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ACCESSIBILITY TESTING FOR USERS WITH DISABILITIES

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Accessibility Testing

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The logo for VeriTest, Inc. consists of the word "VeriTest." in a white, sans-serif font, enclosed within a solid red rectangular box.

Professional Challenge

The transition from concerns of functionality and robustness to security and confidentiality are requiring

- (a) an awareness of and sensitivity to legal issues
- (b) the incorporation of legal standards into test planning.

Professional Opportunity

Testers have a particularly important role in the processes through which legal requirements are being articulated and refined.

Professional Opportunity

Providing disabled persons access to the same resources available to everyone else invites testers to

- anticipate and manage legal risks
- help identify and test to relevant legal standards.

IT Context

Personal Computing

Electronic Commerce Taxonomy

- Information Access
- Self Services
- Shopping Services
- Interpersonal Communication
- Virtual Enterprises

Marketplace Issues

Electronic Commerce Steps of Production

- Attraction of Customers
- Content on Goods and Services
- Customization to Customer Preferences
- Closing the Deal and Payment
- Customer Support, Fulfillment, Delivery
- Data Mining

Mapping the Regulatory Landscape

- Constitutional and Legal Issues in Requirements Testing
- Evolving Standards under the Americans with Disabilities Act
- Complying with Section 508, Electronic and Information Technology Accessibility Standards

Defining the Regulatory Context

- Academic Research
 - Findings
 - Trends
- Public Agencies and Commissions
- Special Interest Groups

Clarifying the Regulatory Context

- The role of quality assurance methodologies
- Testing the practical implications of accessibility
- Mapping federal mandates and exceptions

Emerging Industry Accessibility Guidelines

- Hardware
- Software
- Documentation

Accessibility Aids

- Standards Specific to Certain Technologies
 - Software applications and operating systems
 - Intranet and Internet
 - Telecommunications
 - Video and multimedia equipment
 - Self-contained products
 - Desktop and portable computers

Accessibility Aids

- Complications from Proprietary Features
- Major Vendor Leadership
- Federal Acquisition Requirements

Test Plans and Cases

- Redundant output methods
- Alternative and customizable means of input and output
- Logical navigation consistent with familiar conventions

Test Plans and Cases

Specific Standards

- Keyboards
- Mechanical controls
- Touch-screens
- Biometric devices
- Ports
- Connectors

Test Plans and Cases

- User Profiles
 - Visually impaired users
 - Persons who cannot use a mouse
 - Deaf persons
 - Special cases
- Tips and Tricks
 - Text labels and descriptors for graphics and other format elements
 - Audible screen readers
 - Braille displays

Test Plans and Cases

- Tips and Tricks
 - Text labels and descriptors for graphics and other format elements
 - Audible screen readers
 - Braille displays
 - Visible message display
 - Adjustable volume controls
 - Caption decoder circuitry
 - Secondary audio channels for descriptions of presentations
 - Embedded access features

Testing User-Driven Changes

- Keyboard features
- Color and Sound
- Timing
- Zoom on text and images

Accessibility Testing

Tracking changes in

- (a) new federal and state requirements
- (b) industry standards
- (c) technical innovations.

Resolving (or at least documenting) conflicts among standards.

Meeting the Social and Legal Challenges

Conclusion

James B. Speer, Jr.

James Speer draws upon twenty-five years of quality assurance experience gained from research and litigation-support consultation. In his extensive writings and public speaking, Speer balances his perspective from academic medicine, consulting, and government work with diverse real-world IT experience, including employment designing automated configuration management tools, software testing, service as a software QA manager, technical training and consulting (software quality assurance and testing).

Speer holds the Ph.D. in constitutional history from Rice University and his J.D. from the University of Houston College of Law. His honors and awards include a Ford Foundation Fellowship (Computer Science) and three National Endowment for the Humanities grants (Electronic surveillance and privacy, demographic data modeling and historical archives database architecture).

His academic experience includes the Institute for Urban Studies, the University of Texas Medical Branch (Galveston, Texas) and the University of Washington School of Medicine (Seattle, Washington). Further in the public sector, Speer served as Research