

SYNERGY 2015

SEATTLE, WA, USA



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Integrating Custom Web Controls with DataFlex

Presented by: Harm Wibier

Why a custom control?

- In need of functionality unavailable in the standard toolkit
- Examples:
 - Specialized List
 - Charts
 - HTML Editor
 - Spinform
 - Right click menu
 - WebShop View
 - Dynamic form
 - ...

What is a custom control?

- JavaScript Code
 - Implementation of the wanted feature
 - Implements framework API's
 - Usually renders something on the screen
 - A pseudo class
- DataFlex Code
 - Server-side presentation
 - Provides API's for the application to work with
 - A class



The JavaScript class

- Every DataFlex class has a corresponding JavaScript class that
 - Implements the Web Properties
 - Implements Client Actions called by the server-side class
 - Renders itself by generating HTML
 - Handles user interface events (DOM Events)
 - Sends Server Actions to the server
 - Triggers events

WebApp Framework Principles

- On initialization object definitions are sent to the client
 - Object name
 - JavaScript class name
 - Web Property values
- Controls can initiate server calls
 - Call a specific method of a specific object on the server
 - Pass parameters
 - Framework assembles & sends AJAX Call
- Property changes & client actions come back
 - Property changes will execute setter methods on the controls
 - Client actions are JavaScript functions that will be called on objects

Wrapping existing controls

- Found a JavaScript Library providing the needed functionality
- Advantages
 - Part of the work has already been done
- Considerations
 - There is no standardized control API in JavaScript
 - Usually depend on other libraries
 - jQuery
 - Ext JS
 - Prototype



Different JavaScript Worlds

- jQuery
 - Separates HTML Structure from code
 - Custom, flexible, modern coding style without classes
 - Low learning curve
 - Controls vary
- Ext JS
 - Controls generate HTML
 - Heavy object oriented paradigm with pseudo classes
 - Steep learning curve
 - Controls are pretty consistent but aren't always meant to work alone
- http://en.wikipedia.org/wiki/Comparison_of_JavaScript_frameworks



Knowledge required

- JavaScript
- DOM Manipulation / HTML
- CSS
- AJAX
- WebApp Framework structure

Demo

- https://github.com/szimek/signature_pad

Thank you for your time!

Questions?