

Lotus knows.

Smarter software for a Smarter Planet.

AD112 Development and Deployment of Lotus Product Documentation Wikis

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lotusknows.com

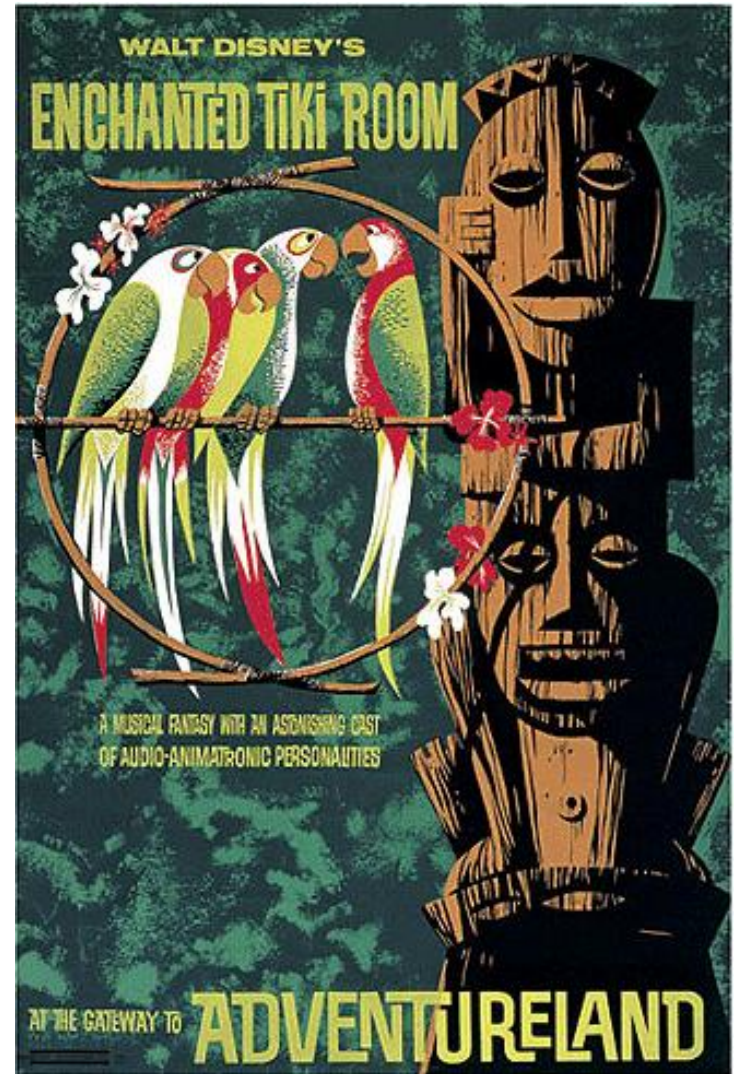
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Agenda

- Background
 - IBM Lotus® product wikis overview
 - Your speakers today
 - IBM Lotus® Domino® infrastructure
- Lotus Domino wiki application development
 - First pass at Lotus Domino wikis
 - Benefits of XPages for wikis
 - XPages Wiki template on OpenNTF
 - Custom development examples
- Real-world experience
 - XPages deployment experience
 - Our XPages lessons
 - What about wikis in IBM Lotus® Connections?
- Project future
- Q&A

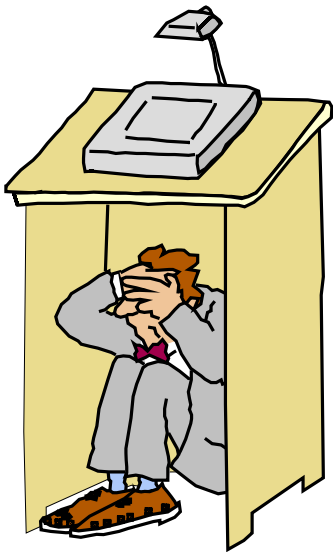


Lotus product wikis overview

- Product wikis for all Lotus and IBM WebSphere® Portal products
- Live on the Internet, open to all customers and users
 - Visit www.lotus.com/ldd/wikis
- Added first wiki for IBM Lotus® Notes® and Lotus Domino in December 2007
- Additional wikis added in 2008
- Current content includes supplemental technical content and IBM Redbooks®
- Plan is to use wikis for official product documentation
 - IBM Lotus® Expeditor, IBM Lotus® Foundations, IBM Mashup Center already publish product doc to wikis



Your speakers today



- Craig Lordan, Manager
 - Craig Lordan is a manager at IBM Lotus. He joined Lotus in 1998 as a technical writer for Lotus Notes and Lotus Domino. He has been working on Web site projects for IBM since 1999, including the original Notes.net Web site. His current focus is managing Web, content, and infrastructure programs for the Lotus product documentation group.
- Kevin Giles, Advisory Software Engineer
 - Kevin Giles is an Advisory Software Engineer at IBM and an IBM Certified Advanced Application Developer, working as an application developer and system administrator for the IBM developerWorks® Lotus Web site. He joined Iris Associates, now part of IBM, in 1997, and worked on the original Notes.net Web site. In past roles he worked as a quality assurance tester for Lotus Domino.
- Where are we in IBM?
 - Lotus Information Development Center
 - Produces product documentation and learning content for all Lotus and WebSphere Portal products
 - Also developing our wiki and other content applications

Lotus Domino infrastructure

- Live Internet-facing Lotus Domino environment
- Part of IBM developerWorks Lotus Web site
- Hosts Lotus product forums, wikis, blogs, Lotus Notes and Lotus Domino fix list, etc.
- Averages 374,000 unique visitors per month
- Averages 3.1 million page views per month



developerWorks

IBM's resource for developers and IT professionals

DeveloperWorks >

Lotus

Technical resources for Lotus software

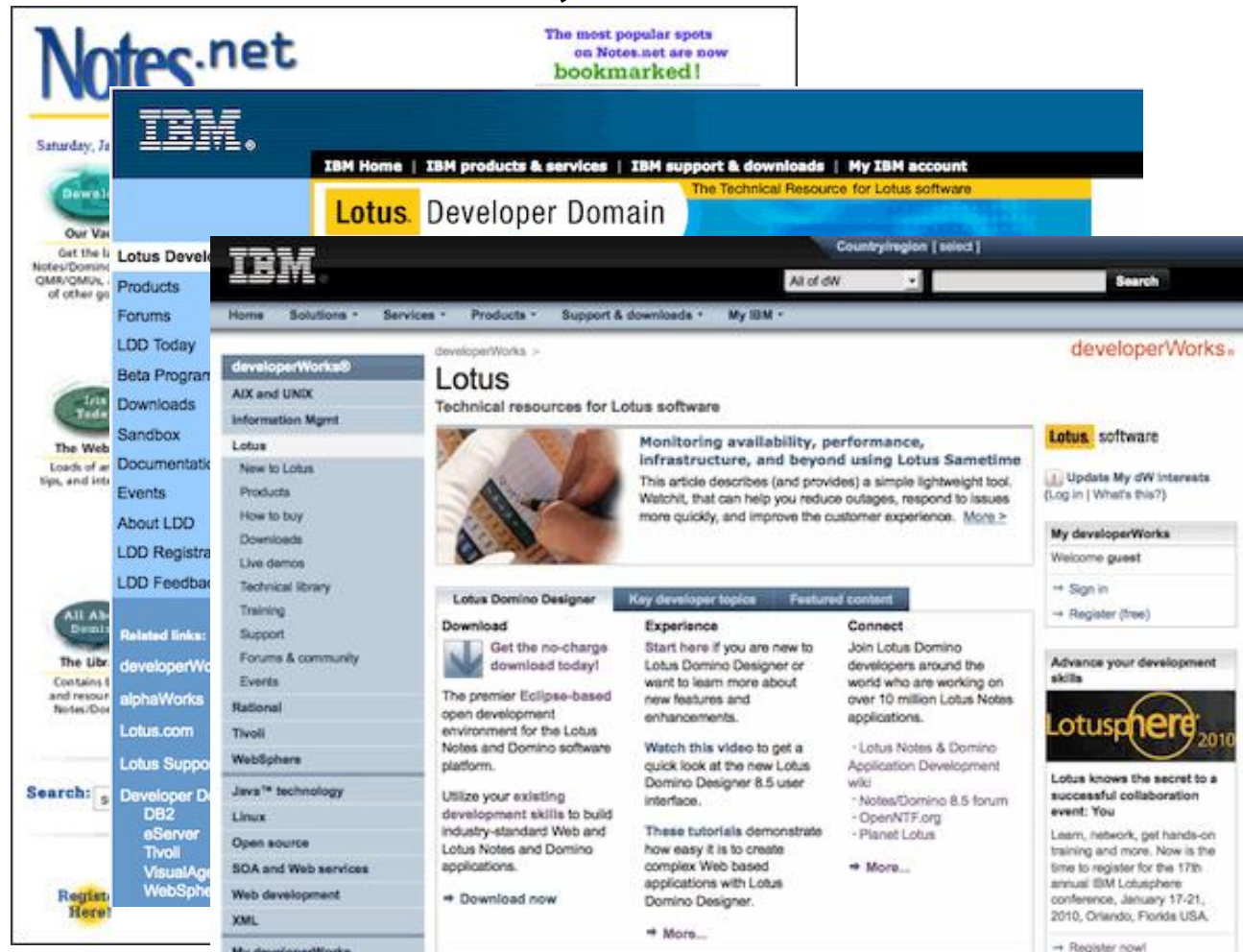


Monitoring availability, performance, infrastructure, and beyond using Lotus Sametime

This article describes (and provides) a simple lightweight tool, Watchit, that can help you reduce outages, respond to issues more quickly, and improve the customer experience. [More >](#)

Lotus Domino infrastructure, cont.

- History
 - Notes.net January 1997 to April 2002
 - Lotus Developer Domain April 2002 to December 2003
 - IBM developerWorks Lotus December 2003 to present



Lotus Domino infrastructure, cont.



- First customer role
- Lab environment tied to development
- Run latest releases or pre-releases/betas of Lotus Domino
- Real-world use and testing at the same time



First pass at Lotus Domino wikis



- 2007: First wiki template developed
 - Great experience hosting Lotus Domino blogs using standard blog template
 - Used Lotus Domino blog template as base and worked with development to extend into a wiki
 - Launched wikis for all products in late 2007 and into 2008
 - Multiple project iterations to customize and add features
 - IBM staff used Lotus Notes interface and customers used Web interface
 - Rich text handling caused content and image flaws
- Decision to move to XPages
 - XPages promised to correct issues
 - Showcase of XPages in a live environment
 - Lotus Domino development team built wiki template using XPages and based on our group's experience with product wikis

Benefits of XPages for wikis

- Rich text handling streamlined
 - Separation between Web presentation and content storage
 - No MIME conversion as done in the blog template
- Markup language
 - Fosters common formatting language between Lotus Notes and Web browser editing environments
 - Markup uses WikiCreole format, same as Wikis feature in Lotus Connections
- Document editing performance improved
 - Processing agents from blog template no longer necessary
- Upgraded Dojo editor
 - Uses Dojo editor from standard Lotus Domino installation
 - Potential for other rich text editor options down the road



Image: Mike McGarel

Benefits of XPages for wikis, cont.

- IBM Lotus “OneUI” style sheets
 - Common look and feel shared by current Lotus product set
 - Web accessibility covered globally and consistently
- Common controls and components
 - XPages provides multiple reusable core controls
 - Standard discussion template from Lotus Domino 8.5.x provides components such as tag cloud and search
- Active content filtering
 - Protects against malicious code content in wiki articles
 - Set at server level via properties file and tied to XPages applications and controls
- Backwards compatibility
 - Provides new Web presentation along with standard Notes forms and views
 - XPages template applied to 20 live production databases with no service disruption



Image: Mike McGarel

XPages Wiki template on OpenNTF



- XPages wiki template shared for no-charge download on OpenNTF (www.openntf.org)
- Template is base for further customization for Lotus product documentation wikis
- Working with development to incorporate our customization work
- Visit www.openntf.org/Projects/pmt.nsf/ProjectLookup/XPage



Custom development examples

- Tag cloud (how we use tag clouds for categories)
- Customizable home page panels
- Limiting file upload types
- Active content filtering
- Importing DITA files into the wiki using DXL
- What's next...

Tag Cloud

- Tag cloud is a visual collection of words users add to documents
- OpenNTF wiki template provides a standard tag cloud control
- We extended the tag cloud by adding “tag filtering”
- Tag filtering provides context-sensitive contents as you move through the wiki and look at different categories



Categories

- Configuring applications (1)
- Designing applications (58)
- Developing XPages Web applications (67)
- Developing applications (6)
- Developing composite applications (3)
- Developing traditional Web applications (8)
- Getting started (42)
- Help (1)
- Integrating applications (2)
- Managing applications (4)
- Media Gallery (18)
- Programming (51)
- Redbooks (1)
- Requested Articles (1)
- Resources for developers (11)
- Troubleshooting (10)
- Using Domino Designer (2)

Tag Cloud

8.0 8.5 6.5.1 @Formulas Data binding Display Error Control Dojo Domino Designer 8.5 Eclipse FAQ Help IBM JSF Java JavaScript Lotus Script LotusScript Lotusphere 2009 Notes 8 Notes OpenNTF Partial Update Portal Redbooks wiki SOA Video Web apps Web services XML **XPages** action





Tag Cloud, cont.

#	Category	Tag	Subject
1	▶ API troubleshooting		
1	▶ Application development		
1	▶ Assembling		
1	▶ Assembling: Adding components		
1	▶ Assembling: Tutorials		
28	▼ Best practices		
1	▶ 2.5		
1	▶ 2.5_deployment		
1	▼ ACF		
0			Security knowledge transfer for Lotus Connections 2.5 (Part 1)
2	▶ activities		
1	▶ adoption		
1	▼ applications		
0			What's new in Composite Applications in Notes 8.5.1 /Expeditior 6.2.1
1	▶ best-practice		

- New view to categorize tags by article category
- First column categorizes articles by article category
- Second column categorized tags by article category



Tag Cloud, cont.

- Creating custom properties allows you to give a custom control greater flexibility
- Here we created two properties that control how filtering works in our tag cloud
 - filterByCategory allows you to switch filtering on/off
 - filterParameter allows you to set the value to filter

The screenshot shows the 'Properties' window with a tree view on the left and a 'Property' tab on the right. In the tree view, 'filterByCategory' and 'filterParameter' are highlighted with red boxes. The 'Property' tab shows the following details for 'filterByCategory':

Property	Validation	Visible
Name:	filterByCategory	
Display name:	Filter by category	
Type:	boolean	
Editor:	Boolean value	
Parameters:		
Default Value:	false	
<input type="checkbox"/> Allow multiple instances		
Description:	Optional: Used only to filter tags by categories	

custom	
alternateText	{0} Entries
cache	xc:cache
categoryColumn	if (compositeData.v...vTagsCategory){...
database	
Filters	xc:Filters
filterByCategory	true
filterParameter	# if(context.getUrlParameter("lookupName") ..
hidden	xc:hidden
links	xc:links
maxTagLimit	100
minEntryCount	2

Tag Cloud, cont.

```
if(_filterByCategory &&
    _filterParameter !== null) {
nav =
    theView.createViewNavFromCategory(_fi
lterParameter.toString());
}else{nav = theView.createViewNav();}
entry = nav.getFirst();
```

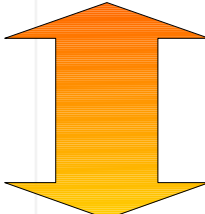
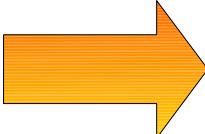


▼ Tag Cloud







Filtered by: Developing XPages
Web applications

8.5 8.5.1 Dojo Eclipse JSF
JavaScript Partial Update Web
services **XPages** ajax app
dev beginner calculations client
computes converters custom
controls custom data binding
database db2 display error control
dynamic fields errors events
facesContext getting started
globalization input validation
internationalization localization
new user programming samples
server tutorials validation video
view Control viewPanel views

Customizable front page panels



What information are you looking for?

 Spotlight articles <p>Find hand-selected community articles, including interesting multi-media content, product news, or timely how-to information.</p> <p>Optimizing Sametime's Name Lookup solution This guide provides a high-level overview, background information, and best practice recommendations on Lotus Sametime's...</p> <p>Best Practices for using LDAP with Lotus Sametime This article contains an overview of LDAP components and how Lotus Sametime Community Server works with LDAP to provide ...</p> <p>Lotus Sametime 8.5 Reference Cards IBM® Lotus® Sametime® 8.5 meetings take place in reservationless meeting rooms. Meeting rooms open in either a Lotus Sam...</p>	 Product documentation <p>Looking for product documentation? Find the latest, most up-to-date documentation here.</p> <p>➤ Lotus Sametime 8 documentation ➤ All product documentation for Lotus Sametime</p>	 Learning center <p>Looking for courses or demos? Find them here.</p> <p>Getting started</p> <ul style="list-style-type: none">➤ Sametime 8.5➤ Sametime Unified Telephony 8➤ Sametime 8➤ Sametime Advanced 8 <p>➤ Media gallery ➤ Education offerings for IBM Lotus Sametime ➤ Lotus certification ➤ Lotus Sametime training</p>	 More resources <p>Looking for support, other social networking sites, or more supplemental content? Find additional resources for supported versions and all user roles here.</p> <ul style="list-style-type: none">➤ Resources for administrators and developers➤ Suggest an article➤ Best practices➤ Deployment scenarios➤ Performance and tuning➤ Lotus Sametime Support
Community translations <p>Find articles originally authored or manually translated into different languages by the community.</p> <p></p> <ul style="list-style-type: none">• English• 中文 <p>For machine translations of any content in this wiki, go to the left navigation bar in this wiki.</p>	IBM Redbooks <p> Lotus® and IBM® Redbooks® have partnered together to deliver high-quality Lotus content in this product wiki. Take a look here for more information.</p>		



Customizable front page panels, cont.

- Brings multiple views together in a single page
- Uses repeat control to display list of documents
- Easy to control number of documents to display

Repeat
All Properties

Name:

Height: Units:

Width: Units:

☒ Visible

Iteration

☒ Simple data binding ☐ JavaScript ☐ Advanced

Data Binding

Data source:

Bind to:

Options

☐ Create controls at page creation

Starting index:

Repeat limit:

Collection name:

Index name:



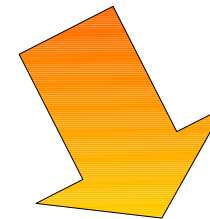
Limiting file upload types

- The default upload control allows you to upload any file type
- We customized the control to allow only specific file types (PDF, JPEG, GIF, etc.) to be uploaded to the wiki
- Notifies user when invalid file type is uploaded

▼ Attachments (0)

Attachment limits
File types: jpeg, gif, png, pdf
Size: 10MB per file
Maximum image width: 600 pixels

Attach File



▼ Attachments (0)

Attachment limits
File types: jpeg, gif, png, pdf
Size: 10MB per file
Maximum image width: 600 pixels


Attach File

Unaccepted Content Type: text/plain




Limiting file upload types, cont.

- By default Lotus Domino offers a drop-down list of file types to select
- To select multiple file types, use a computed value to provide list of file types to accept
 - "image/gif,image/jpeg,image/png,application/pdf,image/pjpeg"



Property	Value
basics	
accept	image/png
accesskey	image/png
binding	image/gif
dir	video/mpeg
disabled	text/css
	audio/basic



Property	Value
basics	
accept	"image/gif,image/jpe...ion/pdf,image/pjpeg"
accesskey	
binding	



Active content filtering

- Protects against malicious content (scripts, tags, etc.)
- Can filter incoming data (htmlFilterIn) as well as existing data (htmlFilter)
- Extend server side rules to protect against unwanted actions such as page redirects, for example:
 - `<meta http-equiv="refresh" content="60">`

htmlConversionWarning	noWarning
htmlFilter	acf
htmlFilterIn	acf
id	content1

```
<rule tag='meta' attribute='http-equiv' value='REFRESH' value-criterion='contains' action='remove-tag' />
<rule tag='xml' action='remove-tag' />
<rule tag='ilayer' action='remove-tag' /> <!-- for NS4 -->
<rule tag='layer' action='remove-tag' /> <!-- for NS4 -->
<rule tag='br' attribute='size' value='&#160;' value-criterion='contains' action='remove-tag' /> <!-- for NS4 -->
```



Publishing doc from DITA to Wiki

- DITA XML is an OASIS standard for modular content
- It is supported by an open-source toolkit, a wide range of products, and an active community of users
- It is the source format for all the product documentation produced at IBM and widely used by other companies, as well.
- To support publishing our Lotus documentation to the products, we developed a DITA import process that leverages Domino DXL and an LotusScript import agent

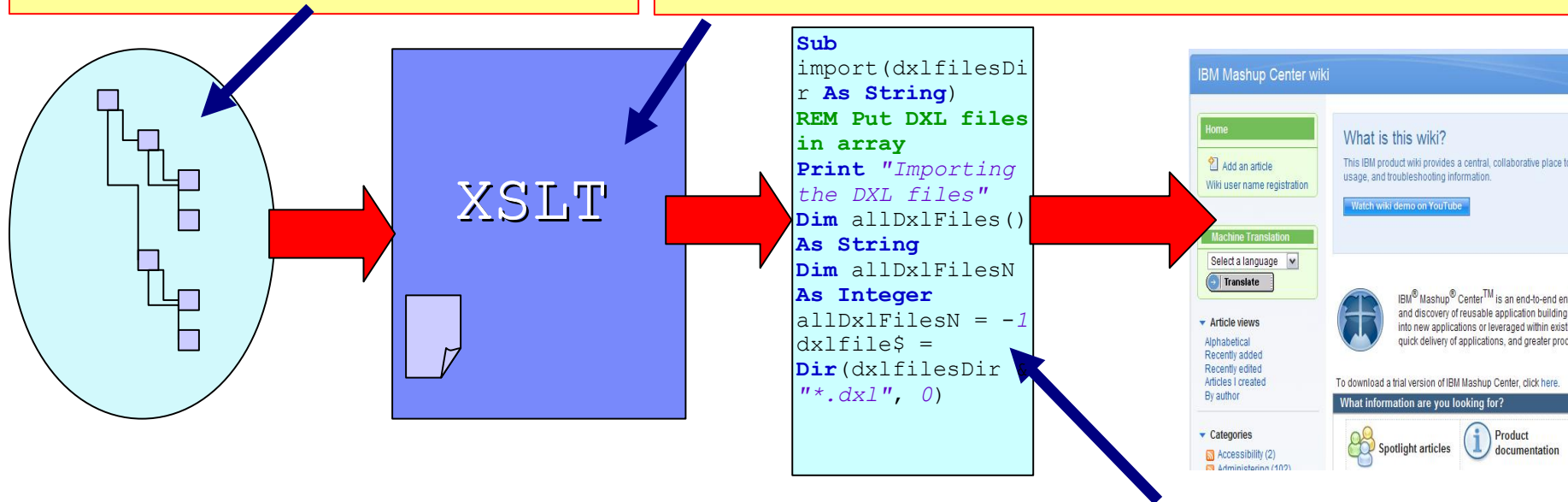




Publishing process with DITA and DXL

1. DITA maps organize topic-based content for import to the wiki

2. DITA2DXL XSL transforms topics and contents to Domino DXL, including metadata, images, richtext, and links.



3. Domino agent imports the DXL to wiki articles



What's next...



- Expandable/collapsible navigation
 - Provide navigation to product documentation and IBM Redbooks in wikis
 - Built using Dojo tree widget
- Version differences
 - User interface to compare changes between document revisions
 - Review what is available in Lotus Connections or...
 - Build a custom solution using the StringDiff utility in the LotusScript Gold Collection available on OpenNTF.org
- Updated tabbed UI
 - Using more Dojo container widgets

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XPages deployment experience

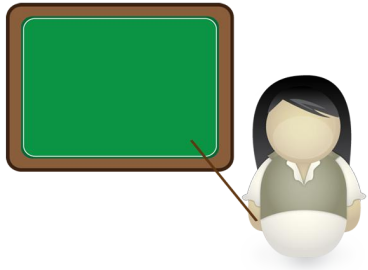
- Specs for initial deployment
 - Four Lotus Domino 8.5 32-bit Web servers
 - Microsoft® Windows® Server 2003, 2GB memory allotted for Lotus Domino, 140GB disk space
- Initial deployment on Lotus Domino 8.5
 - Original tag cloud component caused JVM resource issues
 - Over 1-2 days, using the XPages applications in a Web browser caused various Error 500: Command Not Handled exceptions
 - Worked with development to adapt and apply rewritten tag cloud from Lotus Domino 8.5.1
- Optimized server settings
 - These settings worked in our environment; **may not apply to your environment**
 - Notes.ini setting: **HTTPJVMMaxHeapSize=512M**
 - Default is 256M, which was too low in our environment to allocate Java memory to XPages
 - Setting at 1024M took too much memory from the rest of Lotus Domino
 - xsp.properties file setting: **xsp.session.timeout=15**
 - Default is 30 minutes
 - Note: In release 8.5, file is located in domino/xsp/nsf folder. In release 8.5.1, file is located in properties folder in Lotus Domino data directory



XPages deployment experience, cont.

- Upgraded to Lotus Domino 8.5.1
 - Worked with development to identify that Lotus Domino 8.5.1 contained XPages performance and debugging features
 - Deployed pre-releases of Lotus Domino 8.5.1 into production (CD7, CD8)
 - Moved to Lotus Domino 8.5.1 “gold” release in September 2009
- Specs for current deployment
 - Upgraded four Web servers to 64-bit version of Lotus Domino 8.5.1
 - Four new IBM xSeries servers running Microsoft Windows Server 2008 (Longhorn), 10-13GB memory allotted for Lotus Domino, 700GB disk space
- Server settings
 - Using default for HTTPJVMMaxHeapSize
 - Using default for xsp.session.timeout
 - Memory caching / disk caching features

Our XPages lessons



- Learning curve
 - “Traditional” Lotus Domino developers will need to learn XPages and brush up on JavaScript programming
 - Formula-language wranglers may be a bit daunted at first
 - But, loads of enablement material available from IBM and elsewhere
 - Visit [developerWorks Lotus](#) or the [Lotus Notes and Domino Application Development wiki](#) as a starting point
- Debugging
 - Can be challenging in 8.5 and 8.5.1
 - Improved XPages debugging should be coming
- Server resources
 - Tuning JVM and session usage may be necessary depending on your environment and usage
- Be friends with your system administrator
 - Owning both development and administration did make our project easier to manage

What about wikis in Lotus Connections?



- Great feature in Lotus Connections!
- We piloted Lotus Connections 2.5 during the design partner program to examine the new Wikis feature
- Sections of ibm.com and developerWorks are using Lotus Connections with Wikis for community features
- Wikis in Lotus Connections used extensively within IBM as internal wiki platform
- But, product documentation wiki focus is on our existing Lotus Domino infrastructure with customer-facing wikis for product documentation and community content
 - Pairs with existing Lotus Domino-based forums and registration system in our real-world test environment

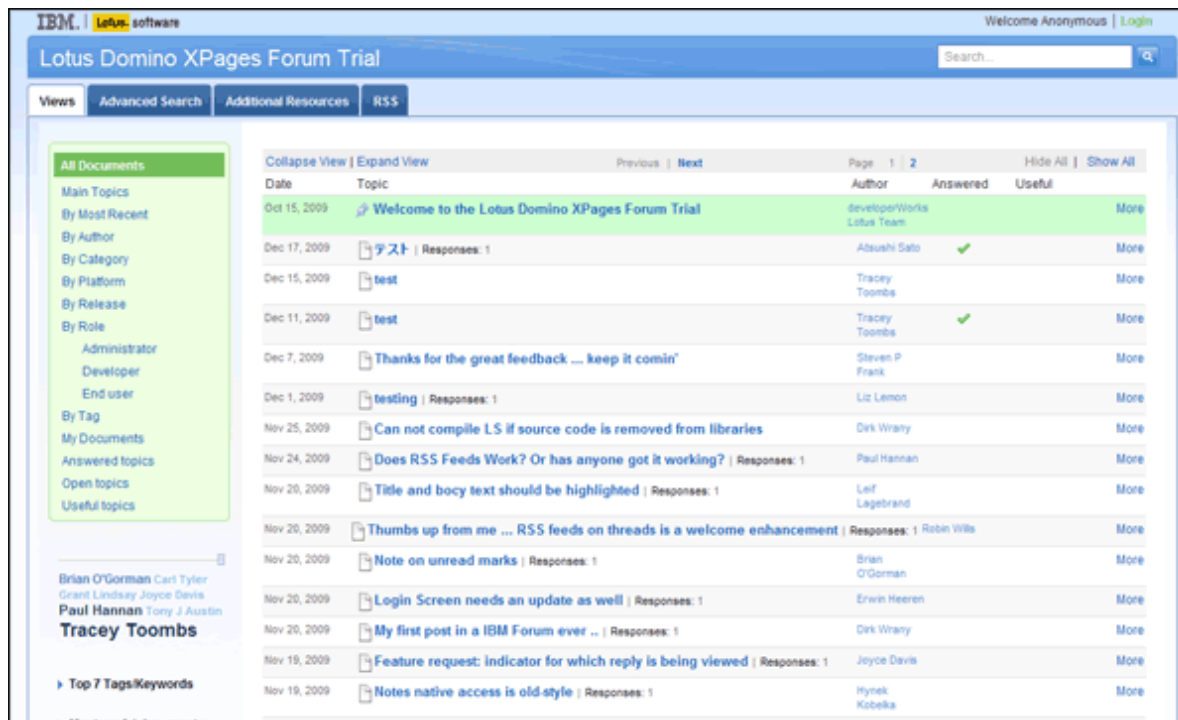
Project future



- Features we are planning / researching for product doc wikis
 - Home for official product documentation
 - Expandable / collapsible site navigation
 - Advanced search
 - PDF generation
 - Ratings
 - User profiles
 - New rich text editor
 - Rich text / markup / HTML source / preview panes
 - Revision differences
 - Enhanced machine translation

XPages forum design

- Companion project
 - Upgrade all existing discussion forums to XPages design
 - Based on standard discussion template in Lotus Domino 8.5.x and available for download from OpenNTF (visit: www.openntf.org/Projects/pmt.nsf/ProjectLookup/Discussion%20Next%20Gen)



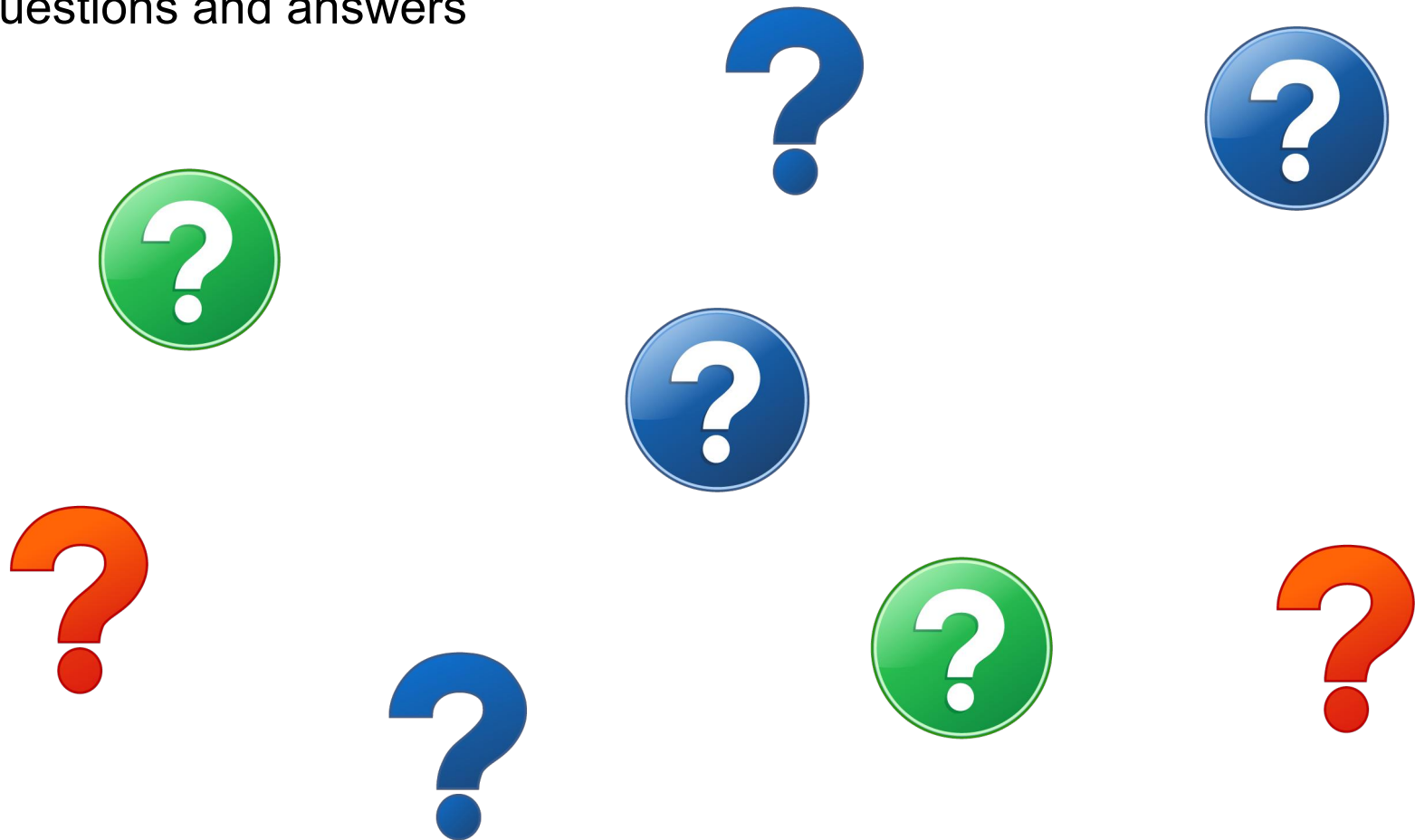
Come talk to us about wikis

- **User experience lab**
 - Dolphin Asia 4
 - Take a wiki usability test
- **Visit the Lotus Knows Info Matters pedestal**
 - IBM section (ped 11) in Product Showcase, Dolphin Atlantic Hall
- **Wiki feedback links**
 - Each wiki provides a wiki feedback link



Q&A

- Questions and answers



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