



*Welcome to*  
**Washington,  
DC**

**Accessibility Forum  
Meeting  
June 2002**

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# Agenda Overview

- **Project Work Sessions will be on the 2nd Floor**
- **Monday (June 3) 9:00 AM – 4:30 PM**
  - Objective Measures – Rooms 4 A, B and C
  - AT/EIT Interoperability – Rooms 6 A, B & C



# Agenda Overview

## **Tuesday (June 4) - Auditorium 8:30 AM – 4:40 PM**

- Welcome
- Speaker – Thurman M. Davis, GSA
- Council Status Reports
- Project Report - Interoperability
- Break
- Project Report – Objective Measures
- Speaker: Ed Reniker, Accessibility Forum Program Director
- Continue after lunch

***More ...***



# Agenda Overview

## **Tuesday (June 4) – Auditorium 1:10 PM – 4:40 PM**

- Panel: Non-Federal Response to Section 508
- Break
- Panel: Government Response to Section 508
- 4:40 PM to 5:40 PM – Affinity Group Meetings, networking
- 6:30 PM To 8:30 PM – Reception



# Agenda Overview

## **Wednesday (June 5) – Auditorium 8:30 AM – 12:30 PM**

- Welcome
- Speaker: Madeline Bryant McIntire
- Break
- Speaker: Eugene Seagriff
- Panel: Section 508 and the Web
- Open Q & A Session
- Wrap-up



# **GUKCC 1st Floor**

**Graphic depicting the layout of  
the first floor at GUKCC**



# **GUKCC 2nd Floor**

**Graphic depicting the layout of  
the second floor at GUKCC**



# **Agenda**

## **Tuesday, June 4**

<b>Welcome</b>	<b>Ed Reniker</b>
<b>Opening Remarks (Speaker)</b>	<b>Thurman S. Davis Sr.</b>
<b>Council Status Reports</b>	<b>Skip Crane</b>
<b>Project Report: Interoperability</b>	<b>Bill Hetzner</b>
<b>Break (approximately 10 AM: 30 minutes)</b>	
<b>Project Report: Objective Measures</b>	<b>Jim Kindrick</b>
<b>Announcement</b>	<b>Lesley Field</b>
<b>Director's Address</b>	<b>Ed Reniker</b>
<b>Lunch (approximately Noon: 90 minutes)</b>	



# **Agenda**

## **Tuesday, June 4**

**Panel: Non-Federal  
Response to Section 508**

**Skip Crane,  
Moderator**

**Break  
(approximately 3 PM: 30 minutes)**

**Panel: Government  
Response to Section 508**

**Ed Reniker,  
Moderator**

**Time for Affinity Group Meetings, Networking**

**Reception begins at 5:00PM located in  
the 1st floor Atrium**



# **Council Status Reports**

**Skip Crane  
Forum Staff**



# Council Subgroups

- **Strategic Direction Subgroup**
- **Processes and Procedures Subgroup**
- **Project Interaction Subgroup**
- **Affinity Subgroup**



# **Project Status Report: AT-E&IT Interoperability**

**Bill Hetzner**

**Forum Staff**



# AT-E&IT Interoperability

- **What are the Deliverables?**
- **Who are the Working Groups?**
- **Status of Working Group Deliverables.**
- **Other Portions of the Standard.**
- **What is the Plan from Here?**



# Deliverables

- **Guidelines for Federal Agencies (current state-of-the-practice)**
- **Generic Accessibility Requirements Analysis and Recommendations (future possibilities)**



# Guidelines for Federal Agencies

- **Primer on Interoperability and Accessibility of E&IT**
  - Definition of important terms
  - Examples of how accessibility can be achieved through interoperability
- **Support for Purchasing AT and E&IT**
  - When and how to conduct user needs assessments
  - Questions to ask vendors
  - How to interpret vendor responses
  - Tips on obtaining and using evaluation copies



# **Generic Accessibility Requirements Analysis and Recommendations**

- **Common characteristics/requirements that describe desirable interactions between E&IT and AT**
- **Being considered**
- **Exploration of other options not part of current state-of-the-practice**
- **Not platform/API specific**



# Project Working Groups

- **1194.21- Software and O/S**

- June Perritt
- Joy Relton
- Paul Fountaine
- Mark Urban
- Bill LaPlant
- Randy Marsden
- Gottfried Zimmermann
- Bill Hetzner
- Mary Beth Janes
- Chris Hofstader



# Project Working Groups

- **1194.23 - Telecommunication Products**
  - John Goldthwaite
  - Eugene Seagriff
  - Jeff Pledger
  - Gregg Vanderheiden
  - Dick Brandt
  - Paul Michaelis
  - Dave Poehlman
  - Paul Mitten
  - Allen Blume
- **1194.24 - Video and Multimedia**
  - Jeff Pledger
  - Bob Regan
  - Larry Goldberg



# Working Group Status to Date

- **1194.21- Software and O/S**
  - Initial Draft of Guidelines for Federal Agencies (available)
  - ATIA AT-IT Compatibility Guidelines (Version 1.05)



# Working Group Status to Date

- **1194.23 - Telecommunications Products**
  - Draft outline of Guidelines for Federal Agencies (available)
  - Draft of some sections (available)
- **1194.24 - Video and Multimedia**
  - Draft of outline of Guidelines (available)



# Other Portions of the Standard

- **1194.22 - Web-based information and applications**
- **1194.26 - Desktop and PC**
- **1194.25 - Self-contained, closed systems**



# What is the Plan from Here?

- **Guidelines for Federal Agencies**
- **Generic Accessibility Requirements Analysis and Recommendations**



# **Project Status Report: Objective Measures**

**Jim Kindrick  
Forum Staff**



# Objective Measures Project

- **What are the Goals?**
- **What is the Task?**
- **What are the Deliverables?**
- **What is the Status to Date?**
- **What is the Plan from Here?**



# What are the Goals?

- **Foster common understanding of the Final Standard for 508 by all stakeholders**
  - Not about defining the Standard  
Defining and modifying the Standard is the job of the Access Board
- **Promote clear and consistent communication regarding the accessibility of E&IT products**
  - Not about defining conformance
  - Not about conducting compliance testing  
Rather about understanding practical ways to help all stakeholders meet accessibility requirements



# What is the Task?

## Analyze the Standard

- Identify necessary assumptions, preconditions, suggestions for clarification, practical approaches and consistent reporting terminology
- Basic questions to ask about each provision
- A structured approach towards common understanding and communication



# Analysis Approach

## **Analysis template to collect the following kinds of information:**

- Necessary assumptions, outstanding issues and terms, or assessment preconditions
- Suggestions for clarification, practical approaches and consistent terminology
- Data collection or measurement methods
- Additional comments and related resources



# What are the Deliverables?

- **Analysis documents**
  - Feedback to Access Board
  - Guidelines for Section 508 Implementation
- **Three levels of analysis maturity/review**
  - Preliminary - staff distributes as a starter for the team.
  - Initial - team reviews and provides inputs based on the Preliminary.
  - Final - broad based review and feedback on the Initial is incorporated.



# What is the Status to Date?

- **Three Initial Analyses are under development**
- **Current drafts are available**
- **Team voting to achieve consensus on documents imminent**
  - 1194.21 – Software and O/S
  - 1194.22 – Web-based information and applications
  - 1194.23 – Telecommunications products



# Status of Other Deliverables

## Preliminary Analysis underway for:

- 1194.24 - Video and Multimedia
- 1194.25 - Self-contained, closed systems
- 1194.26 - Desktop and PC



# What is the Plan from Here?

- **Support the Section 508 Specification**

Feedback to the Access Board resulting from Analysis of the Standard

- **Support Section 508 Implementation**

Guidelines for Federal Agencies

- **Support Section 508 Deployment**

Procurement Education/Training Materials



**BREAK**  
**Resume at 10:40 AM**



# **Announcement**

**Lesley Field**



# **Program Director Address**

**Ed Reniker,  
GSA**



# LUNCH

## Resume at 1:20pm



# Panel Discussion Non-Federal Response to Section 508

- **Deborah Buck**

NY Office for Technology and ITTATC

- **Amy Goldman**

DBTAC (Mid-Atlantic) / Associate Director,  
Institute on Disabilities/UCDD Temple  
University

- **Chris Smith**

Director of Special Programs, AT&T  
Government Solutions, Inc.

- **DISCUSSION ISSUES**

- What is happening in the States regarding implementations of Section 508?
- How is Section 508 affecting your state?
- What can federal agencies learn from your experiences?



# **State Information Technology Accessibility**

**Deborah Buck**



# Information Technology Technical Assistance and Training Center

**ITTATC promotes the development of accessible E&IT products and services by providing:**

- Information
- Training
- Technical Assistance

TO ...

- Industry
- Trainers
- State officials
- Consumers

**... related to Section 508 and  
Section 255**



# ITTATC

## **In Collaboration With:**

- **Southeast DBTAC**
- **Center for Assistive Technology and Environmental Access (CATEA)  
Georgia Institute of Technology, College of Architecture**
- **World Institute on Disability**
- **Inclusive Technologies**
- **Law, Health Policy & Disability Center  
University of Iowa College of Law  
Washington D.C. Office**
- **Trace Research & Development Center  
University of Wisconsin-Madison**
- **Georgia Tech Research Institute**
- **Information Technology Association of America**
- **Jim Thatcher, Independent Consultant**



# State IT Initiatives Project Partners

- **ITTATC**
- **University of Iowa**
- **RESNA**
- **Association of Tech Act  
Projects (ATAP)**
- **Subcontract**  
NYS Office for Technology



# Purpose

- **Identify State Initiatives**
  - Policies, Laws, Executive Orders, etc.
  - Training, Technical Assistance, Testing
- **Identify Barriers**
- **Identify State Needs**



# Stakeholders Targeted

- **State Assistive Technology Projects**
- **State Offices of the Chief Information Officer (CIO)**
- **State Procurement Offices**



# State Assistive Technology Projects

- **47 State Responses**
- **The following diagram represents a Map of the United States and the 47 states that have been surveyed on Assistive Technology Project. The 47 states that have been surveyed are highlighted in red and non-surveyed states (Ohio, Colorado, Hawaii and Oregon) remain white.**



# State CIOs Surveyed

- **28 CIO Responses**
- **The following diagram represents a Map of the United States and the states that have been on the 28 CIO Survey.**
- **Surveyed States are highlighted red: NV, ID, MT, AZ, CO, ND, SD, NE, KS, TX, AR, MS, NC, VA, KY, IN, IL, OH, ME, PA, NY, DE, MD, CT, MN, IA**
- **Unable or refused participation are highlighted white: OR, WY, UT, NM, OK, VT, NH, MO, MA, RI, FL, SC, GA, AL, NJ, TN, WV, MI, WI, AK, HI**
- **No response are in highlighted in brown: WA, CA, LA**



# State Procurement

- **National Association of State Procurement Officials (NASPO)**
- **Survey distributed – May 2002**
- **Collection of Data – June 2002**



# Next Steps

- **Data Analysis**
  - Identify Current Status
  - Identify Needs
  - Develop Technical Assistance & Training Plan
- **June Meeting**
  - State AT Project, CIO, & Procurement
  - Develop Recommendations for ITTATC



# Patterns

- **Preliminary Analysis only**
- **New Entities**
- **Consistency .....**



# Contact Information

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**Accessibility Program Manager**

**NYS Office for Technology**

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**Mimi Kessler**

**ITTATC Project Director**

**Center for Assistive Technology  
and Environmental Access  
(CATEA)**

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**404-894-0953 (voice)**

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**404-894-9320 (fax)**

**[mimi.kessler@ittatc.org](mailto:mimi.kessler@ittatc.org)**



# **Non-Federal Response to Section 508**

**Amy S. Goldman**



# Access to EIT in Education Settings

## Report of Experiences of the Mid-Atlantic EIT/ED Consortium

- History: Role of the Disability Business Technical Assistance Centers (DBTAC) and access to EIT
- Response of the Mid-Atlantic “Tech Act” Projects
- Experiences of the Mid-Atlantic EIT/ED Consortium: The first 6 months



# **Section 508 – E&IT Accessibility Not Just For Federal Employees With Disabilities**

**Chris Smith**



# Industry

## Understanding The Need And Advantages of Accessibility

- **Banking Industry**

Looking to the future

- Online banking – Web accessibility
  - **With age comes some form of disability**
  - **Just good business practice**
  - **Segments of society overlooked**
- ATMs
  - **Big Business**
  - **Development of standard protocols for PDAs to communicate with ATMs and other kiosks**



# Industry

- **Retail and Service Industry**

- Online Retail and Service

- Web accessibility
    - Technology
      - **Smart medicine cabinets**
      - **Smart refrigerators**
      - **Climate-control systems**
      - **Voice to text – text to voice**
      - **Voice activated query database technology**
    - EIT accessibility is opening doors for those with disabilities
    - Accessibility not only for those with disabilities
      - **Ramps**
      - **Closed Captioning**
      - **Phone Volume Controls**



# Industry

## Economic Outlook

- **Personal and social costs are substantially reduced**
  - Individuals become more self sufficient – don't need to rely on others
  - Cost is reduced by allowing individuals access to goods and services through technology
- **Economic externalities not added into the Government's original Economic Analysis**
  - The real cost of modification of EIT is a lot less than presented in the report.
  - The unknown costs are not accounted for



# Higher Education Institutions

## Understanding The Need for Accessibility

- **Before the 508 regulation was implemented educators saw what the 508 impact would be on institutions:**
  - From eSchool News staff and wire service reports June 5, 2001, “A federal law set to take effect this month could mean that school districts might one day be required to employ special software designed to make their web sites and technology practices accessible to visually impaired stakeholders”.



# Higher Education Institutions

- **Section 504 of the Rehabilitation Act**

Protects the rights of individuals with disabilities in programs and activities that receive federal funds.

Educational institutions are aware of these requirements and 508 only reinforces and assists in implementing specific requirements.

- **Distance Learning**

- Web Accessibility by higher education institutions
  - Empowering and enabling those with disabilities through education
  - Cost reduction to society
- Technologies
  - Closed captioning
  - Text to Voice (Screen Readers)
  - Alternative input devices



# Higher Education Institutions

## Technology is an enabler

Giving access to a wide range of educational tools

- Text Books – assisting visually impaired, mobility impaired
- Modeling and simulation
- On-line test



# Accessibility Forum A Forcing Factor

## Keeping the Momentum

- **United We Stand – Divided We Fall!**
    - Coordination between Government Disability Organizations and Forums
      - Understanding Individual Charters and Objectives
    - Awareness Training – Within and Outside the Government
      - Managers
      - Engineers
      - Senior Leadership
        - **Regulations and Requirements**
        - **Responsibilities**
        - **Assistive Technologies**
- » .....continued....



# Accessibility Forum A Forcing Factor

- **Keeping the Momentum**
  - Relationship between the different Regulations
    - ADA
    - Rehabilitation Act
    - Hearing Aid Act
    - Telecommunication Act (Section 255)
- **Selling To The Private Sector**
  - Awareness Training
  - Corporate Council (High Level Management)



**BREAK**  
**Resume at 2:50 PM**



# Panel Discussion Government Response

- **Dave Capozzi**  
Access Board
- **Yvonne D. Jones**  
Division Director, FSS IT Management  
Acquisition Center
- **Ken Nakata**  
Dept. of Justice
- **Fran Suggs**  
Procurement Analyst, FSS Acquisition  
Management Center
- **DISCUSSION ISSUES**
  - Are 508 requirements being adequately included in RFP's? What are some circumstances under which 508 requirements do not have a part of RFP?
  - What has been the response from Industry if they think 508 requirements are insufficient in RFP?
  - Remedies?



# **Implementation of Section 508**

**GSA**

**Federal Supply Service**



# **FSS Multiple Award Schedules**

- **Multiple Award IDIQ Contracts**
- **COTS**
- **Competition – Open to all sources**
- **Over 9,000 contracts – 78% Small**
- **4 million items**
- **\$16 billion in sales FY 01**



# MAS Features

- **Customers may seek price reductions**
- **Contractor Team Arrangements**
- **Blanket Purchase Agreements**
- **Credit for socio-economic goals**
- **Agencies place orders  
Directly with vendor  
GSA Advantage!**



# Implementation of Section 508

- **Modified all contracts**
- **Programmed GSA Advantage!**
- **Distributed 508 Fact Sheet**
- **Participate in Section 508 Forums**
- **Issued internal guidance**



# Continuing Efforts

- **Working to further populate GSA Advantage! with 508 information**
- **Linking GSA Advantage! and the Buy Accessible websites**
- **Answer customer and vendor concerns**
- **Encourage assistive technology vendors to participate on MAS**



# Resources

- **[www.section508.gov](http://www.section508.gov)  
link available through GSA  
Schedules website  
[fss.gsa.gov/schedules](http://fss.gsa.gov/schedules)**
- **MAS Help Desk  
Phone - (703) 305-6566  
e-mail –  
[mashelpdesk@gsa.gov](mailto:mashelpdesk@gsa.gov)**



# Information Technology MAS

- **Group 70 MAS**
- **Types of products & services**
- **Worldwide coverage**
- **Over 3,100 vendors**
  - Over 450 pending offers
  - Average 100 new offers per month
- **\$10.9 billion in sales FY 01**



## **508 & the IT Schedule**

- **IT Schedule leads FSS's 508 effort**
- **Vendors are continuing to identify items**
- **Schedule includes assistive technology**
- **IT Acquisition Center website links to the Section 508 website**



# How to Get on Schedule

- **How to Prepare a Quality Offer Seminar**
  - Every 3 – 4 months
  - POC – Stephanie Turner  
(703) 305-5777  
Stephanie.Turner@gsa.gov
- **IT Acquisition Center website**
  - [fss.gsa.gov/it](http://fss.gsa.gov/it)



**Resume Wednesday,  
June 5  
8:30 AM – Auditorium**



**Good Morning!**  
**General Session begins**  
**at 8:30 AM**



# **Agenda**

## **Wednesday June 5**

<b>Welcome</b>	<b>Ed Reniker</b>
<b>Opening Remarks</b>	<b>Dr. I. King Jordan</b>
<b>Microsoft Accessibility: Shipping Products that Make a Difference</b>	<b>Madeline Bryant McIntire</b>
<b>Economic Challenges to Bringing Accessible Products to Market</b>	<b>Eugene Seagriff</b>
<b>Break (approximately 10 AM: 30 minutes)</b>	
<b>Panel: Section 508 and the Web</b>	<b>Jack Corley, Moderator</b>
<b>Open Q &amp; A Session</b>	<b>Ed Reniker</b>
<b>Wrap-up</b>	<b>Ed Reniker</b>



# **Opening Remarks**

**Dr. I. King Jordan,  
President of Gallaudet  
University**



# **Microsoft Accessibility: Shipping Products that Make a Difference**

**Madeline Bryant McIntire**



# Contents

- **The Future of High Technology**
- **Microsoft Product Development**
- **Strategy for Increasing Accessibility**
- **What's Next?**
- **Conclusion**



# The Future of the High Technology Industry

- **We are just beginning to scratch the surface of what can be done with computers:**
  - Media Integration
  - New Form Factors
  - Radically Different Delivery/Installation
  - Connected Applications
- **Hardware and software vendors want to get their new products out quickly.**
- **Customers request new products.**



# Meeting the Demands of our Industry

- **Microsoft Product Development and the Software Development Lifecycle**
  - Requirements Gathering
  - Initial Product Design
  - Cyclical Design/Development/Test
  - Final Internal Test
  - External Test
  - Release
  - Support



# Microsoft Product Development Timeline



# **Leadership, Partnership, Customer Focus and Technology Innovation**

**We are**

- **Working with a large number of partners to reach a common goal – an accessible, robust product that meets the needs of our customers.**
- **Expanding partnerships with Academia -- short and long term goals.**
  - Partnership with the AT industry overall, and with many, many individual AT vendors is a focus.
  - PC manufacturers are vital partners – they ship more of our software than we do – by far.
- **Increasing our work with mainstream software vendors, with good results to date.**



# What's Next

- **Planned Development Infrastructure**
  - Accessibility Built In – Intrinsic Accessibility
  - Also Supports MSAA
  - Spans desktops, networks, devices.
- **Expand and Leverage Partnerships**
  - Academia
  - AT Vendors
  - PC Manufacturers
  - Independent Software Vendors



# Conclusion

## We must

- **Make it easier to create an accessible product.**
- **Build accessibility into the components that are used to construct applications and content.**
  - Partnerships must be strong, open and productive.
  - Customers must be brought into the process in ways that achieve results and empower customers.



# **“Economic Challenges to Bringing Accessible Products to Market”**

**Eugene Seagriff**



# Purpose and Disclaimers

- **This is intended to foster a greater understanding of industry among stakeholders, with a goal of better communication.**
- **This is not a list of “excuses”.**
- **The examples are general and do not reflect any particular company or industry. They were derived from my work experience at several companies, numerous training seminars, and from extensive reading of business publications.**
- **The conclusions are my own and do not reflect any particular company or industry.**
- **Panasonic is committed to accessibility.**



# **Key Challenges**

## **(Business Economics 101)**

- **Price is set by the US market, not manufacturers.**
- **In all product categories, unit volume is inversely proportional to price point.**
- **Costs not supported by the price point go directly to the bottom line.**
- **Large scale manufacturing requires significant volume to maintain itself.**
- **Some costs can be apportioned over many products, others are product-specific.**



# Costs Incurred by Manufacturer

- **Costs can be divided into five main types:**
  - Product Development
  - Production
  - Distribution
  - Sales
  - Service/Support
- **This is assuming overhead (management, infrastructure, etc.) is included in the above categories.**
- **Specifics will vary with product type, but basics are the same.**



# Example Development Costs

- **Market research to determine product features, functions, and price points.**
- **Core Technology R&D (sometimes apportioned).**
- **Engineering costs of adapting Core Technology to product applications (rarely apportioned).**
- **Operation/UI design, decisions on the roles of hardware vs. software, cost constraints, etc.**
- **Electronic circuit design and testing.**
- **Software coding and testing.**
- **Cabinet design, mock ups, etc.**



# Example Development Costs (cont.)

- **Integration of hardware and software, testing, refining, etc. Production of mock up samples, working samples, and pre-production samples.**
- **Focus group testing.**
- **Packaging design and testing.**
- **Operating Instruction design, content development, and checking.**
- **Required safety, regulatory, and standards body testing and approvals.**
- **Management, administration, IT, facilities, utilities, equipment, maintenance, etc. (apportioned).**



# Example Production Costs

- **Cabinet molds and fabrication devices.**
- **Materials for product (incl. design, fabrication, storage, shipping, etc). \$1 increase per unit x 1 million units = \$1 million in cost.**
- **Packaging materials.**
- **Operating instructions and accessories.**
- **Production process design: robotic programming, worker training, Quality Assurance Procedures, line output testing.**
- **Labor, utilities, equipment, facilities, maintenance, management, administration, etc. (apportioned).**



# Example Distribution Costs

- **Freight from factory to port.**
- **Logistics planning, shipping to distribution warehouse, taxes, duties, etc. (if applicable).**
- **Inventory Control Processes, Warehouse/Logistics labor, security, utilities, equipment, facilities, maintenance, etc. (apportioned).**
- **Delivery to dealer, distributor, or customer.**
- **Freight damage and loss, returns processing, etc.**



# Example Sales Costs

- **Sales staff, marketing staff, administration staff, IT systems, offices, utilities, etc. (apportioned).**
- **Advertising (trade and consumer), product literature production and distribution, website maintenance, etc. (partially apportioned).**
- **Sales staff training (in-house and retail).**
- **Dealer support, incentives, co-op advertising, etc.**
- **PR, customer incentives, promotions, etc.**
- **Returns.**



# Example Service Costs

- **Toll free customer assistance (partially apportioned)**
  - facilities, systems, staff, training, etc.
- **Technical support, training, literature, etc. for repair network (partially apportioned).**
- **In-warranty repairs, claims payment, customer accommodations, etc. (apportioned).**
- **Legacy parts and literature supply.**
- **Refurbishing returns (if applicable).**
- **Alternate format documentation.**



# **Bar Graph: Relative Cost--Mass Market Product**

## **Description of Bar Graph**

- **Bar chart showing Relative Cost on a Scale of 1 to 10 for a Typical Mass Market Product.**
- **Development = 25**
- **Production = 10**
- **Distribution = 5**
- **Sales = 15**
- **Service and Support = 2.5**



# **Bar Graph: Relative Cost-- Specialty Product**

## **Description of Bar Graph**

- **Bar chart showing Relative Cost on a Scale of 1 to 10 for a Specialty Product.**
- **Development = 25**
- **Production = 10**
- **Distribution = 2.5**
- **Sales = 5**
- **Service and Support = 7.5**



# Cost Characteristics

- **Items within the various cost types can be characterized as:**
  - Fixed product costs: Costs required to make a product, whether sales are 1 unit or 1 million units.
  - Unit costs: Costs that are multiplied by each unit produced and do not exist if no units are produced.
  - Overhead: Costs of being in business (staff, space, infrastructure, utilities, etc.)
  - % of Sales: Costs that are incurred as a percentage of units sold.
- **All cost types (production, etc.) have components in more than one of the above categories.**



# Costs Characteristics

- **Results of categorizing the cost examples:**
  - Fixed Product Costs: 17 items (\$/item – tens of thousands +, apportioned over all units produced)
  - Unit Costs: 6 items (\$/item – hundreds or less)
  - Overhead: 14 items (\$/item – hundreds of thousands, apportioned over many products)
  - % of Sales: 10 items (\$/item – tens of thousands, apportioned over all units sold)
- **Fixed costs and Overhead are the enemy.**



# Business Reality

- **Unit sales volume is essential to continuing operations and business development in a given category:**
  - Volume is required to offset Fixed Product Costs and Overhead in a market driven economy because the market pressure on pricing is severe.
  - Note that 175,390 layoffs between Jan. and July 2001 in the telecommunications sector were precipitated by a significant drop in estimated handset sales volume.
- **Not every product developed is successful, and losses must be amortized over other products.**



# Business Reality

- **Price points and unit sales volume are inversely proportional.**
- **The market responds with somewhat predictable volume at specific price points in most categories.**
- **Manufacturers compete for that volume by:**
  - Price/feature ratio
  - Advertising
  - Dealer placement and promotions
  - Customer promotions, PR, etc.
- **Customers expect more value for the money every year in every category.**



# Business Reality

- **Missing a price point by any amount has a very dramatic impact on sales volume:**
  - There is an emotional component to purchases.
  - \$201.00 is viewed much differently than \$199.99.
  - This small difference can result in a unit sales decrease of thousands of units per month for a single model.
- **The concept of recouping additional costs by higher pricing is not a business reality for mainstream products. These costs go directly to the bottom line.**



# Conclusions

- **Although the government market is significant, it is small compared to the enterprise and consumer markets.**
  - Government market for E&IT on average is less than 5% of revenue for many manufacturers. Government also demands “lowest price”.
  - Reliance on economy of scale for survival usually precludes separate product for government.
- **Many companies are working aggressively to improve accessibility in each product cycle**

However costs are incurred even in a Universal Design culture (built-in, not bolt-on access) and market price pressure is severe.



# Conclusions

- **508 has gone through only 1 product cycle and there are many excellent examples of progress.**
- **A positive working relationship with industry will enable the continued acceleration of improvements.**
- **Financial obstacles or design constraints in the federal space may force business decisions which counteract the desired mainstreaming of access (beware of the law of unintended consequences).**



**BREAK**  
**Resume at 10:35 AM**



# Panel Discussion Section 508 and Web

- **Louis Hutchinson**  
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# Panel Discussion Section 508 and Web

- **DISCUSSION ISSUES**

- What are the primary hurdles that must be overcome to make web sites accessible?
- What benefits do you see as a result of 508 compliance outside the Federal Agency Arena?
- What kinds of missteps do webmasters make when trying to make their site accessible over time?
- How can organizations and agencies best insure that their sites don't become inaccessible over time?
- Can you relate good accessibility objectives with navigation objectives?



# **Accessibility Solutions**

**Louis Hutchinson  
CEO, Crunchy  
Technologies**



# **Achieving and Maintaining an Accessible Web Site Accessibility Through the Web Project Life Cycle**

**Dana Louise Simberkoff  
HiSoftware Company**



# About HiSoftware

## HiSoftware

Develops advanced search and Web site Accessibility software for government, corporate, educational, and consumer markets.

## HiSoftware's solutions

- Promote creation of accessible Web sites and the effective use of metadata for indexing, search, and retrieval.
- Help organizations develop long-term strategies to achieve Web content accessibility, enhance usability, and comply with U.S. and international accessibility standards.



# The Information Superhighway

- **Since the Internet was founded, it has become an easy way to publish and locate information.**
- **According to the US Census Bureau, December 1997 U.S. Census brief, one in five Americans have some kind of legal disability.**

(Source: Dec. 1997 US Census Brief, "Disabilities Affect One-Fifth of all Americans," available at

[www.census.gov/prod/3/97/pubs/cenbr975.pdf](http://www.census.gov/prod/3/97/pubs/cenbr975.pdf).)



# The Information Superhighway

- **Most people use Web browsers like Netscape® Navigator and Microsoft® Internet Explorer; others must also use assistive technologies with Web browsers:**
  - Screen readers
  - Audio browsers
  - Braille printers
  - Voice-activation software



# Improving the Web for everyone

- **Accessibility laws are making Web-based information user-friendly for all users. Compliance with these standards, not only assists users of assistive technologies, but also can improve access to the Web for hand-held, wireless devices.**
- **These laws are based on best practices for Web authoring and information technology. While many of the laws directly benefit users with disabilities who might rely on assistive technologies to view information, the laws benefit everyone.**



# Why you should build accessible

- **Developers often ask, “Why should our site be accessible?”**

Aside from any legal or statutory requirements, the answer to this question is simple - offering equal access to disabled users is compelling, and for many reasons:

- **Build your Web site audience**
- **Take a position of leadership in your particular business sector**
- **Grow your loyal customer base**
- **The cost of retro-fitting is much higher than building an accessible site from scratch**
- **It simply makes good business sense to increase the number of your potential customers**
- **It is the right thing to do at a minimal cost**



# **It Is Cheaper to Do It Right the First Time**

- **Organizations that include accessibility management as part of their development plans and quality assurance and testing practices will have a tremendous economic advantage.**
- **The cost of Retrofitting a Web site for accessibility can be as much as three times the cost of designing an accessible site from the ground up.**



# **Designing Accessible versus Retrofitting your Web sites**

- **When you incorporate accessibility into your site design-you should try to leverage verification and repair solutions to work along side of your content creation tools through the use of product APIs.**
- **Quality assurance and testing tools can utilize accessibility testing solutions to integrate accessibility into the defect tracking methodologies you are already using for managing your Web site performance.**
- **Accessibility assurance can be integrated into the test processes for dynamic Web applications and Web sites.**



# Developing a Strategy for Accessibility

- **An accessibility strategy will give you the ability to view accessibility from a project management perspective. This will enable you to:**
  - **Allocate resources appropriately**
  - **Track site progress**
  - **Identify problem areas**
  - **Integrate accessibility into your Quality Assurance and content delivery processes**
  - **Keep a historical view of your Web site accessibility work.**



# Three Steps to Web Site Accessibility

- **Develop an Accessibility strategy for your organization**
- **Verify and Repair, or modify, Web content for compliance with accessibility standards**
- **Monitor Web content for compliance with accessibility standards**



# Defining training requirements

**The Accessibility assessment is the most important phase of development of your accessibility strategy. If you are not sure about the problem and how big it is you will not be able to provide the proper resources and planning necessary to come up with a solution.**



# Existing Content Management Systems

- **It is clear that with training and content engineering you can have a positive impact on the overall accessibility of your Web site. Your content management system (if applicable) is a good starting point.**
- **By using a repair or verification tool that supports automation or by using a server-based tool as part of the content preparation you can quickly and automatically prevent inaccessible content from being published. You can also use verification tools to assure that templates that are used to display data are also accessible.**



# Existing Testing Architecture Tools

**Your accessibility-testing tool can be integrated with Test management software to incorporate accessibility into your Web site Quality assurance practices. Accessibility can be integrated into the testing and defect tracking procedures you have already put in place!**



# Hisoftware Accessibility Solutions ...

## Minimize IT overhead by providing organizations with:

- Desktop and automated server-based tools for accessibility verification, repair and monitoring.
- Ability for collaboration in reporting and in repair work.
- Ability to view accessibility from a project management perspective.
  - Allocate resources appropriately
  - Track site progress
  - Identify problem areas
  - Integrate accessibility into your Quality Assurance and content delivery processes
  - Keep a historical view of your Web site accessibility work.



# Accessibility Recorder Capabilities

**Accessibility Recorder is HiSoftware technology for tracking accessibility efforts. Using Accessibility Recorder, the user can:**

- Identify the accessibility status of a Web project on demand for a specific point in time via the History feature
- Track the progress of the project over time via the History feature
- Create filtered reports and report definitions for the Web
- Isolate Web accessibility information by Web elements, accessibility status, and advanced custom rules



# Understanding the Database Technology

- **When the AccRepair Wizard fixes a Web element, it stores the information in a database. Then AccRepair “remembers” the element and fixes it automatically the next time it occurs.**
- **HiSoftware databases allow integrators to create custom solutions. ODBC databases allow developers to create their own company-specific solutions.**



# Developing a Team Strategy

- **Team members can collaborate on a Web project by sharing AccRepair databases—this multiplies the power of the program and cuts the workload to a fraction.**

## **Description of graphic:**

**Picture consists of a large circle encompassing a smaller rectangle depicting data base files. PC's are shown within the large circle as connected to the data base files.**



# Monitoring tools

- **Remember that because Web site content is dynamic-it is by nature always changing. That means that an important piece of any accessibility strategy is a solution that will let you ensure that your sites remain in compliance on an ongoing basis.**
- **From a site wide perspective organizations should implement unattended services either hosted or placed on their internal servers that will, once configured, constantly monitor Web sites or portions of the Web sites and alert responsible parties if there is a problem that brings them out of compliance.**



# Open Q & A Session



**THANK YOU FOR  
PARTICIPATING IN THE  
JUNE 2002 ACCESSIBILITY  
FORUM**

***HAVE A SAFE JOURNEY HOME!***