

The Philosophy of Digital Libraries: Parsing the Issues, Making Tough Choices

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Core Values

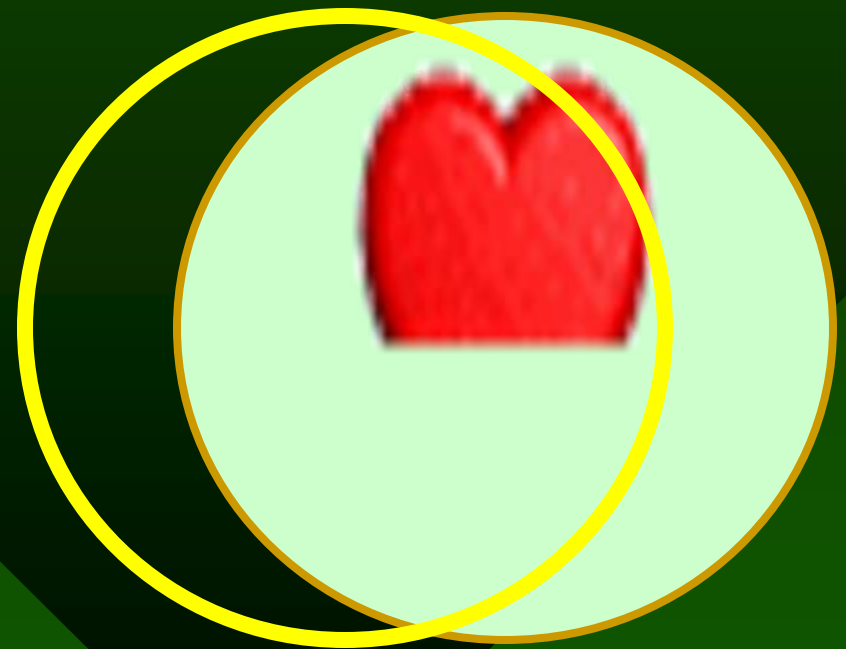
- Intellectual freedom
- Equitable access
- Stewardship
- Service
- Privacy
- Literacy
- Democracy





Key Constraints

- Users
- Policies
- Standards
- Economics
- Laws of nature
- Laws of humankind
- Administrators



Digital Library Challenges

- Upholding our values within our constraints
- Providing what users & administrators want
- Funding traditional & digital initiatives
- Managing physical space
- Licensing & copyright
- Assessment



Users Want Comfort & Convenience

- 24 / 7 access to resources – preferably remote
- More full-text e-resources – but security of print
- Great technology & facilities
- Food & drink
- Self-reliance
- Speed

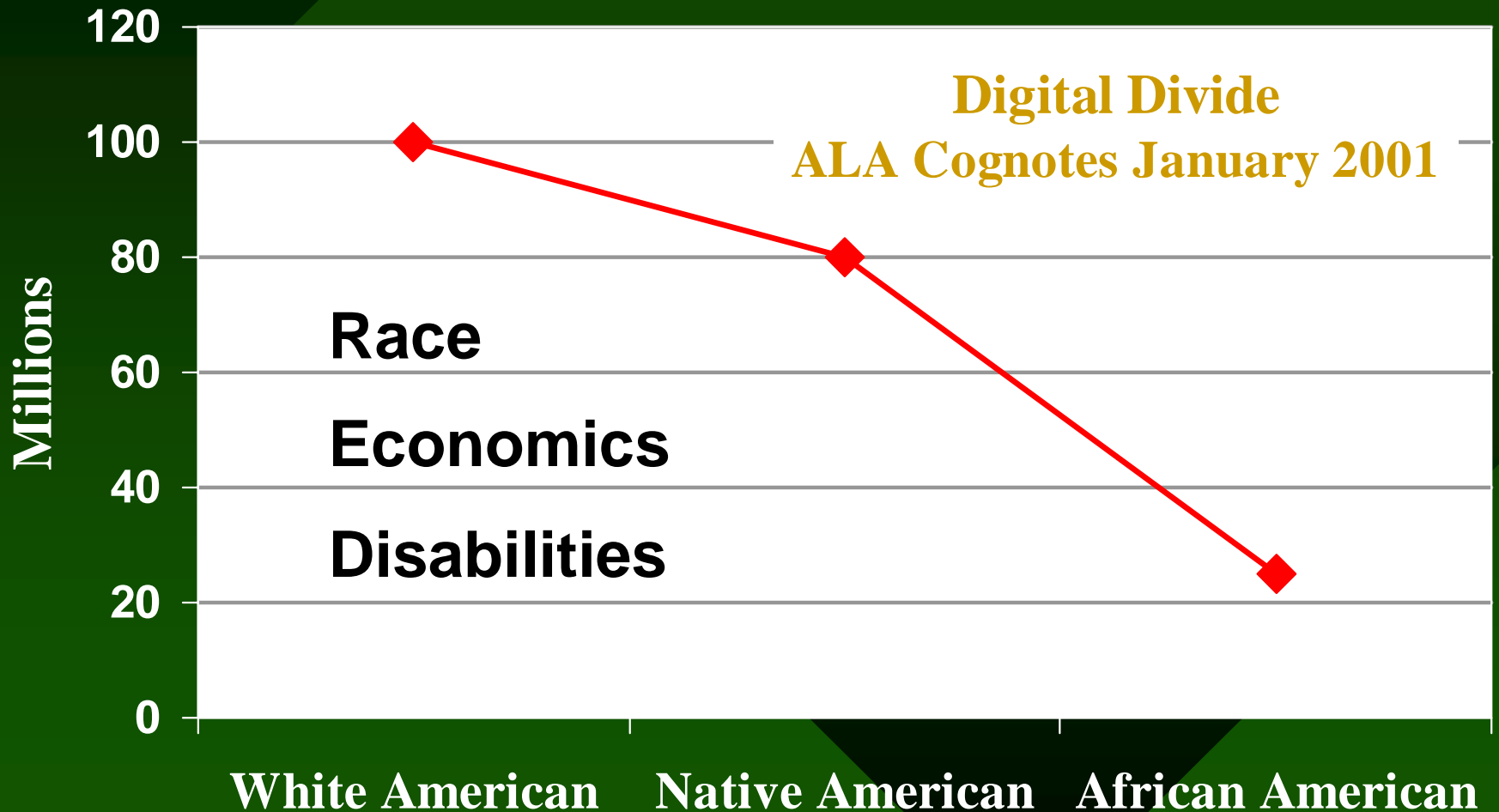


Administrators Want Peace & Prosperity

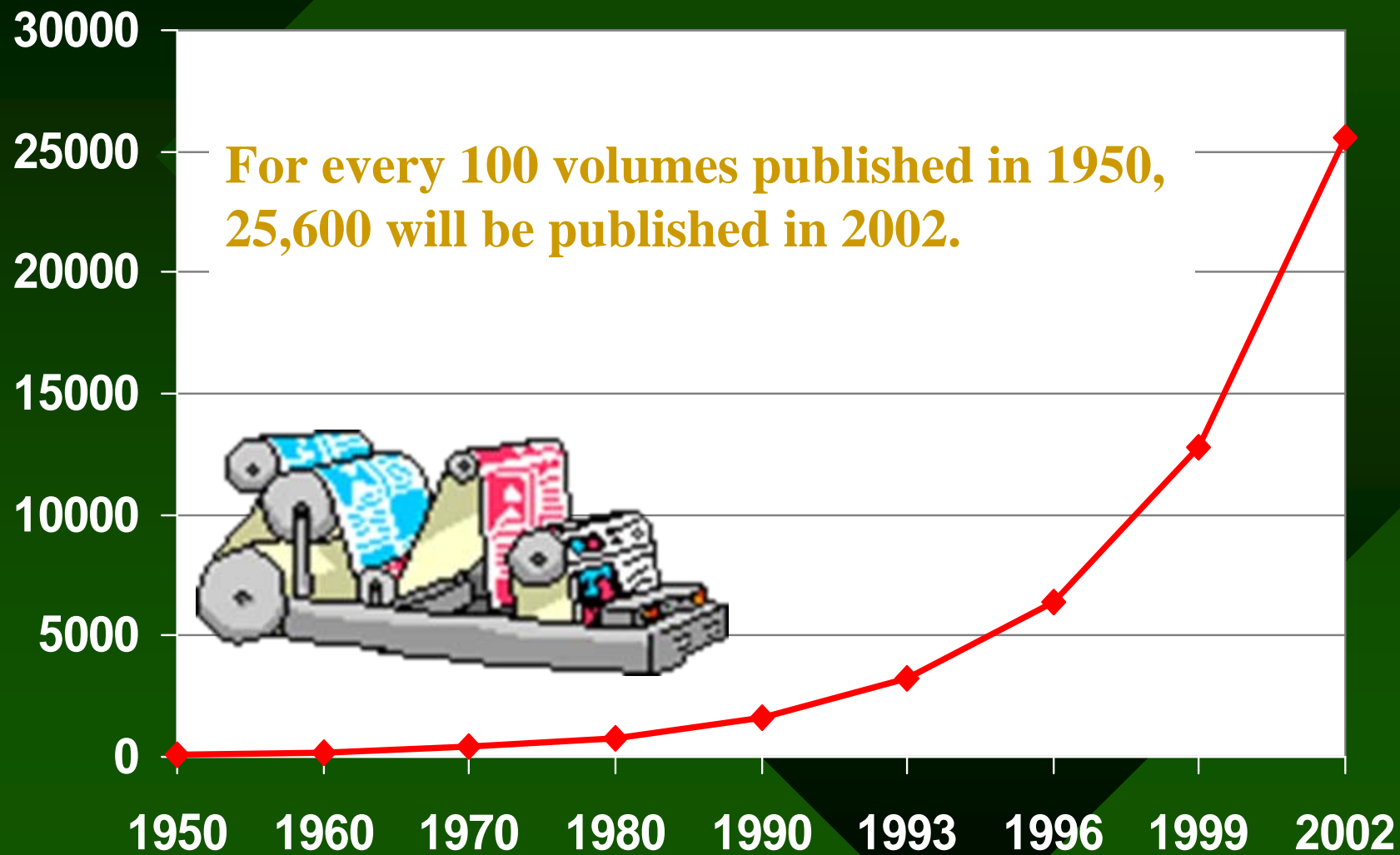
- Satisfied users who are lifelong learners
- Peer comparisons that look good
- Cost-effective management
- Decisions based on data
- Fund raising
- Efficiency



Inequality of Access & Accessibility

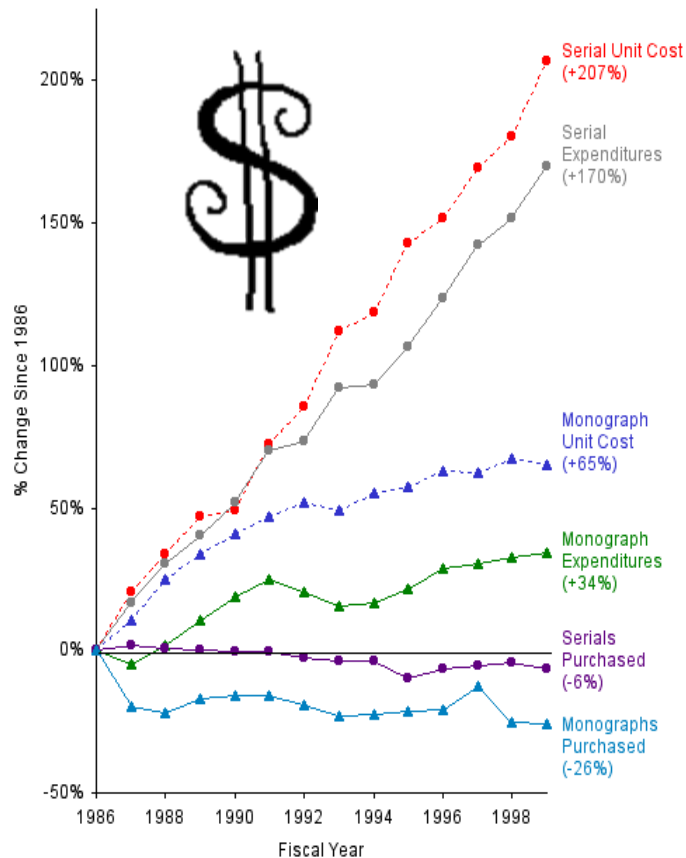


Available Resources



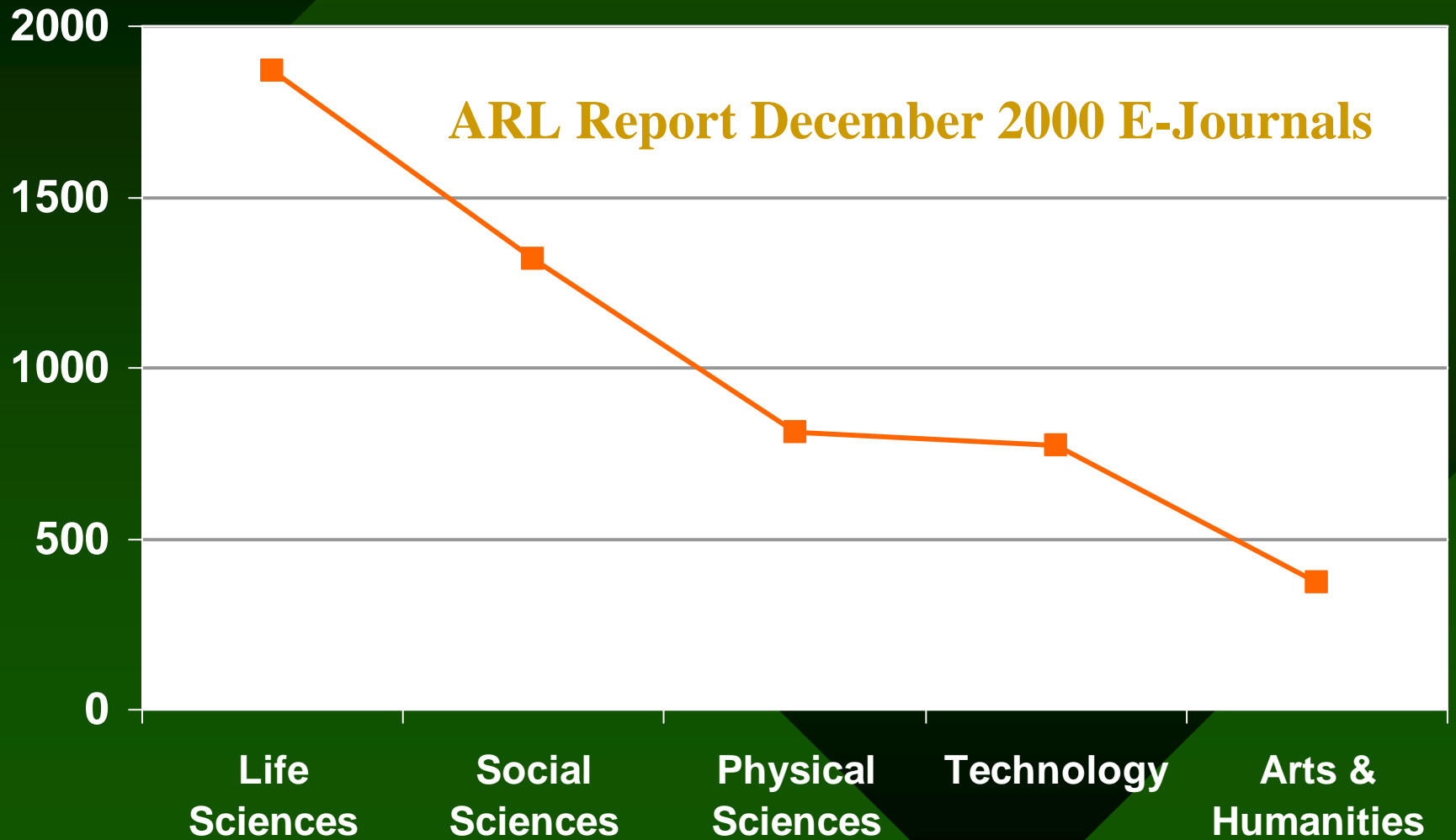
Economics of Content Acquisition

Graph 2
Monograph and Serial Costs
in ARL Libraries, 1986-1999



Libraries are spending more, but acquiring less, which means reduced service & convenience to users

Inequality of Available Content





Collection Growth & Storage Costs

- If collection of 1 million volumes increases 2%
 - 20,000 volumes = 2,000+ linear feet of shelving
 - \$400,000 to catalog, circulate, shelve & re-shelve
- Cost of storage & circulation per volume
 - \$20 to \$40 on library shelf
 - \$5 to \$8 in off-site storage
 - **\$9 to \$3 for digital storage**

Digital Economics of ^ Content Creation

- Labor & storage costs
 - \$25-\$40 per dis-bound book (\$0.10 page)
 - \$90-\$140 per bound book (\$0.30 page)
- Plus the cost of seeking copyright permission, equipment, printing, training, mirroring, & preservation



Seeking Copyright Permission

	Articles	Books
Total random sample	96	337
Copyright protected	70%	94%
Publishers contacted	70%	88%
Publishers responded	45%	51%
Days to respond	30	101-124
Permission granted	90% (28%)	43% (20%)
Average fee	\$12.30	\$100

Wayne State

Carnegie Mellon



Piecemeal approach to seeking Cost of ^ Copyright Permission

- \$24,500 to request permission to digitize 1000 articles for e-reserves
- \$10,450 to request permission to digitize 7,307 advertisements published 1910-1960
- Suspect that libraries will spend more to request permission to digitize books & be less successful at getting permission



Project to Digitize a Million Books

- Provide a critical mass of free-to-read content for research, teaching, & learning
- Preserve & register the digitized content
- Reduce cost of labor & copyright permissions

Carnegie Mellon

Indian Institute of Science

University of Science & Technology in China

Online Computer Library Center (OCLC)

A dozen other libraries

Digitization & Physical Space

- Save 10 square feet of floor space for investment of \$2,500 - \$17,500 (100-125 volumes)
- **BUT . . .**
 - Printing costs could exceed shelving costs
 - Additional equipment could take more space than you just saved
 - Faculty want to keep the security of print

Facilities Space

<i>Equipment / Square footage</i>	
Computer or laptop space at counter height	20
Computer at sit-down height & take notes	35
Computer at sit-down height, no notes	25
Laptop sit-down space & take notes	25
Printer	10

A table for 4 occupiers 23-28 square feet

Assessment

- Inputs, outputs, & outcomes
- Cost-effectiveness
- Cost-benefits
- Environment
- Usability





DLF Usage & Usability Initiative

- Identify effective methods of assessing digital library use & usability
- Study the scholarly information environment
 - Focus efforts appropriately
 - Provide context for interpreting usage trends
 - Evaluate the library's current & future role
 - Improve strategic planning
- Identify priorities, issues, & research agenda



Making Tough Choices

- **McDonaldization**

- Self-checkout
- Patron-initiated ILL
- Direct borrowing
- Online library instruction
- Chat & email reference
- Automated Reference

- **De-librarianization**

- Technicians
- Programmers
- System Managers
- Interface designers
- Human factors researchers
- Scanner operators & verifiers
- Data analysts
- Efficiency experts

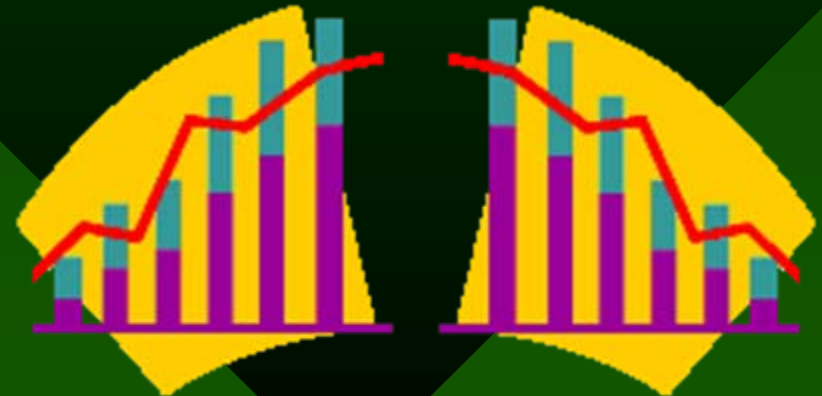
Making Tough Choices

Increased costs

- Printing
- Technology
- Staff
- Training
- R&D
- Renovations
- Dual operations

Decreased revenue

- Photocopying
- Fines



Digital Library \$\$

- 40% Commercial content
- 23% Equipment & infrastructure
- 18% Staff
- 7% Content creation
- 12% New e-publications
- Memberships
- R&D


Allocations
Reallocations
Grants & gifts





Making Tough Choices

- Spend more on digital resources
- Licensed access, not ownership, puts at risk stewardship, privacy, access, accessibility, ...
- No doctrine of first purchase
- What are the implications?



**The reality
of 24 / 7 access**



New Public Policy

- New business models
- License defines allowable use
- Technology enforces allowable use
- Technology enables usage monitoring
- Technology enables censorship of ideas
- No commitment to continued access or preservation



Uniform Computer Information Transactions Act (UCITA)

- Proposed statute that would apply to computer software, multimedia, data, databases, & other online information
- License would establish a contract that trumps copyright law
- Do users of online products with shrink-wrapped or click-wrapped licenses really give informed consent to the contract?



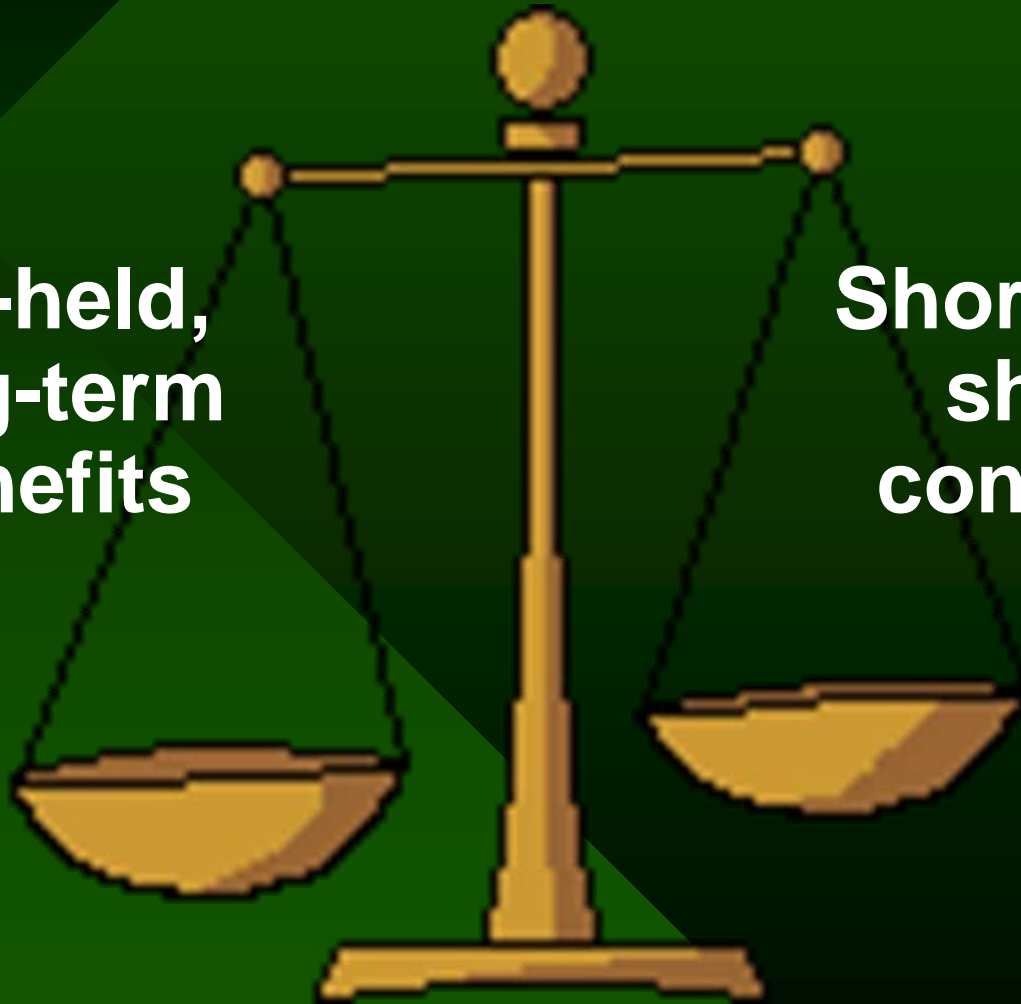
Digital Millennium Copyright Act

(DMCA – 1998)

- E-books are being licensed in proprietary formats with specific rights to specific devices
- Developing software to circumvent protections is a felony – which outlaws access to
 - Copyrighted works after they pass to the public domain
 - Purchased works if you upgrade computer or get virus
- The DMCA challenges fair use & free speech

A Good Trade?

**Long-held,
long-term
benefits**



**Short-sighted,
short-term
conveniences**

Future of Libraries is Digital, BUT...

- Please examine the lure of convenience, the lure of readability & accessibility, & the potential legacy of loss
- What are the costs & benefits of the current trajectory?
- What must we do to preserve what we cherish?

