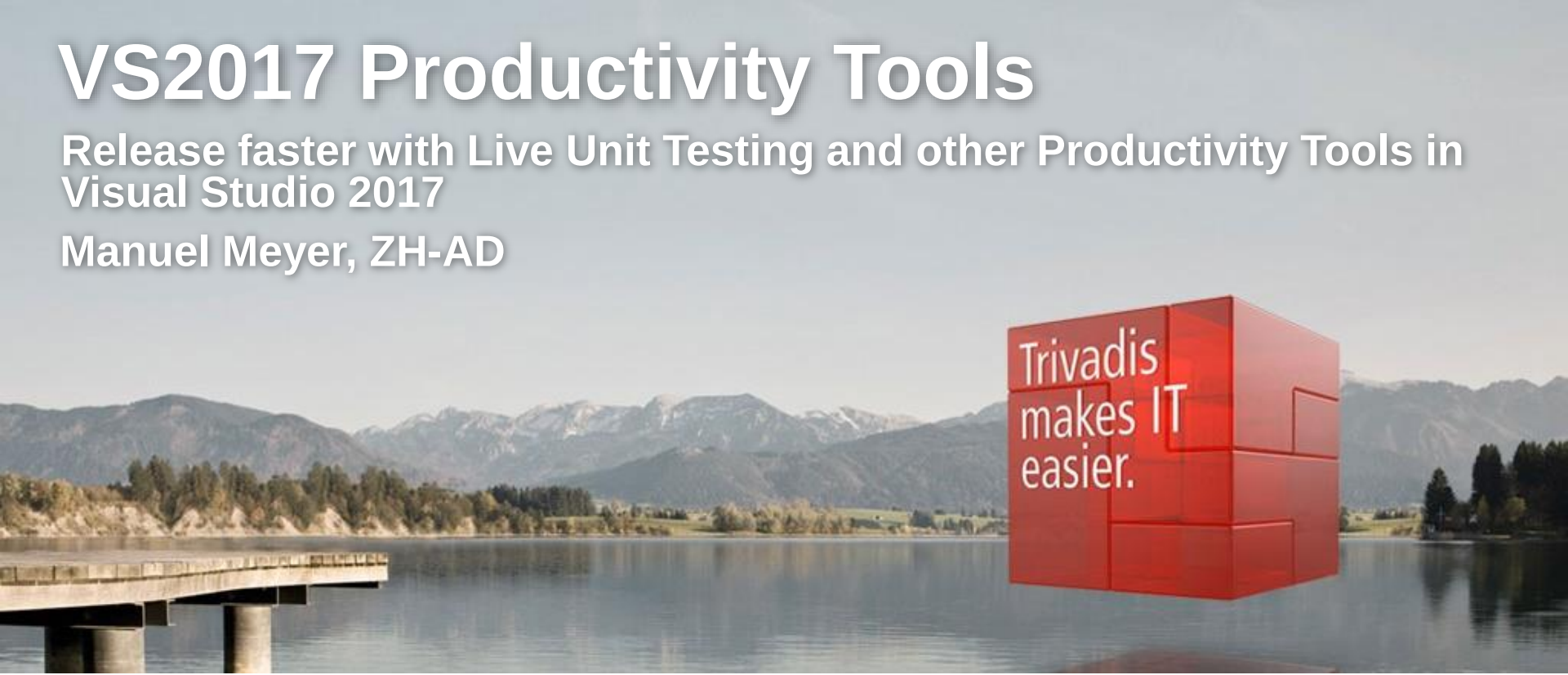
VS2017 Productivity Tools

Release faster with Live Unit Testing and other Productivity Tools in Visual Studio 2017

Manuel Meyer, ZH-AD



About me…

Manuel Meyer

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@manumeyer1

- Consultant & Trainer for .NET
- MVP for Visual Studio & Dev. Tools
- C#/XAML, Integration, Azure, Troubleshooting & Performance Management

www.azurezurichusergroup.com

www.dotnetday.ch

http://bootcamp.azurezurichusergroup.com

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Agenda

1. VS2017 Productivity Tricks
2. Code Map
3. Live Unit Testing & Intellitest
4. Dependency Validation.

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VS2017 Productivity Tricks

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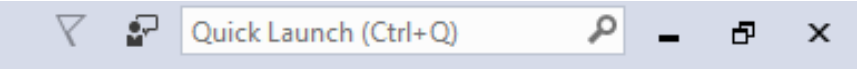
Azure Cognitive Services

- Cognitive Samples: Intelligent Kiosk
  - https://github.com/Microsoft/Cognitive-Samples-IntelligentKiosk

Productivity Secrets

- Quick Launch (Ctrl-Q)
  - Commands
  - Settings
- Scrollbar Map Mode
- Cycle Clipboard Ring
- Paste JSON/XML as classes.



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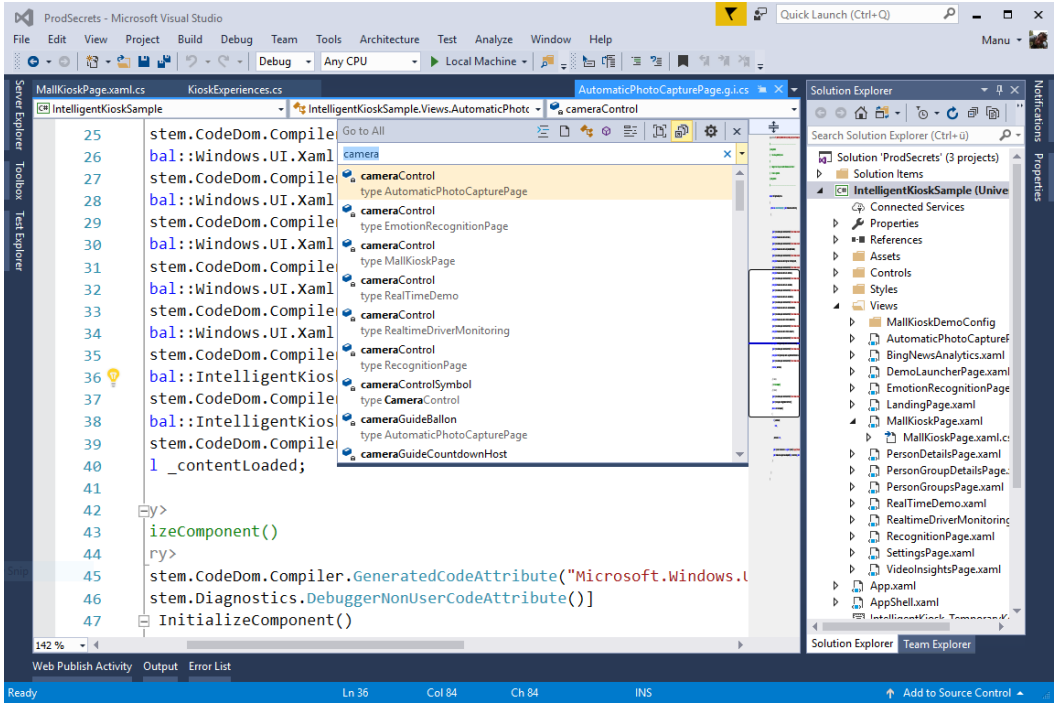
Improved "Navigate to…" (Ctrl - ,)"

- Filters
  - f = files
  - t = types
  - # = symbols
  - m = members
- Show Details.



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Improved "Find all References"

- Grouping
- Search
- Keep Results.

ProdSecrets - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Architecture Test Analyze Window Help

Debug | Any CPU | Local Machine

MallKioskPage.xaml.cs | KioskExperiences.cs | AutomaticPhotoCapturePage.g.i.cs

IntelligentKioskSample | IntelligentKioskSample.Views.MallKioskPage | MallKioskPage()

```
16  using IntelligentKioskSample.MallKioskPageConfig;
17  using IntelligentKioskSample.Controls;
18
19  // The Blank Page item template is documented at http://go.micro
20
21  namespace IntelligentKioskSample.Views
22  {
23      /// <summary>
24      /// An empty page that can be used on its own or navigated t
```

Solution Explorer

Search Solution Explorer (Ctrl+ü)

- Solution 'ProdSecrets' (3 projects)
  - Solution Items
  - IntelligentKioskSample (Unive
    - Connected Services
    - Properties
    - References
    - Assets
    - Controls
    - Styles
    - Views

'cameraControl' references

Entire Solution | Group by: Definition then Path | Keep Results | Search Find All References

Code	File	Line	Col	Project
CameraControl MallKioskPage.cameraControl (12)				
D:_BUCHE\TVD_CONFERENCES\20170318_TE_VS2017_CODE\Demo0_Secrets (12)				
obj\x86\Debug\Views (1)				
this.cameraControl = (global::IntelligentKioskSample.Controls.CameraControl)(target);	MallKioskPage.g.cs	52	26	IntelligentKioskSample
Views (11)				
this.cameraControl.ImageCaptured += CameraControl_ImageCaptured;	MallKioskPage.xaml.cs	37	18	IntelligentKioskSample
this.cameraControl.CameraRestarted += CameraControl_CameraRestarted;	MallKioskPage.xaml.cs	38	18	IntelligentKioskSample
this.cameraControl.FilterOutSmallFaces = true;	MallKioskPage.xaml.cs	39	18	IntelligentKioskSample
await this.cameraControl.StopStreamAsync();	MallKioskPage.xaml.cs	117	24	IntelligentKioskSample
await this.cameraControl.StartStreamAsync(isForRealTimeProcessing: true);	MallKioskPage.xaml.cs	152	24	IntelligentKioskSample
this.webCamHostGrid.Height = Math.Round(this.webCamHostGrid.Width / (this.cameraControl.CameraAspectRa...	MallKioskPage.xaml.cs	162	87	IntelligentKioskSample
this.webCamHostGrid.Height = Math.Round(this.webCamHostGrid.Width / (this.cameraControl.CameraAspectRa...	MallKioskPage.xaml.cs	162	131	IntelligentKioskSample
await this.cameraControl.StopStreamAsync();	MallKioskPage.xaml.cs	177	24	IntelligentKioskSample
await this.cameraControl.StartStreamAsync();	MallKioskPage.xaml.cs	240	24	IntelligentKioskSample
if (this.cameraControl.NumFacesOnLastFrame == 0)	MallKioskPage.xaml.cs	270	34	IntelligentKioskSample

'cameraControl' references | Web Publish Activity | Output | Error List

Ready | Add to Source Control

VS2017 Enterprise Features

Code Map – Live Unit Testing – Intellitest – Dependeny Validation

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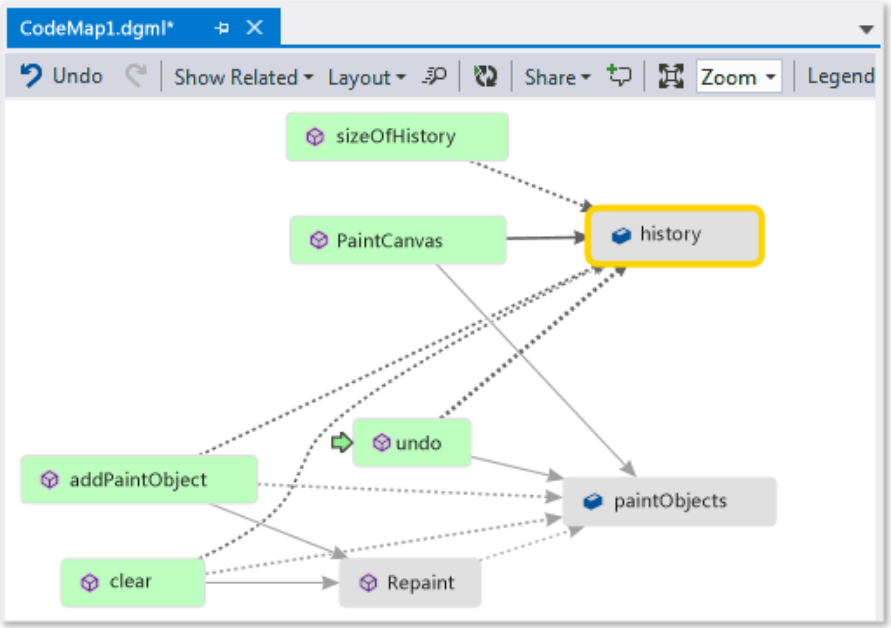
Code Map

- Avoid getting lost in your code
- Understand relationships.



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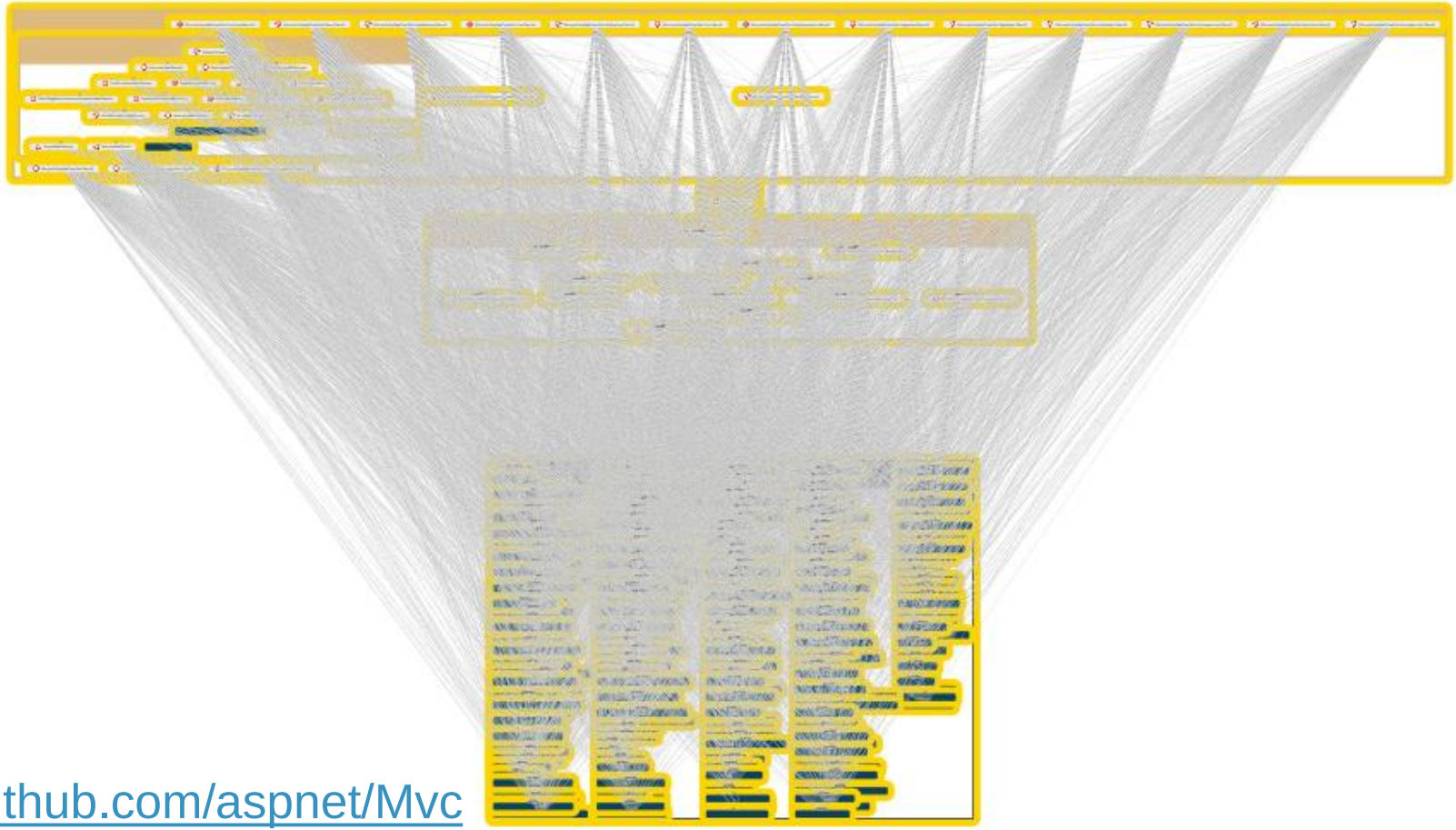
Code Map



https://github.com/aspnet/Mvc

Demo:

Code Map for Face API

Live Unit Testing

"The Gamification of Test Driven Development"

```
public bool IsHackfresse(int face1X, int face1Y, int face1Width, int face1Height,
            int face2X, int face2Y, int face2Width, int face2Height,
            int sizeThresholdFactor)
{
    return Math.Abs(face1Width - face2Width) <= face1Width * sizeThresholdFactor &&
                Math.Abs(face1Height - face2Height) <= face1Height * sizeThresholdFactor;
}
```

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Live Unit Testing

Requirements

- Enterprise Edition
- C# or VB
- Supported Test Framework & Unit Test Adapter
  - xUnit (> 2.0)
  - Nunit (> 3.5.0)
  - MSTest (> 1.0.5 preview)

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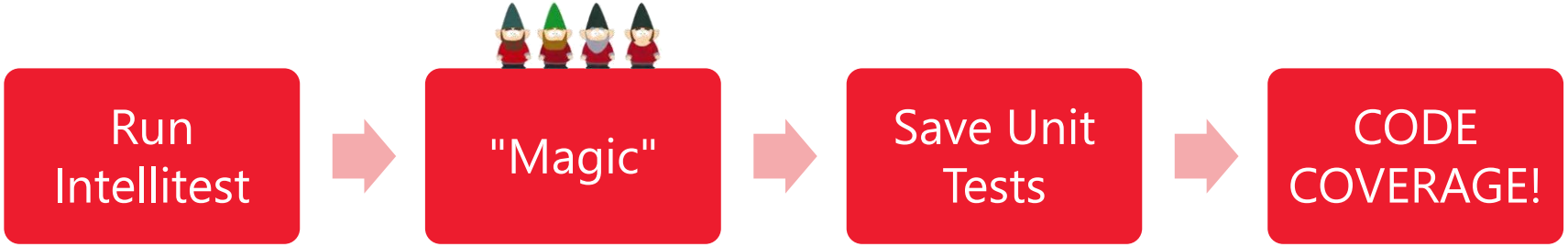
Intellitest

"Test more with Less Effort"

- Aka "Smart Unit Tests"
- Aka "Pex" (http://www.pexforfun.com/)
- Easy Workflow:



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Demo:
Live Unit Testing
&
Intellitest

Dependency Diagrams

"Validate your Code against your Architecture"

- Aka "Layer Diagrams"
- In VS2017 powered by Roslyn.

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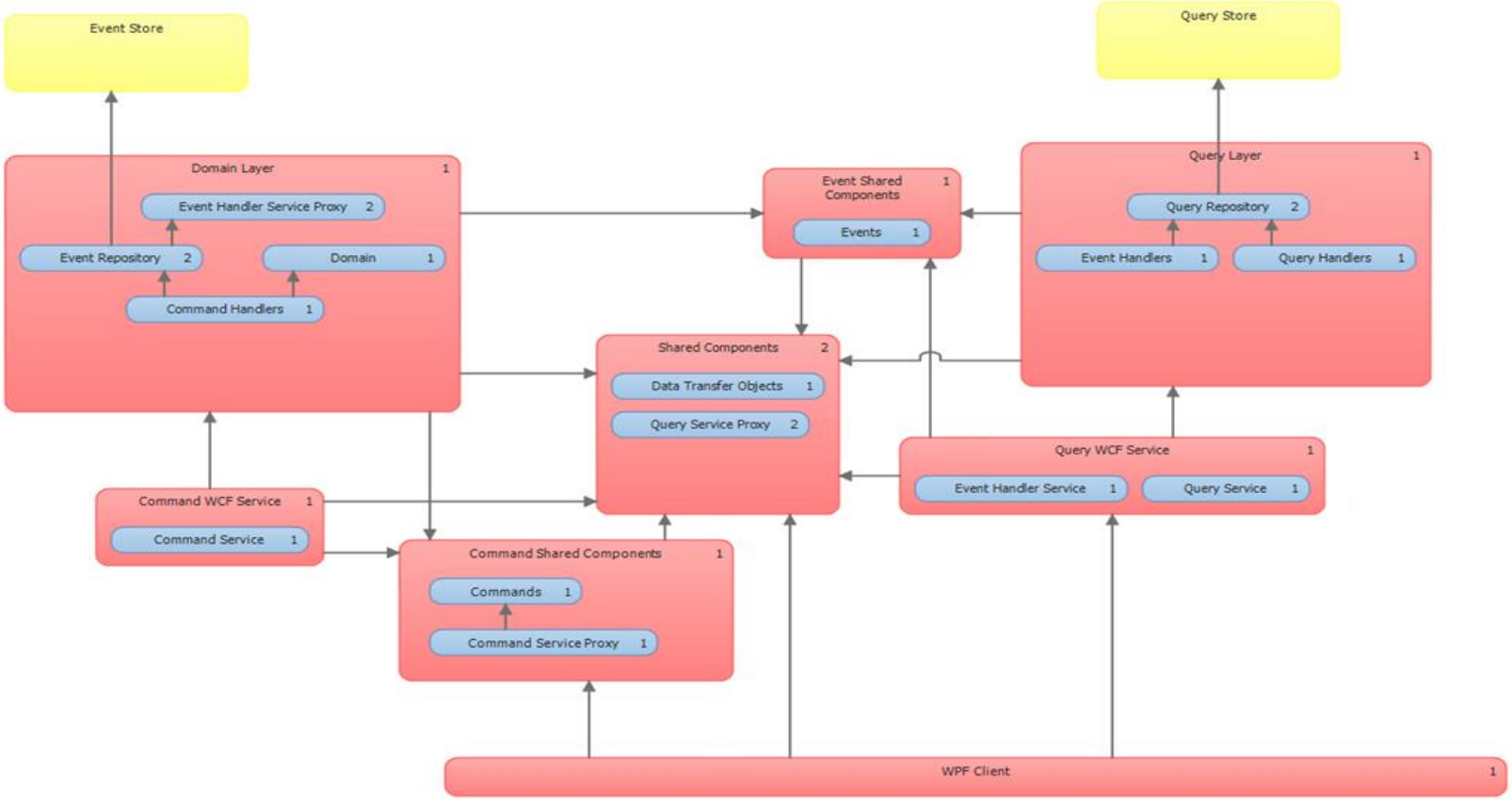
Dependency Diagrams



Source: http://geekswithblogs.net/Optikal/archive/2012/12/30/151680.aspx

Upcoming Events

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Global Azure Bootcamp Switzerland

www.bootcamp.azurezurichusergroup.com/

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.NET-Day Switzerland

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.NET-Day Switzerland

09:15 - 10:00

Keynote: Visual Studio Code - ein Open Source Code-Editor in TypeScript und HTML5 (DE)

10:15 - 11:00

What is .NET Standard? (EN)

11:15 - 12:00

Businessanwendungen für jedes System mit ASP.NET Core und Angular (DE)

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.NET-Day Switzerland

13:15 - 13:30

Lightning Talk - Lust auf Cake? Man nehme etwas C# und fertig gebaut ist die Solution! (DE)

13:35 - 13:50

Lightning Talk - Logging with ASP.NET Core (EN)

14:00 - 14:45

Testing mit Angular – Keine Angst vor dem eigenen Quellcode (DE)

15:00 - 15:45

Serverless Architecture mit Azure Functions (DE)

16:00 - 16:45

Code analysis with the .NET Compiler Platform (Roslyn) (EN)

17:00 - 17:45

ASP.NET Core mit Visual Studio und Docker (DE)

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Thank You!

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