

Visual DataFlex AJAX Library 2.2

June 13, 2009

The 2.2 release of the Visual DataFlex AJAX Library is designed to work with Visual DataFlex 2010/16.0. This document summarizes the changes that have been made since the 2.1 version of the AJAX Library.

Updated themes

Both of the themes provided with the AJAX Library have been updated with new icons, buttons and other small improvements to improve visual appeal. Also, new CSS techniques like the usage of sprites results in faster loading and less 'flickering'.

Expressions

In addition to data binding with regular database fields, the AJAX Library 2.2 now supports binding a field to an expression. The expression can be programmed as a published function in the web object on the server which returns the value of the expression. The method is called when the buffers contain the current record and it only has to return the value to display in the field. Like the windows environment, the server Data Dictionary of the field determines when the field is updated. Defining an expression field in HTML can be done in two ways. The first is by starting the data binding string with "e:" and then adding the method name, the second is by setting the `vdFDataBindingType` to "E" and setting the data binding string to the method name only. Note that the data binding string can also be set as the name of and control right away.

New VdfCall API

A new API for making `VdfCall`'s to the Web Application Server has been added to the Visual DataFlex AJAX Library. When working with Data Entry views (and so using the `vdF.core.Form`) the AJAX calls that are sent to the server will usually be handled by the same Web Object and Web Service. If this is the case the new `vdFCall` method of the `vdF.core.Form` class can be used to send AJAX calls to the server within a single line of code. Like the `dbCall` method the `vdFCall` method needs to be passed a method name, an array of parameters and a reference to a handler method to make an AJAX Call to the server.

Data bound server call

One of the difficulties when making AJAX calls to the server is that the AJAX calls are stateless. This means that each call must contain all the information the server needs to perform the operation. For Data Entry views this means that the server needs to know which data is currently displayed on the screen of the client before it can perform an action like a find, save or delete. The implementation of these actions on the `vdF.core.ClientDataDictionary` class contains the functionality to synchronize the client and server buffers by adding a snapshot to the request and the response.

The easiest way to make AJAX calls to the server is by using the `vdF.ajax.VdfCall` (or the new `vdFCall` method of the `Form`). Many developers encountered the problem that this class does not do any data synchronization so the application developer is responsible for re-finding the correct records and transferring changes to the client. When calling a custom data manipulation method on the server

inside the Web Object, the developer needs to send all the rowid's and possible field values manually to the server.

To make this easier to use, the Visual DataFlex AJAX Library 2.2 now contains a data bound server call. This call is implemented as a method on the `vdF.core.Form` class instead of being a class itself. The `dbCall` method of the form needs to be passed a method name, an array of parameters and a reference to a handler method to make an AJAX Call to the server. The method needs to be defined and published within the Web Object to which the Form belongs. The AJAX Library will then take care of automatically synchronizing the buffers before and after the method is executed, thereby materially reducing the amount of code that the developer must write to produce the same result.

Runtime labels

The new `vdF.core.Label` control provides an easy way to load Data Dictionary labels onto the page. If the control is defined on an element together with a data binding, the text of the element will be set to the label for that field. The label control can be used on all HTML elements that can have a text content (`td`, `label`, `span`, `div`, `p`, ...).

Clear All

The missing clear all function has been added to the Data Dictionary Object system. It will clear the complete form just as the Visual DataFlex for Windows performs a "clear all".

Improved DDO structure support

The AJAX Library now has better support for complex Data Dictionary Object structures and constraints. There were issues in the prior `LoadSnapshot` method of the `cAjaxWebBusiness` process that is responsible for reloading records into the buffer for each action (find, save, clear, delete). A full rewrite of this method solves the issues and provides a more stable base upon which to build data entry applications.

Error details & CollapsePanel

Errors now have a "details" section that will show error details. In particular, the classes that make AJAX calls will use this feature.