Databinding on the Web

Michael Hughes
MJH Software Services Ltd
Overview

WPF and Dyalog APL currently provide an excellent GUI for native windows.

XAML is used to define the GUI.
Data is manipulated by APL
Databinding (‡2015) is used to connect the two together.

However it is currently limited to native Windows, excluding mobile apps, tablets, web browsers and Linux.

The aim is to address this using a product from Userware (cshtml5.com) which compiles standard C# and XAML files into html5, Javascript and CSS files. Freeing a Dyalog Xaml WPF application to run on other platforms.
Dyalog WPF/Xaml

Data Binding

XAML

APL code
Dyalog WPF over the Web

XAML now compiled as html5 and css

Data Binding

Data Binding

Internet

Internet

APL code
Four steps to the Web ....1

1. Create Xaml as for a normal Windows WPF system, using the same {apl:} markup;

   DataContext="{apl:DataContext namespace}" sets binding source
   ItemsSource="{Binding var}" binds var from namespace
   ItemsSource="{apl:Binding ns.var}" binds var from an explicit ns
   Click="{apl:Event foo1_Click}" runs APL function on server
   Click="foo2_Click" runs C# event as local
   Command="{apl:Command command}" runs APL function on server
   Command="command" runs C# command as local
Four steps to the Web ....2-4

2. Create APL callback functions, specify types for binding if necessary – defaults may be good enough (identical to the left argument to Data binding lbeam)

3. ]cshtml5 inputdir= outputdir=

4. Copy output directory to Web Site
   Run Web Socket server
Platforms

IIS8+, Apache 2.2+ or any web server supporting reverse proxy. Pre reverse proxy versions, need an open tcpip socket through firewall.

Simple Conga 3 Web Socket server

Will work on any combination of;

• Windows/Linux* browser supporting WebSockets
• Mobile App* in the Apple/Windows/Android stores
• Windows client supporting WPF/.Net
  * needs Windows to compile, but not for runtime
Proof of concept 1

A very boring page on APLServer.co.uk

It allows a user to select one of 5 data displays.
TableA
TableB
TableC
TableD
And displays a message when Tab is entered.

Manages multiple guest users (press Ok to discover your “index”)
Proof of concept 2

A more interesting Sample Application

Shows off many controls, there is an example mobile app version
Look in app stores for “Userware cshtml5.com”

CSHTML5 home page
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(cshtml5.com)
Questions

Michael Hughes
MJH Software Services Ltd.

Email: Michael@Hughes.uk.com

Mobile/Cell: +44 7740171140