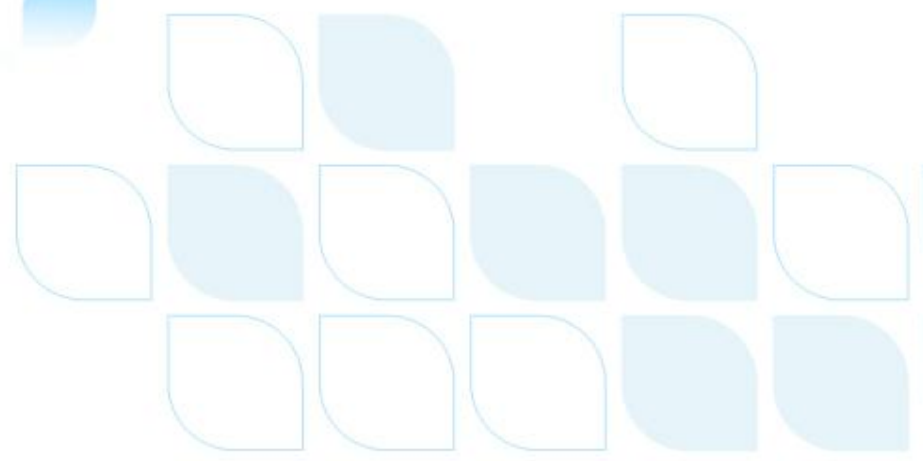


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Microsoft

What's new in Windows Presentation Foundation 3.5 and Beyond

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Joseph Cooney
Developer
Paradigm Logic





Wh

Jose
Deve



Jose Develing
Jose is a designer, usability and user interface specialist at global IT consultancy Avanade. He specialises in design for web-based media and enterprise applications. His role encompasses user interface design, usability, accessibility, information architecture and branding. He also manages the technical development of creative designs, works with stakeholders to determine UI and business requirements, and undertakes usability processes with end users to understand their needs. Adam has been working at Avanade since 2003. Before this time he worked as a designer at a creative IT internet start-up as a freelancer and as a print designer. Jose's approach is not intended as a designer, but as a programmer - more interested in the outcome than the technology. While not a 'standards guru', he endeavours to create the most compliant and accessible frontend code achievable. Adam has been using Expression Web since late 2006.
<http://www.avanade.com/>

Worst Bio Photo Ever

Para



EPIC FAIL

Joseph Cooney
Joseph is a Microsoft MVP and has been working with Microsoft Technologies for the past 8 years with a strong focus on .NET technology. Joseph is an active member of the .NET community regularly contributing to online discussion forums and maintaining his own software development blog at learnwpf.com and jcooney.net. Joseph has also developed a mind mapping tool called ThoughtStream using WPF. In addition, Joseph is a regular presenter at technical workshops and user groups. Joseph heads up Microsoft partner Paradigm Logic in QLD, and lives in Brisbane with his family. <http://www.jcooney.net/>



Jorke Odolphi
Jorke is a Web Platform Architect Evangelist for Microsoft Australia, and works in the technical community of Web Hosting Providers. Jorke has previously worked with large service providers in a variety of roles specialising in the deployment and management of Microsoft technologies in multi-tenancy situations - particularly with IIS, .NET, SharePoint and other web-based applications. He loves talking about datacentre optimisation and the ideas of green technology in the datacentre. Jorke also feels quite strange talking about





Who are you?

- Developers

or

- Designers who understand code



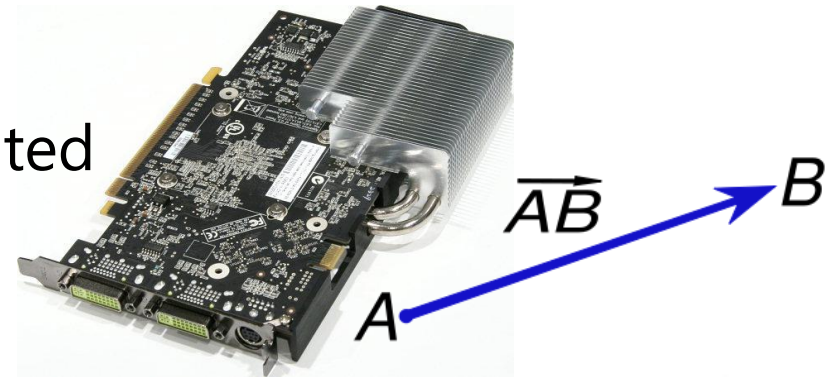


What is WPF again?



Framework for developing User Interfaces for Windows.
Integrated support for controls, documents, 2D & 3D drawings, video and Images.

Hardware Accelerated
and Vector-Based



XPSP2, Server2003,
Vista and beyond





WPF Timeline

■ 2003

- Unveiled at PDC '03 as Avalon

■ 2006

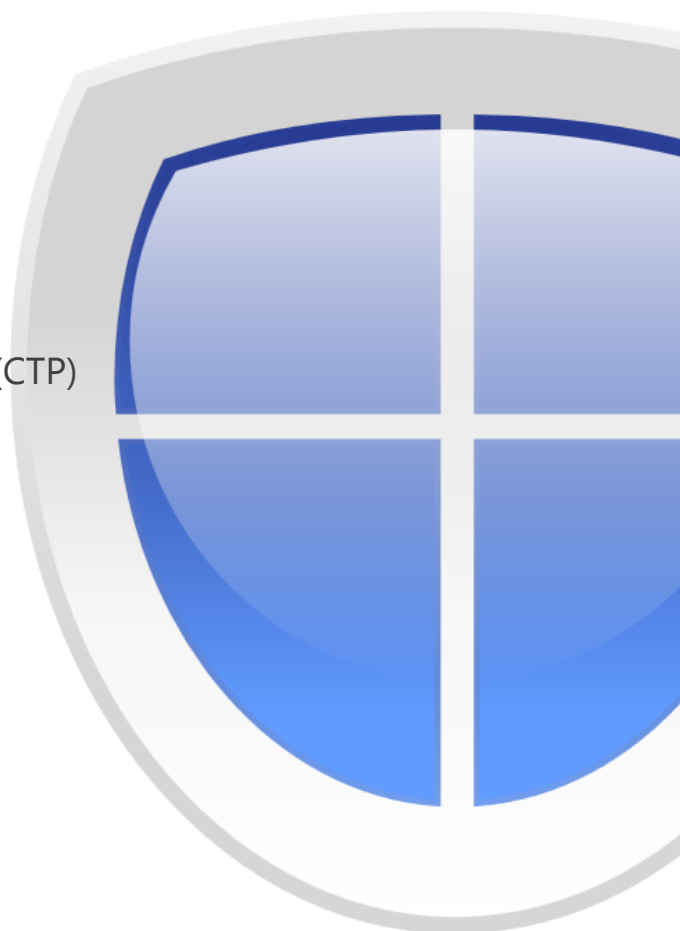
- .NET Framework 3.0 (nov '06)
- VS 2005 Extensions for .NET 3.0 (CTP)

■ 2007

- .NET Framework 3.5
- Expression Blend 1.0
- Visual Studio 2008

■ 2008

- .NET Framework 3.5 SP1
- Visual Studio 2008





What we'll cover today

■ 2003

- Unveiled at PDC '03 as Avalon

■ 2006


- .NET Framework 3.0 (nov '06)
- VS 2005 Extensions for .NET 3.0 (CTP)

■ 2007

- .NET Framework 3.5
- Expression Blend 1.0
- Visual Studio 2008

■ 2008

- .NET Framework 3.5 SP1
- Visual Studio 2008 SP1

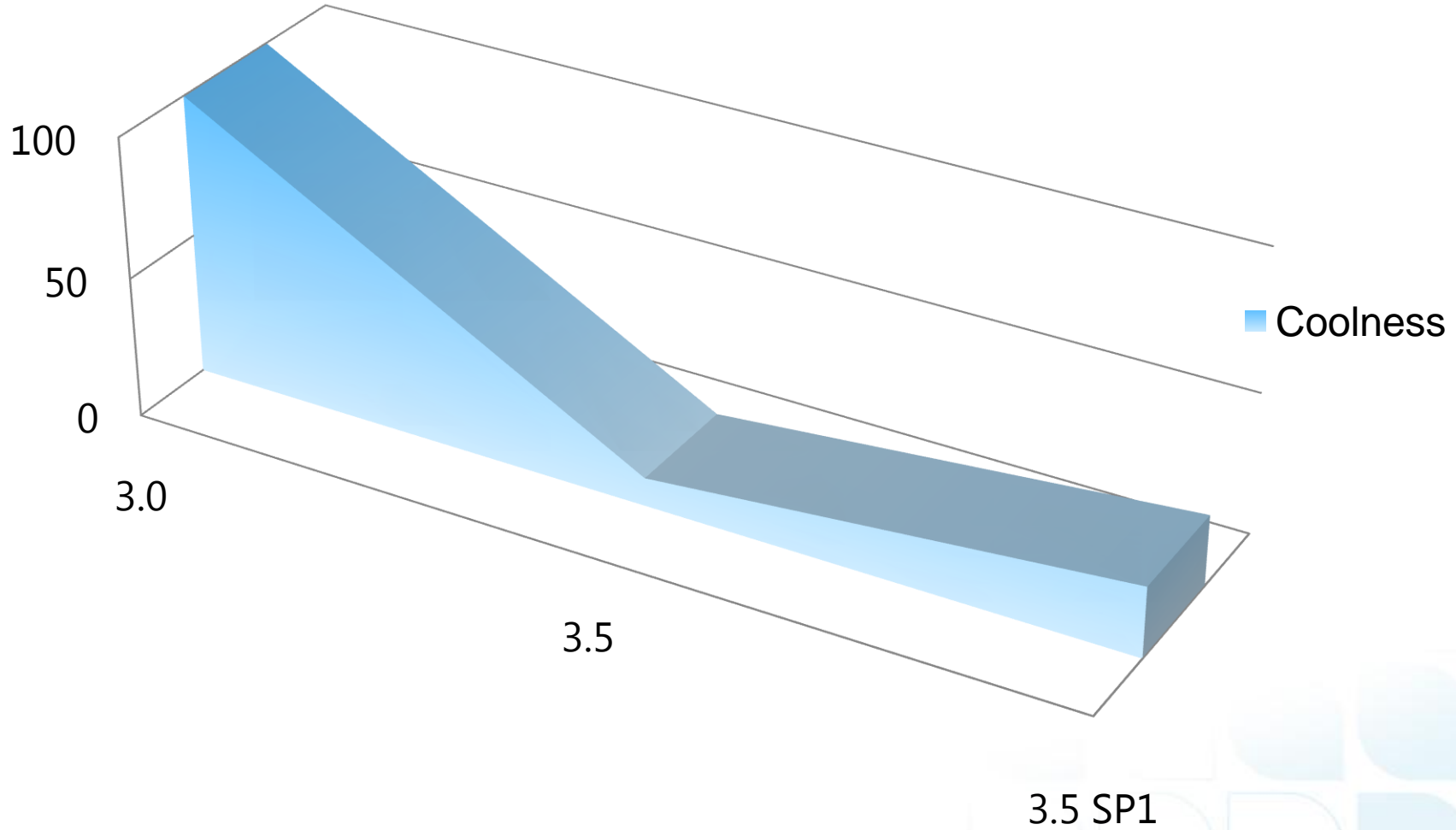


Plus stuff they
haven't even
dreamed up a
release date for yet

Coolness



Amount of Cool WPF Stuff



Add-Ins - .NET 3.5

- New System.Addin API
- System.Addin.dll & System.Addin.Contract.dll
- UI integration of add-ins
- Security Isolation of add-ins



If we were writing our own Plugin system...

- Define an addin interface or base class.
- Look for assemblies in a particular directory (or from config file).
- Look for addin types in those assemblies.
- Load and Run them.



demo



Add-in demo

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<http://www.rhizohm.net/irhetoric/blog/21/default.aspx>



- 3.5 – **XBAP** in Firefox on Windows
- 3.5 SP1 – **ClickOnce** in Firefox on Windows





Data Binding – 3.5

- LINQ!
- Business object validation
 - IDataErrorInfo
 - Leverages existing validation model
 - {Binding ValidatesOnDataErrors=true}
- Better debugging
 - High-granularity, per-binding tracing
 - Attached property:
PresentationTraceSources.TraceLevel
 - Low|Medium|High

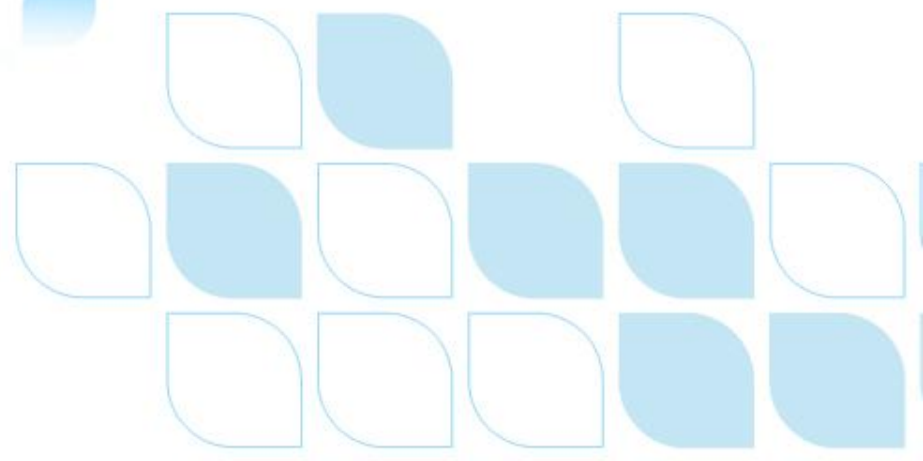


demo



LINQ + WPF demo

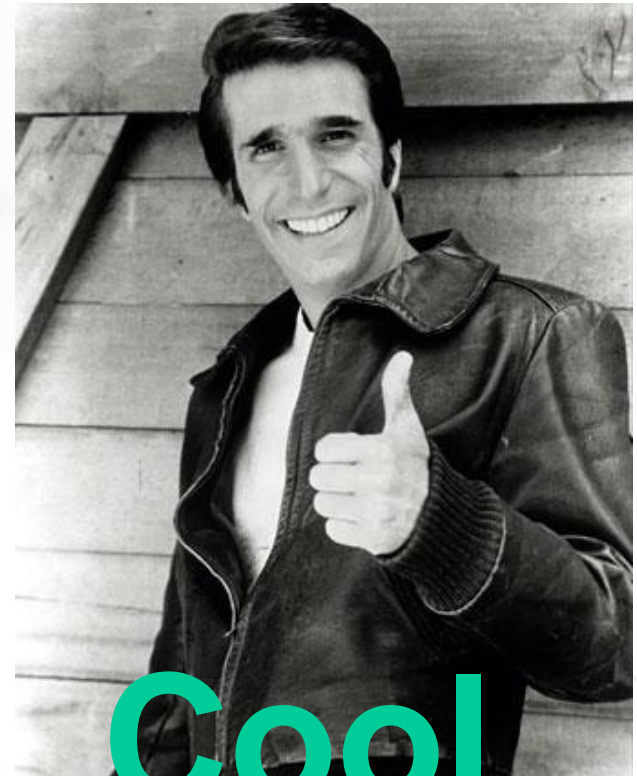
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Themes for WPF 3.5 SP1



Setup



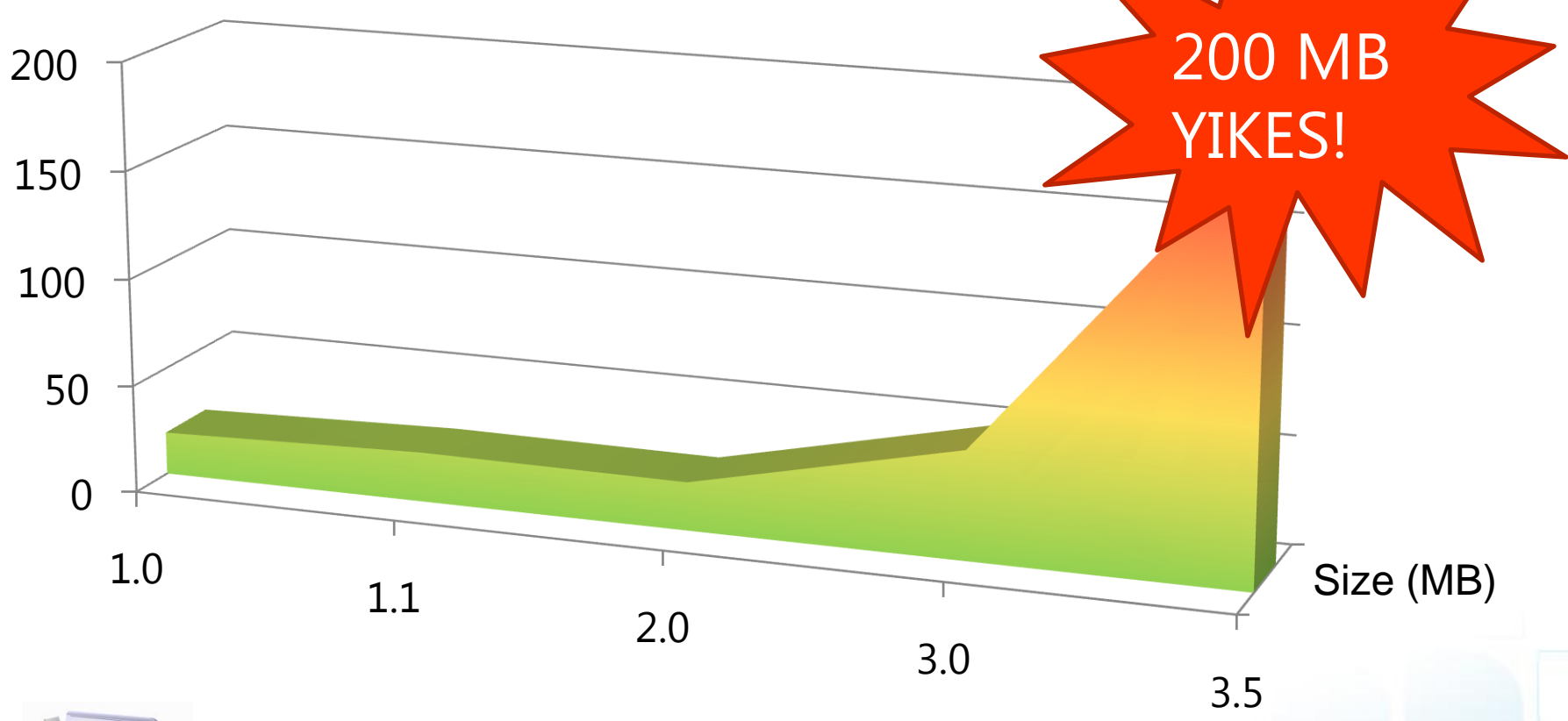
Cool

Performance





.NET Install Size





.Net Framework Versions

.NET Framework 3.5 "Servicing Release"



**WPF
Enhancements**

.NET Framework 3.5



WPF 3.5

LINQ

**Add-in
Framework**

**WF & WCF
Enhancements**

.NET Framework 3.0 SP1



WPF

WCF

WF

CardSpace

2.0 Subset In

2.0 Subset Out

.NET Framework Client

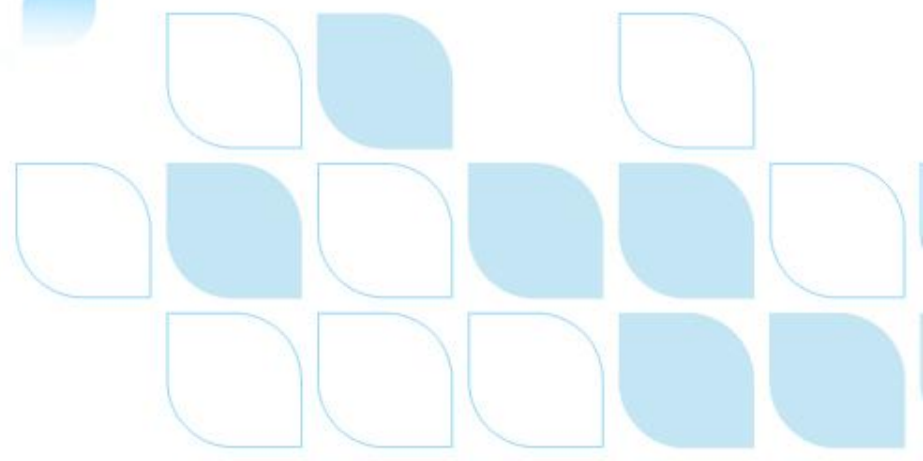


demo

.NET Framework Client Profile



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Recycling Virtualisation

What the heck does ***THAT*** mean?

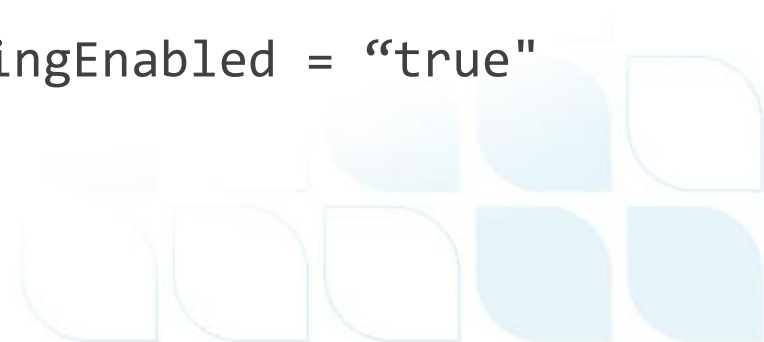
■ WPF 3.0 and 3.5

- ItemsControl can “virtualise” lists of elements

■ WPF 3.5 SP1

- ItemsControl can “virtualise” lists of elements, and recycle element templates!
- Non-live scrolling

`ScrollViewer.IsDeferredScrollingEnabled = “true”`

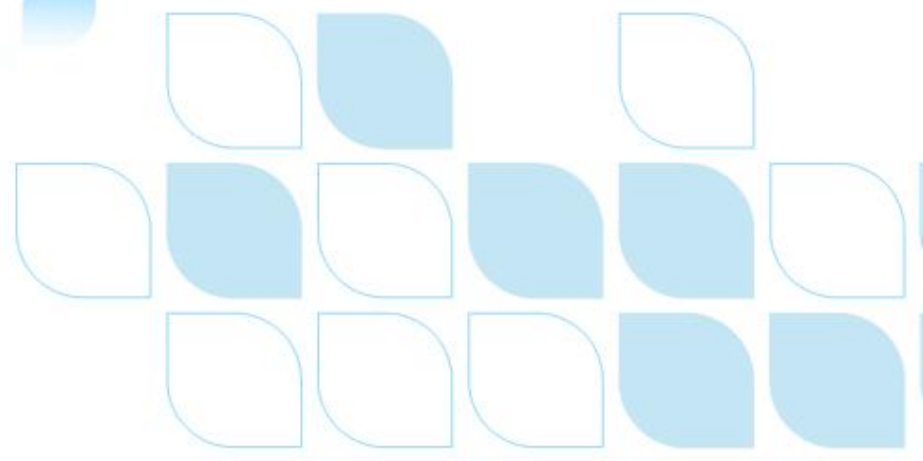


demo



Virtualization Demo

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Pixel Shader Effects



■ WPF 3.0 and 3.5

- Bitmap Effects -> Software Rendered -> **Slow**

■ WPF 3.5 SP1

- Shader Effects -> Hardware Rendered* -> **Fast**

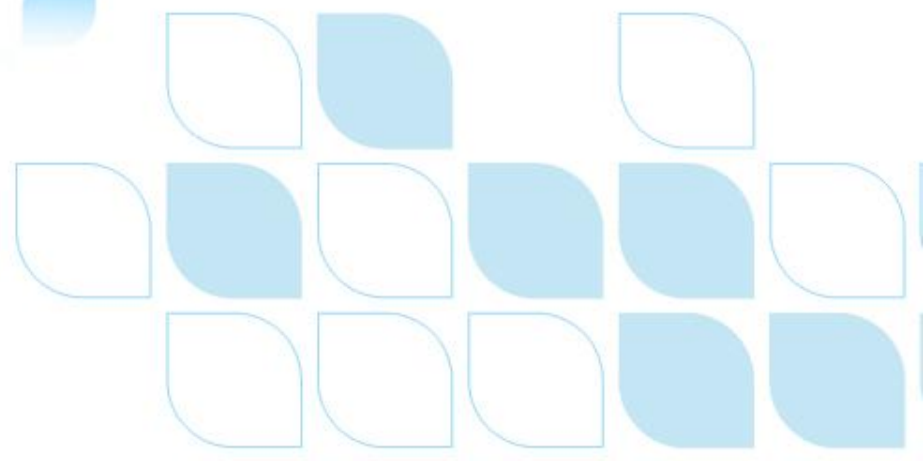


demo

ShaderEffect demo



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Write Your Own Shader Effects

C#/VB.NET + HLSL

- Also hardware accelerated on the GPU
- HLSL ~ C, very similar to Cg
- Compile with fxc.exe from DirectX SDK
foo.fx -> foo.ps
- Embed foo.ps as a resource

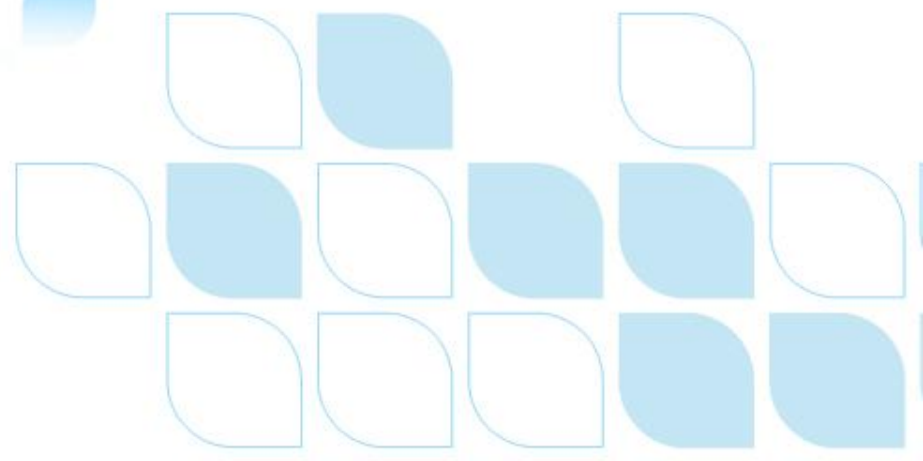


demo

Custom
ShaderEffect demo



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Other Graphics Improvements

- D3DImage
- Writeable bitmap
- Improvements to Layered Windows
- New "NearestNeighbor" BitmapScaling Mode

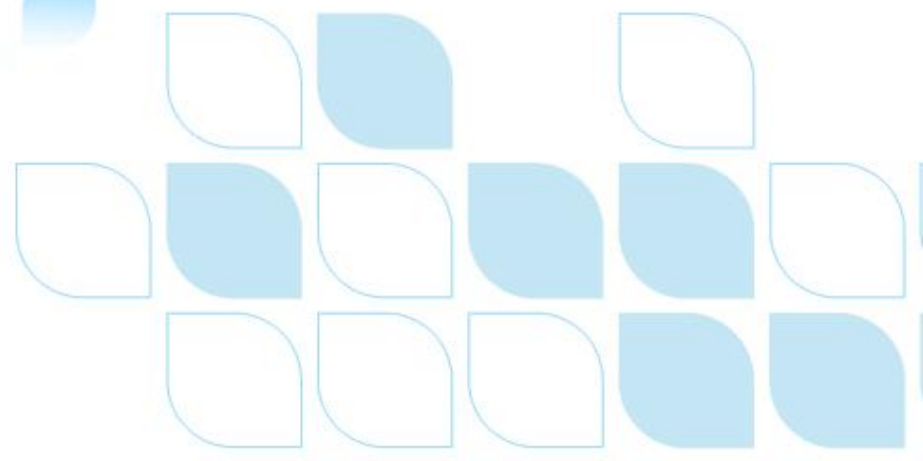


demo



BitmapScaling Mode

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Start-up Time

- NGEN and JIT Compilation improvements
- Start-up Working Set Reductions
- Easy-to-add non-WPF splash screen (not in beta1)
- Strong Name Bypass (fully signed + trusted apps loaded into trusted AppDomain from under the ApplicationBase)
- XBAP start-up progress page comes up immediately
- Parallelization of XBAP download resources





Controls

- 3.5 SP1 adds the **WebBrowser** control (a better Frame)
 - Works in partial trust
 - DOM and Script access
 - HTML content form a stream
- Beyond SP1 – **Ribbon, DataGrid, Calendar/Date Picker** (out-of-band release, redistributable with your app)





Key Take-Aways

- WPF is an evolving platform – it's **getting better**
- Continuing tools improvements – A more approachable WPF
- WPF + Silverlight are a great compliment to each other
- Give MS feedback on the stuff you don't like





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