

**THE BORN-DIGITAL REVOLUTION
FAILURE OR OPPORTUNITY
FOR THE GLOBAL LIBRARY COMMUNITY**

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BUILDING THE DIGITAL LIBRARY

QUALITY=CONTENT+FUNCTIONALITY

- Published/Licensed Content
- Primary Content
- Open Web Content
- Institutional Content
- Research Data Content
- Multimedia Content
- Integrated Services
- Software Tools

PRESERVE AND ARCHIVE THE CONTENT

- Archive as Repository HOLD
- Archive as Persistence ACCESS
- Archive as Curation SECURE
- Archive as Steward CARE
 - Analog
 - Digital Conversion
 - Born Digital
 - Disaster Preparedness

NEW TECHNOLOGIES AND THE 21ST CENTURY LIBRARY

- Mobiles and Tablets (single, portable multi-purpose device)
- Cloud Computing (distributed processing and applications)
- Geo-Everything (geolocation and geotagging)
- Personal Web (customized management of online content)
- Linked Data (connecting and relating structured information)
- Semantic-Aware Applications (meaning to provide answers)
- Smart Objects (links physical world with information)

NEW TECHNOLOGIES AND THE 21ST CENTURY LIBRARY

- Open Content (wide distribution and repurposing)
- MOOC (massive open online courses)
- Electronic Book (platforms, applications, redefinition)
- Data/Big Science (research information management)
- Games As Learning Tools (participation and interaction)
- Visualization and Simulation (more meaningful and intuitive)
- 3-D Printing

DIGITAL CONTENT

SOME INTERESTING CHALLENGES

- Form/Text/Function
- Content=Format
- Importance of Context
- Executable Content/Renderability
- Data Formats/Versioning Over Time
- Physical/Format Obsolescence
- Authenticity/Provenance
- Standards/Globally Unique Identifiers

DIGITAL CONTENT

IMPORTANT CHARACTERISTICS

- Accessibility
- Availability
- Searchability
- Currency
- Researchability
- Dynamism/Fluidity
- Collaborative
- Multimedia/Sensory
- Linkability
- Interactive
- Procedural Qualities
- Spatial Capabilities
- Encyclopedic
- Modular
- Volatile
- Fragile

BREADTH AND DIVERSITY OF BORN-DIGITAL CONTENT

- Licensed/Published Works (E-Journals, E-Books)
(Commercial, Academic, Independent, Self-Publishing)
- E-Video and E-Audio
- Digital Government
- Online Learning Materials
- Research Data
- Social Media
- E-Archives (Personal Papers, Organizational Records)
- Web Sites and Web Documents

BREADTH AND DIVERSITY OF BORN-DIGITAL CONTENT

- Visual Images
- Spatial Data (Longitudinal Observations)
- Software/Applications (Proprietary, Open Source)
- Video Games
- Medical Data (Personal Health Records)
- Live Feeds (RSS, News)
- Visualizations/Simulations
- Interoperable Metadata (MARC, BIBFRAME, schema.org)

BORN-DIGITAL CONTENT AND ISSUES OF SCHOLARLY INTEGRITY

- Ability to Consult Evidence/Sources
- Ability to Pursue Research Study When Primary Sources Gone/Changed
- Repository Chaos/Research Study Deposited and Accessed in Multiple Sites

Integrity: adherence to code or standard of values
complete and unimpaired and undivided

DIGITAL LIBRARIES REPOSITORY CHAOS

- Discipline Repositories
- Institutional Repositories
- Format Repositories
- Departmental/School Repositories
- Individual Repositories
- Learning Repositories
- Government Repositories
- National Repositories
- Publisher Repositories
- Research Data Repositories
- Preservation Repositories

THE RIGHT TO TEXT AND DATA MINE

SUPPORT THE NEEDS OF BIG DATA

- Federal/Funding Agency Mandate
- Massive Data Sets
- Unstructured Data/Curation
- Extraction
- Distribution
- Collaboration
- Visualization
- Simulation
- Preservation

DIGITAL LIBRARIES

FORUMS FOR COOPERATION

- Library Systems
- Local and Regional Cooperation
- State Projects
- Multi-State Projects
- National Consortia/Projects
- International Partnerships
- Researcher Collaboration
- Publisher Collaboration
- Collaboration with Technology Organizations
- Corporate Partnerships
- Business Partnerships

REACHING OUT TO CULTURAL COMMUNITY

PROMOTING NEW COMBINATIONS THRU
PUBLIC-PRIVATE PARTNERSHIPS

RADICAL COLLABORATION

- Centers for Excellence
- Mass Production
- New Infrastructure
- New Initiatives

Quality/Productivity/Innovation

DIGITAL LIBRARIES

ADVOCATE THE INFORMATION POLICY AGENDA

- INTELLECTUAL FREEDOM
- PRIVACY
- CIVIL LIBERTIES
- EDUCATION PROGRAMS
- RESEARCH PROGRAMS
- INTERNET DEVELOPMENT
- TELECOMMUNICATIONS
- GOVERNMENT INFORMATION
- APPROPRIATIONS
- WORKFORCE POLICY
- FIGHTING THE COPYRIGHT WARS

HOPE/POWER/ACTION THROUGH COLLABORATION

DIGITAL CONTENT

IMPORTANCE OF NEW THINKING

ABOUT COPYRIGHT

- Law Out of Sync With Technology and User Needs
- Issue of Orphan Works
- Importance of Transformative Uses
- Licensing Trumps Copyright
- Issue of Preservation Exception
- Issue of Open Content and Proprietary Rights
- National vs. International Legal Context
- Where/What Is the Public Interest?
- Lack of Agreement on Interpretations/Court Role
- Business Erosion/Commercial Exploitation

DIGITAL CONTENT 2020

AREAS FOR ATTENTION

- Mobile and Adaptable Technologies
- Accessibility and Support for Print-Disabled
- Publishing Explosion: Mainstream/Independent/Self
- Radical Collaboration and Systemic Strategies
- Rigorous Assessment: Quantitative and Qualitative
- Mass Digitization Meets Open Access: New Business Models
- Human Computer Interaction: Gaming and Virtual Reality
- Open Source Software and Open Source Hardware
- New Organizational Models
- Transformation of Library Space
- Importance of Standards

DIGITAL CONTENT 2020

AREAS FOR ATTENTION

- Network: Connectivity, Reliability Capacity, Performance, Security
- Digital Preservation: Persistence and Curation
Issue of Executable Content
- Open Web Content: Issues of Scholarly Integrity
- Repository Chaos: Issues of Discovery and Version Control
- Metadata Chaos: Issues of Quality, Currency, Accuracy
- Library as Publisher/Distributor/Incubator
- Library and Maker Culture/Digital Fabrication and 3-D Technologies

WHAT DO WE MEAN BY INNOVATION?

- new method, idea or product
- systematic application of new knowledge to new resources to produce new goods or new services

MARKET

- process of lowering the costs or increasing the benefits of a task

VALUE

- result of thinking deliberately about existing problems and unmet needs

SOLUTIONS

EVOLUTIONARY (incremental)

REVOLUTIONARY (disruptive/discontinuous)

WHAT DO WE MEAN BY TRANSFORM?

- to change in composition or structure

WHAT WE ARE/WHAT WE DO

- to change the outward form or appearance

HOW WE ARE VIEWED/UNDERSTOOD

- to change in character or condition

HOW WE DO IT