



Virtual Dave Lankes

P r e s e n t a t i o n

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TITLE: Massive Scale Librarianship

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ABSTRACT: Overview of digital reference training, and how it integrates with digital reference management.

KEYWORDS: Massive Scale Librarianship, Participatory Librarianship

Massive Scale Librarianship

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and
IST 676

<http://drew.syr.edu/MSL>

<http://www.DavidLankes.org>



Gigabyte per Mile



Gigabyte per Mile

- Soon Every Mile of Road will Generate a Gigabyte of data a day
 - Road Sensors, Real-Time Traffic Data, Weather Information, Toll Data, Car Black Boxes



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- It is assumed that this will become a gigabyte an hour. As there are 3.5 million miles of highways in the U.S. that would be 3.3 petabytes of data per hour, or 28 exabytes per year.



Exabyte?!

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Paper Experiment



-Gladwell Tipping Point

Paper Experiment

- Imagine I Give you a Large Piece of Paper (.01" thick)



-Gladwell Tipping Point

Paper Experiment

- Imagine I Give you a Large Piece of Paper (.01" thick)
- You Fold It



-Gladwell Tipping Point

Paper Experiment

- Imagine I Give you a Large Piece of Paper (.01" thick)
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- And Fold It Again...50 Times



-Gladwell Tipping Point

Paper Experiment

- Imagine I Give you a Large Piece of Paper (.01" thick)
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- How Tall Would It Be?



-Gladwell Tipping Point

Paper Experiment

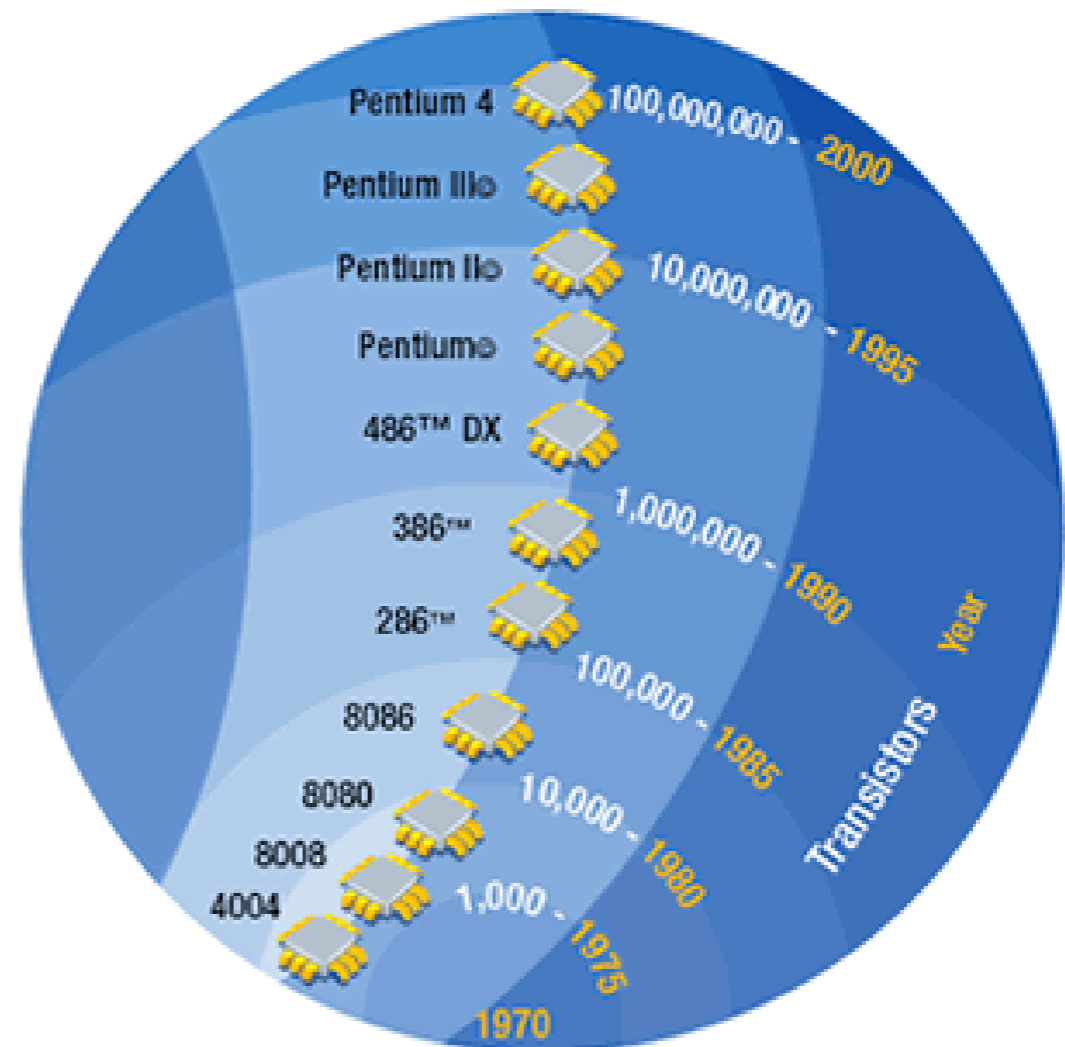
- Imagine I Give you a Large Piece of Paper (.01" thick)
- You Fold It
- And Fold It Again...50 Times
- How Tall Would It Be?
- Approximately the Distance Between the Earth and the Sun



-Gladwell Tipping Point

Predictable Change

- Unlike the Web, Massive Scale Computing is “Foreseeable”
- Moore’s LAW
 - Storage is Exceeding Moore’s Law



Issues

- **Privacy**
 - Total Information Awareness (DARPA)
- **Ethics of Involvement**
 - Unintended Censorship
- **Commercialization and Scarcity**
 - Radar Data
- **Unintended Consequences**
 - AOL Search Logs
- **Security**
 - eVoting and Diebold
- **Preservation: Migration and Emulation**
 - The Abandoned Grad Student at DRI
- **Culture and Control**
 - Google goes to China
- **Cognition and Perceptual Scarcity**
 - A weekday edition of the New York Times contains more information than the average person was likely to come across in a lifetime in seventeenth-century England. More new information has been produced in the last 30 years than in the previous 5,000. (Wurman)
- **Scalability and Sustainability**
 - Ask.com operations VP Dayne Sampson estimates that the five leading search companies together have some 2 million servers, each shedding 300 watts of heat annually, a total of 600 megawatts. These are linked to hard drives that dissipate perhaps another gigawatt. Fifty percent again as much power is required to cool this searing heat, for a total of 2.4 gigawatts. With a third of the incoming power already lost to the grid's inefficiencies, and half of what's left lost to power supplies, transformers, and converters, the total of electricity consumed by major search engines in 2006 approaches 5 gigawatts...almost enough to power the Las Vegas metropolitan area – with all its hotels, casinos, restaurants, and convention centers – on the hottest day of the year.

Options?

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- Catalog it All
 - Tried It

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- Ignore It
 - Commercialization of Data Stewardship
 - Dissolution of the Library as Institution?
Continued Reduction to a Niche Player

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- Limit the Library
 - Selection versus Intellectual Freedom

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Continued Reduction to a Niche Player
- Limit the Library
 - Selection versus Intellectual Freedom
- Embrace It
 - The Ethical Responsibility of LIS Education

Participatory Librarianship



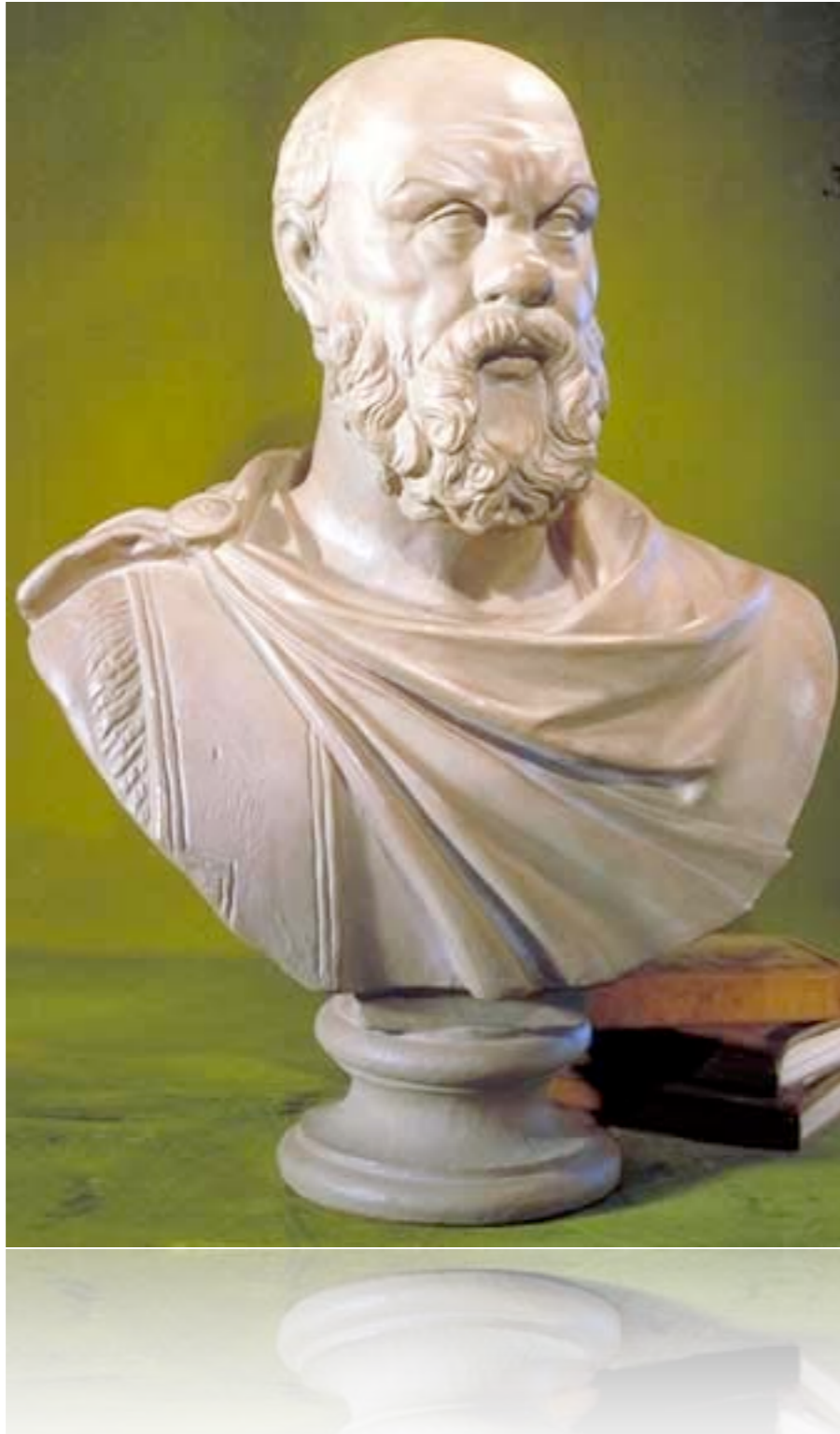
<http://iis.syr.edu/>

- Knowledge is Created through Conversation
 - Conversation Theory
 - Scalable
 - Intra-individual, Inter-personal. Organizational
- Artifacts are Simply By-Products

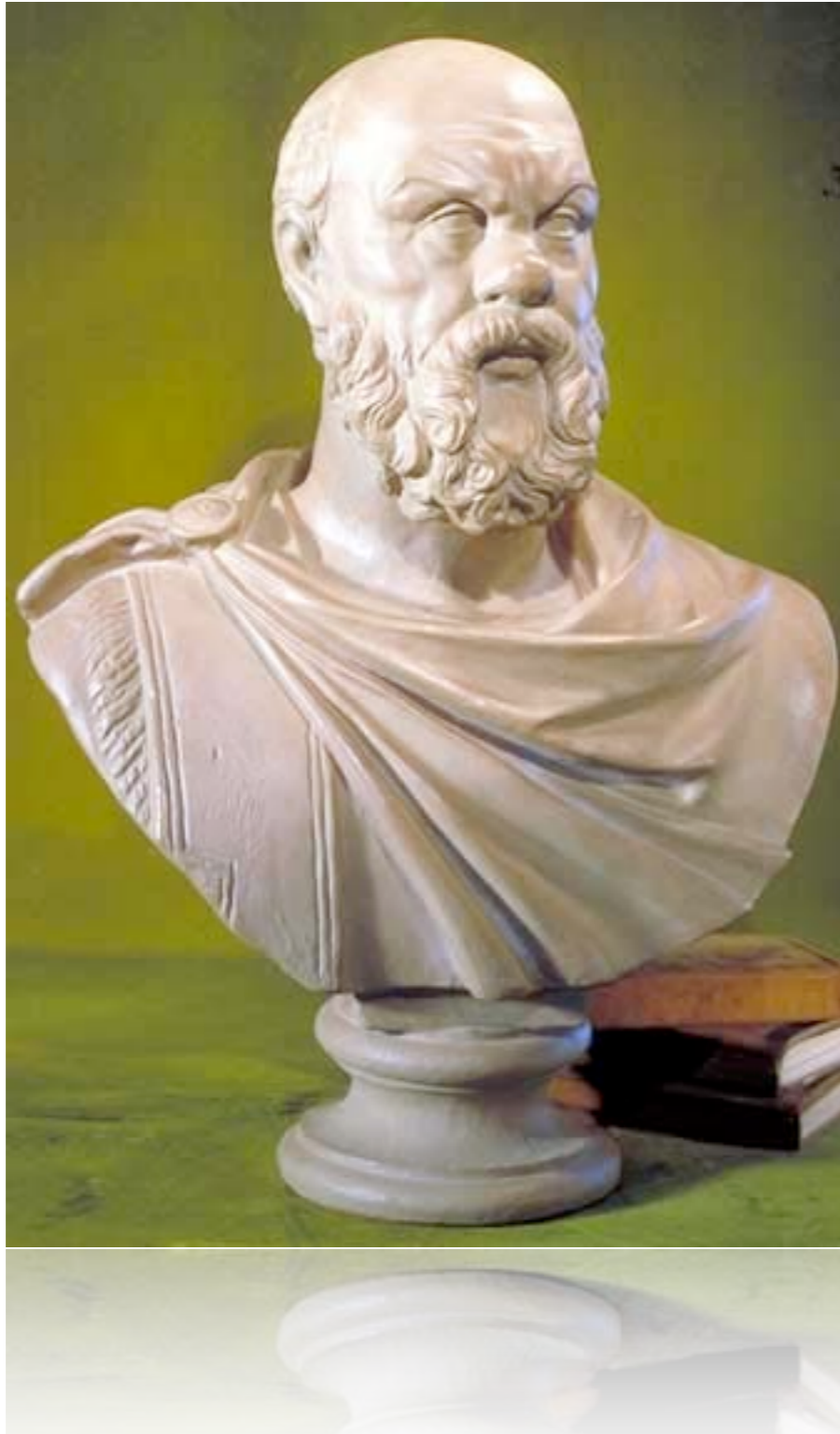
Mission of the Participatory Library

- To facilitate the knowledge creation of its community through conversation

Not Really New



Not Really New



- Socratic Method

Not Really New



- Socratic Method

Not Really New



- Socratic Method
- Book Groups

Not Really New



- Socratic Method
- Book Groups
- Programs
 - Speaker Series
 - Story Time

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- Socratic Method
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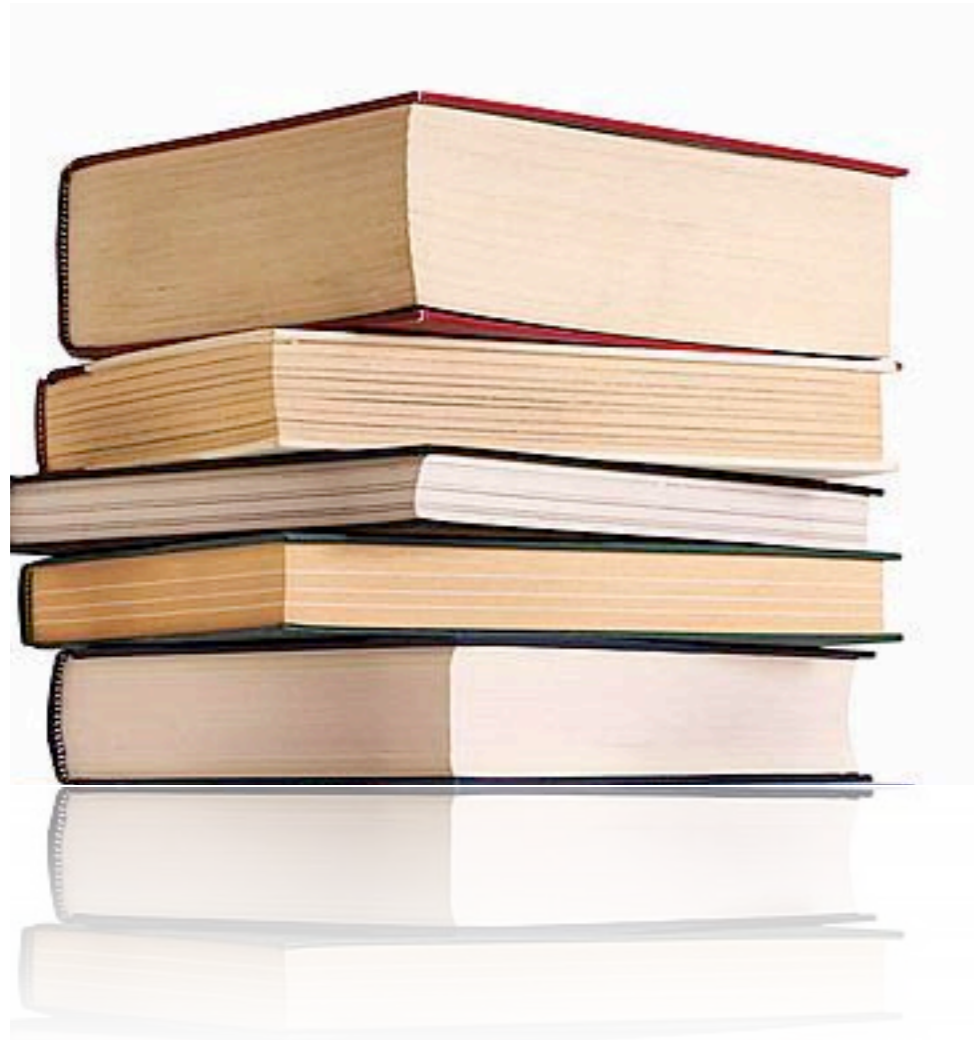
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- Collection Development

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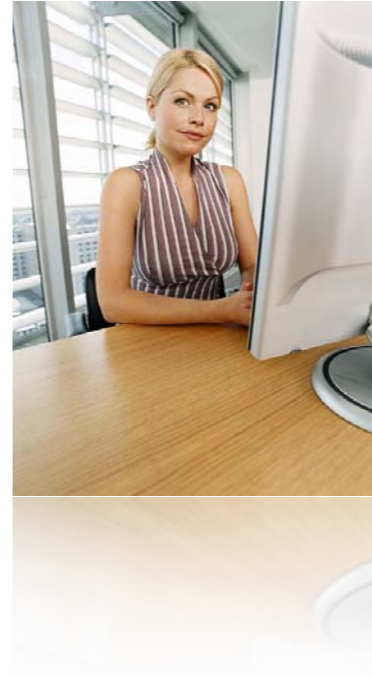


- Socratic Method
- Book Groups
- Programs
 - Speaker Series
 - Story Time
- Reference
- Collection Development
- Preservation

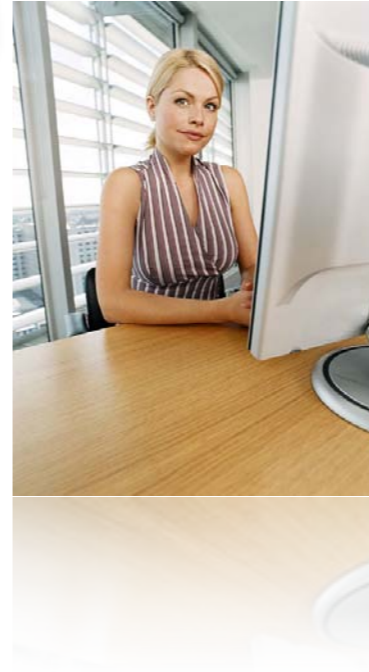
The ^{not so} Hidden Item Focus



- LIS Theory Development
- Evaluation
- Difficulty Incorporating All Library Functions
- CORC, LII
- Bibliofundamentalism
 - An Extreme that Sees the Role of the Library as a Haven of Order and Quality
 - Ultimate Focus on Collection
 - NOT SCALABLE!

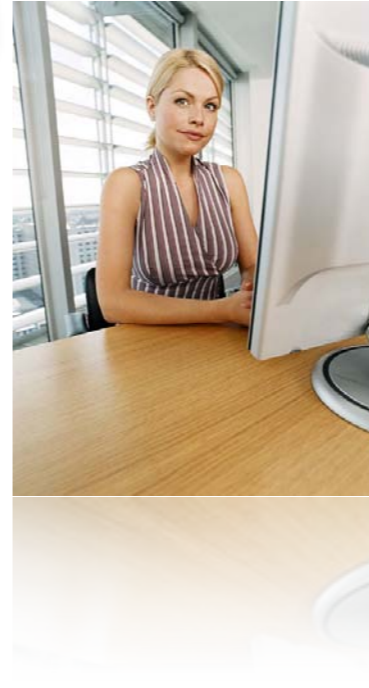


Did it Rain June 18th in
Yellowstone?



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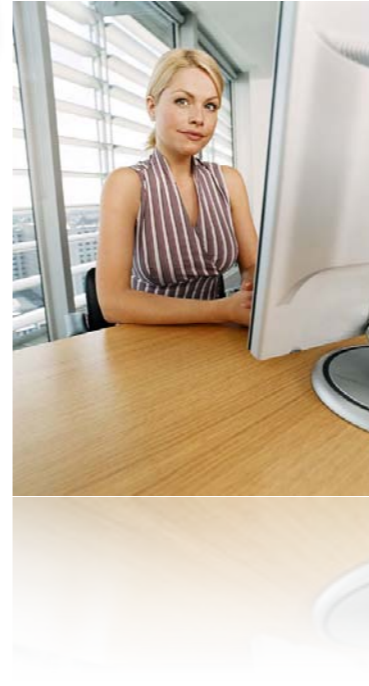
Yes



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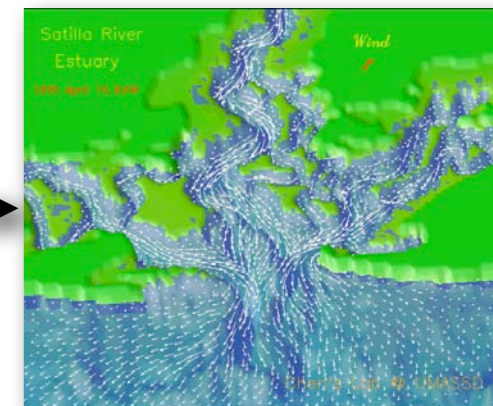
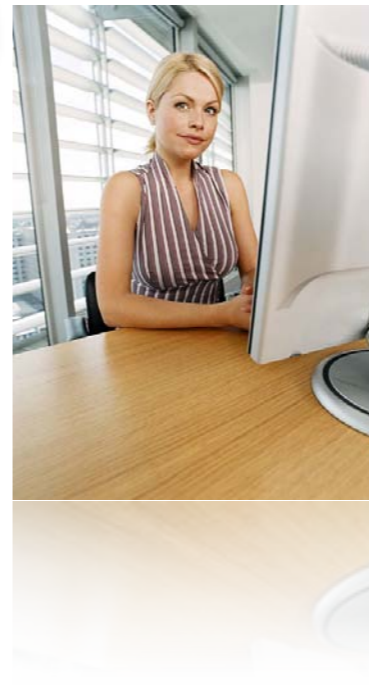
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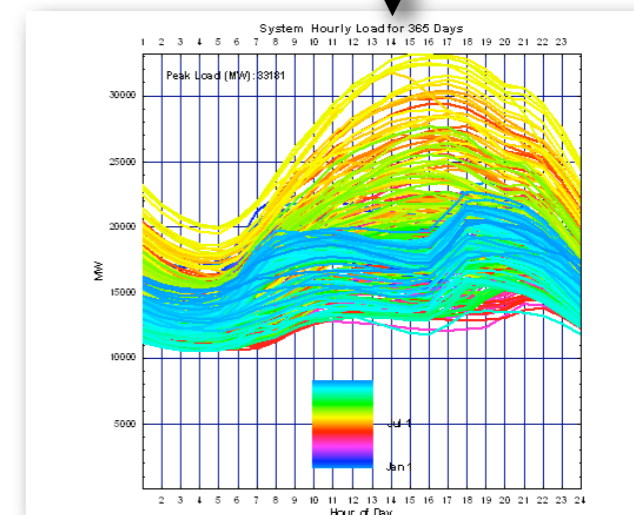
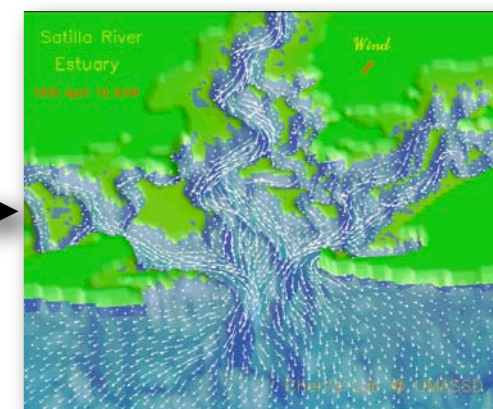
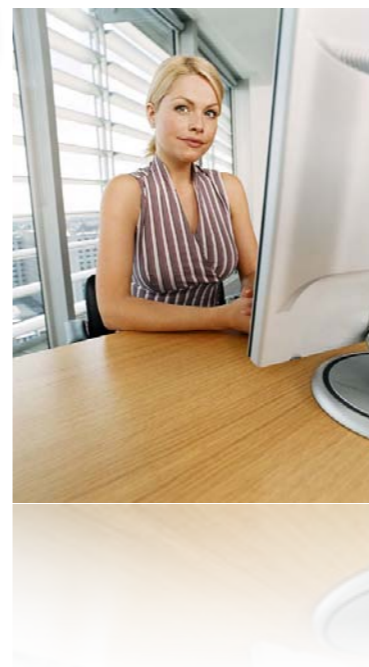
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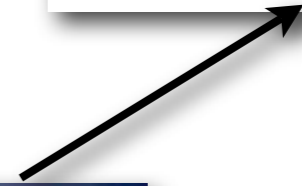
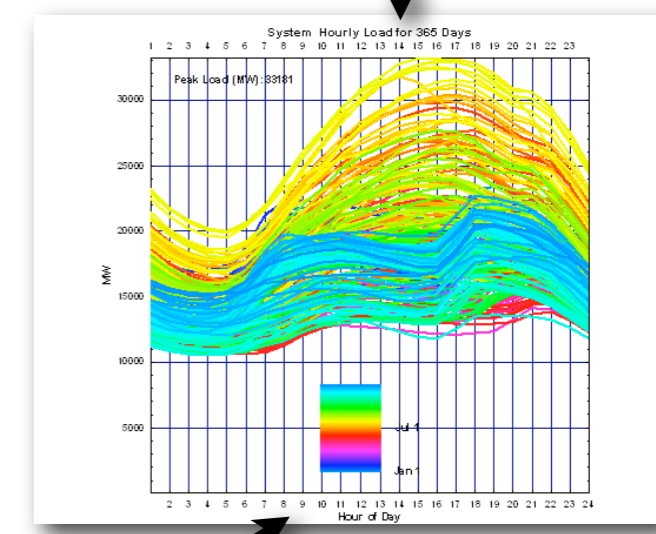
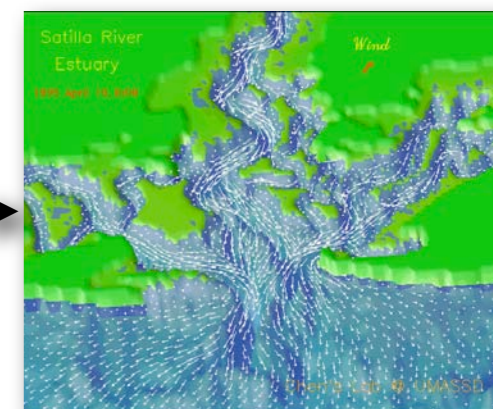
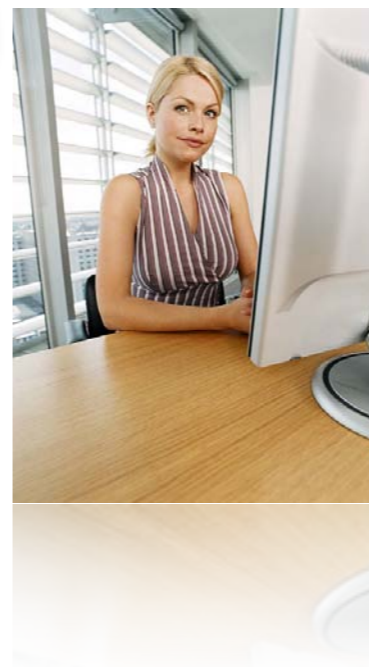
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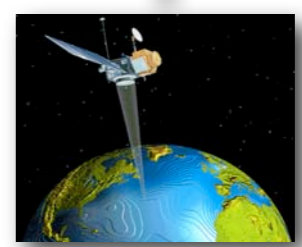
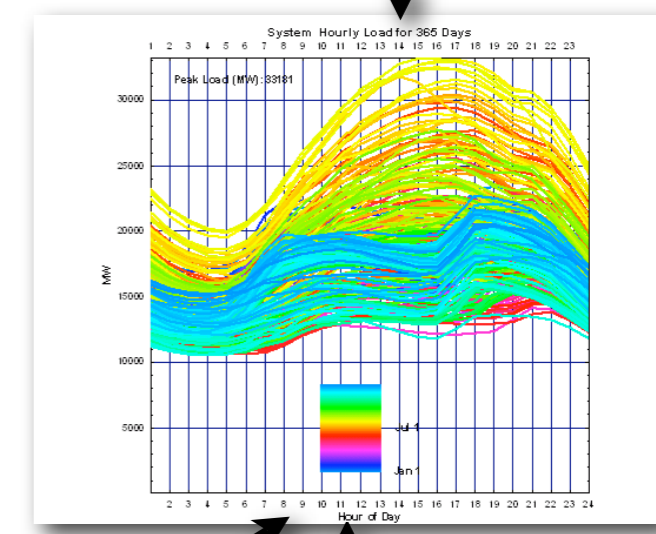
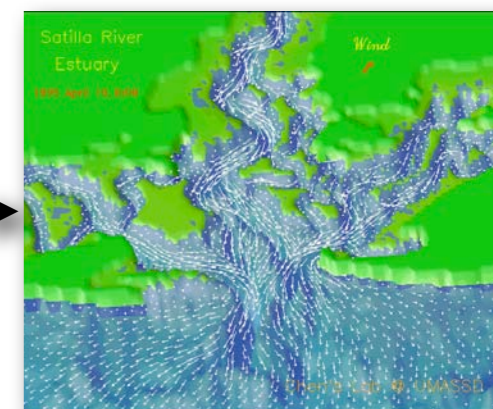
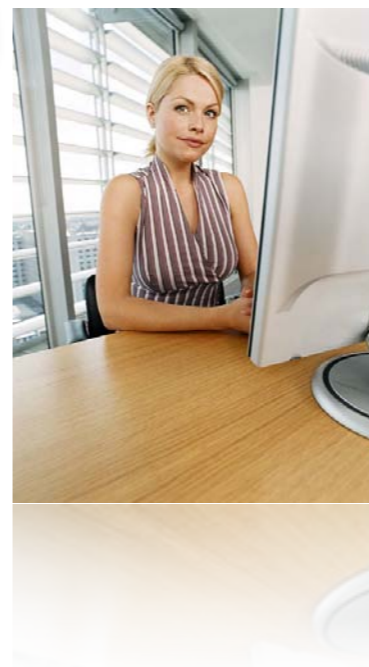
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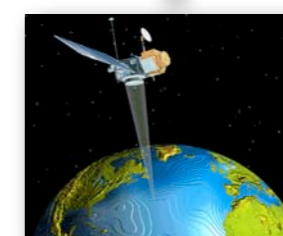
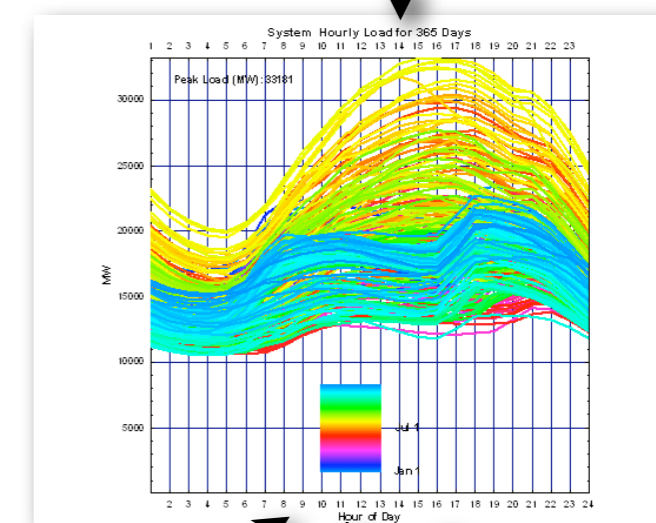
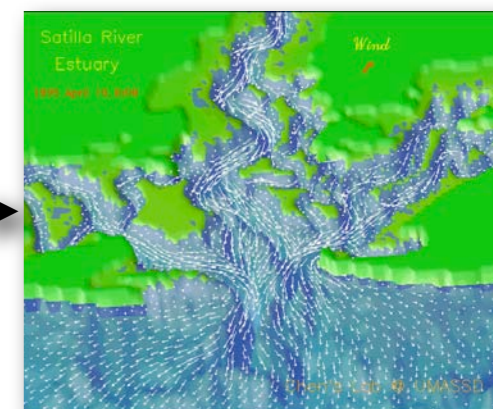
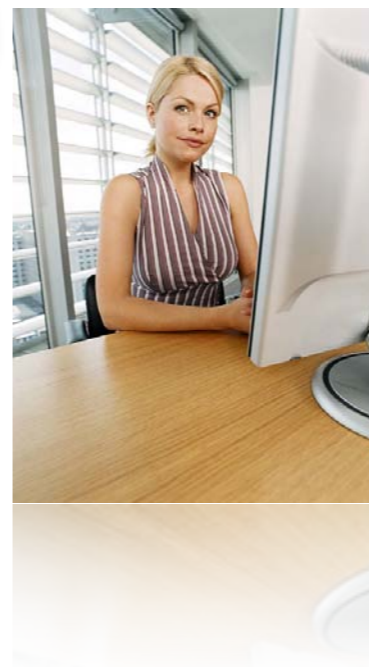
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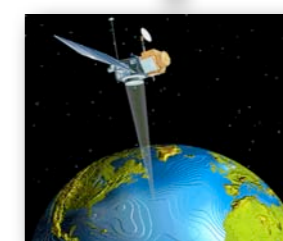
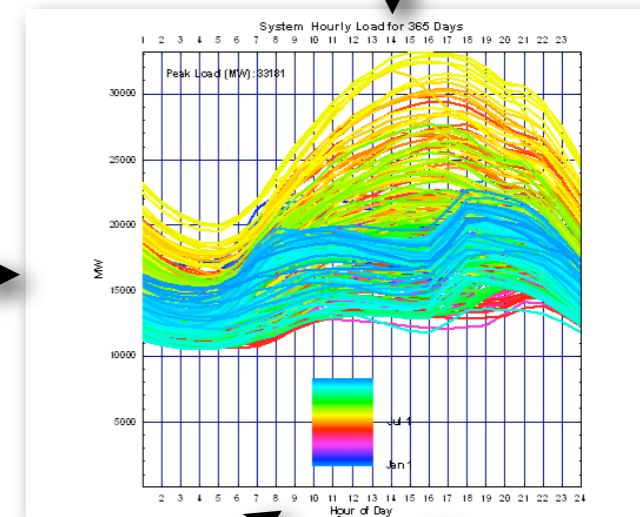
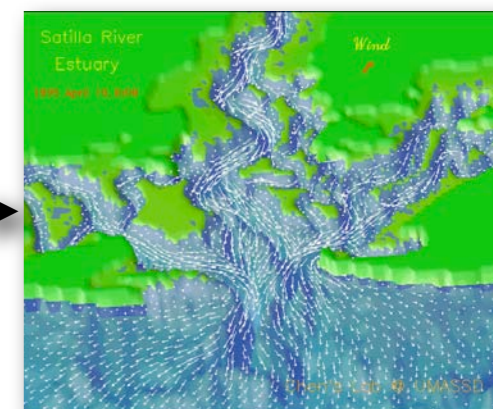
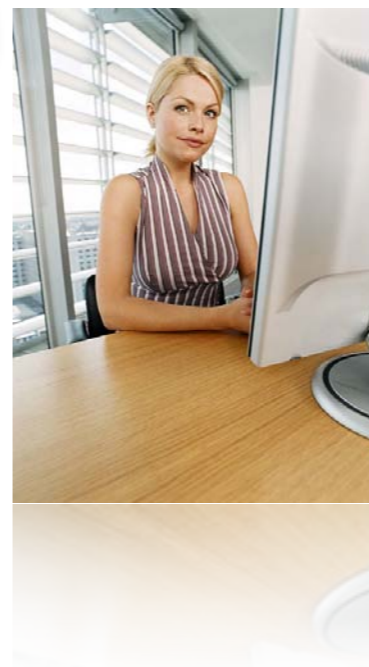
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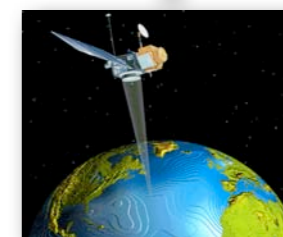
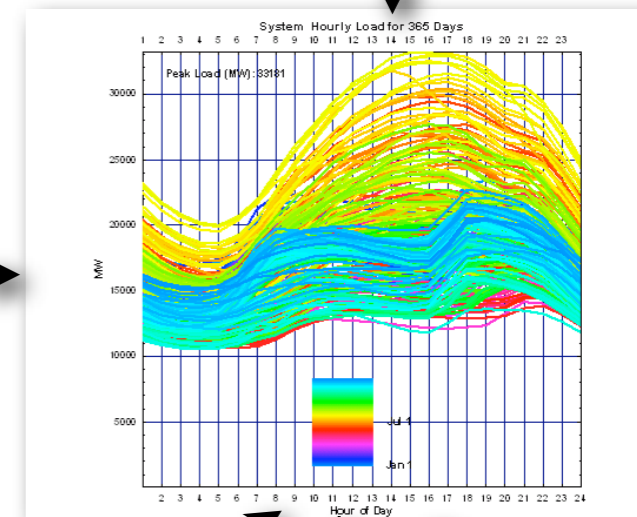
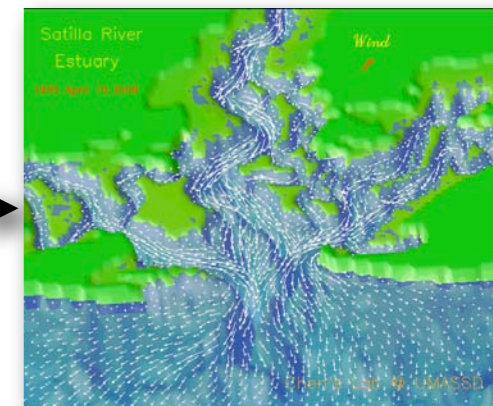
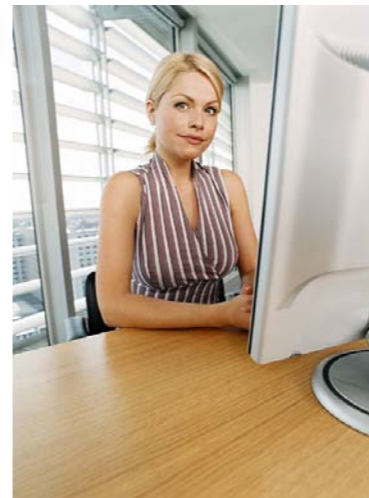
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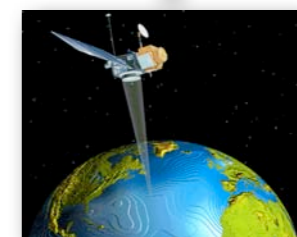
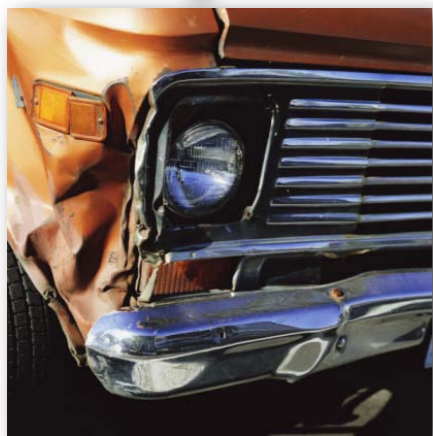
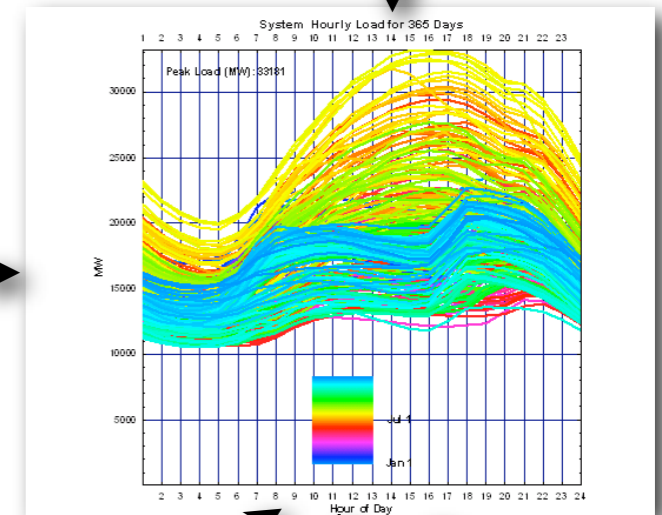
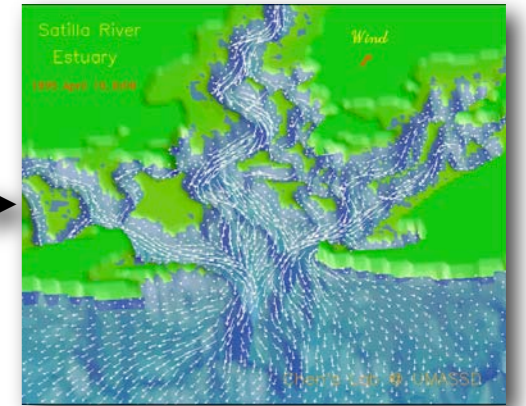
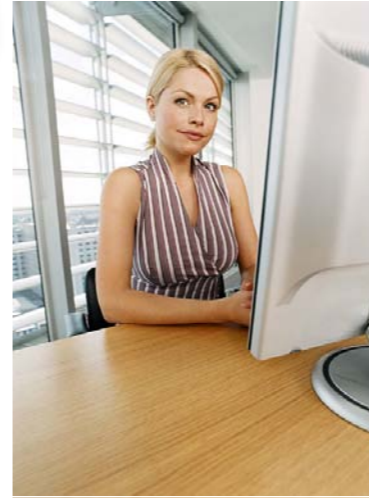
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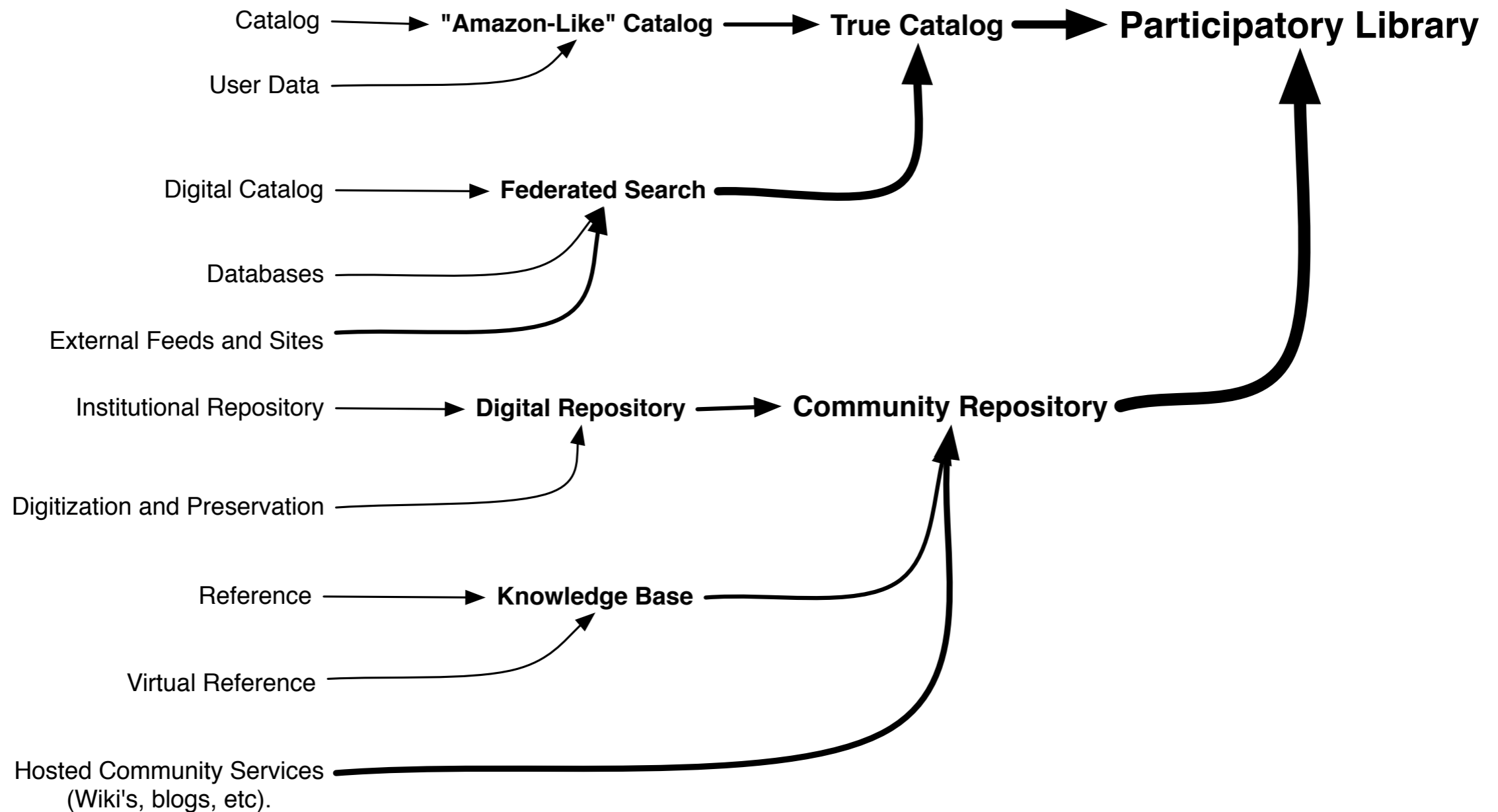
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Participatory Library System



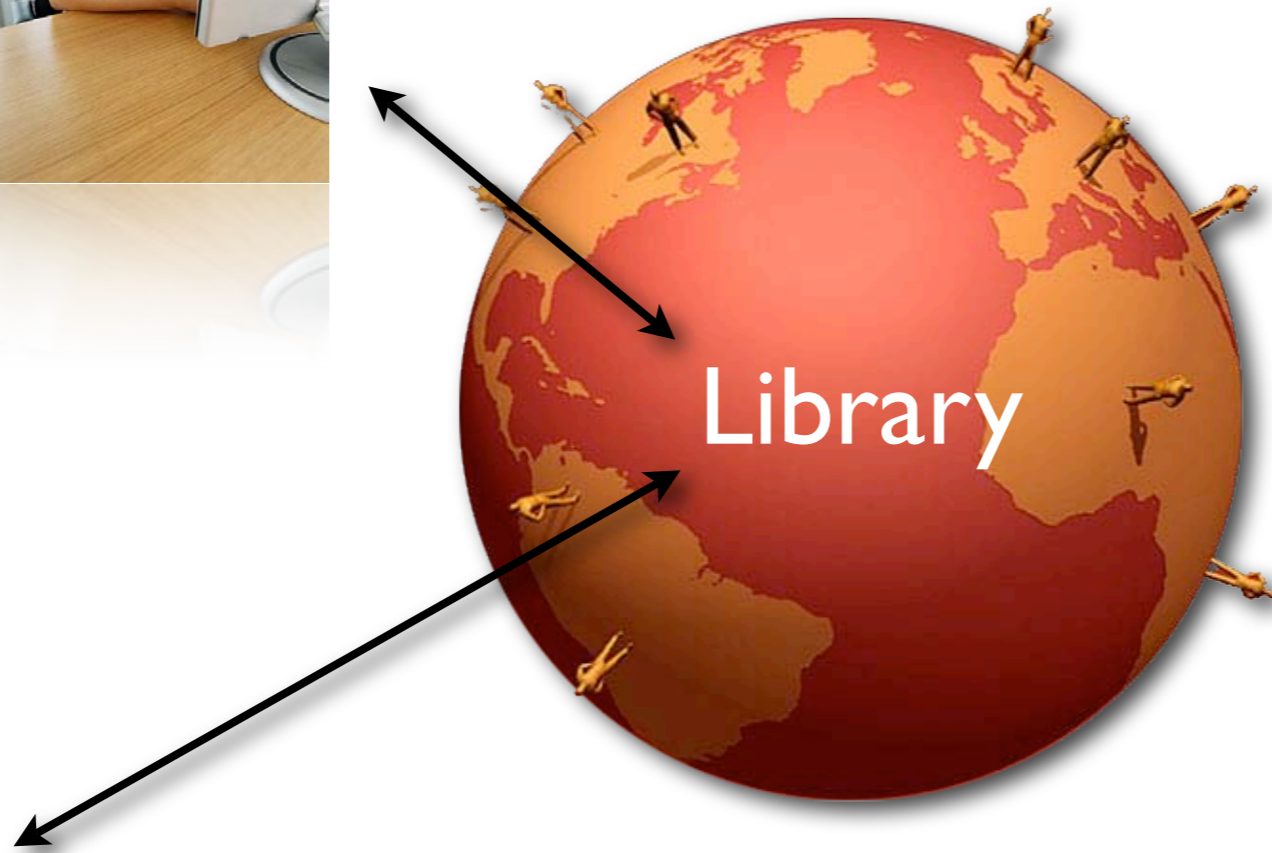
Example



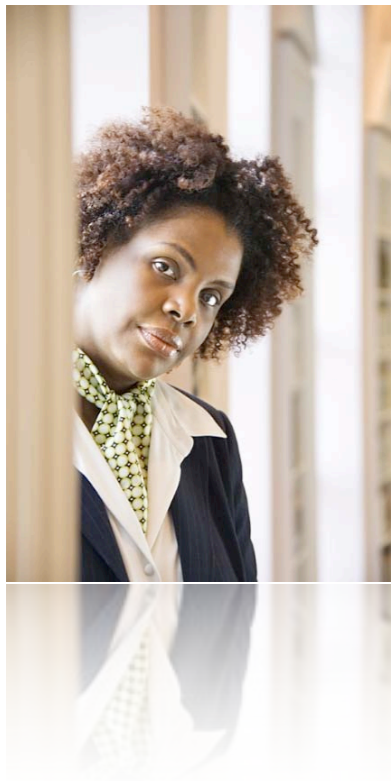
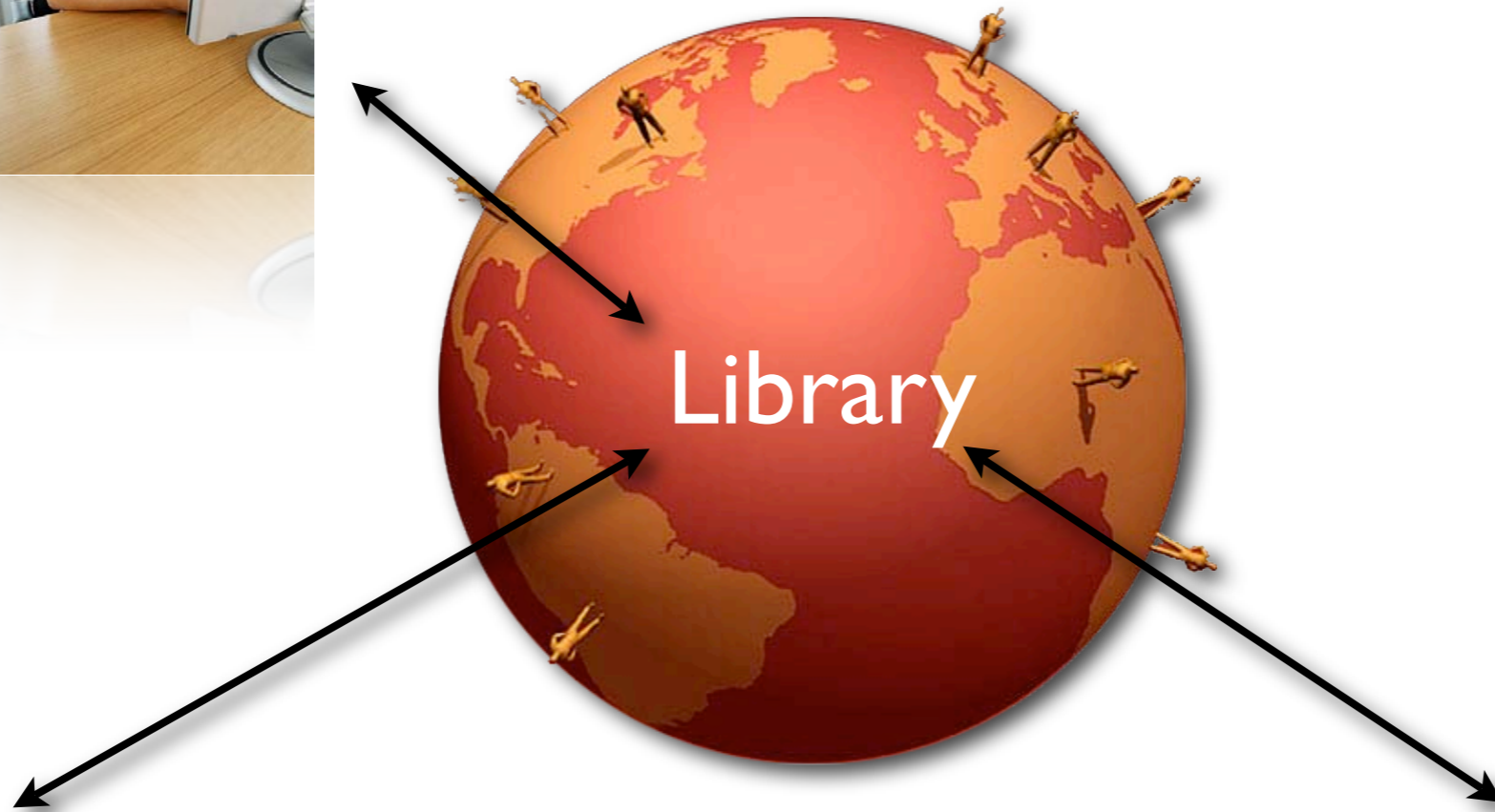
Example



Example



Example





C O N V E R S A T I O N S



Lib.Local

PEOPLE, Reference
Transactions, blog posts,
wikis, events, annotations,
books, articles, digital
images....



Lib.Network

PEOPLE, Reference
Transactions, blog posts,
wikis, events, annotations,
books, articles, digital
images....



Web Resources

Commerce, videos, search
engines, general web
available information



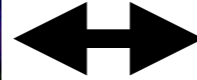
Institutions

Governments, Humanities



Massive Data

Research results, sensor
data, imagery, interaction
data



C O N V E R S A T I O N S



Lib.Local

PEOPLE, Reference
Transactions, blog posts,
wikis, events, annotations,
books, articles, digital
images....



Lib.Network

PEOPLE, Reference
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Web Resources

Commerce, videos, search
engines, general web
available information



Institutions

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Massive Data

Research results, sensor
data, imagery, interaction
data

Engage!

- To Ignore the Implications of Massive Scale Computing is Dangerous.
 - It Abdicates Serious Decisions and Consequences to Others
- Massive Scale Librarianship is an Opportunity to Not Only Enhance the Mission of the Library, but Proactively Position Librarians at the Forefront of the Information Field...Where they Belong