



# *Virtual Dave Lankes*

## Presentation

<http://www.DavidLankes.org>

**TITLE:** Reference in Academic Libraries: Virtual Reference

**AUTHOR(s):** R. David Lankes

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**ABSTRACT:** On day one join David Lankes as he looks at current issues and themes in digital or virtual reference. Libraries are taking reference to the web and this is creating challenges for librarians in terms of new skills, staffing requirements, and budget demands. This workshop will cover the basics of virtual reference, virtual reference tools, current trends and a little crystal ball gazing into the virtual reference future..

**KEYWORDS:** digital reference, virtual reference, OCULA



# Reference in Academic Libraries: Virtual Reference

R. David Lankes

<http://www.DavidLankes.org>







A New Twist  
on “Authority  
Control”



- David Lankes: What is the dewey number for books on tattoos?
- A librarian will be with you in about a minute. Please do not use your "back", "forward", or "refresh" buttons, or you will be disconnected.
- [ Librarian - A librarian has joined the session.]
- Librarian: hi. I'll try to find that for you.
- Librarian: The books in our library are at call number 391.65 and 391.6



- Librarian: I'm answering your question from a library in Calif. What library do you go to? I could look and see whether there are books there on tattoos.
- David Lankes: do you know the corresponding dewey that would be?
- Librarian: Would you like for me to do that?
- David Lankes: I don't need a specific book, just making a funny graphic for a talk I'm doing.
- Librarian: Libraries use the same dewey number for the books. That way you could go to another library and look for a similar book in the same area.



- Librarian: And you should find books in your library under the same dewey number I just gave you, if your library has books on the subject.
- David Lankes: I know, but I would like to know the actual subject hitting that matches the dewey number.
- Librarian: When I searched my catalog, I used the keyword term "tattoos".
- David Lankes: Do you know a place on the web, or have access to the Dewey classification system?
- David Lankes: Perhaps WebDewey?
- Librarian: WebDewey? What is that? I looked up ...
- Librarian: tattoos in our online system at Books In Print and found the book "Tattoo Icon" and they list it at 391.65
- David Lankes: WebDewey is a way to look up terms in the dewey classification system...in essence the resource they used to assign that book to the number 391.65
- David Lankes: It's no big deal. The number was a great help.



- Librarian: Another title: "Tattoo Nation: Portraits of Celebrity Body Art" has the dewey number: 391.6/5
- Librarian: Is there a site on the internet for WebDewey?
- David Lankes: It probably is just called "tattoos" in dewey, but I'll be talking with catalogers and sometimes they actually know what names the actual numbers correspond to. Knowing a little about Dewey it might be either tattoos or body art or something else.
- David Lankes: <http://www.oclc.org/dewey/versions/webdewey/>
- David Lankes: You have to pay for access.
- Librarian: I'm not a cataloger. You probably have more knowledge on this than I do at the moment.
- David Lankes: No problem. Thanks again. Have a good day.



- Librarian: You are right that it could be found under different keywords. I was trying to find the most direct, quick answer to your question.
- David Lankes: And I got it. I asked for the number. That's what I needed.
- Librarian: You're welcome. Thanks for the challenge. Have a good day, yourself.
- David Lankes: The name was just a follow-up if you knew.
- David Lankes: bye.



# Post Game Summary



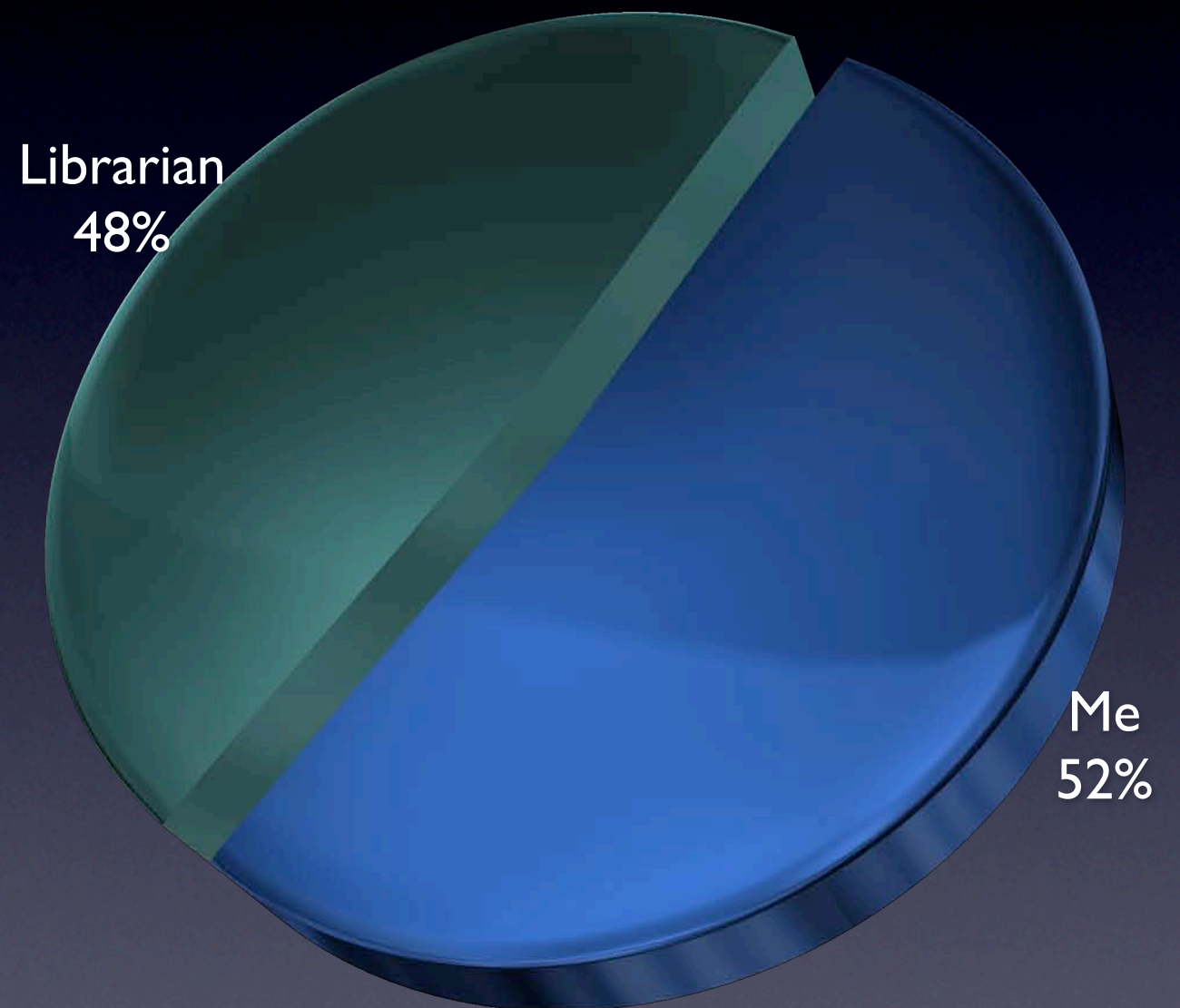
# Post Game Summary

	Total Messages	29
	Librarian	14
	Dave	15



# Post Game Summary

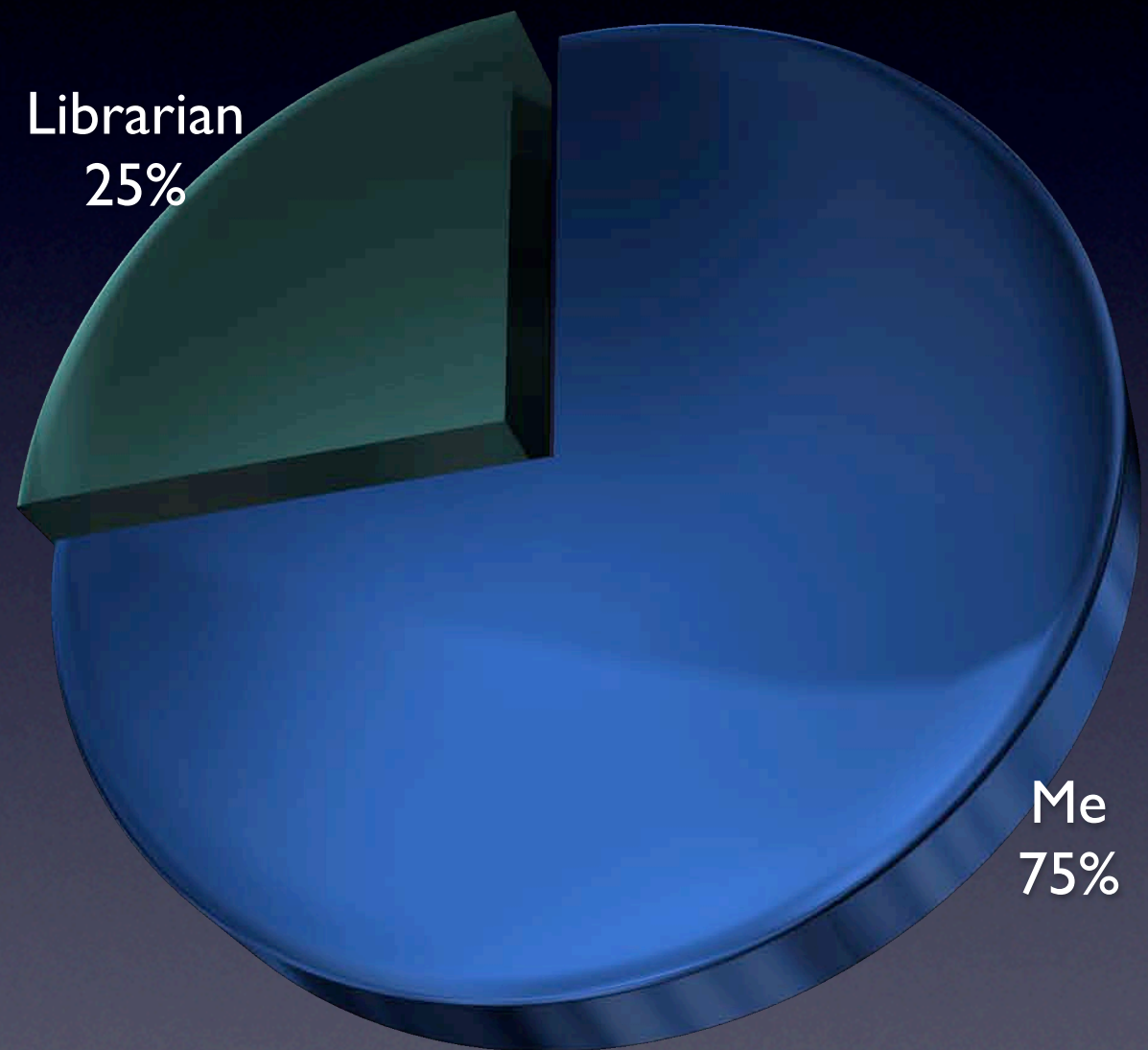
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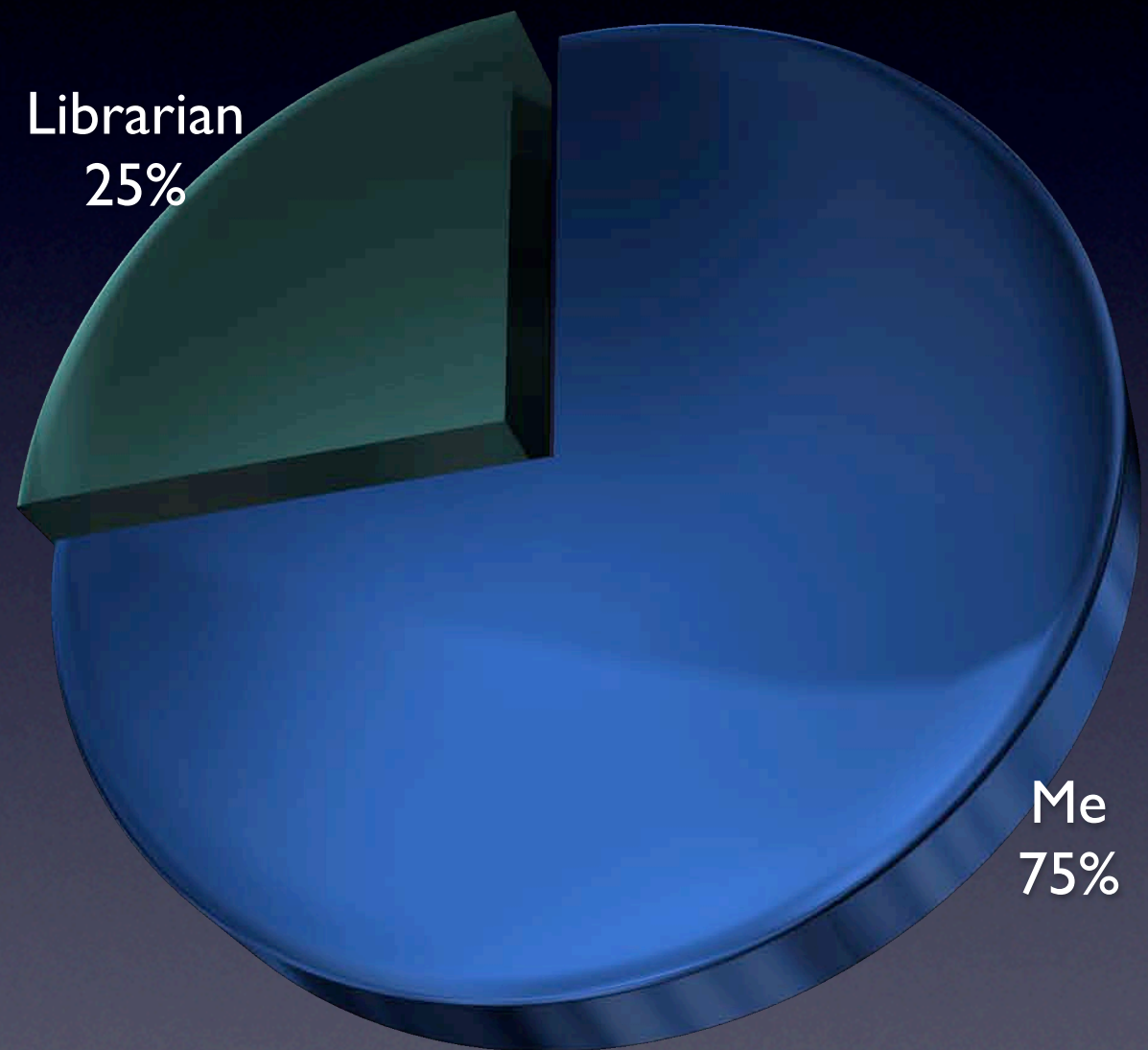
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Librarian	14
Dave	15
Closing Messages	4
Librarian	1
Dave	3





# Post Game Summary

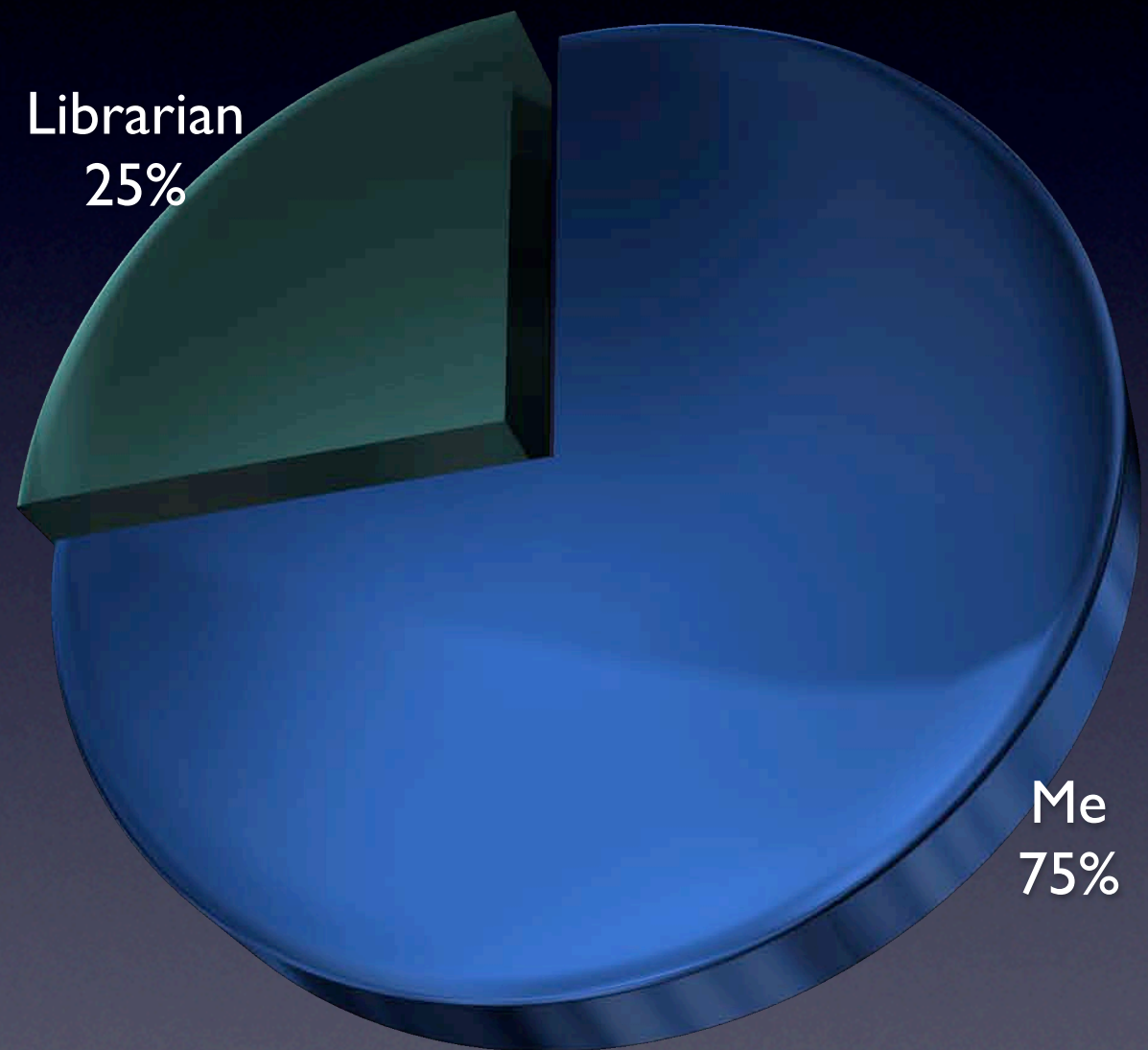
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Reference Questions	5





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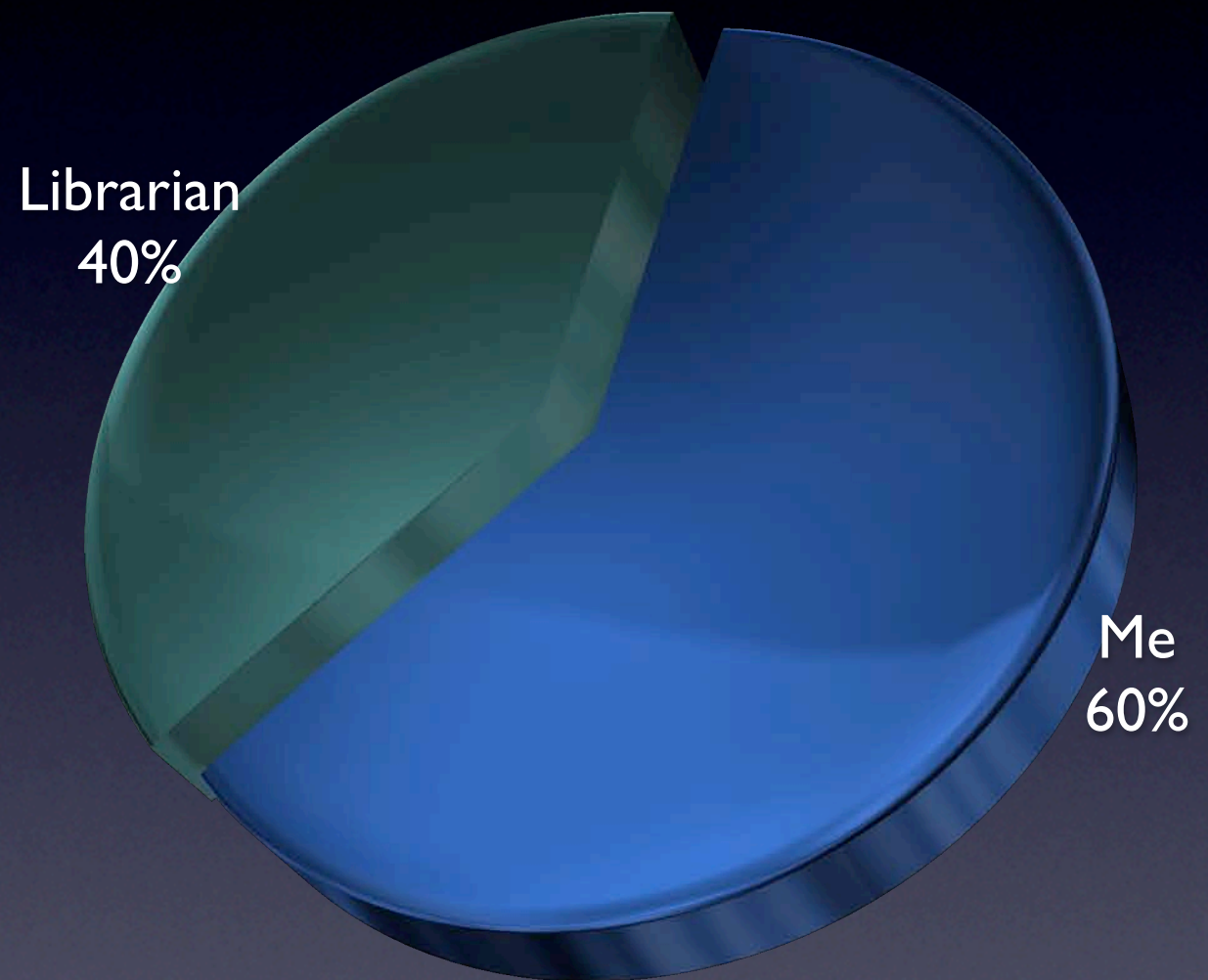
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Librarian	2 (What is Web Dewey, Site for Dewey)





# Post Game Summary

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Dave	3
Reference Questions	5
Librarian	2 (What is Web Dewey, Site for Dewey)
Dave	3 (Dewey Number, Class and Site for Dewey)





# Uncomfortable?

- Reference is at once both the most public, and private function the library offers
- While we call it public service, we don't have the same transparency as technical service





# Libraries Have it Backwards

- Reference is an Unnatural Act
  - Admitting Ignorance is Uncomfortable - the Greedy Librarian Problem
- Self Promotion is Human Nature





# Agenda

- Why Virtual Reference
- Basics of Virtual Reference
  - General Digital Reference Model
  - Technical Opportunities
- Expanding Reference Service



Reference by Any  
Other Name



# Reference by Any Other Name

Digital Reference



# Reference by Any Other Name

Email Reference

Digital Reference

Live Reference

Virtual Reference

Chat Reference

eReference



# Reference by Any Other Name

Email Reference

Online Reference

Digital Reference

Live Reference

V\_Ref

AskA

Virtual Reference

Chat Reference

eReference

Dig\_Ref



# Reference by Any Other Name

Email Reference

Online Reference

Digital Reference

Live Reference

V\_Ref

AskA

QuestionPoint

Virtual Reference

Tutor.com

Docutek

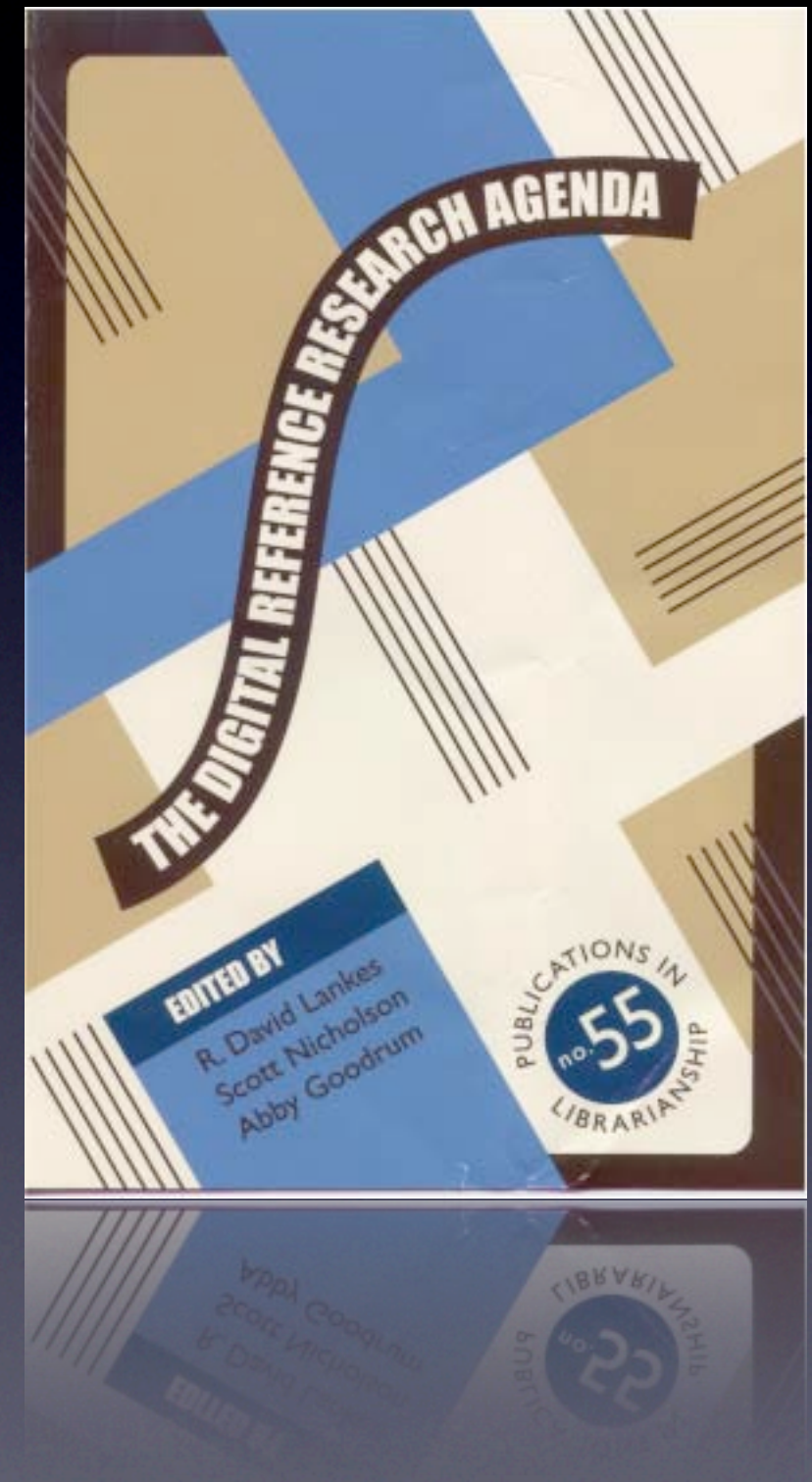
Chat Reference

eReference

Dig\_Ref



“The use of human  
intermediation to answer  
questions in a digital  
environment”  
- The Digital Reference  
Research Agenda

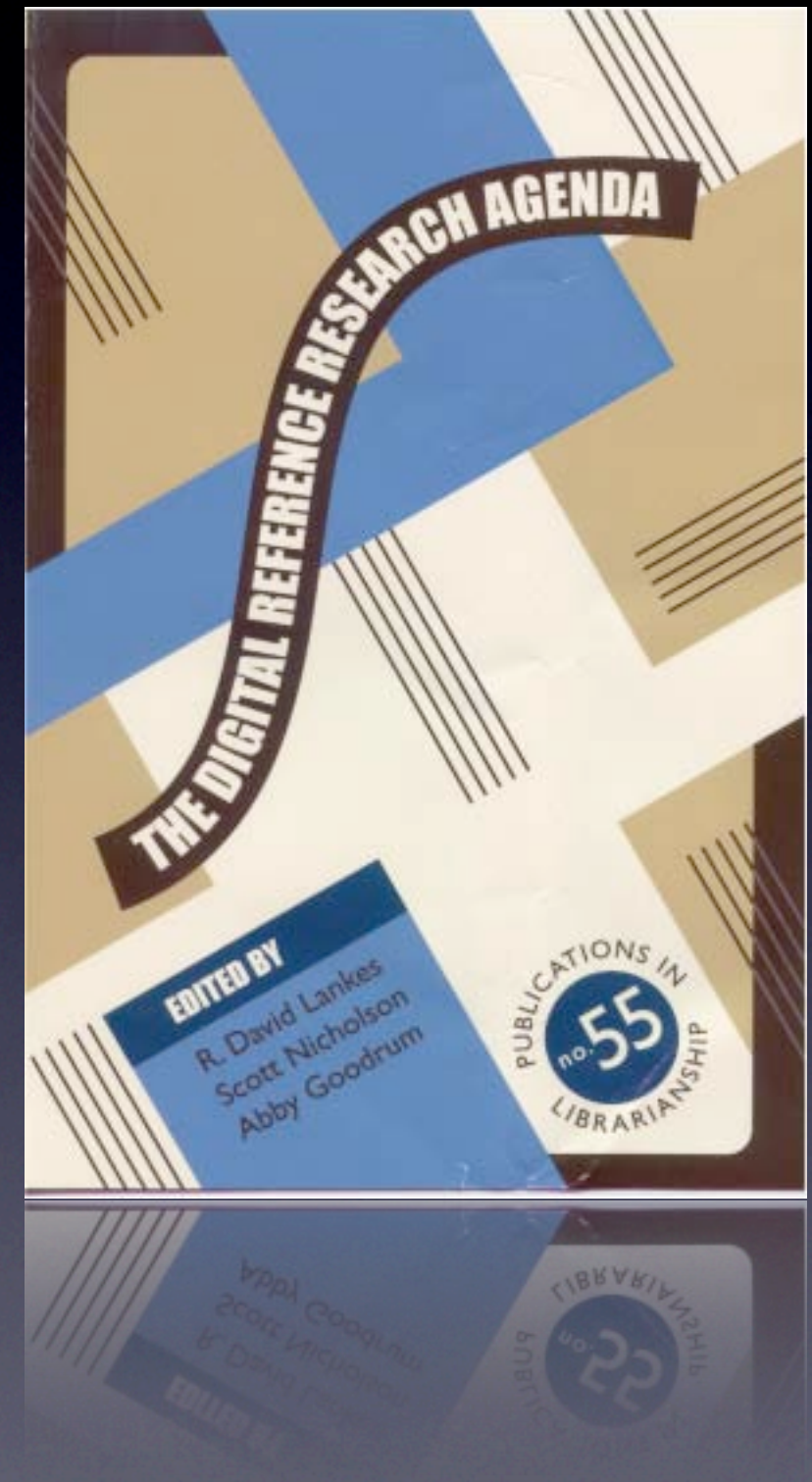




“The use of human  
intermediation to answer  
questions in a digital  
environment”

- The Digital Reference  
Research Agenda

An agenda to increase the  
technical knowledge (and  
capacity) of libraries and to build  
bridges (and respect) to the  
digital library and other  
communities.





# Lankes' Virtual Reference Perspective

- Reference is an Island of Chaos in a Sea of Library Order...That's a Good Thing
- Virtual Reference is Different from Traditional Reference - It Creates Artifacts by Default/Design
- Virtual Reference is Beyond Libraries



# Purpose, General





# Purpose, General

- Answer the Needs of the Constituency





# Purpose, General

- Answer the Needs of the Constituency
- Know the Needs of the Constituency





# Purpose, Internal



# Purpose, Internal

- Organizational Development and “Bonding”
  - Develop Group Identity
  - Common Policies
  - Provide Even Service Distribution
  - Provide Innovation Opportunities
  - Training



# Purpose, External



# Purpose, External

- Raise Visibility



# Purpose, External

- Raise Visibility
- Demonstrate Innovation



# Purpose, External

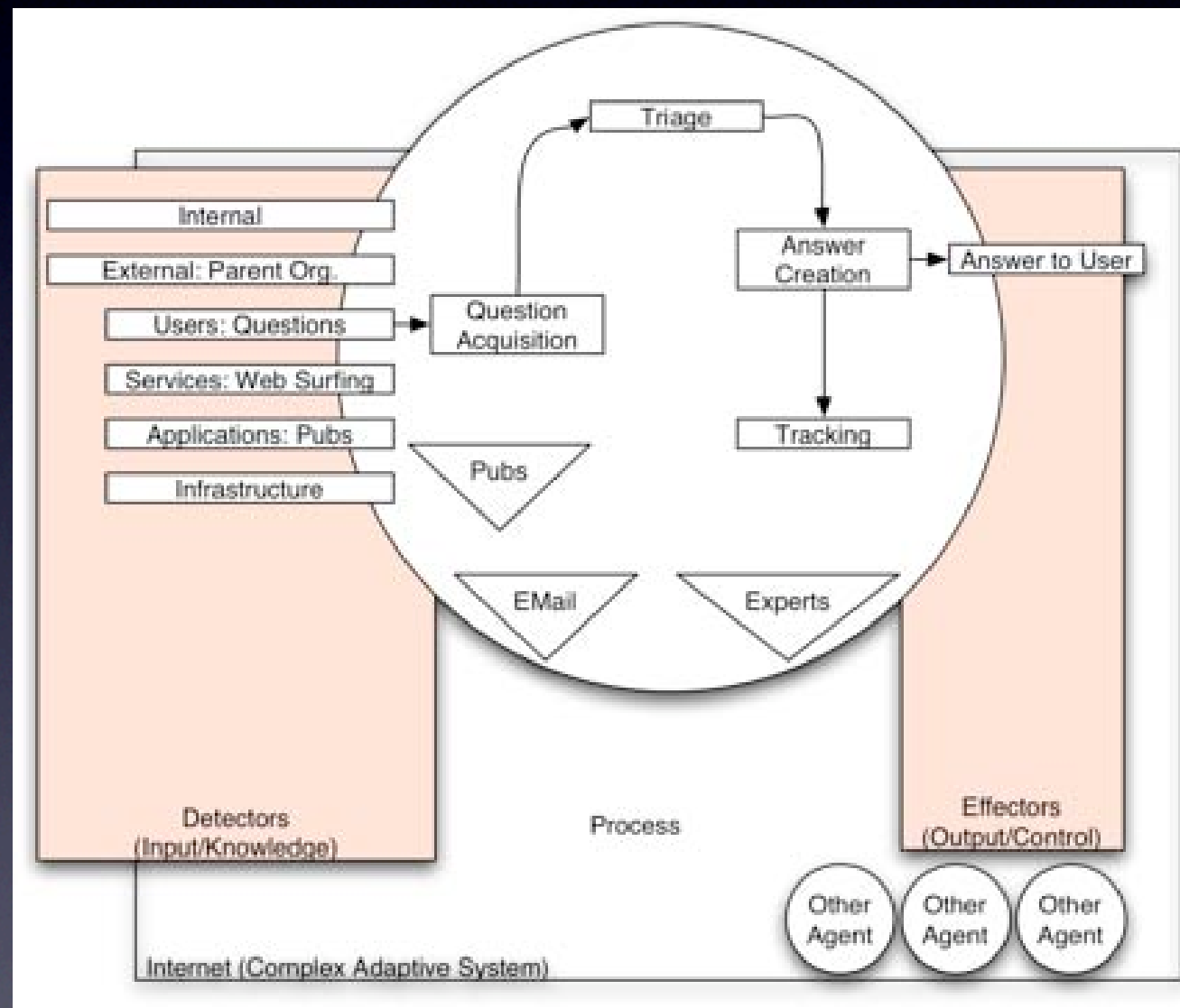
- Raise Visibility
- Demonstrate Innovation
- Provide Expanded Service
  - Time: Use Time Zones to Your Advantage
  - Expertise: Disconnect Reference from a Physical Collection



# General Digital Reference Model

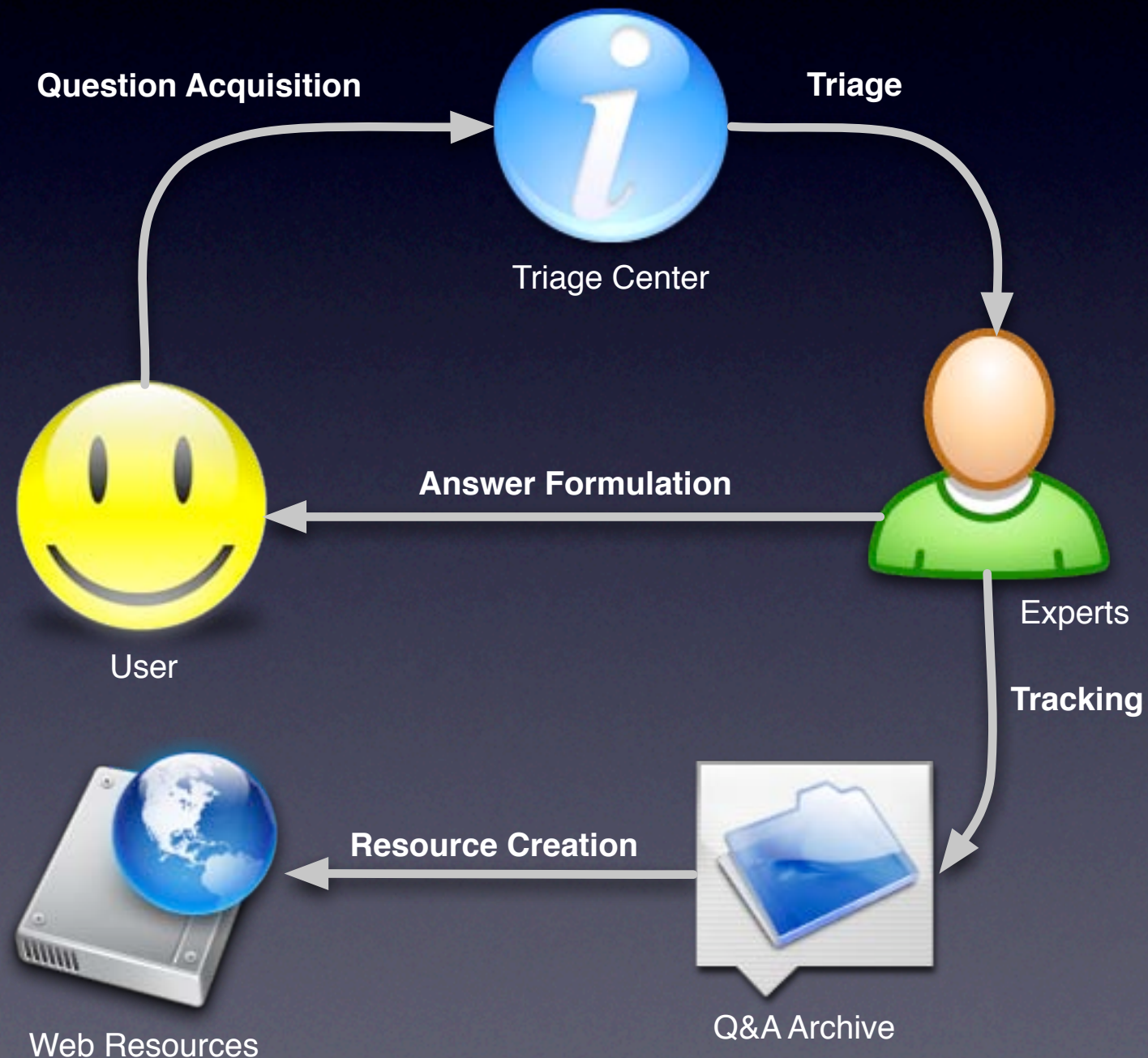


# General Digital Reference Model



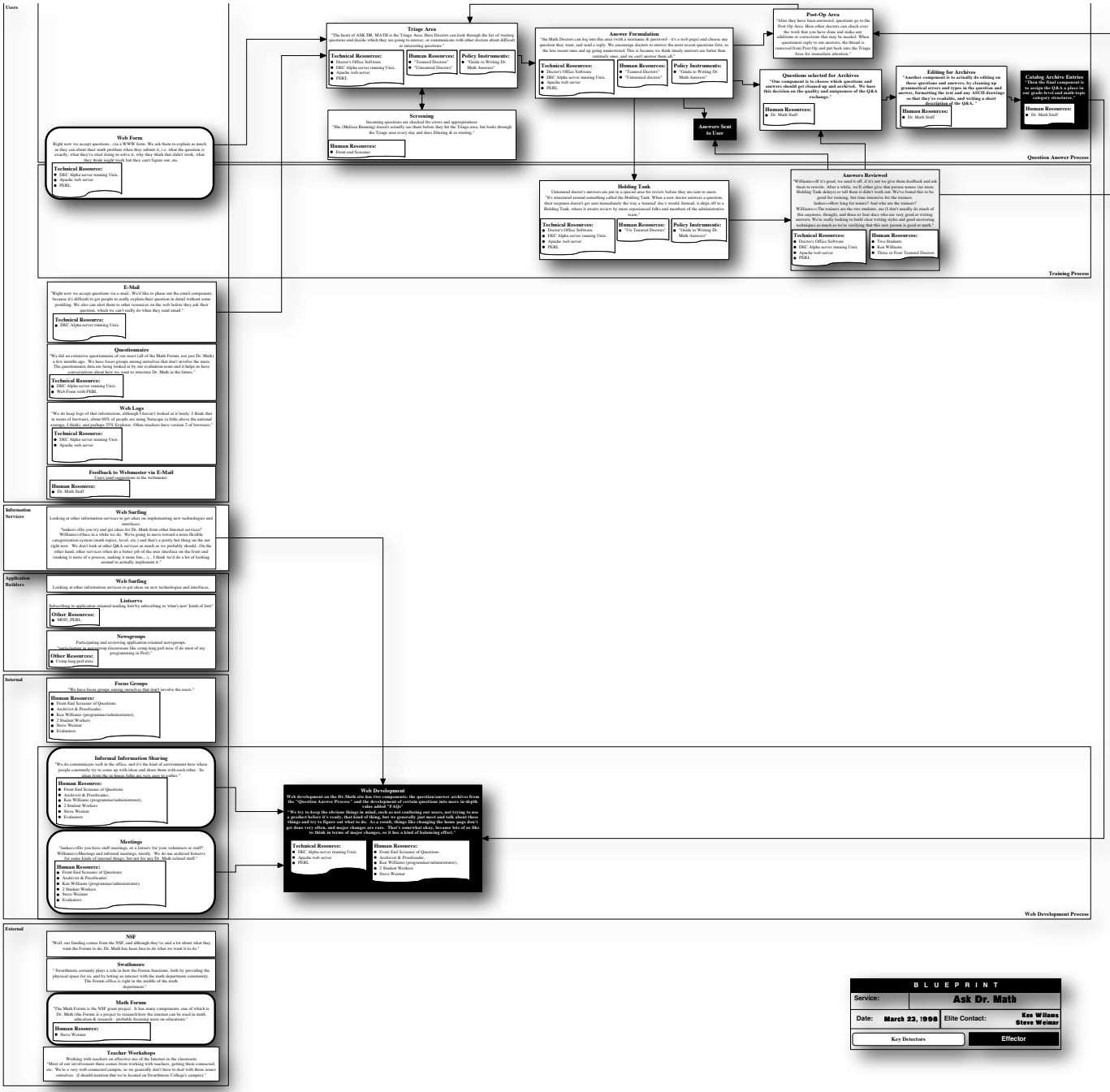


# General Digital Reference Model



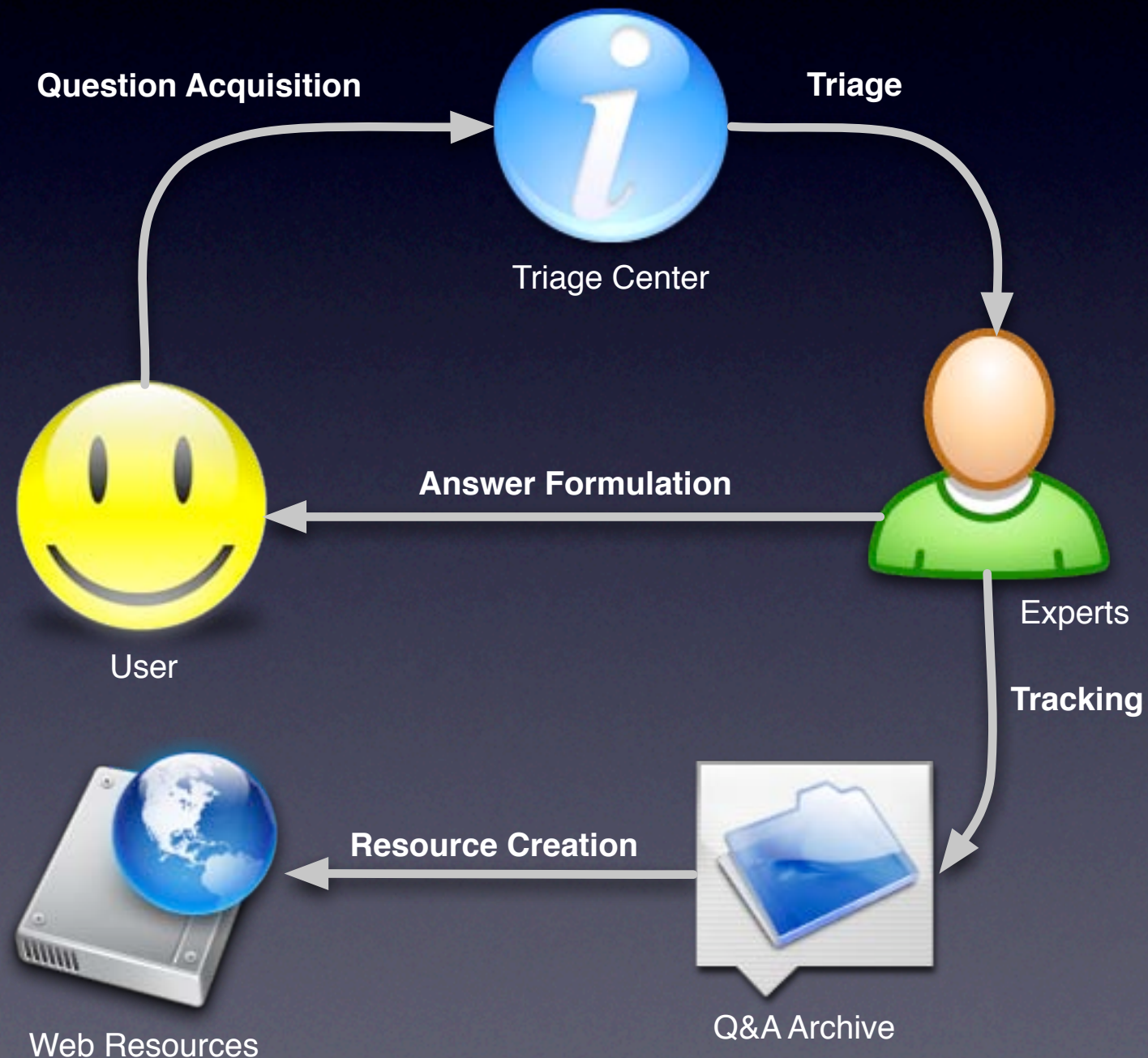


# Blueprints





# General Digital Reference Model





# Question Acquisition

- How Do Users Ask Questions
  - Modes: IM, E-Mail, Web?
  - Integrated with Other Reference?
  - Web Forms





# VR Modes



- Commercial “Chat” VR Software
- E-Mail
- IM
- Blogs
- Custom Web Applications



# “Chat”

- Library Centric Software
  - Good: Matches Needs and Expectations of the Library Community
  - Bad: Doesn't Match Anyone Else's





# Typical

Patron

http://www.questionpoint.org/crs/servlet/org.oclc.home.TFSRedirect Google

myWebCT MyYahoo Dave's World Institute Stuff Development Look at Bookmarks

## Onondaga County Public Library

447 South Salina Street, Syracuse, NY 13202-2494

Telephone: (315) 435-1900  
Email: [reference@onlib.org](mailto:reference@onlib.org)

### Welcome to Live Online Reference.

Please enter the information requested on the right side of your browser window, and click the connect button.

24/7 Reference is a new service that lets you get answers to your questions in real time over the Internet. The service is staffed by reference librarians in Onondaga County and throughout the country.

**During your session, please do not do any of the following, or you may be disconnected:**

- Type a new URL in this browser window
- Use the forward or refresh/reload buttons on your browser
- Add a site to your favorites or bookmarks list

While you are waiting, you can browse the OCPL website:

- [Library Catalog](#)
- [Databases](#)
- [Internet Links](#)

### 24/7 REFERENCE

Please enter the following and click the "Connect" button.

☐ Check this box to make this session anonymous. [Please click here for explanation.](#)

Name (required)

Email Address

Confirm Email Address

Your nearest Library:

Zip Code

Your Question:

Connect

Exit



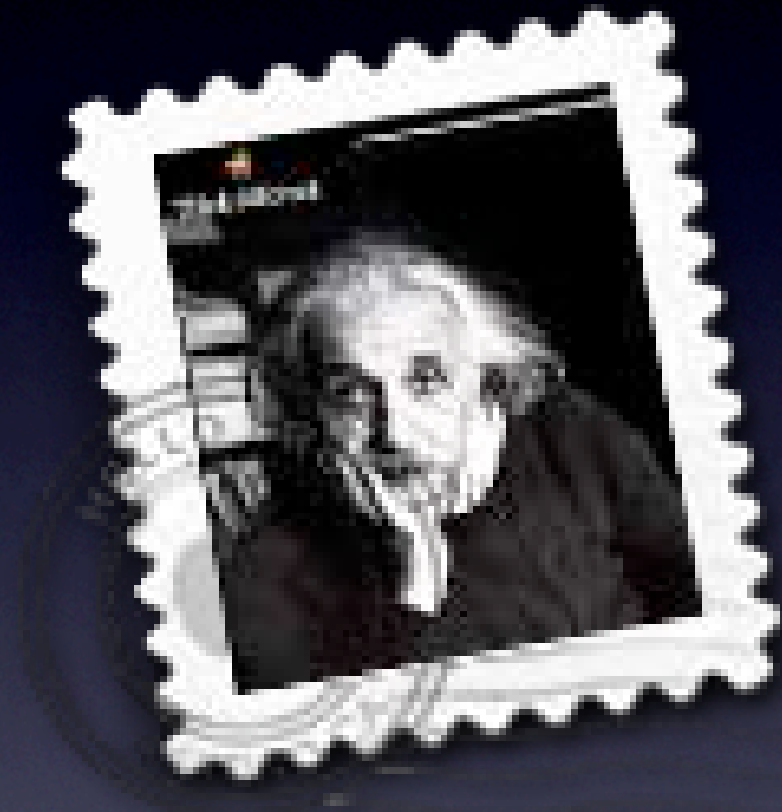
# Commercial “Chat”

 Pros	 Cons
Meets Expectations of Librarians	Meets No One Else's
Scripts	Scripts
Archives	Archives on Hosted Servers
Queuing	
Statistics	



# E-Mail

- 58 Million Americans do E-Mail at Least Once a Day - Number 1 Activity





# E-Mail

 Pros	 Cons
Part of Daily Workflow	So is Spam
Accommodates Rich Media Types	Like Viruses
Well Established Protocols	Set in the 1980's





# Instant Messaging

- 53 million adults trade instant messages and 24% of them swap IMs more frequently than email. IM also gains a following in U.S. workplaces





# Instant Messaging

 Pros	 Cons
Free	Proprietary
Real Time	No Queuing
Cross Platform	Limited Media Types



# Blogs

- 7% (8 million people ) of the 120 million U.S. adults who use the internet have created a blog
- 27% of internet users say they read blogs
- 5% of internet users say they use RSS aggregators or XML readers
- 12% of internet users have posted comments or other material on blogs.





# OpenQA

- Open Source Blog Based Digital Reference Package
- <http://iis.syr.edu/tiki-index.php?page=OpenQA>
- StoryStarters





Reference is Community

Reference is Community



# Blogs

 Pros	 Cons
Easy to Update	Built for Diaries
Built in Comments	Comment Spam
RSS	Hard to Highlight Comments
Modifiable	PHP Knowledge Needed



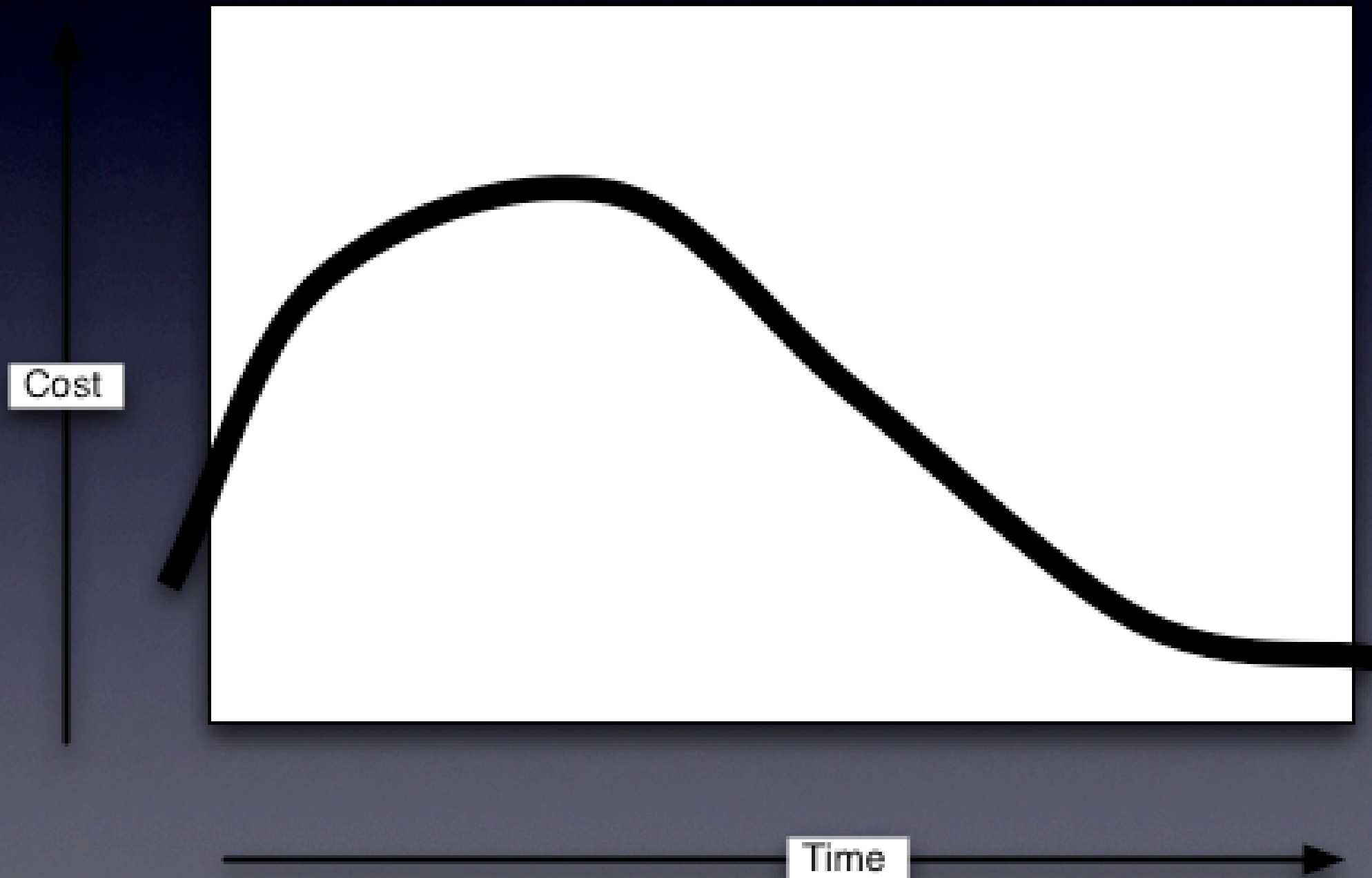
# Custom Web Apps

- Do not be Afraid
- Rise of Open Source and LAMP



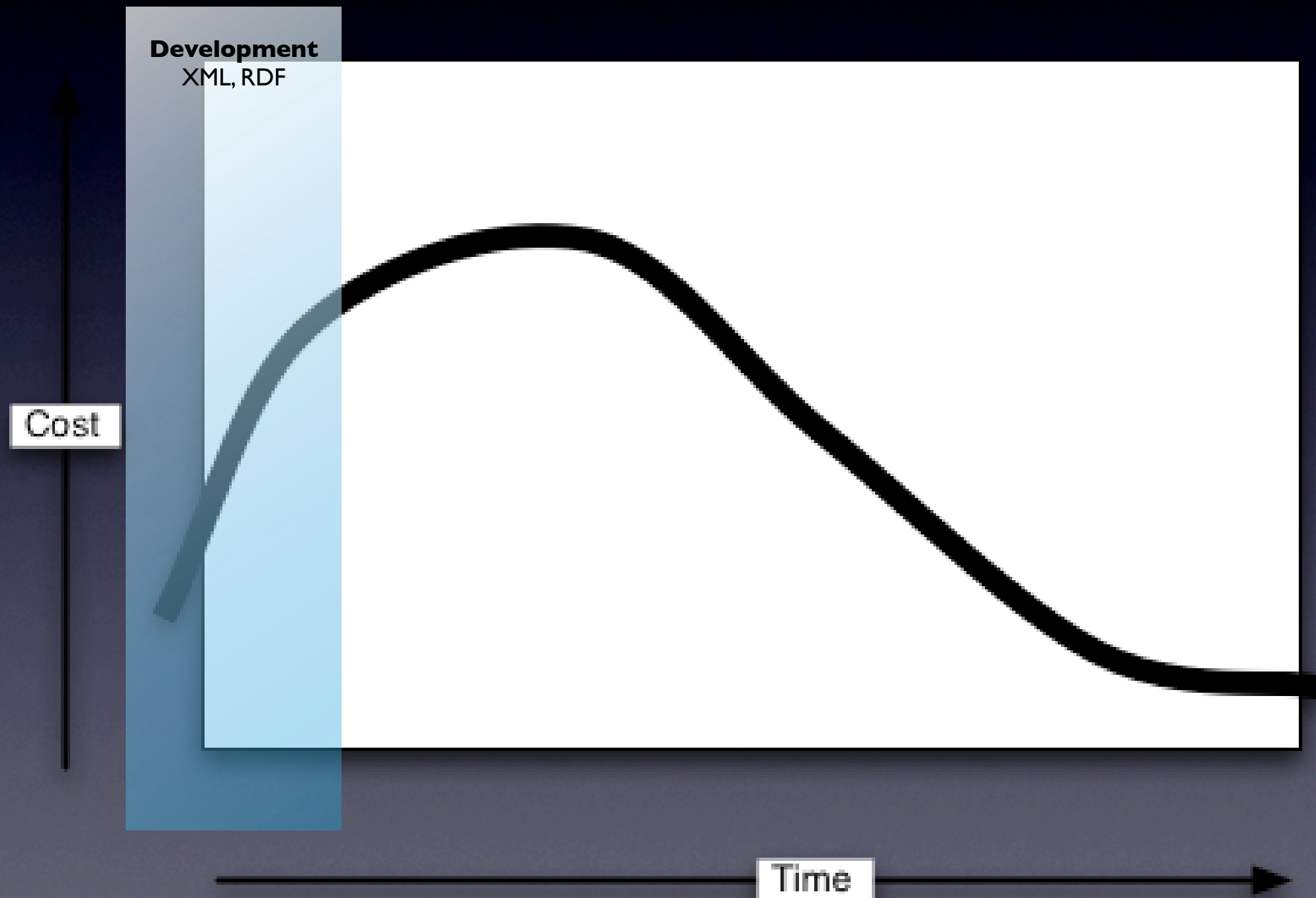


# Costs on a Curve



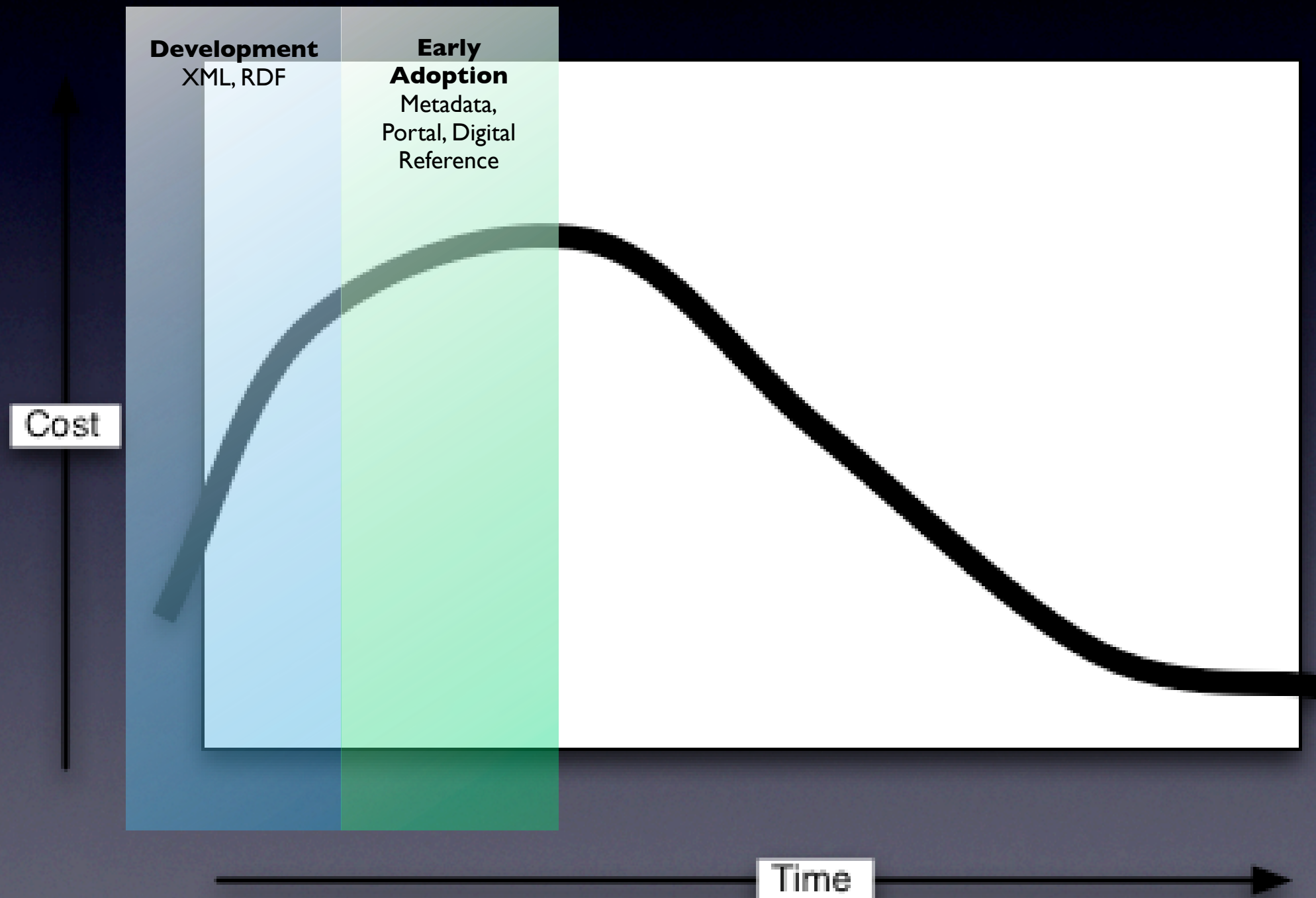


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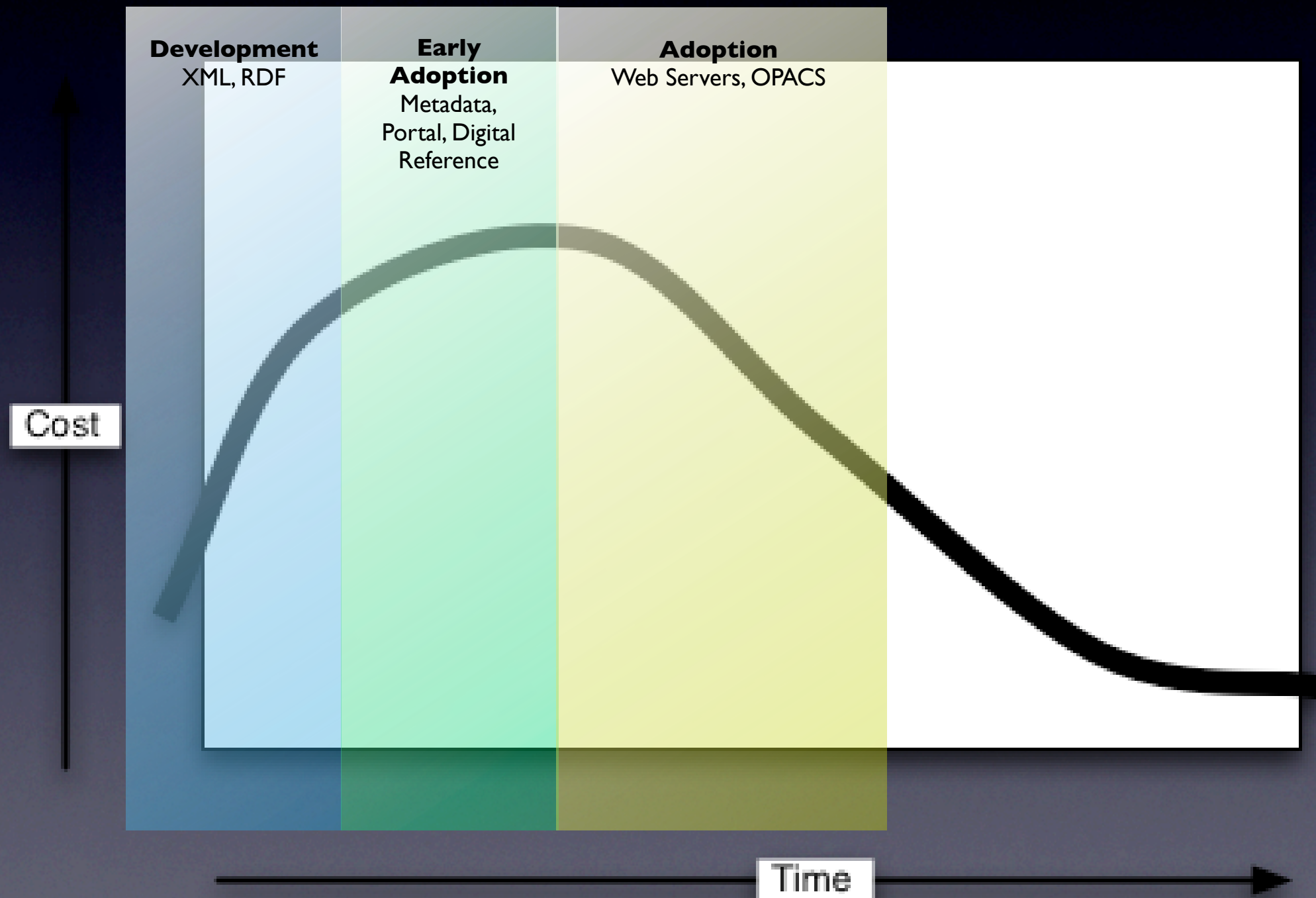


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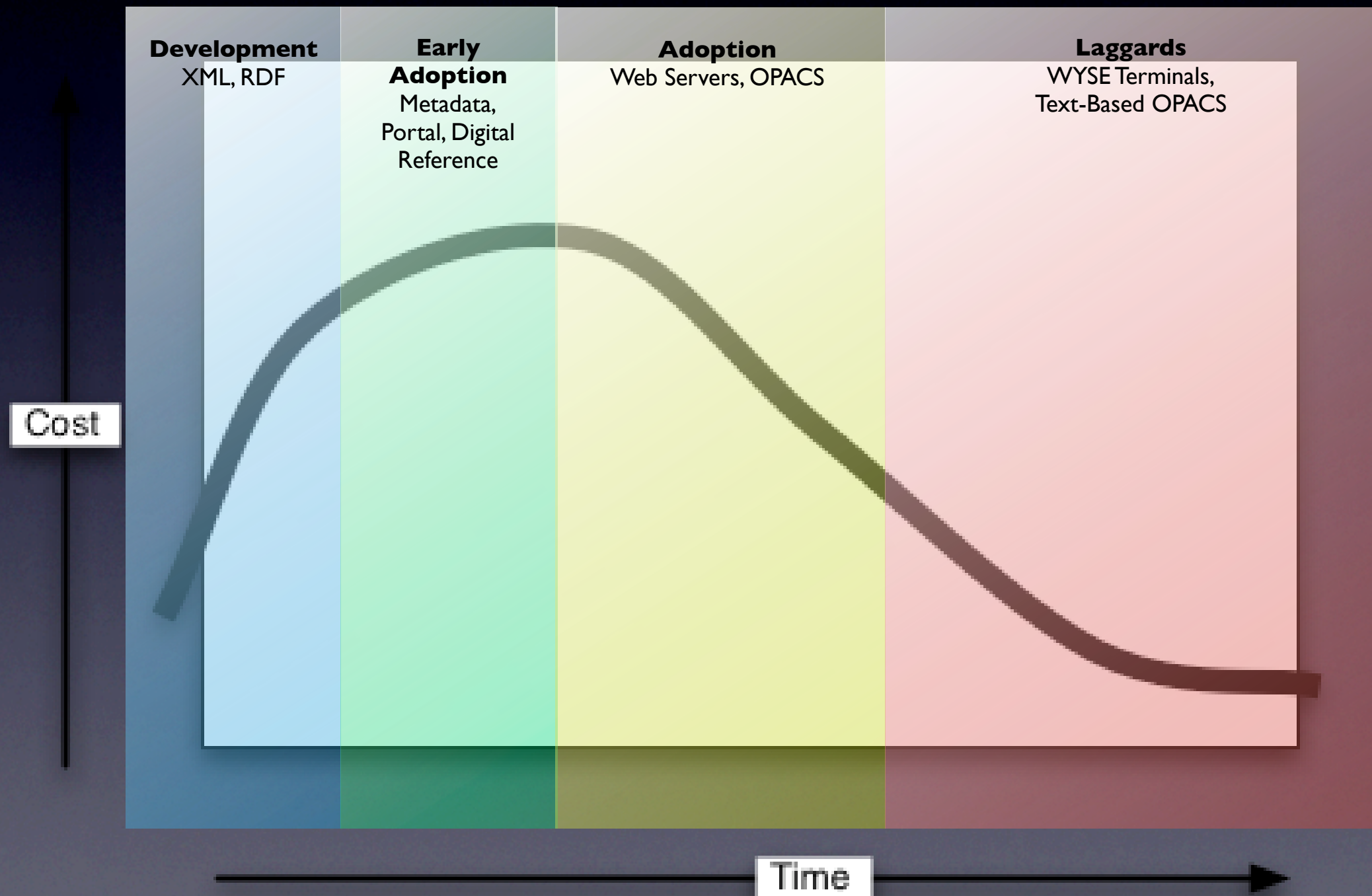


# Costs on a Curve





# Costs on a Curve





# So What is LAMP

- Collection of Commonly Used, but Independent, Open Source Software
  - LINUX
  - Apache
  - MySQL
  - PHP (PERL, Python)



# Open Source Advantages

- A Great Deal of Pre-Existing and Diverse Work
- Large Scale Distributed Building Community
- Increasingly Sophisticated Systems
- Increasingly Standardized Development/Implementation Environment



# Old Open Source Environment

- Open Source was Just That...Source Code
- Single Owner
- Every Project Unique
- Compiled Code
  - C, Java, Home Grown

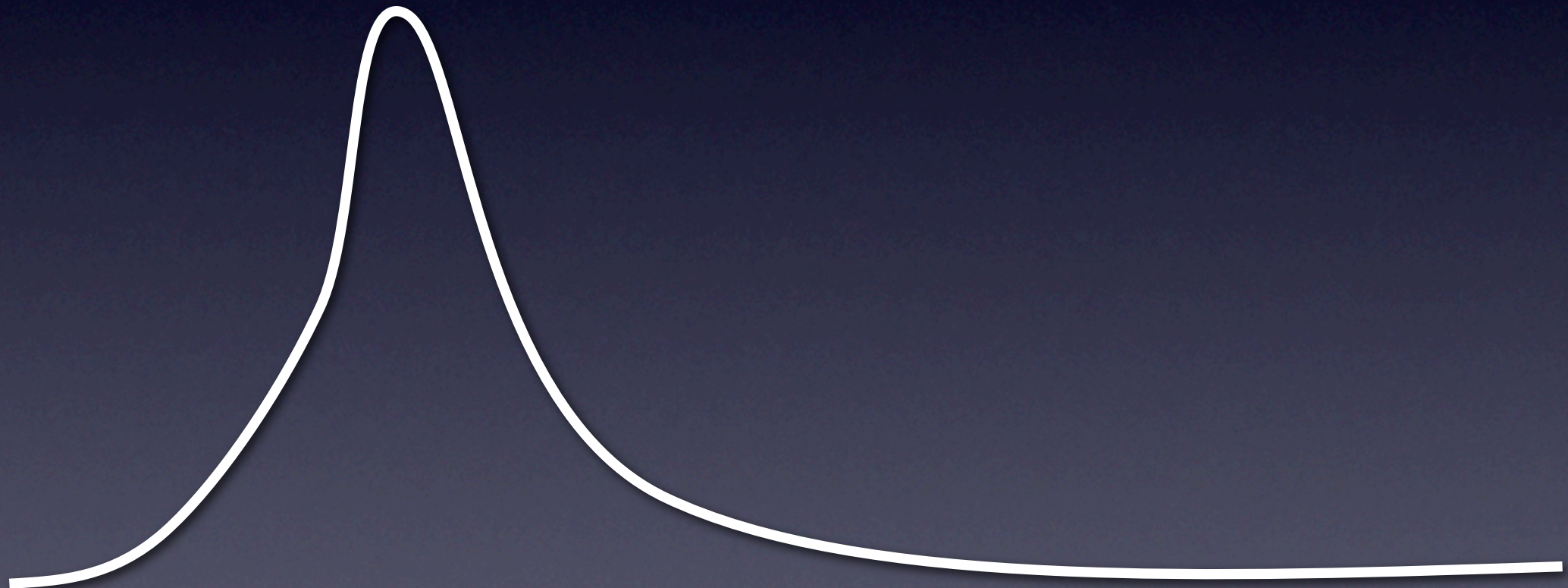


# Learning Curve





# Learning Curve with Web Development Environments





# Learning Curve with Web Development Environments?

- OS Integration
- Database
- Web Server
- Scripting Engine



# Proprietary Solutions

## Microsoft

- .ASP, .NET
- OS: Windows
- Database: MSSQL, Access
- Web Server: IIS
- Scripting Engine: ASP

## Macromedia

- ColdFusion
- OS: Windows, Linux, Unix
- Database: Various
- Scripting Engine: Coldfusion



# Advantages

- Software Reuse
- Basic Services: Security, Backup, Statistics, etc.
- Built-in Functions: Database Connectivity, Display, XML, etc.



# Disadvantages

- Locked Into Vendor Design Path and Timeline
- OS Lock-In
- Limited Ability to Disseminate Product
  - Expensive to Replicate Environment



# LAMP Emerges

- Linux
- Apache
- MySQL
- PHP, PERL, or Python





# LAMP Emerges

- Linux - OS Integration
- Apache - Web Server
- MySQL - Database
- PHP, PERL, or Python - Scripting Engine



# So What Will Your Form Look Like?

- Your Face on the Internet IS the first Step in a Reference Interview





# Typical

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Name (required)

Email Address

Confirm Email Address

Your nearest Library:

Zip Code

Your Question:

Connect

Exit



**Accessibility Info**

**Subject Collections**

Arts & Humanities  
Business  
Computers  
Education  
Entertainment  
Health  
Law & Government  
Regional  
Science & Tech  
Social Science

**Ready Reference**

Almanacs  
Calendars  
Dictionaries  
More...

**Reading Room**

Books  
Magazines  
Newspapers

**KidSpace**

**TeenSpace**

**Special Collections**

Blogs  
Literary Criticism  
Science Fair  
More...

**Searching Tools**

FARQs  
Pathfinders  
Search this Site  
Web Searching

**About the IPL**

**IPL Audio/Video Tours**

**Teach with the IPL**

**Contact Us**

**Ask a Question**



**IPL Ask A Question Form**

**Need an answer fast?** Hundreds of our most popular questions and answers are listed on our [Frequently-Asked Reference Questions](#) pages.

Want to know more about [how the IPL "Ask a Question" Service works?](#)

Please review our [Privacy Statement](#) before submitting your question.

\* required information

Name\*

E-mail\*

Provide a complete e-mail address  
(example: [fluggly@aol.com](#))  
so that we can reply.

If you have parental or mail controls  
turned on, please add [iplref@ipl.org](#) to  
your allowed mail list.

Confirm e-  
mail\*

Enter the **same e-mail address**  
here as you did above.

This helps to ensure that we have your  
correct e-mail address, and that you  
will receive a reply as quickly as  
possible.

Where do  
you live?

Knowing where you live helps us  
recommend resources that are relevant,  
and accessible, to your area.

Deadline for  
reply\*

†3 days are usually needed  
for us to reply.

†If you need an answer in less than 3  
days, please consider these [other  
resources](#) instead of the IPL.

Subject\*

How will  
you use this  
information?  
\*

Understanding the context and scope of  
your information needs helps us to  
deliver an answer that you will find  
useful.

Is this for a  
school  
assignment?

☐ Yes  
☐ No

Your  
question\*

A human being will read your question,  
so please use complete sentences. The  
more you tell us, the better the answer  
will be. What do you already know  
about your subject or question?

Sources  
already  
consulted

Knowing where you've already looked  
will help us keep from sending you  
someplace you've already been.

Please review our [Privacy Statement](#) before submitting your question.



Ask a Librarian (Library of Congress)

http://www.loc.gov/rr/askalib/ Google

myWebCT MyYahoo Dave's World Institute Stuff Development Look at Bookmarks

Library of Congress >> Especially for Researchers

# Ask a librarian...

an online reference service from the Library of Congress

Reference Correspondence Policy - Error Reports - Virtual Reference Shelf - Virtual Programs and Services

Select a link below, based on the subject of your question:

General Collections	International Collections	Special Formats & Genre
<input type="checkbox"/> <a href="#">Business</a>	<input type="checkbox"/> <a href="#">African/Middle Eastern</a>	<input type="checkbox"/> <a href="#">American Folklife Center</a>
<input type="checkbox"/> <a href="#">Humanities/Social Sciences</a>	<input type="checkbox"/> <a href="#">Asian</a>	<input type="checkbox"/> <a href="#">Geography &amp; Maps</a>
<input type="checkbox"/> <a href="#">Law</a> <b>NEW!</b>	<input type="checkbox"/> <a href="#">European</a>	<input type="checkbox"/> <a href="#">Manuscript</a>
<input type="checkbox"/> <a href="#">Local History/Genealogy</a>	<input type="checkbox"/> <a href="#">Hispanic (select a language):</a>	<input type="checkbox"/> <a href="#">Microform</a>
<input type="checkbox"/> <a href="#">Newspapers/Periodicals</a>	<input type="checkbox"/> <a href="#">- English</a>	<input type="checkbox"/> <a href="#">Motion Pictures &amp; Television</a>
<input type="checkbox"/> <a href="#">Science/Technology</a>	<input type="checkbox"/> <a href="#">- Español</a>	<input type="checkbox"/> <a href="#">Music &amp; Performing Arts</a>
	<input type="checkbox"/> <a href="#">- Português</a>	<input type="checkbox"/> <a href="#">Prints &amp; Photographs</a>

## Digital Collections

<input type="checkbox"/> <a href="#">American Memory Historical Collections</a>
<input type="checkbox"/> <a href="#">Digital Reference Team</a>
<input type="checkbox"/> <a href="#">Learning Page (for K-12)</a>

## Other Library Programs and Services

<input type="checkbox"/> <a href="#">Access to Collections</a>	<input type="checkbox"/> <a href="#">Interlibrary Loan</a>
<input type="checkbox"/> <a href="#">Borrowing Accounts</a>	<input type="checkbox"/> <a href="#">Nat'l Library Service for Blind/Physically Handicapped</a>
<input type="checkbox"/> <a href="#">Cataloging in Publication</a>	<input type="checkbox"/> <a href="#">Preassigned Card Numbers</a>
<input type="checkbox"/> <a href="#">Copyright Registration and Programs</a>	<input type="checkbox"/> <a href="#">Photoduplication Service</a>
<input type="checkbox"/> <a href="#">Federal Research Division</a>	<input type="checkbox"/> <a href="#">Preservation</a>

Still don't know where to send your question?



# Ask a librarian...

an online reference service from the Library of Congress

Please read the following before you begin:

- You will receive a reply within five business days.
- This Ask a Librarian form uses QuestionPoint, a global, collaborative reference service. May we have your permission to forward your question outside the Library of Congress if necessary and to archive your question and corresponding answer?
- (All personal information will be removed prior to archiving.)
- See the Library of Congress policy on [privacy](#) for further clarification.

## Questions

### Ask a Question | Check Your Questions and Answers

Asterisk (\*) denotes required field.

\*E-mail Address:

\*Confirm e-mail address:

\*Question:

\*Your Name:

\*Reason for Research:

\*Education Level:

Mailing Address:

\*City and State/Province:

\*Zip/Postal Code:

\*Country:

Telephone Number:

Resources consulted (Where have you looked already?):

Ask

Please Note: Your reply will be sent via email. If you want to follow up, or check the progress of your answer, you will need to create a password the first time you visit our "Check your Questions and Answers" page. Use the address in the email notification you receive to set up your account.



Digital  
Reference  
Team

[Link to Home Page](#)



Monday through Friday  
2:00 - 4:00 PM  
Eastern Time  
(except [Federal Holidays](#))  
Today is  
Friday March 24 10:20 AM

### Services we can provide

- Assistance using digital collections/services
- Assistance on searching the Library of Congress Online Catalog
- Response within 5 business days

### Reporting errors to the Library

- General errors: use our [error report form](#)
- Catalog/authority record errors: use our [Catalog/authority error report form](#)

### For other questions, try...

- [The Virtual Reference Shelf](#)
- a selected listing of free Internet reference tools, compiled by the Library of Congress.
- For questions on using the Online Catalog, try the [Frequently Asked Questions](#)

### Some questions are better answered elsewhere:

- [Public Libraries](#) - your local public libraries may offer online services for finding information.
- See the Library's [MINERVA](#) project or the [Internet Archive](#).
- Technical information for [American Memory](#); [Digital Preservation](#) and [MARC Standards](#).

If you have any problems with this service, please use our [Ask a Librarian Error Report Form](#).



# Build Your Own

 Pros	 Cons
Control	Responsibility
You Pick Features	You Create Features
Lots of Open Source	Open Source “Support”
Not Hosted	Not Hosted



# Triage

- Who Gets the Next Question? Who Decides?
- Automation Question Routing
  - Sandwich Interface:  
Question → Search  
→ Expert
- Consortial Level Issues
  - Know who you are “triaging” to





# Facets of Quality

## **User Transactions**

- Accessible
- Prompt Turnaround
- Clear Response Policy
- Interactive
- Instructive

## **Service Development and Management**

- Authoritative
- Trained Experts
- Private
- Reviewed
- Provides access to related information
- Publicize



# Answer Formulation/ Experts

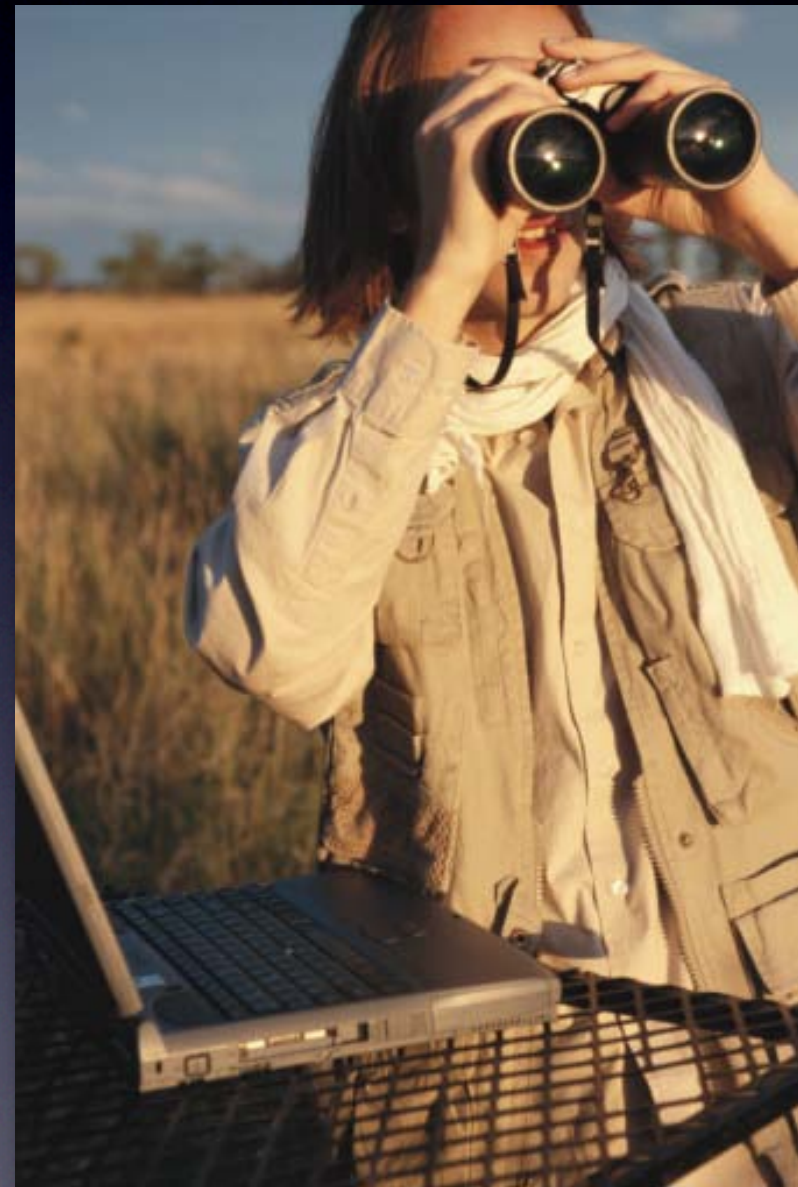
- Are All Librarians Equal
- Including Experts from Across the Academy
- Resources to Use in an Answer
- Answer Policies
  - Types of Answers, Appropriate Use





# Tracking/Statistics

- Who Needs What Statistics?
- How Can we Anticipate Trends?
- How Can We Improve Quality?





# Quality Standards

- **Courtesy:** The behavior of the library or institution's staff
- **Accuracy:** The “correctness” of answers provided by a digital reference staff
- **Satisfaction.** Users determination of their success in interacting with the digital reference service
- **Repeat Users:** The percentage of users that re-use a service after first encounters
- **Awareness:** The population user group's knowledge that the service exists
- **Cost:** The cost per digital reference



# Performance Measures

- Descriptive Statistics and Measures: Statistics and Measures to determine the scale and scope of a digital reference service.
- Log Analysis: Statistics that can be derived from analysis of logs generated by web and digital reference software packages
- User Satisfaction Measures: Statistics and metrics seeking to understand the user view of a digital reference service.
- Cost: Measures that gage outlay of financial resources to run an ongoing digital reference effort.
- Staff Time Expended: Measures to determine staff time dedicated to digital reference

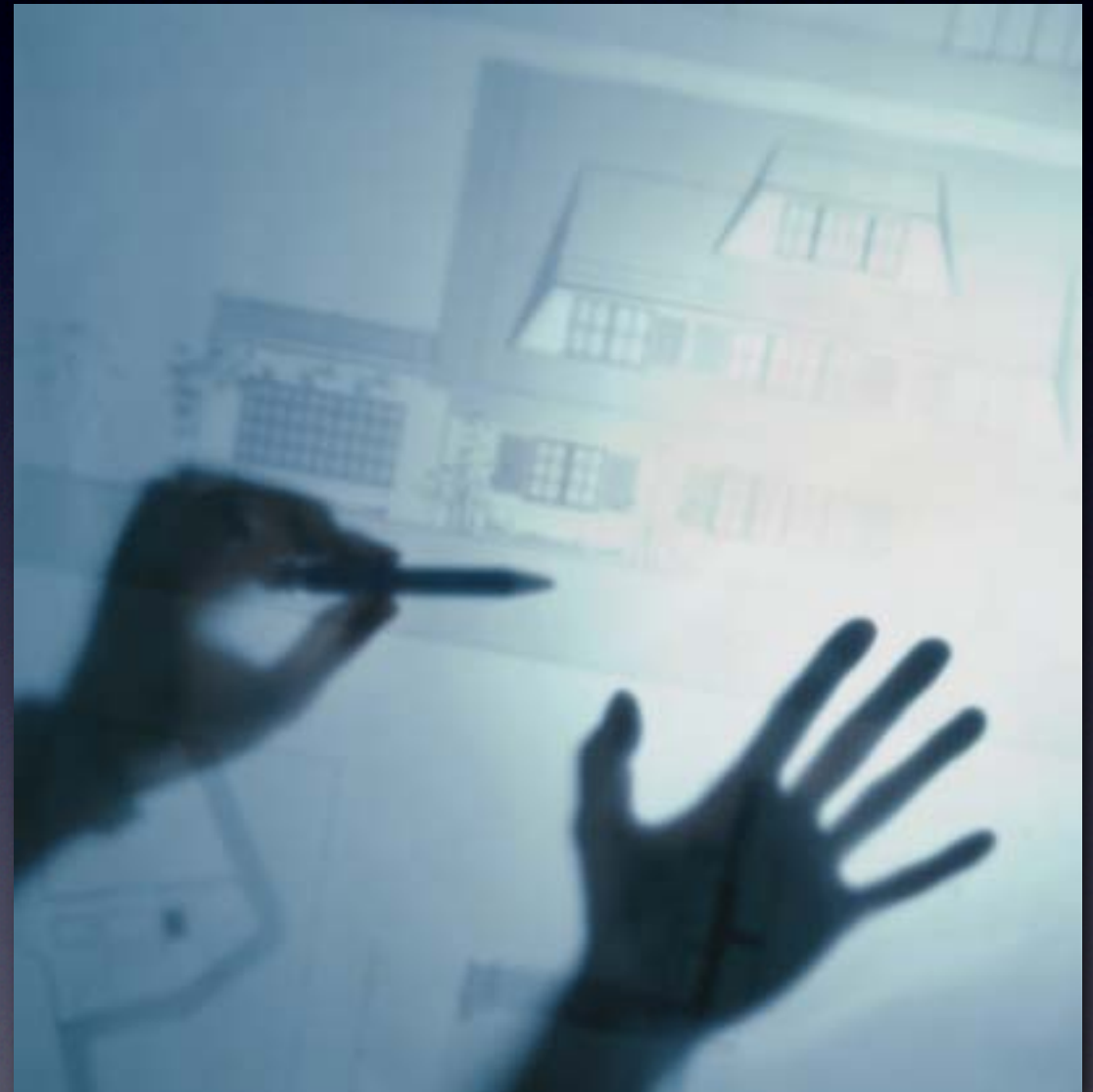


<b>Descriptive</b>	<b>Log</b>	<b>User</b>	<b>Cost</b>	<b>Staff</b>
Number of digital reference questions received	Number of digital reference sessions	Awareness of Service	Cost of digital reference service	Percent of staff time spent overseeing technology
Number of digital reference responses	Usage of digital reference service by day of the week	Accessibility of service	Cost of digital reference service as a percent of total reference budget	Percent of staff time spent assisting users with technology
Number of digital reference answers	Usage of digital reference service by time of day	Expectations for service	Cost of digital reference service as a percent of total library or organizational budget	
Total reference activity	User's browser	Other sources user tried		
Percentage of digital reference questions to total reference questions	User's platform	Reasons for use		
Digital reference correct answer fill rate		Reasons for non use		
Digital reference completion rate		Satisfaction with staff		
Number of unanswered digital reference questions		Delivery mode satisfaction		
Type of digital reference questions received		Impact of service on user		
Total number of referrals		Additional services that need to be offered		
Saturation rate		User demographic data		
Sources used per question				
Repeat users (return rate)				



# Resource Creation

- Take Back the Web!





# TAKE THE WEB!



Mrs. Angelina Eberly firing off a cannon



# Do You Have Control of the Web?

- Can You Update Information on Your Web Site in 15 Minutes - From any Computer? From Home? From Tokyo?
- How Many “Brands” are on Your Web Site?
  - Library, Academy, EBSCO, ISI, OCLC...
- Is “Your Web Site” and the Academy’s the Same?
- What Does Your Site Promote...Librarians or Buildings?



# Key Technologies

- RSS/Blogs
- Web/Wiki
- IM
  - “Chat Reference” is not chat
- E-Mail
- 4 Color Offset Printers and Large Format Ink Jet Printers





# “I’m not a cataloger”





# Reference *IS* Tool Building

- Reference is a Delightful Island of Chaos in a Sea of Structure
- Pathfinders, Bibliographies
- Websites, Blogs, Wiki's
- Who is Better Qualified to Design Cross-Content systems?
- Open Source Comes to the Masses





# BYOS: Build Your Own Search Engine

- Lot's of Good Open Source Search Engine Packages
- Sphider
- Nutch





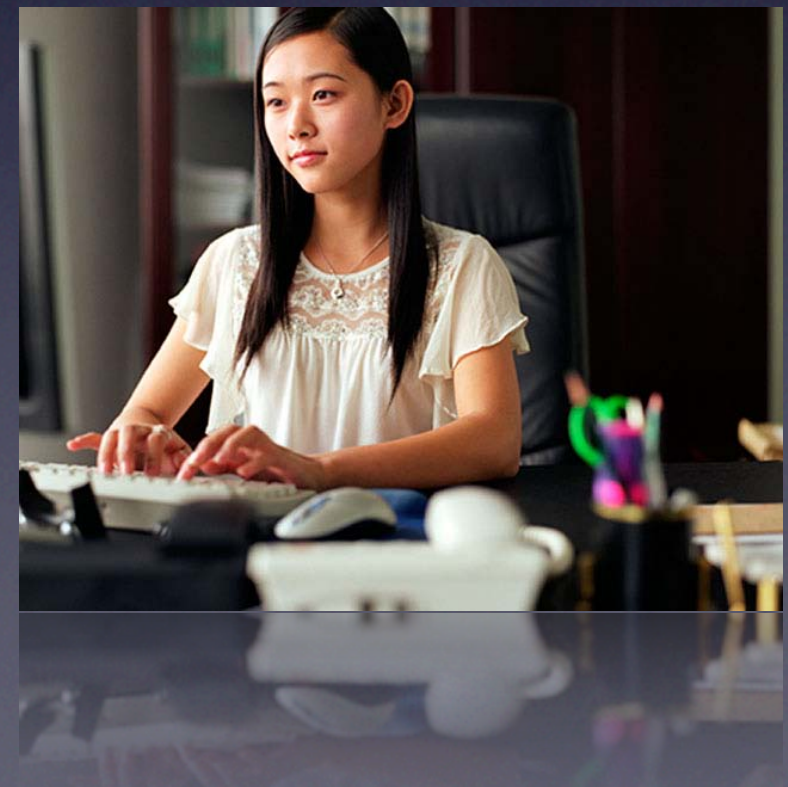
# Beyond Reference

- Cataloging as Customer Service
  - Organize Data and Materials for Faculty and Other Units
- Archiving and Preservation
- Document Management



# Old Model

- Library as a Separate Process and Collection from the Academy's Core Business
- Enhance and Facilitate
- Emphasis on External Documents





# Old Model

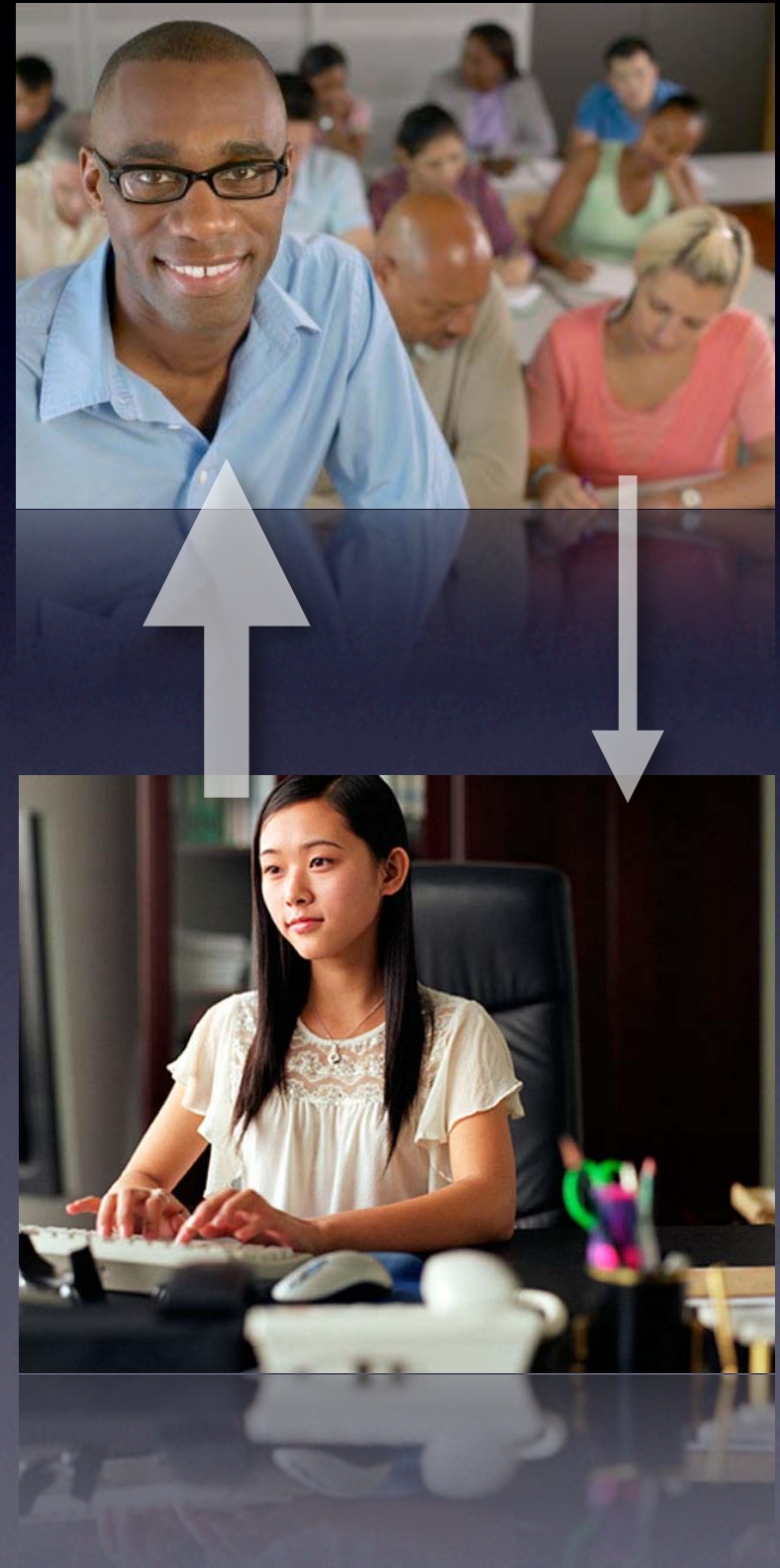
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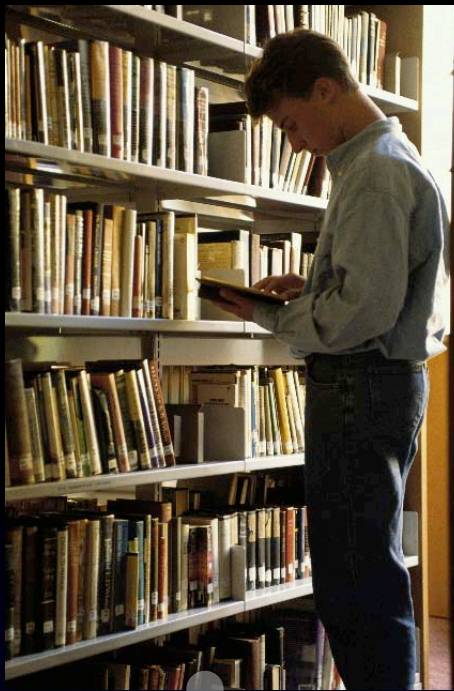




# New Model

- Library as Information “Collector” and “Enhancer” of the Organization’s Information
- Institutional Repository
- Emphasis on Synthesis
- Sees the Complexity of the Academy





Planning



Gathering



Publishing



Disseminating





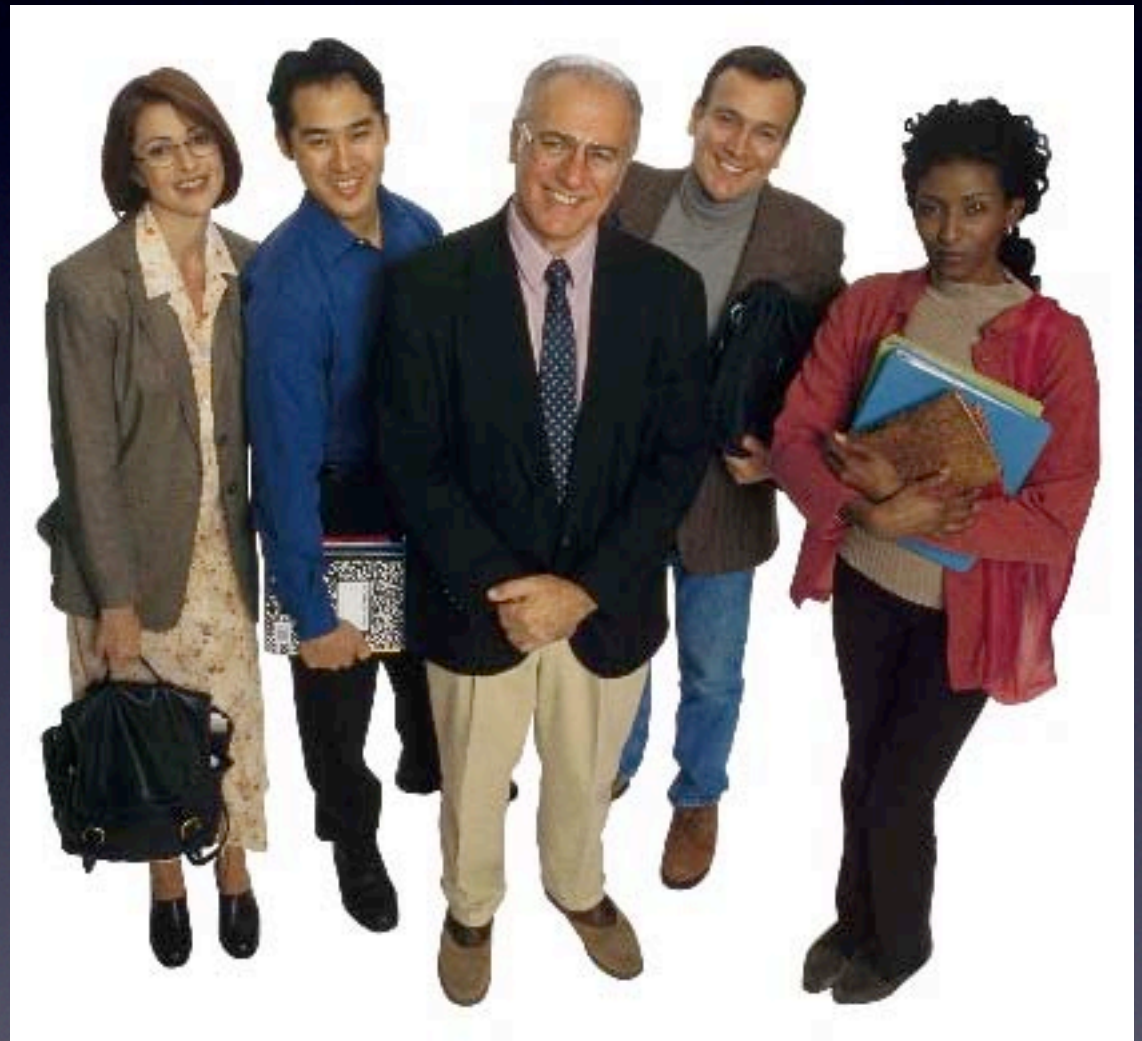
# What Does This Mean for Reference

- Don't Wait...Burn the Desk
  - or at least use it as cool furniture in your home like the card catalogs you store CD's in
- Get on Grants
- Attend Faculty Meetings



# Defining the Team

- Core Librarianship:  
Access, Organization,  
Design, Conservation
- Extended Family:  
Coders, Marketers,  
Content Experts
- Everything Old is New  
Again - Subject Scholars,  
Historians, etc...





# Some Ideas

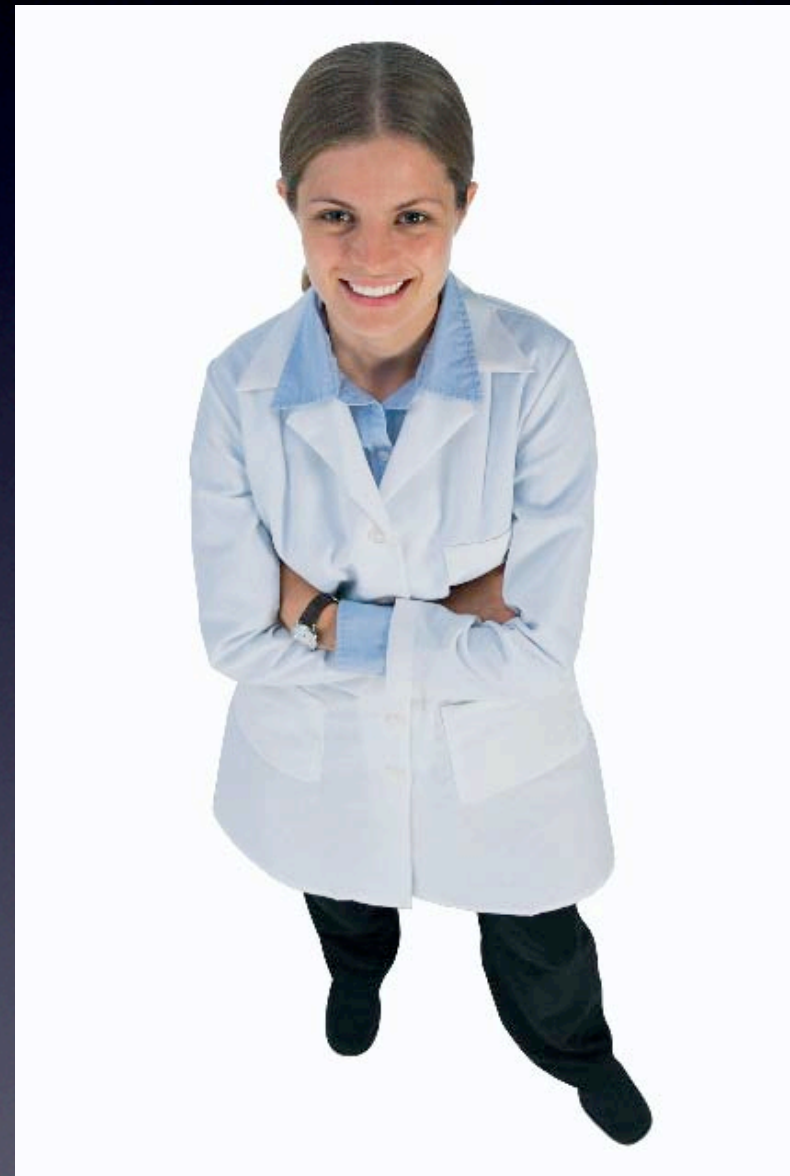
Projects and Tactics to Take  
Over the World





# Be an Active Part of the Tenure Process

- Begin an “In Depth”  
Citation Review Service
- Make It Part of Standing  
Tenure Practices





# Be an Active Part of the Research Process

- Be the Sustainability and Clearinghouse Portion of a Research Project
- Create a Depository Data Program
- Make It Part of Institutional Review





# Be an Active Part of the Teaching Process

- Banish the following:  
Bibliographic Instruction, BI - Use  
“Instruction”
- Create (Jointly) the  
Following Course:  
“Hacking College”
- Become the Instruction  
Materials Archive and  
Outcomes Assessment  
Data Warehouse





# Be an Active Part of the Dissemination Process

- Be the Full Service Web Host for the University
- More Than Just Space
  - Design, Blogs, Content Management, Document Delivery





# Questions, Corrections, Arguments





## Survey of the Environment Worksheet

1. Service Type:

☐ Topical Area: \_\_\_\_\_

☐ Audience Type: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ General Reference

2. Intended Users:

☐ Undergraduates

☐ Graduates

☐ Faculty

☐ General Public

☐ K-12 Students

☐ Alumni

☐ Other: \_\_\_\_\_

3. Stakeholders:

☐ Librarians

☐ Administration

☐ Students

☐ Faculty

☐ Technologists

☐ Other: \_\_\_\_\_

### User Needs Survey

1. Survey Audience:

2. Primary Survey Questions:

3. Survey Methods

☐ Listservs/Mailing Lists

☐ Mail/E-Mail

☐ Phone

☐ Informal Discussions

☐ Literature Research

☐ Focus Groups

☐ Other: \_\_\_\_\_



## **Question Acquisition Worksheet**

Who Do You Expect to Ask Questions?

What Communication Modes Do These Groups Use Most?

What Do These Groups Have in Common with Each Other? Themselves?

What Questions Should You Ask Everyone?

A Specific Group?

What Do Users Need to Know Before they Ask a Question?



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## Facets of Quality for Digital Reference Services Worksheet

<http://www.vrd.org/facets-06-03.shtml>

Version 5

June 2003

### User Transaction

**Accessible:** Digital reference services should be easily reachable and navigable by any Internet user regardless of equipment sophistication, physical disability or language barrier.

*Essential:*

*Recommendations:*

**Prompt Turnaround:** Questions should be addressed as quickly as possible. Actual turnaround time depends on a service's question-answer policy and available resources (e.g., staffing, funds, technology, etc.).

*Essential:*

*Recommendations:*

**Clear Response Policy:** Clear communication should occur either before or at the start of every digital reference transaction in order to reduce opportunities for user confusion and inappropriate inquiries.

*Essential:*

*Recommendations:*

**Interactive:** Digital reference services should provide opportunities for an effective reference interview, so that users can communicate necessary information to experts and to clarify vague user questions.

*Essential:*

*Recommendations:*

**Instructive:** Digital reference services provide access to current information and expertise. Quality digital reference services offer more to users than straight, factual answers; they guide them in how to formulate questions, subject knowledge, and information literacy.

*Essential:*

*Recommendations:*



## **Service Development and Management**

**Authoritative:** Experts of a digital reference service should have the necessary knowledge and educational background in the service's given subject area or skill in order to qualify as an expert. Specific levels of knowledge, skill and experience are determined by each service and its related discipline or field.

*Essential:*

*Recommendations:*

**Trained Experts:** Services should offer effective orientation or training processes to prepare experts to respond to inquiries using clear and effective language and following service response policies and procedures. Training of information specialists is one of the most important aspects of planning and operating a digital reference service.

*Essential:*

*Recommendations:*

**Private:** All communications between users and experts should be held in complete privacy.

*Essential:*

*Recommendations:*

**Reviewed:** Digital reference services should regularly evaluate their processes and services. Ongoing review and assessment help ensure quality, efficiency, and reliability of transactions as well as overall user satisfaction.

*Essential:*

*Recommendations:*

**Provides access to related information:** Besides offering direct response to user questions, digital reference services should offer access to supporting resources and information. Services can reuse results from question-answer exchanges in resources such as archives and frequently-asked questions (FAQs).

*Essential:*

*Recommendations:*

**Publicize:** Services should inform potential users of the value that can be gained from use of the service. A well-defined public relations plan can ensure that services are well-publicized and promoted on a regular basis. Publicity should not create more demand than the service has capacity to handle.

*Essential:*

*Recommendations:*



## Expert Worksheet

[illegible]



## Blueprint Worksheet

Conceptual Framework Section	Sub Section	Questions	Considerations/ Suggestions	Answers/Comments
Detector	Users	<p>How will you keep track of your users?</p> <p>What type of information will you attempt to gather about users of your services?</p> <p>What specific mechanisms will you put in place to gather this information?</p>	<p>Determine number of users.</p> <p>Determine demographics of users.</p> <p>Use logs (such as logs from a World Wide Web server).</p> <p>Keep archives of interactions.</p> <p>Provide online feedback forms.</p> <p>Conduct focus groups.</p>	
Detector	Information Services	<p>What will you keep track of regarding other virtual reference services?</p> <p>What will you keep track of with other Internet information services in general?</p> <p>How will you gather ideas from other Internet sites and incorporate them into your own services?</p>	<p>Surf the Web.</p> <p>Decide whether or not to assign specific responsibilities to yourself or staff regarding reviewing other sites, doing digital reference, or building Internet sites.</p> <p>Allot time to review other sites on the Internet.</p>	



Conceptual Framework Section	Sub Section	Questions	Considerations/ Suggestions	Answers/Comments
Detector	Application Builders	<p>How will you keep current on software available on the Internet?</p> <p>How will you determine new trends in software?</p> <p>What specific mechanisms will you put in place to gather this information?</p>	<p>Use logs to determine the type of software being used to access your site.</p> <p>Check certain Web sites for software-specific updates.</p> <p>Develop relations with vendors specifically to “keep ahead” of the changing Internet software.</p>	
Detectors	Infrastructure Providers	<p>How will your service connect to the Internet?</p> <p>Who will be primarily in charge of this relationship?</p> <p>How will you monitor changes in your connection?</p>	<p>Determine type of bandwidth that will be available to your service.</p> <p>Consider technologies such as routing and switching in decisions regarding how you build and maintain your services.</p>	
Detectors	Internal Influences	<p>How will you capture ideas generated from those working your service?</p> <p>What specific mechanisms will you put in place to gather this information?</p>	<p>Identify staff members to act as innovators.</p> <p>Identify individual(s) to set the vision for the organization.</p>	



Conceptual Framework Section	Sub Section	Questions	Considerations/ Suggestions	Answers/Comments
Detectors	External Influences	<p>How will forces outside of the Internet affect your service?</p> <p>What non-Internet sources of information will inform how to build and maintain your service?</p> <p>What specific mechanisms will you put in place to gather this information?</p>	<p>How do funder influences on day-to-day service agenda.</p> <p>Influence of larger marketing or systems concerns.</p> <p>Determine the needs of the larger organization in terms of your service.</p>	
Rules	Detector Information Processing	<p>How will you prioritize the information acquired from the Internet, internal sources, and external sources?</p> <p>How will this information link into your daily procedures?</p>	<p>Consider priority by type of information (such as users)?</p> <p>Hold daily or weekly meetings to discuss what's happening outside of the organization.</p>	
Rules	Process	<p>How will you answer the questions of your community?</p> <p>How will you gather and distribute questions and then ensure users get answers?</p>	<p>Determine method for archiving questions.</p> <p>Determine methods for modifying existing service or creating new services.</p>	



Conceptual Framework Section	Sub Section	Questions	Considerations/ Suggestions	Answers/Comments
Rules	Resource Types	<p>What hardware and software tools will you use to build and maintain your service?</p> <p>How many people will be involved within the organization in the digital reference service?</p> <p>What policies will you put in place to guide the operation of this service?</p>	<p>Use the Web to answer your community's questions (or e-mail or other Internet tools).</p> <p>Consider hardware requirements involved in conducting this service.</p>	
Rules	Resource Types (People)	<p>What skills are required of the people who build and maintain this service?</p> <p>Will the people processing the questions have high technical skills?</p>	<p>Identify roles in service processes.</p> <p>Identify roles of different people.</p> <p>Determine whether or not there is a need to distinguish between those who process the questions (intermediaries) and those who answer the questions (the collection).</p>	
Rules	Effector Tie-Ins	<p>What policies or decision-making structures will you put in place for modifying your existing services or creating new services?</p>	<p>Consider stakeholders' expectations (such as users or funders).</p>	
Effectors	Technical	<p>What types of Internet tools will be used to deliver information to the community?</p>	<p>Provide: Web site FTP site</p>	



Conceptual Framework Section	Sub Section	Questions	Considerations/ Suggestions	Answers/Comments
Effectors	Other	What others types of services will you offer to the community?	Provide: Toll-free telephone number Multiple Web sites Workshops or conferences	



## Useful Links

R. David Lankes and Workshop Slides:

<http://www.DavidLankes.org>

Virtual Reference Desk:

<http://www.vrd.org> and

<http://www.webjunction.org/do/Navigation;jsessionid=631E1AB3D2CBEE33D7BD531E55A83CFC?category=11649>

Quality Standards:

<http://www.webjunction.org/do/Navigation?category=11832>

AskA Starter Kit:

<http://www.webjunction.org/do/Navigation?category=11839>

WordPress:

<http://www.wordpress.org>

TikiWiki:

<http://tikiwiki.org>

StoryStarters and OpenQA:

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

<http://iis.syr.edu/tiki-index.php?page=OpenQA>