

Interoperability

Mark Heath
<http://markheath.net>
@mark_heath



pluralsight 
hardcore dev and IT training

Module Overview

- **Access the full capabilities of Windows**

- Call Windows APIs
- Intercept Windows messages

- **Host web content**

- The WebBrowser control
- Displaying static HTML
- Loading webpages
- Manipulate the DOM

- **Host WPF controls**

- ElementHost
- Incremental migration



Invoking Windows APIs

- **Call any Windows API**
 - Use Platform Invoke ("P/Invoke")
 - pinvoke.net
- **Examine any Windows message**
 - Override WndProc
 - Be nosey!

```
protected override void WndProc(ref Message m)
{
    base.WndProc(ref m);
    Trace.WriteLine(m.Msg + ": " + m);
}
```

- WM_DEVICECHANGE

Example: Touch Support

- **Register for touch messages**
 - Call RegisterTouchWindow
 - Windows 7 and above
- **Override WndProc**
 - Intercept WM_TOUCH messages
 - Interpret with GetTouchInputInfo

WebBrowser Control

- **Internet Explorer embedded as a control**
 - Uses the installed version of IE
 - Defaults to IE7 compatibility

Navigate method

Load a web page by URL

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ScriptErrorsSuppressed property	Suppress JavaScript errors

Incremental Migration

- **Convert parts of your application to use newer technologies**
 - HTML 5 with WebBrowser
 - Can also embed Chrome (e.g. <https://awesomium.codeplex.com>)
 - WPF with ElementHost
- **Benefits of Model View Presenter**
 - Model and Presenter can be reused
 - Only the View needs to be re-implemented

Module Summary

- You can call any Windows APIs
 - Platform Invoke
- You can view all your Windows messages
 - Override WndProc



Module Summary

- You can embed web pages
 - WebBrowser control
 - Interact programmatically with the DOM
 - Render HTML fragments



Module Summary

- You can host WPF controls
 - ElementHost
- You can migrate incrementally
 - MVP makes it easy

