

Replacing a Search System

NALIT PDS October 2011

Capabilities We Provide

- ▶ Internal and external search capabilities on legislative documents—bills, amendments, committee analyses, journals, statutes, register documents, administrative code sections
- ▶ Ability to trim the search considerably by doc type, biennium, title or chapter in statutes, limit search to parts (zones) of documents
- ▶ Lots of flexibility in building search terms—boolean, proximity, phrases, root word, zones
- ▶ Named like
- ▶ Saved queries



Problems We're Trying to Solve

- ▶ Search has changed a whole lot since 1998
- ▶ Legislative researchers don't want to search the universe
- ▶ Text Roadmap in 2007: Our plan for moving text-based apps off old unsustainable technologies
 - ▶ Some text-based apps now data-based
 - ▶ In-house DMS
 - ▶ New XML schema
 - ▶ Just started work on reengineering applications for bill drafting, administrative rule processing, codification



Problems We're Trying to Solve

- ▶ **Fulcrum → Hummingbird → OpenText**
 - ▶ Knowledgeable support disappearing
 - ▶ Search engine now part of a suite—can't just purchase it, and would be new, expensive purchase
- ▶ **Old technologies—ASP, SQL Server 2005—made it hard to support, adapt**



Problems We're Trying to Solve

- ▶ It stops for a reason we've been unable to discover, have to recycle app pool
- ▶ Very complex interface for entering terms, selecting document sets
- ▶ We need a tool that supports internal users on the network and external users on the web
 - ▶ Researchers' and drafters' precise searches
 - ▶ Public's more general, Google-ish searches
- ▶ Want to abstract interface from search engine so upgrades and replacements are easier



Why We Selected dtSearch

- ▶ SharePoint/FAST, just as Microsoft purchased company
 - ▶ Big boys in the marketplace
 - ▶ Open source (Lucene/Solr)
 - ▶ We found dtSearch (thanks, Nutmeggers)
 - ▶ Inexpensive—\$2,000/year vs. \$25-100,000
 - ▶ People easy to work with
 - ▶ Product easy to work with
 - ▶ .NET platform
 - ▶ Supports zone searches and indexes PDFs
 - ▶ API and good documentation
 - ▶ External and internal
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Technical Goals

- ▶ Create a layer of abstraction between dtSearch and our business objects. This will allow us to deal with dtSearch upgrades and even a different engine in the future.
- ▶ Provide a search API that other legislative applications can use. This API will expose an interface that is search-engine independent.



How We're Doing This

- ▶ Spent a lot of time revisiting requirements
 - ▶ How they use existing system
 - ▶ What kinds of searches they do
 - ▶ Plowed through logs to see what features they really use
- ▶ Started thinking about the business layer
- ▶ Time out for UI design research, discussions, and decisions—selected HTML 5, jQuery, AJAX
- ▶ Iterative methodology
- ▶ Web page mock-ups to show customers



Challenges

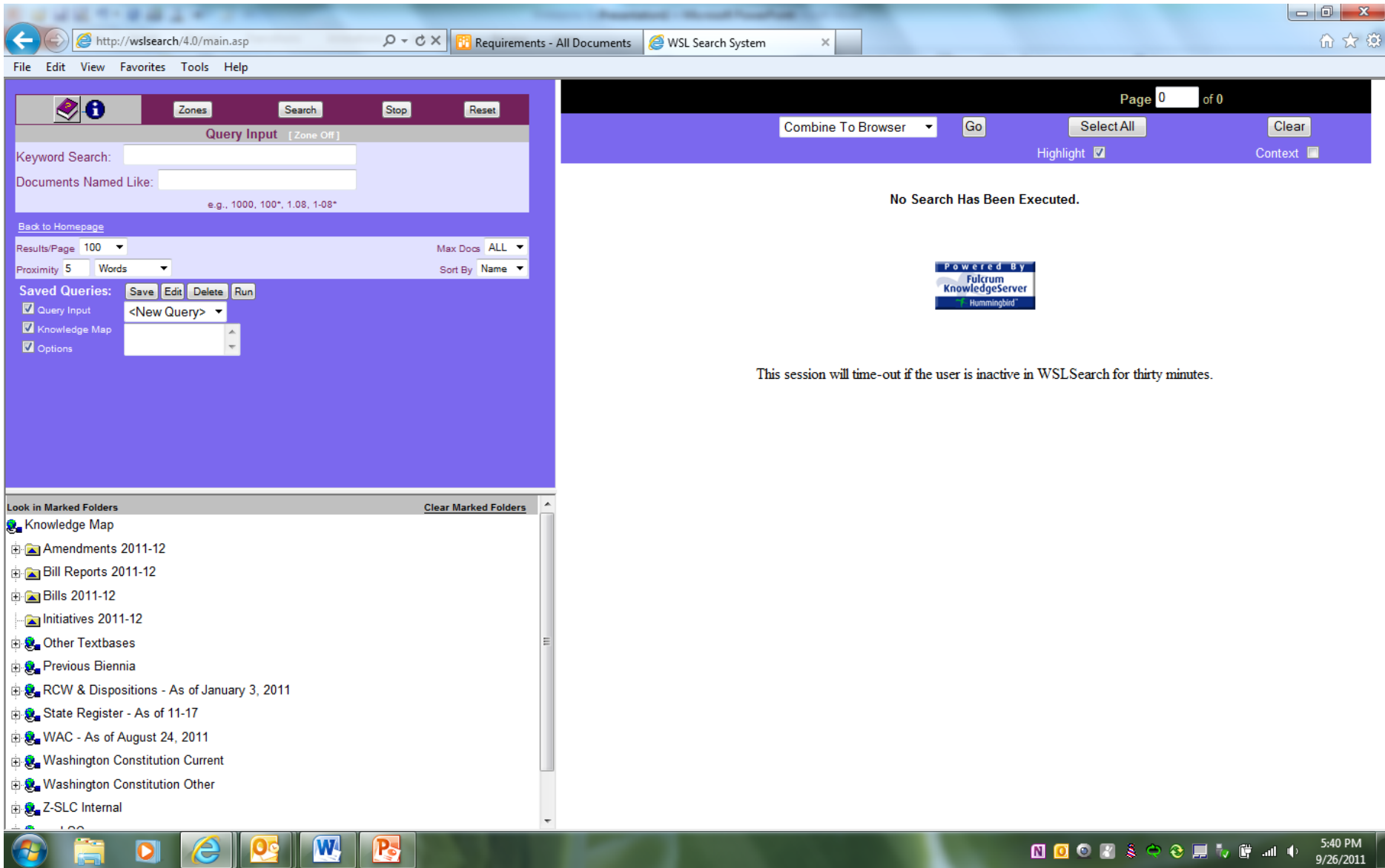
- ▶ Vocabulary differences between Hummingbird and dtSearch
- ▶ Creating the layer of abstraction we want is taking longer than we thought it would
- ▶ Products define zones differently, so we will have to convert documents and makes changes to the applications that render documents for search
- ▶ 64-bit server—Visual Studio dev server default is 32
- ▶ Debugging in Visual Studio—Had to set up web site using IIS on developers' local machines



Cool Stuff

- ▶ Features in dtSearch—it passed all our evaluation criteria
- ▶ Cost effectiveness
 - ▶ Our first reaction was “this is too good to be true, what’s wrong with the product?”
- ▶ dtSearch API—robust, well documented





▶ Current Search interface showing tree structure to select document set

http://wslsearch/4.0/main.asp Requirements - All Documents WSL Search System

Documents 1 to 8 of 8 Total Page 1 of 1

Combine To Browser Go Select All Clear

Highlight Context

Query: (CONTENT contains trout)

- [1387](#) (2011-12)
AN ACT Relating to increasing revenue to the state wildlife account
- [1387-S](#) (2011-12)
AN ACT Relating to increasing revenue to the state wildlife account
- [1642](#) (2011-12)
AN ACT Relating to investing in the economy of the state of Washington by creating a mechanism to enhance the production of Pacific salmon
- [1821](#) (2011-12)
AN ACT Relating to investing in the economy of the state of Washington by creating a mechanism to enhance the production of Pacific salmon in waters located east of Cape Flattery and subject to the agreements made by the state government, the federal government, and tribal governments relating to the cooperative management of the resource
- [1850](#) (2011-12)
AN ACT Relating to consolidating natural resources agencies and programs
- [1885](#) (2011-12)
AN ACT Relating to providing streamlining improvements in the administration of programs affecting the natural environment
- [1885-S.E](#) (2011-12)
AN ACT Relating to providing streamlining improvements in the administration of programs affecting the natural environment
- [1885-S](#) (2011-12)
AN ACT Relating to providing streamlining improvements in the administration of programs affecting the natural environment

As the tree expands, you lose some context

File Edit View Favorites Tools Help

Zones Search Stop Reset

Query Input [Zone Off]

Keyword Search: trout

Documents Named Like:
 e.g., 1000, 100*, 1.08, 1-08*

Back to Homepage

Results/Page: 100 Max Docs: ALL

Proximity: 5 Words Sort By: Name

Saved Queries: Save Edit Delete Run

Query Input <New Query>

Knowledge Map

Options

- +Bills 2011-12
 - House Bills
 - House Concurrent Resolutions
 - House Joint Memorials
 - House Joint Resolutions
 - House Passed Legislature
 - House Resolutions
 - Senate Bills
 - Senate Concurrent Resolutions
 - Senate Joint Memorials
 - Senate Joint Resolutions
 - Senate Passed Legislature
 - Senate Resolutions
 - Session Law 2011

Result List Order: Previous Term Next Term Previous Document Next Document Back to Result List

Document 5 of 8 1850

Oncorhynchus nerka (in its landlocked form)	kokanee or silver trout
Perca flavescens	yellow perch
Pomoxis annularis	white crappie
Pomoxis nigromaculatus	black crappie
Prosopium williamsoni	mountain white fish
Oncorhynchus aquabonita	golden trout
Oncorhynchus clarkii	cutthroat trout
Oncorhynchus mykiss	rainbow or steelhead trout
Salmo salar (in its landlocked form)	Atlantic salmon
Salmo trutta	brown trout
Salvelinus fontinalis	eastern brook trout
Salvelinus malma	Dolly Varden trout
Salvelinus namaycush	lake trout
Stizostedion vitreum	Walleye
Thymallus arcticus	arctic grayling

(2) Private sector cultured aquatic products as defined in RCW 15.85.020 are not game fish.

Sec. 2011 RCW 77.08.022 and 2000 c 107 s 208 are each amended to read as follows:
 "Food fish" means those species of the classes Osteichthyes, Agnatha, and Chondrichthyes that have been classified and that shall not be fished for except as authorized by rule of the ((**commission**)) department. The term "food fish" includes all stages of development and the bodily parts of food fish species.

Sec. 2012 RCW 77.08.030 and 1980 c 78 s 11 are each amended to read as follows:
 As used in this title or rules of the ((**commission**)) department, "big game" means the following species:

Search Term:

Documents Named Like:

Search

[Clear All Search Terms](#)

Main | **Zones** | **Saved Queries**

Choose where you want to search: [Clear All Selections](#)

Law Documents:

RCW *RCW Dispositions* WAC Constitution

Bills and Bill-Related Documents:

House Senate Both

Bills

- Session Law Documents only*
- Resolutions & Memorials

Amendments

Bill Reports

- Final Bill Reports only*

Initiatives

Vetoes

Yearly Documents:

- WA State Register
- Journals

Other Documents:

- Ethics (Do we need this in Search????)
- SLC

Documents 1 to 30 of 50 **Page 1 of 2**

Combine To Browser

Combine To Browser

Combine To Word

List Of RCW Selections

Query: (CONTENT contains cat\dog) for 2011-12 biennium

- [1124](#) (2011-12)
AN ACT Relating to allowing the use of dogs to hunt cougars
- [1124-S](#) (2011-12)
AN ACT Relating to allowing the use of dogs to hunt cougars
- [1140](#) (2011-12)
AN ACT Relating to authorizing towns to provide high-speed internet service
- [1226](#) (2011-12)
AN ACT Relating to enhancing local animal care and control functions primarily through the provision of a means for low-income individuals to receive assistance for animal population control services
- [1387](#) (2011-12)
AN ACT Relating to increasing revenue to the state wildlife account
- [1387-S](#) (2011-12)
AN ACT Relating to increasing revenue to the state wildlife account
- [1434](#) (2011-12)
AN ACT Relating to compliance with sales, use, and business and occupation tax requirements
- [1464](#) (2011-12)
AN ACT Relating to down payments on bail bond premiums
- [1507](#) (2011-12)
AN ACT Relating to crimes against pharmacies
- [1669](#) (2011-12)
AN ACT Relating to the educational opportunity gap, including implementing recommendations made by the achievement gap oversight and accountability committee

► Mock-up of proposed interface



Your Questions