Workshop on Improving Building Design for Persons with Low Vision

September 29th and 30th 2010
National Institute of Building Sciences
Panel Discussion – Day-lighting
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Day-lighting in Buildings

Benefits

- Illumination
- Thermal
- Energy savings
- Connection to exterior
- Spatial impact
- Inspiration
- Beauty
Day-lighting in Buildings

Potential Challenges

• Uncontrolled glare
• Lack of transitions can be overpowering
• Uncontrolled heat gain
• Reflections
• Location, location, location
• No light at all
Why contemporary architecture is challenged

- Energy savings
- Light harvesting
- New technologies
- Aesthetics created with new technologies
- Excellence created by photography
- Faster paced project delivery
- Accountability
Problems with Daylight
Photographs can’t always hide the problem
Designing for persons with limited vision

- Not designing for the blind
- Not designing to be dull
- Designing to control light
- Designing to allow natural day-lighting to contribute to high-definition environments
- Raising the bar for sophistication in design
- Endeavor to create a high definition architectural experience.
Historic Examples
Historic Examples
Modern Successes
Design process and design tools

• Smart design is a worthwhile investment; Budget for the needed service.
• Start with and inclusive design concept
• Go back to basics:
  – Building orientation
  – Planned fenestration
  – Holistic design
• Seek out technologies and details that support the design intent and an inclusive aesthetic
• Use available computer modeling tools
Tools for designers – 3D modeling
The way forward

• Understand the parameters of the problem
• Educate designers and future professionals
• Establish guidelines
• Promote creative solutions and successes
• Advance technical tools
• Promote successful technologies
• Leverage government buying power