

Scholars, Tools and Developers, Working Together

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Outline

- The Ecology of a Discipline
- A Triangular Relationship
- Tools and Platforms: The Web Platform
- An Infrastructure for a Laptop
- The Field at Large: repositories and portals
 - standard metadata
 - ontologies
 - searchable multimedia repositories: a demo
- Conclusions and Links

The Ecology of a Discipline

- [E-MELD](#), [E-MELD2006](#), Jeff Good's paper
- People:
 - Creators and maintainers of repositories, archives, community portals
 - Content creators and users, including, in some fields, the local community
 - Tool creators

The Ecology of a Discipline 2

- Tools:
 - ease of installation
 - ease of use
 - coverage of data formats
 - inter-oper-ability
- Platforms: Windows, Mac, Linux, the Web
(The browser is both a tool and a platform.)

A Triangular Relationship

- More reflection, discussion, mutual respect and understanding.
- Learn each others' language.
- Developer's thinking – very anthropological: users and their roles, tasks, scenarios of use, modes of interaction.

Developer's Questions 1

- Who are the users? What tools do they use? Do those tools work together well?
- Are there common tasks that are difficult or awkward to perform with existing tools? Tasks for which there are no tools?
- Situations, participants, roles, scenarios of use.
- Once we have new powerful interoperable tools, how do we get people to use them?

Developer's questions 2

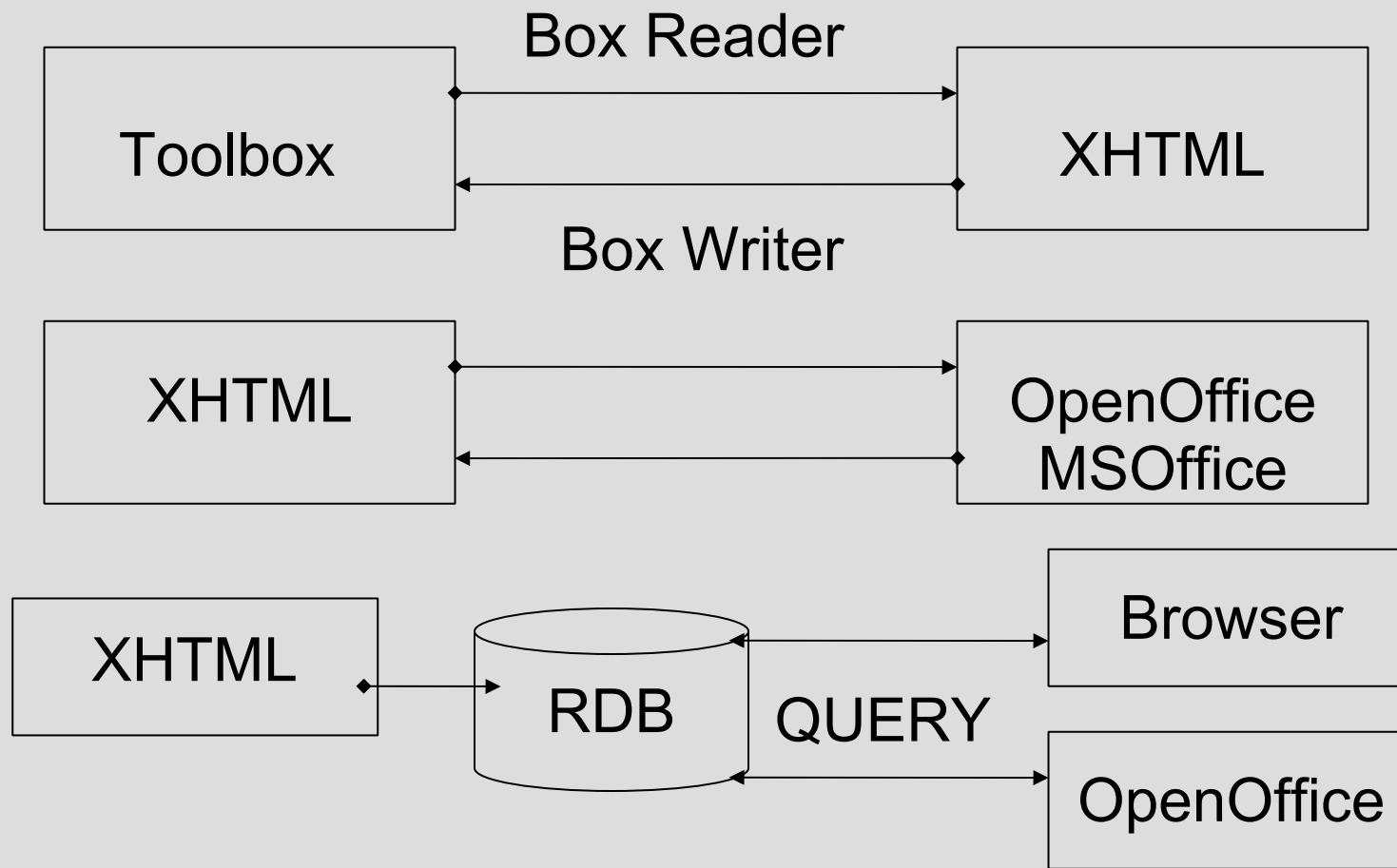
- Are there tools that you need but don't know about?
- Can I tell you about them?
- For instance, can I tell you about mashups?
(They are very cool.)

Example: Linguistics

- Three most common programs:
 - MSWord
 - the Web browser, including email client
 - Linguist's Toolbox
- Toolbox => MSWord for printing
- Toolbox => XML export
- ELAN <= Toolbox import

- Problem: Toolbox ?? the Web
- BoxReader and BoxWriter

Summary of Transformations



Generalizing

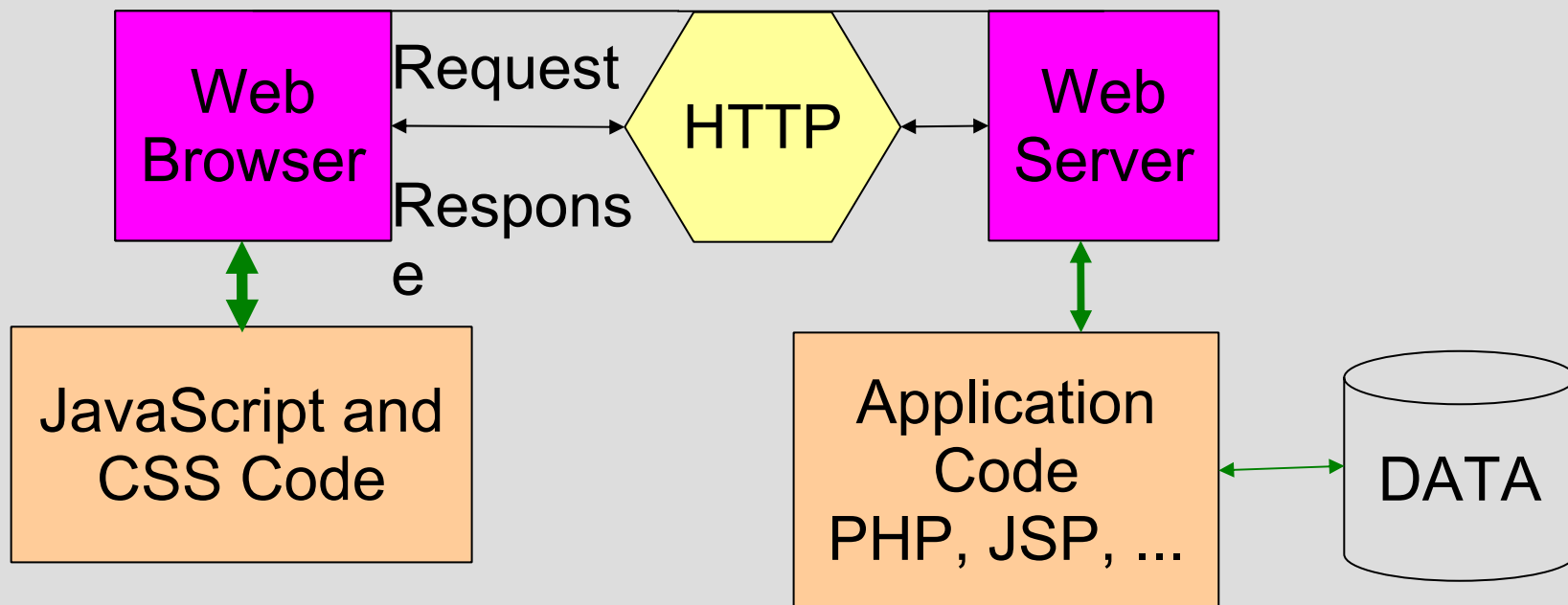
Probably in all disciplines:

- MSWord, Excel, PowerPoint
- the browser
- discipline-specific tools, desktop or Web-based

- Web-based tools are best because they scale up seamlessly from an individual machine to a group to the field at large.

Web-based Application

XMLHttpRequest



A server on every laptop

- A browser AND A WEB SERVER on every scholar's laptop.
- Which server? Apache, Tomcat, IIS
- What language for writing applications?
PHP, JSP, Python, Ruby
(should be invisible in the URLs)
- Which browser?

Which Browser?

Page has: Structure Looks Behavior

Language: (X)HTML CSS JavaScript

Standard: W3C W3C ECMA
WHATWG W3C

- XSLT for transforming structure (W3C)

Firefox

- free, open-source, easy to install
- best at standards compliance
- works the same on Win, Mac, Linux
- supports new features from WHATWG.org
- Developers develop in Firefox, add IE support. (IE7 is an improvement over IE6.)

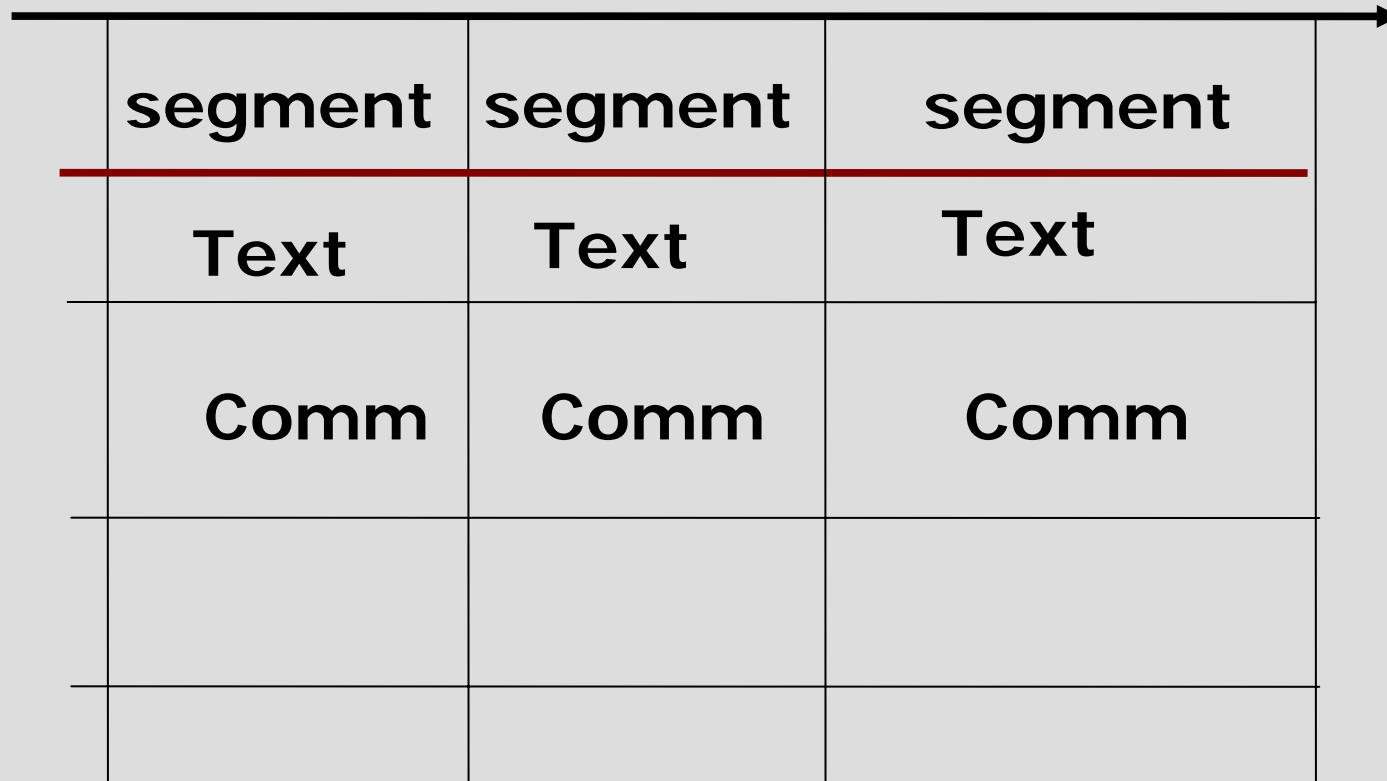
The Field at Large

- Data repositories
- A way to locate repositories
- Standard metadata for repositories
- Standard tools for searching and adding to repositories
- Ontologies for better resource description and search

- Searchable multimedia repositories based on time alignment

Time Alignment

Time=based Media



segment	segment	segment
Text	Text	Text
Comm	Comm	Comm

Time Alignment

Makes these tasks easy:

- Study the video
- Add annotations to video
- Search the video by text or annotations
- Multimedia annotators – players:
ELAN, Transcriber, Transana, MannX

Multimedia Repositories

- Search through text and commentaries to locate media segments
- An example
 - [Algorithm Analysis Lect1-localfile](#)
 - [Algorithm Analysis Lect1-localhost](#)
 - [Algorithm Analysis Lect1-1-Web host](#)
- Searchable repositories
 - [Multimedia Search Page](#)

Conclusions

- Scholarship is an integrated whole.
- Identify needs, talk to developers.
- Tool categories:
 - Web-based tools
 - tools for legacy data and MSOffice data
 - the Web platform on every laptop
 - XML for data interchange, interoperability
- Standard metadata for repositories and search; ontologies for better search
- Multimedia repositories

Links and References

- <http://csproj2.colgate.edu/nsf/ParisFeb07.zip>
- <http://emeld.org/workshop/2006/>
- BoxReader and BoxWriter:
<http://emeld.org/workshop/2006/proceedings.html>
- Multimedia annotators: ELAN, Transcriber, MannX
- Greenspun <http://philip.greenspun.com/>
(on community portals etc)