

VION DOINTORS

eliminate useless links Take advantage of CGI and HTML to customize web views and



By Keith Reichley

need to create static HTML links. immediately fall into place, without the ell-designed Notes views shine in their ability to present dynamic information documents are added to the database, on your Domino-based web site. As

more intuitive interface. This article highlights customized to provide sounder navigation and a Views can be even more effective when they're

and earlier. quality of any site using ers can use to enhance the several techniques developsions of Notes/Domino 4.6 otherwise, techniques, unless noted Notes views. Each of these works in ver-

Standard view template

\$\$ViewBody. an editable text field called of web views. A \$\$Viewcustomize the appearance developers know \$\$Viewdetermines where on a page Template form must contain Template forms let them Experienced This Domino field

whatever text, images, links, etc., needed to give a view the desired look-and-feel. For more information about \$\$View Template forms, refer to the Domino Users Guide available from Lotus Development at http://www.lotus.com/. Beyond that, \$\$ViewTemplate forms can contain Domino displays the contents of your view

\$\$ViewTemplate

example, the form named \$\$ViewTemplate for alias (or its name in the absence of an alias). For for <*viewname*>, where <*viewname*> is the view's Domino looks for a form called \$\$ViewTemplate When a Notes view is published to a browser,

HIME S

> generic \$\$ViewTemplateDefault. If that form States associates that form with the view called own standard appearance. doesn't exist, Domino displays the view with its for <viewname>, Domino looks for the more States. If there isn't a form called \$\$ViewTemplate

be desired, especially in its navigation bar that contains icon and text links for Previous, Next, This default appearance leaves something to

of the view. above and below the body navigation bar appears both Expand, and Collapse. This

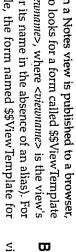
collapsed view is opened When a on it. happens if the visitor clicks the visitor can return. The page of the view to which ous. There is no previous Previous link is superfluopened by the browser, the example, when a view is is always irrelevant. For at least one of these links this is a common criticismnecessary. However—and these standard links are link is there, but nothing For most Notes views, Another example: categorized and

the face of good web design. like these tend to confuse the user. They fly in the Collapsed link is redundant. Useless links

plate that dynamically provides relevant view Here's a technique for building a better view temnavigation links. You can do better for your web site customers.

Better default view template

view navigation is knowing where the visitor is The key to providing meaningful links for



articles and presentations at national and regional technical seminars have contributed little to the college funds of his children, Spencer and Emma. as a Notes and Domino developer. Most recently, he has focused on Intranet/Internet development. His numerous Keith Reichley, a technology consultant for a large insurance company, has been in IT for eight yearsthe last four

Table 1: Hidden fields for a better view template—Add these nine hidden fields to the top of your view template form. These fields are the driving force behind dynamic view navigation links.

collapsedView	expandedView	endVlew	midView	newView	count	start	HTTP_Referer	Path_Info	Field Name:
Determines if the view has been partially or fully collapsed.	Determines if the view has been partially or fully expanded.	Determines that the visitor clicked on the Next link on the last page of the view and the same page was redisplayed.	Determines that the visitor isn't at the beginning page of a view.	Determines if the visitor is at the beginning page of a view.	Captures value of URL Count argument if it exists.	Captures the value of URL Start argument If it exists.	Captures URL of previous page.	Captures URL of current page.	Purpose:
Computed	Computed	Computed	Computed	Computed	Computed	Computed	Editable	Editable	Type:
<pre>@If(@Contains(@UpperCase(Path_Info) ; "COLLAPSE"); "Yes"; "No")</pre>	@If(@Contains(@UpperCase(Path_Info)) "EXPAND"); "Yes"; "No")	lastpage := @UpperCase(@Right(HTTP_Referer; 15)); thispage := @UpperCase(@Right(Path_Info; 15)); @If(lastpage = thispage; "Yes"; "No")	<pre>wasOne := @If(@Contains(@UpperCase(HTTP_Referer); #START=1"); "Yes"; "No"); isOverOne := @If(start > 1; "Yes"; #NO"); #NO"); @if(wasOne = "Yes" isOverOne = "Yes"; "NO")</pre>	right8 := (Right(Path_Info; 8)); GUpperCase(GRight(Path_Info; 8)); GIf(right8 = "OPENVIEW" GContains(right8; ".NSF") (right8 = "PANUVIEW" & start = 1) start = 1; "Yes"; "NO")	<pre>@II(@Contains (@UpperCase(Path_Info)</pre>	<pre>start2 := @Middle(Path_Info; "Start="; 2); start1 := @If(@Contains(start2; "E"); 1; @If(@Contains(start2; ".");3;2)); @If(@Contains(@UpperCase(Path_Info); p:SCART="); @TextToNumber(@Middle(@UpperCase(Path_Info); "START="; start1)); 0)</pre>	NONE CONTRACTOR OF THE PROPERTY OF THE PROPERT	none and the second sec	Formula:

in a view. Is the visitor on the first page in the view? On the last page? Somewhere in the middle? Is the view expanded or

by examining the values of Path_Info and HTTP_Referer. These variables are standard methods web servers use to gather user are two of the many CGI variables supported by Domino. CGI pages, browser being used, etc. information: user name, URL of current and previously visited The answers to these questions can nearly always be found

can use the power of the Hide-When text property to display the good view navigation links and to hide the links that don't apply. Armed with the values of Path_Info and HTTP_Referer, you

\$\$ViewTemplateDefault. Give the form one editable text field make a copy of it and rename the old one. If you don't to the form. Where the standard view template puts all of the in table 1 to the top of the form. Finally, add the navigation links called \$\$ViewBody. Next, add the nine hidden Text fields shown have a default view template, create a new form called If you already have a form called \$\$ViewTemplateDefault,

> others belong below it. individually and in well-placed pairs on separate lines. Some links should be positioned above the \$\$ViewBody field, while links on one always-visible line, you should place your links

shows the formulas for the individual view navigation links. If you're building your view template from scratch, table 2

Table 2: Link by link—Formulas for each navigation link.

	Action Hotspot Formula:
Previous	<pre>@DbCommand("Domino"; "VlewPreviousPage")</pre>
Next	<pre>@DbCommand("Domino"; "ViewNextPage")</pre>
Expand All	@Command([ViewEupandAll])
Collapse All	@Command([ViewCollapseAll])

Navigation links above the view

are placed above the body of the view. Figure 1 shows how these look on the form in design mode. Certain view navigation links make the most sense when they

Continued

⇒Previous Previous Collapse All \$\$ViewBody Collapse All SExpand All ⇔Previous 骨Expand All

Figure 1: Navigation links above the view-These links and link pairs enhance the visitor's experience when placed above

the form ensure only relevant links are displayed (table 3) Hide-When formulas that refer to the hidden fields at the top of Set these links above the \$\$ViewBody field on your form. The

Navigation links below the view

Now that the above the view navigation links are in place, create the links that belong below the body of the view. Figure 2 shows how these appear on the form in design mode.

that only relevant links are displayed to the visitor (table 4). As with the links above the view, the Hide-When formulas ensure Enter these link sets below the \$\$ViewBody field on your form.

Exceptions

Even as powerful as Domino is in delivering browser-ready applications, it can't give us everything. Until Lotus comes out

Table 3: Formulas for links above the view—Hide-When formulas make sure only the relevant links are displayed.

Collapse All che	Expand All che	Previous Collapse All che	Previous I Expand All che	Previous che	Link Set: Hid
check := newView = "Yes" & expandedView = "Yes"; check	check := newView = "Yes" & collapsedView = "Yes"; !check	check := expandedView = "Yes" & check	check := expandedView = "Yes" & newView = "No"; check	check := expandedView = "No" & collapsedView = "No" & newView = "No"; (check	Hide Paragraph When Formula is True:

LotusScript—you need to be aware of two exceptions: with the @Command([ReadMyMind])—or the ESP function in

- 1. Next link: The only time you can be sure if a page is the last all possible the displayed view page may not be the last. This technique conservatively displays the Next link if it's at the same as the current page (Path_Info). This call is made in the formula for the endView field (table 1). in the view is if the previous page's URL (HTTP_Referer) is S
- Ņ **Expanded/Collapsed:** The only sure way for a browser to know if a view is expanded or collapsed is if the URL contains the words expand or collapse. To be safe, this

Now...Stampede *TurboGold*' more than doubles the speed of Loins Notes" database replication.

unique speed-boosting innovations: speeds the replication of Lotus Notes databases with these Stampede Technologies' patented acceleration technology

- Replication accelerator—compression of Notes database updates into a continuous stream of data.
- data changed since last access. Intelligent caching—automatic downloading of only
- Passive replication—automatic caching of Lotus Notes databases on TurboGold Verifiers closest to the end-user.
- Data file verification—time and date stamp matching eliminates unnecessary transfers.

Microsoft Office, etc. applications such as Lotus Approach, Microsoft Access, also accelerates Lotus cc:Mail (DB6 & DB8) and file based And, the benefits don't stop there. Stampede TurboGold

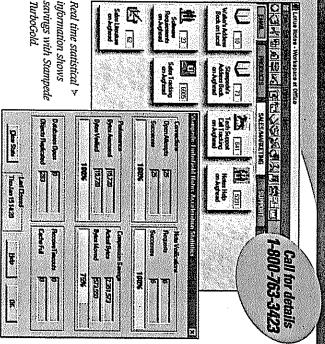
Don't take our word for it—see for yourself.

Evaluation software is available. Call today for details





MIIIS Business Partner



STALL 225. Stampede Technologies, Inc., 65 Rhoads Center Drive, Dayton, OH 45458 Tel: 937-291-5035, Toll free: 800-765-3423, Telfax: 937-291-5040, Web: www.stampede.com

Common Translati UE Perme M-881514 Summon Translation a represent redening of Dumnous Entropyes, As other

Table 4: Formulas for links below the view—Again, the Hide-When formulas makes sure only relevant links display

Link Set:	Hide Paragraph When Formula Is True:
Next	check := (newView = "Yes" midView = "Yes") & expandedView = "No" &
	collapsedView = "No" & endView = "No"; icheck
Next I Expand All	check : (newView = "Yes" midView = "Yes") & collapsedView = "Yes" & endView = "No"; icheck
Next I Collapse All	check := (newView = "Yes" midView = "Yes") & expandedView = "Yes" & endView = "No"; check

Collapse All Next 라Expand All 드 Next \$\$ViewBody

Figure 2: Navigation links below the view—These links and link pairs are most effective when placed below the view.

is well. If the view is categorized, once the visitor clicks oh a technique assumes that, in the absence of these words in the URL, the view is neither expanded nor collapsed. If ate Expand All or Collapse All link kicks in. twistie to either expand or collapse a category, the approprithe view being displayed by the browser isn't categorized, all

> power is yours Hide-When formula for any of the lines containing the Expand All link so the link isn't hidden when the view is first displayed. The for a categorized and collapsed view, you may want to change the For example, if you're creating a view template form specifically Modify this technique to meet the requirements of your web site.

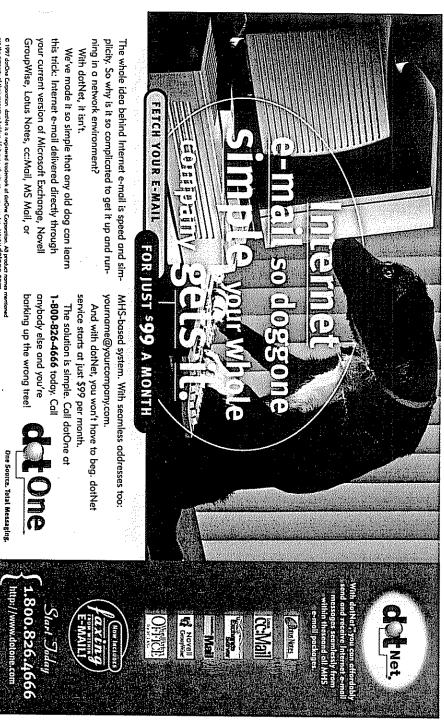
More view enhancements

combining the power of Notes views with embedded HTML sites on the Web. Our team often exceeds these expectations by achieve some rather non-Notes-like results. Notes with easily maintainable content, but that look like other A recurring request from our clients has been to build sites in

Create a table-like view

bordered and link-less table, put embedded HTML to work. an HTML table. To make your view look like a standard HTML When Domino renders a view to the browser, it actually creates

Continued



1997 dotOne Corporation, dotNet is a regiment Inademark at dotOne Corporation, All product names is the property of their respective holders. Visit our web site or you guessed it—WWW.dD10ne.COTT

To achieve the borders, include this HTML in the title of the first column in front of any desired title text:

[]

The cellpadding is optional. Figure 3 shows the result of this HTML applied to a simple two-column view.

The state of China II have a 100 /100 have a 100 and the state of the
Alcon, OH Starting at Akron, OH, begin HWY 77 heading north for 12.8 miles Turn right on US 271 heading northeast for 19.4 miles Turn left on US 422 (HWY 87) heading north for 1.4 miles to Claveland
City Directions to Cleveland
City Directions to Cleveland Akron, OH Starting at Akron, OH, begin HWY 77 heading north for 12.8 miles Turn right on US 271 heading northeast for 19.4 miles

Figure 3: Table-like view—This view contains embedded HTML that produces cell borders and suppresses column links.

You'll also notice in figure 3 that the view has no links. Sometimes the view says it all and a link isn't needed. Unless you tell it not to, Domino always makes the left-most column into a link. If the left-most column is categorized, you get the link in the form of a twistie. If the column isn't categorized, the value of the column becomes the link.

How do you tell Domino not to create the link? In 4.6, it's easy. Double-click on the column to bring up the Column Properties InfoBox. Click on the beanie tab and de-select the option labeled Show Values in this column as links.

In 4.5 and older, just add this HTML to the beginning of the column's formula to achieve the same results:

+ "[<4/2>]"+

Stacked and colorful view

One of our customers wanted a view that didn't look like a view. She wanted to display, in an attractive way, a variety of

information without forcing the visitor to scroll horizontally. Figure 4 shows a view that stacks text and field values for a more readable user experience.

```
Akren State. OH
Directions to Cleveland:
Stating at Abron, OH, bogh HWY 77 heading north for 12.8 miles
Turn right on US 271 heading northeest for 19.4 miles
Turn left on US 472 (HWY 87) heading north for 1.4 miles to Cleveland
Distance is: 41.4 miles

State: IL
Directions to Cleveland:
Stating at Chicago, IL, begin on 190 (194) heading east for 235.9 miles
Turn right on 171 heading south for 5.3 miles to Cleveland
Distance is: 354.5 miles
```

Figure 4: More interesting page—This page looks more like a standard HTML page than it does a Notes view. Creative use of HTML is the key.

To build a page like this, start with a simple two-column view. Make sure that the view's properties allow for multiple lines by selecting at least 2 for the Line per row option on the Styles tab.

Next, add the following HTML tags, field references, and static text to the column formulas.

```
For column 1:
"[<b>]" + City + "[</b>]
```

For column 2:

```
"[<font size=3 color=\"#669999\">]State:<i>] " + State +
"[</T><font size=3 color=\"#999999\">cbr>
<br/>
<br/>
<br/>
<br/>
<br/>
<br/>
<br/>
<br/>
<br/>
Distance is: <b>]" + Distance + "[</b> miles<br/>
<br/>
br>
<br/>
<br/>
Distance is: <b>]" + Distance + "[</b> miles<br/>
<br/>
<br/>
<br/>
<br/>
<br/>
Distance is: <b>]" + Distance + "[</b> miles<br/>
<br/>
<br/>
<br/>
<br/>
<br/>
<br/>
<br/>
<br/>
Distance is: <br/>
<br/>
<br/>
Distance is: <br/>
<br/>
<br/>
<br/>
<br/>
Distance is: <br/>
<br/>
Distance
```

Product News

Find and Replace for Developers

TeamStudio Configurator is a global search and replace tool for Lotus Notes applications. Developers can find all occurrences of a piece of text or field name in a database design and optionally replace them with another string. Configurator integrates completely with Notes and can be accessed through a Smartlcon from the design pane. US\$300 per developer.

30 Doaks Lane Marblehead, MA 01945 (781)639-8779, fax (781)6

(781)639-8779, fax (781)639-1422 http://www.teamstudio.com/

Head-Start Scripting

Mental Notes ScriptCoach is a Notes database that contains a library of tested

and ready-to-use LotusScript functions and examples for developers to copy and paste into their applications. For beginners, every script has a walk-through section that gives a line-by-line explanation of how the code works. ScriptCoach also offers a version control feature for managing reusable code. US\$695 for a 1-5 user license and US\$99 for a 1-year subscription for upgrades, US\$1,295 for a 6-10 user license and US\$149 for a 1-year subscription for upgrades, US\$1,295 for a site license and US\$249 for a 1-year subscription for upgrades.

Mental Notes

110 E 31st Street, 4th Floor New York, NY 10016 (212)545-1241, fax (212)545-1586 http://www.mentalnotesinc.com/

Project Management

Infolmage Team Project 5.1 is an optionally web-enabled project management system that runs in the Notes environment. This collaborative environment allows management of subprojects by individual team members across multiple sites and resource management across multiple projects. The latest version offers a new enduser navigator, an author-based security model, project templates, and tight integration with Microsoft Project 98. US\$7,000 per server (with volume discounts available), US\$1,400 for web-enabling module.

Infolmage, Inc.

100 West Claredon, Suite 2310 Phoenix, AZ 85013 (602)234-6900, fax (602)234-6950 http://www.infolmage.com/

Judicious use of break tags and font tags with color and size options overrides the color-impaired and column-bound defaults of the standard Notes view.

Real customizing power: HTML views

Notes 4.6 gives web site developers a wealth of powerful new design features. One of the most impressive lets Domino render a view as pure HTML to the browser.

Figure 5 shows a two-column categorized view. Look, ma! No twisties! To save screen real estate, I've displayed the cities for each state category—not one above the other but in long rows. If you know HTML, HTML views are for you. For more information on creating twistie-less views, see Kevin Pauli's article, "A Cure for the Common View," in the August 1998 issue of LOTUS NOTES & DOMINO ADVISOR.

- CO Anna Asen Denet Quenq Euchio Sweming.

 OC Yasungin.

 GA Aben Hens Mana Angula Columbia Hason Sarannah
- H. Chicago, Eansew-Heigdic, Robas, Obland Pais, Squinnfeld, OH Alon Canton, Electronali, Clevelland, Sphirobus, Davion, Eleta, Lena, Mangfeld, Portsmouth, Tolego, Youngstown, Zanearolle.
- PA Albafferm Benasiem Bildarelle Rubet, Casisin Chamberthura Crarbour Eide (tanbin, Otsanabum Giova Cin, Handburg, Handburg, Hermalate Kolünaraburg, budana, dünsibirm, Lincasser, Lanssbrana Arthanceburg, Andrewiji, Pathalung, Pernoyah, Mu, Asanina, Airabilca, Sinte Ceisege, Bipoudaburg, Yasisen, Yesischester, Yalihanuspori, Yosh,

Figure 5: HTML view—What's more impressive? A categorized view without twisties, or column values displayed horizontally rather than vertically?

The first step is to open the View Properties InfoBox, click on the beanie tab, and select Treat View contents as HTML.

Next, add these HTML tags and field references to the column titles and formulas.

Column 1 title:

Column 1 formula:

"width=\"15%\">" + State + "width=\"15%\">" + State + "width=\"85%\">"

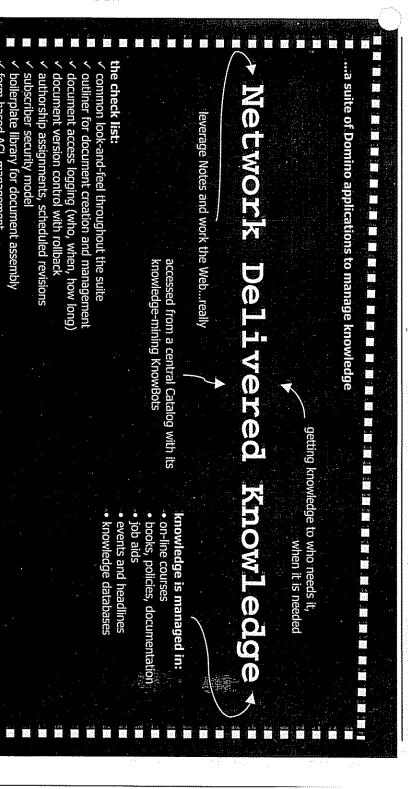
Column 2 formula:

The extra

pair in the Column 1 formula adds a extra line break between the state categories.

Summary

Creatively combining the power of native Notes design with embedded HTML and CGI variables lets you make the most of Notes views. Do your content managers a favor by using views as much as possible. Exceed their expectations by shaping the views to the look and feel they want.



economical per-server and corporate licensing open source code version available

.

www.coursewaresource.com

form-based ACL management

The \$\$ Forms Used in Web Applications

For information on using some of these forms, see Chapter 10.

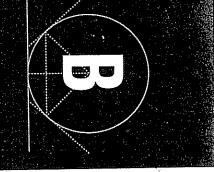
Form Name SSViewTemplateDefault	Requires the Field \$\$ViewBody	Remarks Acts as the default form (template) for views on the Web.
ssviewTemplate for <i>viewnanne</i>	\$\$Viewbody	Where viewname is the alias (preferred) or view name, serves as the form (template) used to display that view.
SSNavigatorTemplateDefault	\$\$NavigatorBody	Serves as the default form (template) used to display navigators
ssNavigatorTemplate for <i>navigatorname</i>	\$\$NavigatorBody	Where navigatomame is the navigator name, serves as the default form (template) used to display that navigator.
SSSearchTemplateDefault	\$\$ViewBody	Serves as the default form (template) for search results on the Web.
S\$SearchTemplateDefault for <i>viewnanne</i>	\$\$ViewBody	Where <i>viewname</i> is the view name, serves as the default form (template) for search results for a view.
\$\$Search(alias)		If you create a form with the alias \$\$Search, Domino will use it whenever a Web user initiates a search on a Domino server. If you create no such form,
		Domino uses the file search.htm in the icons directory.

appendix B

\$\$ Web Forms and Fields

The following are special Domino-reserved fields used in Web applications.

\$\$ Return Pachwant Deleted



Using CGI variables to capture user info automatically

CGI programs are a standard for interfacing external applications with HTTP servers. When Web users submit forms, the HTTP server gathers the information and passes it on to a CGI program.

Although Domino obviates the need for many types of CGI programs that are needed with a typical HTTP server, Notes application developers still have the opportunity to capture cgi variables in applications. Include any of the fields below in your form to capture Common Gateway Interface (CGI) environment variables. These fields let you capture information such as the IP (Internet Protocol) address of the user submitting the form. Be sure to mark the fields "Hide when Editing," so that users cannot enter information in them.

Field Name	Returns
Remote_Host	The hostname making the request.
Remote_Addr	The IP address of the remote host making the request.
Remote_User	Authentication method that returns the usemame they have authenticated as.
HTTP_User_Agent	The browser the client is using to send the request.
HTTP_Referer	The URL of the page the user used to get here.
Server_Software	The name and version of the information server software running the CGI program.
Server_Name	The server's hostname, DNS alias, or IP address as it would appear in self-referencing URLs.
Server_URL	
Gateway_Interface	The version of the CGI spec to which the server complies.
Server_Protocot	The name and revision of the information protocol this request came in with.

Server_Port

The port to which the request was sent.

۲:

NO. 742

Request_Method

Path_Info

Path_Translated

Script_Name

Query_String

Auth_Type

Remote_Ident

Content_Type

Content_Length

HTTP_Accept

HTTPS

The method with which the request was made. For HTTP, this is "GET," "HEAD," "POST," etc.

The extra path information, as given by the client. In other words, scripts can be accessed by their virtual pathname, followed by extra information at the end of this path. The extra information is sent as PATH_INFO.

The server provides a translated version of PATH_INFO, which takes the path and does any virtual-to-physical mapping to it.

URLs. A virtual path to the script being executed, used for self-referencing

The information which follows the ? in the URL which referenced this script.

If the server supports user authentication, and the script is protected, this is the protocol-specific authentication method used to validate the user.

This variable will be set to the remote user name retrieved from the server. Usage of this variable should be limited to logging only.

data. For queries which have attached information, such as HTTP POST and PUT, this is the content type of the

The length of the content as given by the client.

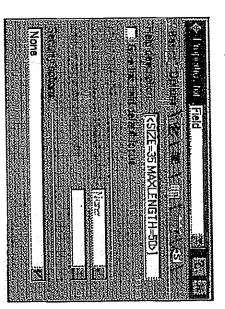
The MIME types which the client will accept, as given by HTTP headers

For more information, see the CGI Environment Variables Specification at http://hoohoo.ncsa.uiuc.edu/cgi/env.html.

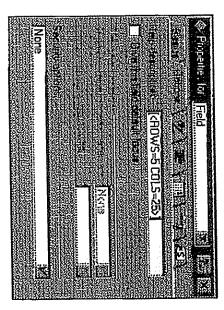
Adding HTML attributes to editable fields

Domino lets you control the size and length of fields in the form. To override the field defaults, enter HTML code in the Help description box of the Field Properties dialog box. For information on writing HTML code, visit the HTML Spec Web site at http://www.w3.org/hypertext/WWW/MarkUp/html-spec/html-spec_toc.html.

Specifying the size and maximum length of text fields
You can specify the size and length of text fields. For example, the figure below specifies that the Name field display 35 characters, and accept a maximum of 50 characters.



Specifying the number of rows and columns of a text box in rich text fields
You can specify the size of the text box in rich text fields. For example, the figure below specifies that the Comments field be 5 rows long and 25 columns wide.



Specifying the maximum number of visible choices in keywords fields
You can specify the maximum number of rows that are visible in keywords fields. For example, the figure below specifies that the Request field has 5 rows. If more than 5 keywords exist for that field, a scroll bar will be used to scroll to other keywords.

609 897 6605

Specifying the wrap setting for a rich text field
You can specify the wrap setting for a rich text field. For example, HTML tag WRAP=VIRTUAL in the figure below specifies that text entered in the Comments field wrap, and that no line feeds or carriage returns be inserted at the end of lines.

