

Down to Earth with Notes Designer for Domino 4.6

Interview by Betsy Kosheff

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If you're a Web site designer or a developer looking to deploy applications on the Web, you have a lot to do these days. So chances are, you have about as much time to knit together different Web tools, servers and development environments to build your site or application as you do to ponder the question: "Was there life on Mars?" The Notes Designer for Domino 4.6 team talks about how easily things can be done without a degree in rocket science, or even programming a single line of Java code. (But if you're a Java programmer, there's a ton of new stuff for you, too.)

Where does Notes Designer fit in the wired world?

Bill Andreas: It's really for both Web designers and Notes designers.

The world is rapidly evolving to include three basic types of Web sites -- first, there's your basic, static brochure-ware type of site. This type is not very interactive, although they're becoming more so as people demand at least the ability to process forms and scripts to capture user information. Then, there's interactive sites with people doing all sorts of discussions, handling FAQs, and working with other more sophisticated applications. And then, there's business process-type applications, where developers are starting to take the types of applications we were writing 20 years ago in COBOL, and extending them to customers out on the Web. Notes Designer really addresses the latter two spaces, with the Fusion tools as a really wonderful product for designing a beautiful, easy-to-maintain site.

Why does the world need another tool for building Web-based applications?

Bill Andreas: Well, you can use other design tools with Domino and you always have been able to. But there's really not a lot out there yet that does what Notes and Domino do in terms of an integrated development environment. We're going to compete mostly with Microsoft products, which really use a glue-it-all-together-yourself kind of approach, or Netscape's products, which we're still waiting to see. There are also some smaller players out there that do some of what Notes does, and a lot of them are the same price or higher. So, you could get less for more, so to speak.



Bill Andreas: Lead Designer for Notes Designer for Domino 4.6

What were the broad goals for Notes Designer?

Jen Kidder: The goal of Notes Designer was to make the design UI of Notes more Web-friendly. In Notes 4.5, you could design Web sites using Notes, but it took a lot more effort and required some things that were fairly kludgy. In 4.6, we added a UI for most of the Web design features, such as HTML field attributes, embedded views and folders, and Java applets.

Why is this only a point release -- it sounds like there's a lot in there.

Bill Andreas: There is. A lot of what we initially set out to do was small stuff, but it added up to a lot of new capabilities that are really designed to bring the Notes client and server closer together in terms of what you can do in the design space, particularly with HTML. Some things were just clunky, so we spent time getting those things to be not so clunky. A good example is, there used to be \$\$ constructs designed to get Notes constructs into HTML pages. These were hard to use, so now we have a direct user interface that lets you set those types of things right in the UI. Also, we worked on getting views and folders to be usable on the Web, and improvements to the way Notes navigators work when they go out to the Web.

This stuff takes a lot of work, and people will really appreciate it when they start to use the product. But it was hard to say this would be a major upgrade when you're spending most of the time on the small stuff. Of course, support for Java applets is the biggest thing, and I think people are going to see how cool this is when they start using them.



Jen Kidder: Project leader for Notes application development

I thought Notes 4.5 already supported Java applets?

Matt Siess: Notes could run them, but there was no UI to create them. If you wanted to put them inside a Notes document or form, you had to convert them using the Notes Web Navigator. Now, you can actually insert Java class files in a Notes document. Before, we didn't actually store the applet files in Notes, so you had to go out to the Domino server and put the files for the applet into the proper directories. Now, you just insert the applet in your document, and Domino knows how to find it and serve it up.

How do I add a Java applet to my form?

Matt Siess: You just go to the Notes Create menu. Then, you can either link to an applet that's out on an HTTP server, or, if you've purchased an applet or developed one yourself, you can insert the class files directly into your form.

Where do I look for applets on the Web?

Matt Siess: Well, a lot of the applets that are out there are really just ornaments, although there are starting to be more useful ones. The best thing I can advise is to use the Lotus BeanMachine, which is included with the Notes Designer, and makes it just a point-and-click operation to create an applet.



Matt Siess: Java applet senior developer

Can you program the applets?

Matt Siess: That's where we're headed next. Right now, applets can't cause something to happen within your Notes document, but the idea in the 5.0 release is to support Beans, which will be programmable.

Which version of Java are you supporting in the Notes Designer?

Matt Siess: JDK 1.1.1, which is very cool because you get support for international characters, so you can support international applets. Plus, there are performance improvements and support for JAR files.

What are some of the things Notes Designer improves upon in terms of usability for Web designers?

Darrell Loverin: One thing people are hopefully going to notice is that all the navigators they've created for Notes applications can now come across on the Web without a lot of work -- you just select a checkbox on the navigator to make it "Web browser compatible." In Notes Designer, you can get things like text boxes and bitmap buttons to show up on the Web, and you can have several bitmaps in your document. Plus, if you create new navigators, you can now put your text right into the navigator, instead of having to take the bitmap and change the text in some drawing application, and bring it back into Notes.

What about transparent GIFs? Can you support them?

Darrell Loverin: Yes, one of the things we've worked on is making sure people can import different types of bitmap formats, so now we support BMPs, GIFs, TIFFs, JPEGs, PCX and transparent GIFs. Plus, we've added a circle hotspot, so you can have an area of the bitmap do some action.



Darrell Loverin: Graphical navigator senior developer

What are anchor links?

Jen Kidder: Anchor links allow you to create a link to an exact location within a document. They are similar to document links, but now you can take users to the exact location within a document where you want them to be, rather than just to the document itself.

What about Dynamic HTML?

Bill Andreas: It works and without requiring a Ph.D. One of the things we do really well is make it easy to do what people are now calling Dynamic HTML, only it's so easy you don't even know you're doing it. A good example of something a lot of people are trying to do is construct a page that is different depending on things like user preferences and security, or time of day, so you can, say, make the advertising change on your site. They're also called active server pages, but we just call them Notes documents. It's very easy to do with Notes Designer. You just select some text and say "Show this when Fred is on the site." That's one big thing that Web site developers are having to deal with that is just part of Notes.

The second thing people want is to make little pop-ups and such happen, and that's one of the areas we're working on. So, you can not only generate dynamic pages, but if it's a Notes client, have them be very active. For example, you could check field values, and have pop-ups do formulas that go here and there. We've already made it easy in 4.6 to make all of our buttons now work in Web clients, but we have more work to do here, too.

What have you done to make Notes Designer ease the application development process?

Colleen Griffiths: We've tried to help in several ways for both advanced developers and novice users. One new and hopefully useful thing we've done in this release is that we've focused on better documentation of the template design, so that they are easier for advanced and intermediate developers to learn from. We kinda took a hint from the common way Web developers learn -- they see something cool on the Web, and do "View, Source" to see how the developer did it. Well, we thought we could add a lot of value by showing more of the "source" behind our templates.

The Notes Designer is a powerful application development environment. The templates are our best evidence of that, but until now, we didn't do a very good job of documenting our cool developer techniques used within them. In 4.6 templates, you'll now see that practically every field the template developer has included in the template is accompanied by developer comments so that it is easier than ever before to dissect a template, learn from it, and apply those concepts to templates (applications) you want to create. Or, of course, if you're a beginner user or a non-programmer, you can just use the template as is and with no code on your part, and have powerful workflow, mail, calendar and scheduling, discussion and other applications working instantly. There's also a new *Application Development Best Practices Guide*, which goes into further depth on each individual template's design. Users will also find several templates and samples devoted entirely to Web concepts -- very helpful! Finally, for real newbies, there's a QuickStart that will walk you through creating some Web pages, making one of them a home page and setting up a forum for a threaded discussion.



Colleen Griffiths: Project Leader for Domino Web Application Server and Design Environment

What's the Discussion template?

Teresa Deane: It's a basic example of how you'd create an online discussion. I can create a topic and you can create a response, and it's all on the Web. People can collaborate the way they always have with Notes, but since it's on the Web, the template has a lot more Web-centric features -- like an interest profile that lets each individual user customize how the information is processed for them. For example, you can say "inform me if topics are added to this thread," or "send me articles written by this person."

Can I modify it?

Teresa Deane: Sure. You can customize the template, so you can add buttons and other actions. It's got a whole new look and feel with navigators and new graphics so that it's very webified.

One of the reasons we did these templates -- aside from wanting to get people up and running faster -- is so we could show them examples of the new Designer features, like better navigators and views, so you'll see all of that in there.

Can I use it from a browser?

Teresa Deane: Definitely. Also, it's got some tools for administrators of the discussion, so you can do things like pare down a database, which is something you could always do in Notes, but not always from the Web, or from any Web client.

You can also mark documents as expired, and public or private, so if you were creating a draft that was not ready for public consumption, you could mark it as such. These are little features, but you don't find them out there.

What about templates for system administrators?

Teresa Deane: There's an NNTP template that has the same look and feel as the Discussion template, but you use it to create news articles instead of discussion topics and responses. It launches automatically when you use the Domino 4.6 server's new NNTP process, and then you use this template to create your newsgroup.

Can I create private newsgroups?

Teresa Deane: Absolutely. And the template is available from any browser, Notes client, or any newsreader client, although you don't get the same fidelity from the newsreader.



Teresa Deane: Senior template developer

What do you gain by using the Notes client with the News template, rather than a newsreader client?

Teresa Deane: First of all, you get access to the Interest Profile feature, which allows you to specify customized information that you are interested in receiving in Newsletter form. You can also put your favorite articles in a separate folder, and use the core Notes functionality, such as full text indexing.

It sounds like you've done a lot of things for people with less technical experience?

Colleen Griffiths: Very much so. Web developers aren't necessarily programmers; in fact, more often, they are people in charge of a departmental Web site who need more simplified tools that just work, and work fast.

One of the templates we've included is the Web Pages template, so you can create Web pages either by typing your own HTML that the Domino server will send to the browser as is, or you can just fill in the Notes document the way you would any Notes document, and the Domino server will render it into HTML and then send it to the browser.

What about if I want a site with frames?

Richard Schwartz: We have a Frameset template that lets people with very little or no knowledge of HTML put together a site based on frames. You can create regular content documents, or special types of documents that provide links in one frame to change the document that's being displayed in another frame. You simply fill in entries in a table, specifying a navigator or GIF file to use for a graphic hotspot, or some text to use for a text hotspot, and the name or URL of a page that the hotspot should bring up. All the actual HTML for the linking is generated for you. If you know HTML, you can write all the code for defining your frame layout yourself, or you can use our Frames Wizard to select one of 18 pre-defined layouts, and then modify the frame sizes and other attributes.

Also, I've heard site maps are really easy now. What else have you made easier for the site designer?

Richard Schwartz: We built in a site map capability that just uses a simple Notes view. You can identify any page in the database as being in this site map and assign it to an area. Enabling the site map is as easy as creating a document to define a URL for it, and then including that document in the frameset that you define with our wizard. Also, when you program frames, you can be nice to those people who don't have the latest version of Internet Explorer or Netscape Navigator by setting the "noframes" tag to point to your site map's URL, so they can browse your database, too. Another thing we've made easy is the creation of meta tags that help search engines index your site. That's in our Frameset template and in the three sample site databases that we provide.



Richard Schwartz: Template developer consultant

What other samples are you providing?

Colleen Griffiths: There are three different ones included, which show the same data in three different site styles to give you an idea of the versatility and ease of development of Domino-based Web sites. There are samples based on the Web Pages and Frameset templates, as well. There's also one for registering users, so if you deploy it on your Domino server, users can register and be given passwords and IDs.

The last one I would recommend people look at is a FAQ sample. You can see how to create documents, and stage them through the process of draft, public, archived, and so on. One other cool thing is there is an agent in the FAQ database that aggregates all the documents into a single document and creates anchor links so you can navigate it. Then, you can print all the documents without having to bring them all up.

What were some of the bigger technical challenges?

Bill Andreas: Well, Notes has a lot of functionality, and generally getting that functionality to work on a browser has been really tough. When we add new features to Notes, we don't want to dumb them down just because they go to browsers as well as Notes clients, but obviously we want to get as much value to browsers as we can. So first we have to figure out what we want the feature to do, and then figure out how to make it work on a browser.

Any other features you might want to mention?

Jen Kidder: There's one called Preview in Web Browser, which allows you to preview your design through a browser. You can see just how your design will look to a user viewing your application from the Web.

BIOGRAPHIES

Bill Andreas is the Lead Designer for Notes Designer for Domino 4.6, having joined Iris from Hyperdesk last year. He recently finished digging up a late Bronze Age palace in Cyprus, an after-hours activity that helps him maintain a perspective on what groups of people working together are trying to achieve.

Teresa Deane has been with Iris and Lotus for the past 10 years; at Iris she designed the original template for Web navigation in the Notes Web Navigator and has just completed a number of templates for the new Notes Designer and the Notes 4.6 client's PerWeb template for enabling Internet Explorer to be used as an integrated browser component in Notes.

Colleen Griffiths has been with Iris and Lotus for roughly 7 years, working in various product management, user interface design, and development roles. She is the Project Leader for Domino Web Application Server and Design Environment.

Jen Kidder is the Project Leader for Notes Application Development. She has been at Iris for 3+ years, working on various areas, from the user interface for agents to ECL support.

Darrell Loverin is responsible for navigators. He enjoys fishing and golf in the summer and ice hockey in the winter. He and his wife, Kyoko, share their house with their collie, Max, and three lizards.

Richard Schwartz is the founder of RHS Consulting Incorporated, a Lotus Business Partner based in Nashua, NH. He has been working with the 4.6 team at Iris on development of Web templates since January. Whenever he gets frustrated with groupware, he thinks back to the 11th hole at Lotusphere in Orlando and takes comfort in the fact that golf is infinitely more frustrating.

Matt Siess has been with Iris for 3 1/2 years working on various parts of the Notes user interface, including graphics and color palette support and, most recently, support for Java applets.

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