listening to the Users

When developing the structure and content of the site, the project team relied heavily on the comments of its advisors and other potential users, including those who have extensive experience in universal design and those who are in the beginning stages of exploration. The team also enlisted the involvement of a small group of individuals with disabilities who periodically evaluate the site's accessibility and usability.

Through educator roundtables, conference calls, and feedback by phone, e-mail, and online forums, the project team concluded that design educators want access to more advanced teaching resources and opportunities for interaction with other UD educators. Reviewers emphasized the need for the site to meet a high standard of accessibility and at the same time, include graphics that are sophisticated, effective and compelling.

The site is organized into two primary sections,

"teach" and "learn." Within the "teach" area there are program overviews, course outlines, course modules, student-initiated projects, special events, teaching techniques, and a discussion forum. The "learn" area offers a range of opportunities to study universal design. Resource materials listed on the site relate to both teaching and learning, with readings, articles, examples of universal design, and links to related sites. To make it helpful and more accessible, the site offers customization

features that allow users to change the look of the site for easier viewing. Visitors can also offer feedback.

The design team built inter-

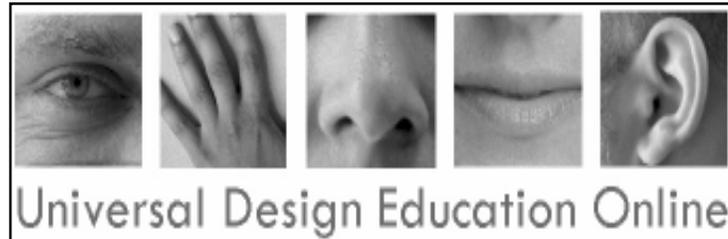
active features into the site whenever possible. At the heart of this interaction is the discussion forum where universal design educators and practitioners can respond to the teaching materials and share their ideas, methods, and strategies. Other interactive aspects of the site include animated exemplars of universally designed products and a "best hits" organized search interface.

Promoting Interaction and Utilization

The next step in this project is to promote utilization of the site, and to ensure that the site provides a valuable service to its users. Web promotion of the site includes registration with search engines and directories and press releases for site announcements and other news pertaining to the site. Equally important is the "live" promotion of the site with people who teach universal design. This includes organizing educator roundtables and workshops at national and international conferences, giving paper presentations with attendant proceedings at a range of conferences in design and design-related disciplines, and seeking new partners such as design education organizations and services.

Conclusion

This web site has the potential to influence uni-





News from the Center

Unlimited by Design in Milwaukee

Approximately 1,500 people attended the July 26 opening of the Unlimited by Design Exhibit at the Brooks Stevens Gallery at the Milwaukee Institute of Art and Design. This exhibit provides a showcase for market driven products that exemplify the principles of universal design. Many of those in attendance were representatives from manufacturers whose wares are celebrated in the exhibit. The vice provost of the school commended Unlimited by Design as the greatest exhibit ever hosted in the gallery. The exhibit is open to the public and runs through March 22, 2003.

Universal Bathroom Wins Silver Award

The Universal Bathroom project received a Silver Award at the IDEA 2002 international design competition sponsored by the Industrial Designers Society of America. Abir Mullick, Drew Kelley and Edward Steinfeld are the designers of the universal bathrooms. The jury chose 41 gold, 60 silver and 73 bronze award winners from 1,116 entries. Projects were submitted from many countries including: Canada, Denmark, France, Germany, Hong Kong, Ireland, Japan, Korea, Malaysia, Northern Ireland, Switzerland, Taiwan, The Netherlands, Turkey, United Kingdom and United States.

Second New York Guidebook Underway

Staff at the RERC has begun work on a new publication entitled "Universal Design Guidelines II", a technical guide that will assist professionals in implementing universal design in their practice. The guidebook is a follow-up to the Center's previous "Universal Design New York" publication.

Santa Monica Hosts Public Hearing on UD

Dr. Edward Steinfeld and Danise Levine, staff members from the RERC, recently conducted a public hearing in Santa Monica, CA as part of the Study of Proposed Universal Accessibility and Visitability Provisions for the Santa Monica Municipal Code. Steinfeld and Levine presented the city with proposals for Visitability and Universal Accessibility ordinances, as well as a summary of the costs and benefits. The hearing was well attended and included members of the community, architects, builders and public officials. 

Reader Survey

The Rehabilitation Engineering Research Center on Universal Design at Buffalo has published articles in the last 11 issues of Universal Design Newsletter (UDN). Readers are requested to rate the RERC's effectiveness in disseminating project information. Clip this survey and mail to: RERC on Universal Design at Buffalo, 378 Hayes Hall, University at Buffalo, Buffalo, NY 14214-3087

Survey

- I read Universal Design Newsletter (UDN) regularly.
- I am a new reader of UDN.

Please answer, using the following scale where appropriate:

- (1)Strongly Agree (2)Agree (3)No Opinion (4)Disagree (5)Strongly Disagree

1. The articles by RERC I have read have been informative and useful. ____
2. I believe these articles strengthen UDN. ____
3. The content of the inserts has heightened my interest in universal design. ____
4. The articles by RERC on Universal Design at Buffalo interested me in other RERCs, locally and nationally. ____
5. I became aware of the RERC on Universal Design at Buffalo through the UDN. **Yes / No**
6. I became aware of UDN through the RERC on Universal Design at Buffalo. **Yes / No**
7. I would like to see more of _____ covered in the RERC articles.
8. I would like to see less of _____ covered in the RERC articles.

To receive a free CD-ROM from RERC on UD at Buffalo include your name and address with this survey and indicate your interest in the CD-ROM. **Thank you for your participation.**

Respondents are eligible to receive a complimentary resource CD-ROM filled with publications, programs, and presentations by the RERC on Universal Design at Buffalo.



Reaching Diverse Fields in One Place

This summer the rehabilitation technology community was presented with the latest universal design research on how people move and think and use the spaces around them.

The RERC on Universal Design at Buffalo, together with the Center for Universal Design, sponsored a Research Symposium on Universal Design at the annual Rehabilitation Engineering and Assistive Technology (RESNA) conference in Minneapolis.

“RESNA is a good venue for bringing people in diverse fields together who have an interest in universal design practice and research,” said **Ed Steinfeld**, director of the RERC on Universal Design at Buffalo.

In the human factors session, Steinfeld summarized the state of the art in the anthropometry of disability. He described the types of anthropometry, the limitations of our current knowledge related to disability and recommendations for improving the state of the art. **Tom Armstrong** from the RERC on Ergonomics at the University at Michigan then presented the field of biomechanics and demonstrated the value of investigating strength and movement as part of human factors research on universal design. He illustrated methods that can be used to study biomechanics and the value of developing biomechanical models that take disability into account.

Chris Law, formerly from the Trace Center at the University of Wisconsin in Madison, argued that there is a research application gap in interaction design. He noted that although there is much information available on design for both severe and relatively mild cognitive limitations, only a small portion of it is being applied in practice.

In the product research session, **Molly Story** of

the Center for Universal Design presented research on the development of a method for evaluating products for universal design characteristics. **Abir Mullick**, from the RERC on Universal Design at Buffalo described methods currently being used to study whole room systems like bathrooms and kitchens. **Gregg Vanderheiden** of the Trace Center presented the results of a study that identified facilitators and barriers to the adoption of universal design by industry.

In the environmental research session, **Scott Danford**, also from the RERC on Universal Design at Buffalo, presented research findings on the evaluation of the Lighthouse International building in New York City. This study demonstrated, that universal design has a positive impact on both people with disabilities and people who do not have disabilities. **Jon Sanford** presented findings from a mail survey on utilization of accessibility features in bathrooms. **Tamara Mills** made a presentation of findings on a survey demonstrating that people without disabilities view universally designed housing very favorably.

In the international perspectives session, **Paivi Tahkokallio** described the investment that the European Union is making on research in universal design. The focus of current work in Europe is on the push to develop an accessible information society. **Satoshi Kose** reported on how Japan is addressing the rapid aging of its population, the oldest in the world. Universal design is viewed as a means to reduce the economic burden of a large aging population by keeping people independent. Current efforts are focused on implementing infrastructure to make the housing stock more accessible, to improve access to transportation and to plan elder-friendly communities. 

“RESNA is a good venue for bringing people in diverse fields together who have an interest in universal design practice and research,.

Ed Steinfeld
Director of the RERC
on Universal Design at
Buffalo

Universal Design Education, *from page 8*

versal design educational practices in at least three ways: 1) providing new tools for teaching and learning; 2) providing a new communication channel and centralized site; and 3) helping to prepare teachers, practitioners and students for success in a society that will require more universally designed environments and elements. The site allows individuals who are interested in the discipline of universal design to tap the many resources available without regard to geographical boundaries, time constraints, or resource allocations.

The project team hopes that providing this extensive and rich collection of educational materials online will facilitate the instruction and study of universal design. It hopes to encourage the inclusion of universal design subject matter in a wide variety of existing courses and the creation of new courses on the topic. *UDN* readers are invited to visit the site and to contribute information about their own teaching, opportunities for study, design competitions, and events. For more information, visit Universal Design Education Online at www.udeducation.org. 



Resource Center on Supportive Housing & Home Modification

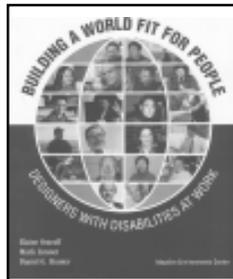
The National Resource Center on Supportive Housing and Home Modification has a comprehensive website designed to assist architects, builders, government agencies and individuals with accessibility issues. At www.homemods.org, visitors can find a host of information pertaining to home modification and supportive housing, including convention announcements, publications, safety checklists and assessment instruments, a national directory of product and service resources, monthly

news updates and a newsletter from the National Home Modification Coalition. The frequently asked question (FAQ) section is divided into separate categories, such as architects/contractors, government grants/funding, assessment tools, general modification, universal design and assistive technology, making it easier to find answers to commonly asked questions. The site also features helpful links, a bulletin board, online courses and information about the center and its mission.

Building a World Fit for People: Designers with Disabilities at Work

This 106-page book—written for design students with disabilities, career and vocational rehabilitation counselors, design educators, young people with disabilities and design firm employees—describes the career development of 21 designers with disabilities from around the world.

Published by Adaptive Environments and funded by NEC Foundation of America, the book highlights the major influences that shaped each person's professional choices. In an effort to promote the design professions as a viable career opportunity for people with disabilities, Adaptive Environments used its initial research funded by the National Endowment for the Arts to demonstrate the contributions that designers with disabilities are making to product and building design.



As part of Adaptive Environment's Access to Design Professions program, the book can viewed online at www.AdaptiveEnvironments.org/accessdesign or ordered from the website for \$15.

Microtel Inn Virtual Room Tours

The national Microtel Inn hotel chain features online room tours of its suites, double and single rooms, lobby and ADA-compliant rooms on its website at www.microtelinn.com. The tours, which require a free download of the IPIX PPC

plug-in, take viewers on a 360-degree journey around each room, showing beds, doors, tables, television cabinets and bathrooms. Microtel's ADA-compliant rooms include extra-wide doors to accommodate wheelchair users, roll-in showers with hand-held showerheads, bathroom railings and other accessibility features. In addition, Microtel Inn uses the Opening Doors™ video training program to educate its employees on disability etiquette and requirements. The program teaches practical service skills covering customer relations, operational procedures, emergency and safety considerations and an awareness of "people first" terminology.

AAA Barrier-Free Travel Guidebook

The American Automobile Association (AAA) recently released six guidebooks in its Barrier-Free Travel series that offer information about various types and levels of accessibility in lodgings, restaurants and attractions for mature travelers and those with disabilities. The guidebooks -- one each for Central Florida, California, Washington, D.C., Las Vegas, New York City and Hawaii -- feature symbols to express the types of accessibility, including hard of hearing or deaf, visually impaired or blind, dexterity and three levels of mobility. In addition, each book lists the criteria used to assess the property's accessibility as well as general travel information, such as major points of interest, healthcare providers, transportation options, medical suppliers and medical equipment available. Barrier-Free Travel is available at AAA club offices and online at www.aaa.com. 

The program teaches practical service skills covering customer relations, operational procedures, emergency and safety considerations and an awareness of "people first" terminology.

Tolerances, from page 6

lem with this process was the difficulty getting people to review the document and provide comments. Windley would like to see more involvement from the construction industry in developing tolerance guidelines for disability access. "The construction industry has tolerance guidelines," said Windley, "but not tolerances for accessibility issues."

Haney, too, would like to see more proactive involvement from industry, however, he noted that few industry groups have the resources, such as a technical committee, to undertake guideline development.

"Industry may respond," said Haney. "It just might take awhile."

One example of industry stepping up to develop construction tolerances for disabled access construction is the Orange Empire Chapter (CA) of the International Conference of Building Officials (ICBO), which published its guidelines in July 2000 (www.icboec.org/DA-Final%207-14.htm).

"The California code does allow for construction tolerances but the code does not give guidelines for what those tolerances are," explained Soroosh Rahbari, chapter vice president and a building official with the city of Westminster, CA.

The chapter assembled a subcommittee of building officials, architect/engineering consultants and a consultant for the disability community. The guidelines are voluntary and are meant as a tool for building officials. Rahbari said that although he has personally used the guidelines in decisions on two cases, the chapter has not tracked use of the guidelines.

Rahbari said that the chapter shared its guidelines with other ICBO chapters. However, he does not know if any other chapters are undertaking the development of their own guidelines. He said that the industry response may be slow because there is some concern that contractors might use the tolerance guidelines as a standard rather than using the code.

Meanwhile, the litigation involving construction tolerances continues. "You don't want a judge deciding construction tolerances," said the Access Board's Windley. "A judge doesn't know anything about concrete."

The mindset of those responsible for the voluminous litigation needs to change, said Perlman, from "fighting for 100 percent compliance to fighting for 100 percent accessibility."

"You don't want a judge deciding construction tolerances. A judge doesn't know anything about concrete."

Scott Windley,
Accessibility
Specialist,
Access Board

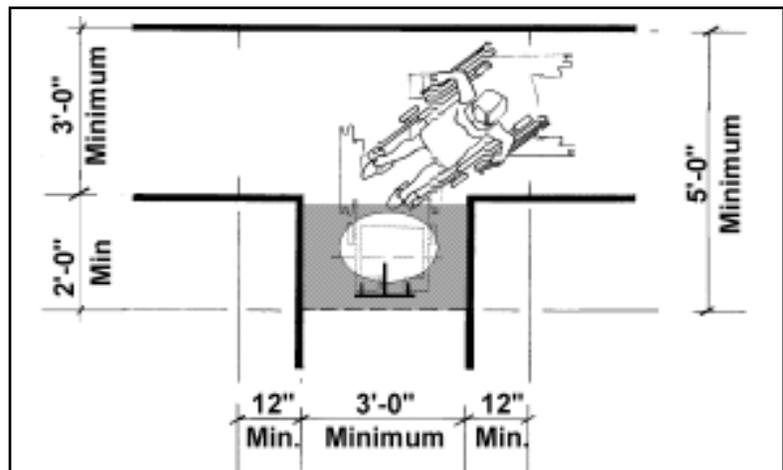
DESIGN TIPS

? PROBLEM: It may be very difficult to modify an existing bathroom to allow a wheelchair user to turn around in the space. What can be done?

TIP: The proposed 2003 version of the ANSIA117.1 Standard and the draft final version of the Americans with Disabilities Act Accessibility Guidelines both allow one leg of a T-turn to only provide knee and toe clearance (rather than requiring the full floor to ceiling volume to be open.)

This change will allow a 3'

wide aisle in front of a 3' wide lavatory with knee and toe space to accommodate a 180 degree wheelchair turn.



NEW
PRODUCTS

Voice Activated Dimmers

VOS Systems Inc. has several new products that feature voice command activation. The IntelVoice Dimmer^a, which plugs into any standard outlet, dims lamps at three levels of brightness with simple voice commands.

The unit features high speed speech recognition and command response, a pre-programmed vocabulary and speaker independent operation, which allows it to work with anyone's voice.



The Wall Switch Dimmer^a with Touch Control is a voice operated/touch-control dimmer that takes the place of a standard wall switch and can be simultaneously operated in both modes. The unit can be installed using only a screwdriver and features both speaker independent and speaker dependent operation for increased flexibility.

World Update, from page 5

are illustrated and described in the online catalog at www.hhrc.rca.ac.uk/.

The RSA Student Design Awards, open to students in the European Union, announces the project briefs for 2002/03 on www.rsa-design.net. This year's competition spotlight is on sustainability. Demi, an educational web resource attached to Goldsmiths College, will award \$1,100 to a student who incorporates sustainability within his or her design in any of the briefs. Briefs are grouped within five main themes: 21st Century Living; What We Wear/Where We Live; Our Public Spaces; Design To Include; and Getting The Message.

Prizes this year total more than \$200,000, comprising of travel awards and work place attachments including the chance to work in Boston with Reebok or in Japan with Shiseido. New sponsors this year include ACI Worldwide, Ideal-Standard, Innovision Research & Technology, PDD and NCR. The deadline for entries is Nov. 28. For more information visit www.rsa-design.net or email media@rsa.org.uk.

Stepless Ramps

Stepless has developed two new ramps for scooter and wheelchair use.

The lightweight Stepless Suitcase Ramp can be folded once and carried like a suitcase. The ramp is available in 92 (36.2"), 122 (48"), 153 (60.2") and 183 (72") cm. lengths. The Stepless Telescopic Suitcase Ramp is lightweight and easier to handle, position and carry than traditional trifold ramps because of its ease of length adjustment. The telescopic function prevents finger pinching and requires less space for unfolding. It is available in 183 (72"), 213 (83.8"), 244 (96") and 305 (120") cm. lengths. Both ramps feature an integral non-slip surface; soft, rounded handles; cushioned ends to prevent sliding during use; and maintenance free anodized aluminum profiles for strength and stability.

Barrier-Free House Plans

FMR Home Portfolio now offers a catalog called 50 Barrier Free and Beautiful House Plans, a comprehensive collection of architectural plans for homes ranging from 1,000 to 7,000 square feet, with two and three bedrooms, and exclusive executive plans that include shaft space to accommodate vertical lifts.

The catalog itself, which can be ordered for \$17.90, shows front elevation, main level floor plan, square footage and descriptions of each house.

In addition to the architectural drawings, each study plan ordered from the catalog comes with universal detail sheets to show contractors how to build stepless entryways and roll-in showers and reinforce walls and ceilings for grab bars, lifts and hoists. There are recommendations for door hardware, outlet and switchplate height and other universal design features.



VOS Systems, Inc.
(Voice Activated Dimmers)
13000 Danielson St.
Suite J
Poway, CA 92064
Phone: 800.596.0061
www.vosystems.com

Guldmann
(Stepless Ramps)
Graham Bells Vej 21-23A
DK-8200 Arhus N
Denmark
Phone: +45.8741.3131
www.stepless.com

FMR Portfolio
(Barrier Free House Plans)
4418 University Ave.
Des Moines, IA 50311
Phone: 888.937.3939

Universal Design Means Saving Money

Nearly empty-nesters and approaching age 50 with the rest of the baby boomers, my wife, Ann, and I have designed and are building our new “Home for the Next 50 Years.” An add on to a historic building, we have attempted to carefully consider the universal design implications of every element and space while keeping in mind the actual users – our family and friends. This is an excerpt from my continuing journal investigating issues of universal design in our new “Home for the Next 50 Years.”

John P. S. Salmen, AIA

For designs to be useable by all, they must be affordable by all -- this is hardly proposed as an addition to the Principles of Universal Design. Early in the programming of our Home for the Next 50 Years, we identified energy and water to be the primary places where resources could be conserved, and also, the largest opportunities for efficiency and savings. Over the next 50 years, resources are only going to grow increasingly costly. We realized early on that if our house is too costly to operate we may not be able to afford it if we have to live on a fixed retirement income.

In designing our Home for the Next 50 Years, we attempted to make it as resource efficient and thus economical as reasonably possible. Energy efficiency was achieved through the design of a thermally efficient envelope and the selection of energy efficient equipment and appliances. (All new windows — only five of the historic windows were able to be salvaged — have high efficiency insulated low E glass.)

We worked with Marlon Pujol, who designed a combination heat pump and high-efficiency five-zone, gas fired, heating-ventilating-air conditioning system with an energy recovery exterior intake/exhaust air balancing system. The five zones allow us to selectively (and automatically through occupancy sensors and smart house controls) condition only those spaces that we are actually using. The variable speed motor on the system allows us to maintain low humidity levels in unoccupied spaces. Humidity and the resulting growth of mold and mildew can be major problems in the hot and humid summertime climate of the Washington D.C. metropolitan area.

Non-toxic Icynene insulation was foamed into the oversized 2 X 6 stud space of the new construc-

tion and the 2 X 4 stud space of the historic portion as a cost effective solution for providing both high R value insulation and a vapor barrier -- without destroying the existing historic German lap and cedar shingle siding.

To conserve water, the Home for the Next 50 years incorporates several water saving strategies, including a hot water recirculation loop that supplies hot water to the furthest (and highest hot water use) points in the house – the master bath and the kitchen. A small high-efficiency Gruen flow pump, operated by the smart house system only prior to anticipated use periods, circulates hot water through an insulated loop of pipe running between the hot water heater in the basement and the shower and sinks. (Instead of letting the water run down the drain to flush the pipes of cold water and carry hot water the 66’ distance from the hot water heater to the facets, this recirculation loop system will save at least .6 gallons - the equivalent of more than a third of one flush of the three 1.6 gal/flush high efficiency Toto toilets used in the house. Coupled with the high efficiency dish and clothes washers, we hope to reduce our water usage by one-third.

To reduce sewer costs, outdoor water spigots are on a separate sub-metered line allowing us to deduct non-contributing water usage from our charges for sending water down the sewer. Each month the Washington Sanitation and Sewer Commission reads both our total and sub-metered outside usage water meters and subtracts the outside water from the total, to determine and charge us only for the amount of water we actually send down the sanitary sewers. As sewer treatment costs escalate, we won’t have to pay sewage treatment charges for water used for our vegetable garden and landscaping irrigation. 

As sewer treatment costs escalate, we won’t have to pay sewage treatment charges for water used for our vegetable garden and landscaping irrigation.

Reducing the difference between old & young

Dr. John Zeisel is assisting the Institute for Design of Montreal with a project to support prototype design and production of needed industrial design products for an “aging population.” An initial round-table of designers and specialists in aging identified a single theme: “Designed objects that reduce the difference between old and young.”

Zeissel is helping to identify other objects that exemplify this criterion, as well as gaps in object design that prototype support could help fill. These will form the basis for future requests for proposals and eventually other useful products. For more information, contact John Zeisel, Ph.D. at zeisel@TheHearth.org



Printed on recycled paper with vegetable inks.

Oct. 18-19, 2002: *Design+Technology+Users: Design that Works for Everyone*, Rhode Island School of Design (RISD), Providence, RI. Co-sponsored by Adaptive Environments and RISD. Featuring leading software companies, graphic designers and web experts. See: www.AdaptiveEnvironments.org/webconference.

Oct. 22-25, 2002: *Fall 2002 ADA Conference*, Washington, D.C. Sponsored by the National Association of ADA Coordinators, the conference covers new and updated issues related to employment, college/university, accessibility and transit. Contact: 800.722.4232.

Oct. 27-30, 2002: *6th Global Conference Maturity Matters*, Burswood International Conference Centre, Perth, Western Australia, sponsored by the International Federation on Ageing. Contact: IFA@congresswest.com.au.

Nov. 30-Dec. 4, 2002: *International Conference for Universal Design in Japan 2002*, Yokohama, Kanagawa, Japan. The conference will feature examples of universal design in Japan and the Far East, in the areas of products, housing, buildings, transportation and information technology. Contact: www.ud2002.org/en/index.html.

Dec. 2-6, 2002: *A Universal Approach to Interpretive Planning, Programs and Design*, New Orleans. A National Center on Accessibility training course, this program focuses on interpretive programs and facilities that are not only accessible to people with disabilities, but usable by people of all abilities. Contact: www.ncaonline.org.

Jan. 13-15, 2003: *The US Architectural & Transportation Barriers Compliance Board* will hold its bi-monthly meeting in Washington, DC. Contact the Board at 202.272.5434(v), 800.872.2253(v), 202.272.5449 (tty) or www.access-board.gov.

Feb. 12, 2003: *Caring Communities for 21st Century: Imagining the Possible*, United National Headquarters, New York, NY. This international conference, sponsored by the International Council for Caring Communities, will address the "Age of Connectivity." Contact: icccworld@earthlink.net.

March 25-28, 2003: *INCLUDE 2003*, Royal College of Art, London, UK. The second inclusive design conference, this bi-annual event presents the world's leading figures in inclusive design on topics ranging from fashion to workplace design, from transport to domestic interiors. Contact: include@rca.ac.uk and see highlights of INCLUDE 2001 at: www.hhrc.rca.ac.uk/plain/events/include/report.html.

Events to be placed in the UDN Calendar must be submitted to the editor two months before the publication date.

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Address Correction Requested

