

# Travelling in Silverlight

Wang Tao / 28/02/ 2009

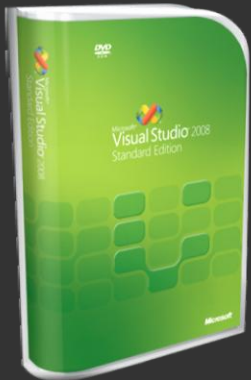
# About

- Engineer
- CNBlogger
- Microsoft MVP
- **INSIDE NECESSARY .NET** →
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# What we are not about?



Tools



XAML

CoreCLR



Browser Integration

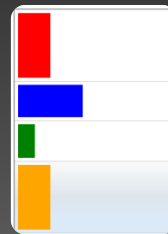
Globalization and Localization



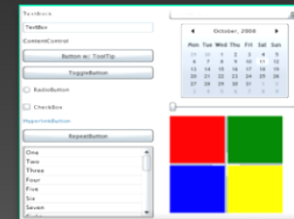
Design



Isolated Storage



Layout and Style

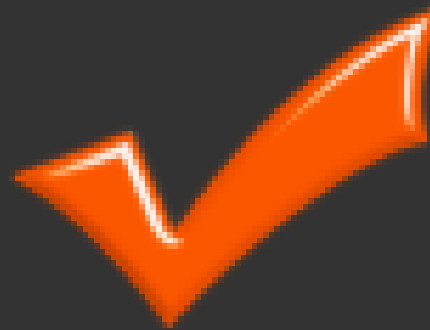


Controls

# What we are about?



What's silverlight?

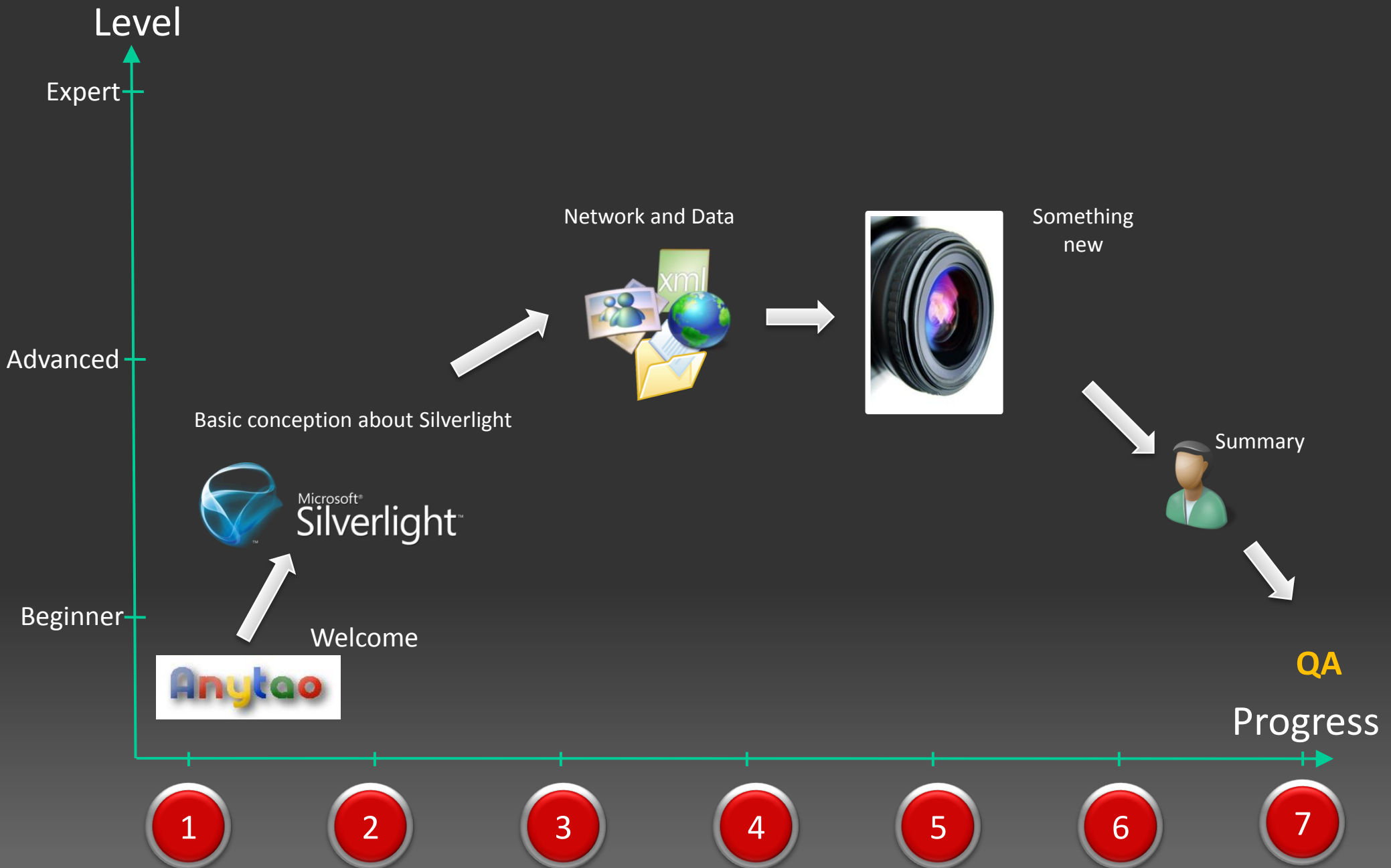


Something new



Network and Data

# Agenda



What is Silverlight?

Network

Something new



Microsoft®  
Silverlight™

# A web browser add-on



<http://www.mono-project.com/Moonlight>

Runs cross-browser, cross-platform

## **R**ich UI experiences

Need an interactive UI model for working with data

## **I**nternet application deployment

Need a pure web deployment

## **A**pplication logic

Need a highly productive dev experience





# Integrate with .NET



Microsoft® Silverlight™ 2 Developer Reference

www.silverlight.net

## Controls

**Common**

March, 2008

Sun	Mon	Tue	Wed	Thu	Fri	Sat
24	25	26	27	28	29	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Jan Feb Mar Apr  
May Jun Jul Aug  
Sep Oct Nov Dec

☐ CheckBox ☐ RadioButton

<enter text here>

<M/d/yyyy>

Button  
Calendar  
CheckBox  
DatePicker  
GridSplitter  
HyperlinkButton  
Image  
MultiScaleImage  
OpenFileDialog

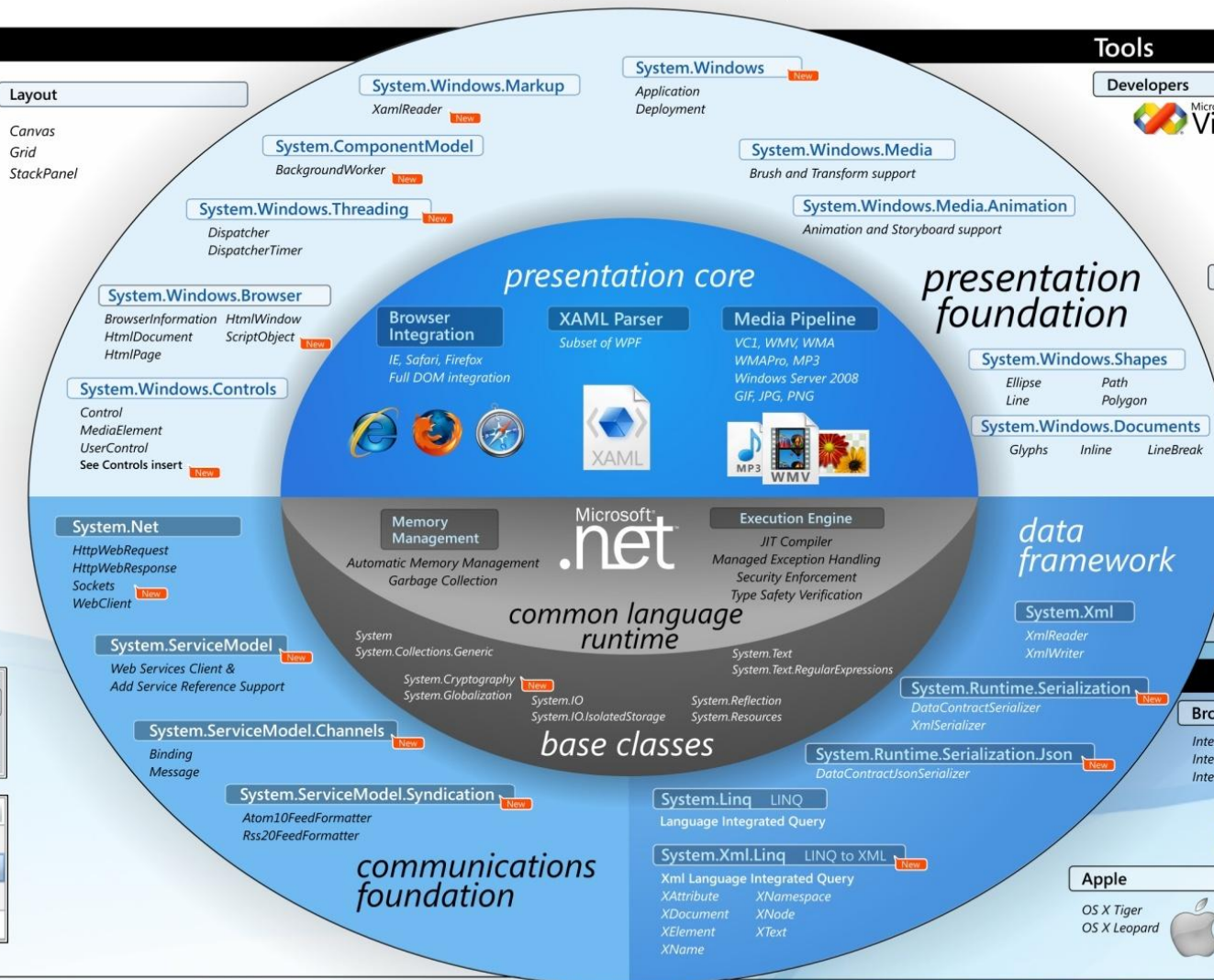
Popup  
RadioButton  
RepeatButton  
ScrollViewer  
Slider  
TextBlock  
TextBox  
ToolTip  
WatermarkedTextBox

**Data**

DataGrid  
ListBox

Item 1	
Item 2	
Item 3	
Item 4	
Item 5	

Color	Size	CheckBox
Red	Small	<input type="checkbox"/>
Green	Medium	<input checked="" type="checkbox"/>
Blue	Large	<input checked="" type="checkbox"/>
Orange	Medium	<input type="checkbox"/>



## Tools

**Developers**

Microsoft Visual Studio

**Designers**

Microsoft Expression Studio

## Framework Languages

C#  
Visual Basic  
Managed JScript  
IronRuby  
IronPython

## Platforms

**Browsers**

Internet Explorer 8  
Internet Explorer 7  
Internet Explorer 6

Firefox 3.0  
Firefox 2.0  
Firefox 1.5

Safari 3.0  
Safari 2.0

**Apple**

OS X Tiger  
OS X Leopard

**Microsoft**

Windows Vista  
Windows XP  
Windows Server 2003  
Windows 2000

## Legend

Namespaces / Category  
Types

New New or changed functionality in Silverlight 2 Beta 1

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Microsoft®



```
<StackPanel x:Name="LayoutRoot">

    <Button
        Content="Click Me"
        Click="OnClick" />

    <TextBlock
        x:Name="myText" />

</StackPanel>
```

XAML

```
void OnClick(object sender, EventArgs args)
{
    myText.Text = "Event handled";
}
```

.NET code



Silverlight App(\*.xap)



myapp.xap



Browser requests XAP file, unzips it, runs .NET code

# Enjoy cool Silverlight

- **Obama's Inauguration,**
  - <http://www.pic2009.org/page/content/live>
  - <http://www.cnn.com/SPECIALS/2009/44.president/inauguration/thementment/>
- **Showcase**
  - <http://silverlight.net/showcase/>
  - <http://silverlight.net/samples/sl2/silverlightairlines/run/default.html>
  - <http://photo.live.com/>
  - <http://www.palmsoft.com/webscheduler/>
- **Samples**

What is Silverlight?

Network

Something new



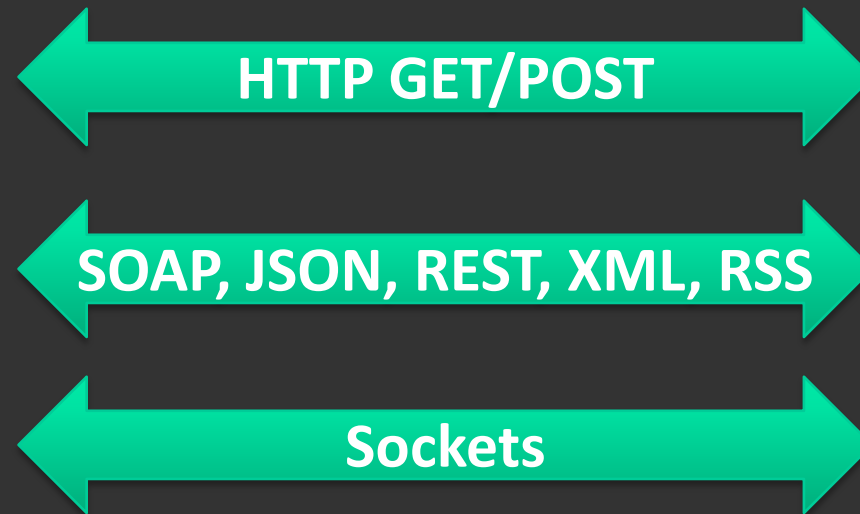
# A start of silverlight communication

- APM(Asynchronous Programming Model)
- Cross-domain Support
  - Requests constrained to same domain by default
  - clientaccesspolicy.xml
- Security
  - SSL
  - UserName Authentication
- Exception

# Connect with a range of services



Microsoft®  
Silverlight™



# Communication

- WebClient
- HTTP Requests, WebRequest/WebResponse
- WCF build SOAP and REST service
- ASMX by “Add Service Reference”
- ADO .NET Data Services

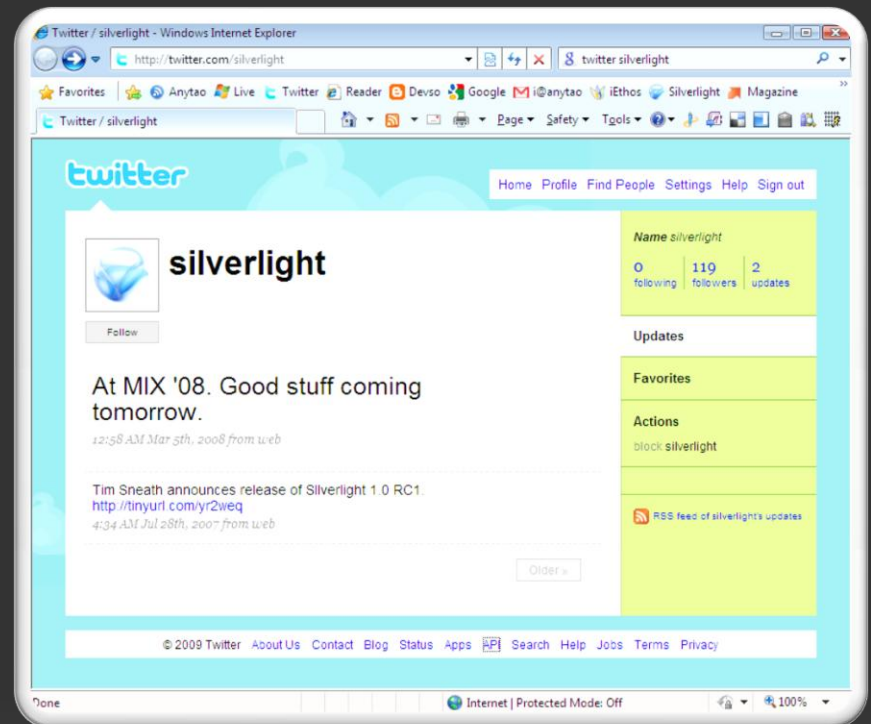


# General step by step

```
[ServiceContract]
public interface IUserService
{
    [OperationContract]
    List<User> GetUsers();
}
```

```
public class UserService : IUserService
{
    public List<User> GetUsers()
    {
        List<User> result = new List<User>()
        {
            new User{ID=1, Name="wang", Age=28},
            new User{ID=2, Name="Li", Age=25},
            new User{ID=3, Name="Ding", Age=27}
        };

        return result;
    }
}
```



1 Create or find services



# General step by step

```
<system.serviceModel>
  <behaviors>
    <serviceBehaviors>
      <behavior name="Ethos.TravellingSiverlight.WCFService.UserServiceBehavior">
        <serviceMetadata httpGetEnabled="true" />
        <serviceDebug includeExceptionDetailInFaults="false" />
      </behavior>
    </serviceBehaviors>
  </behaviors>
  <services>
    <service behaviorConfiguration="Ethos.TravellingSiverlight.WCFService.UserServiceBehavior"
      name="Ethos.TravellingSiverlight.WCFService.UserService">
      <endpoint address="" binding="basicHttpBinding" contract="Ethos.TravellingSiverlight.WCFService.IUserService">
        <identity>
          <dns value="localhost" />
        </identity>
      </endpoint>
      <endpoint address="mex" binding="mexHttpBinding" contract="IMetadataExchange" />
    </service>
  </services>
</system.serviceModel>
```

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2

## Configuration

# General step by step

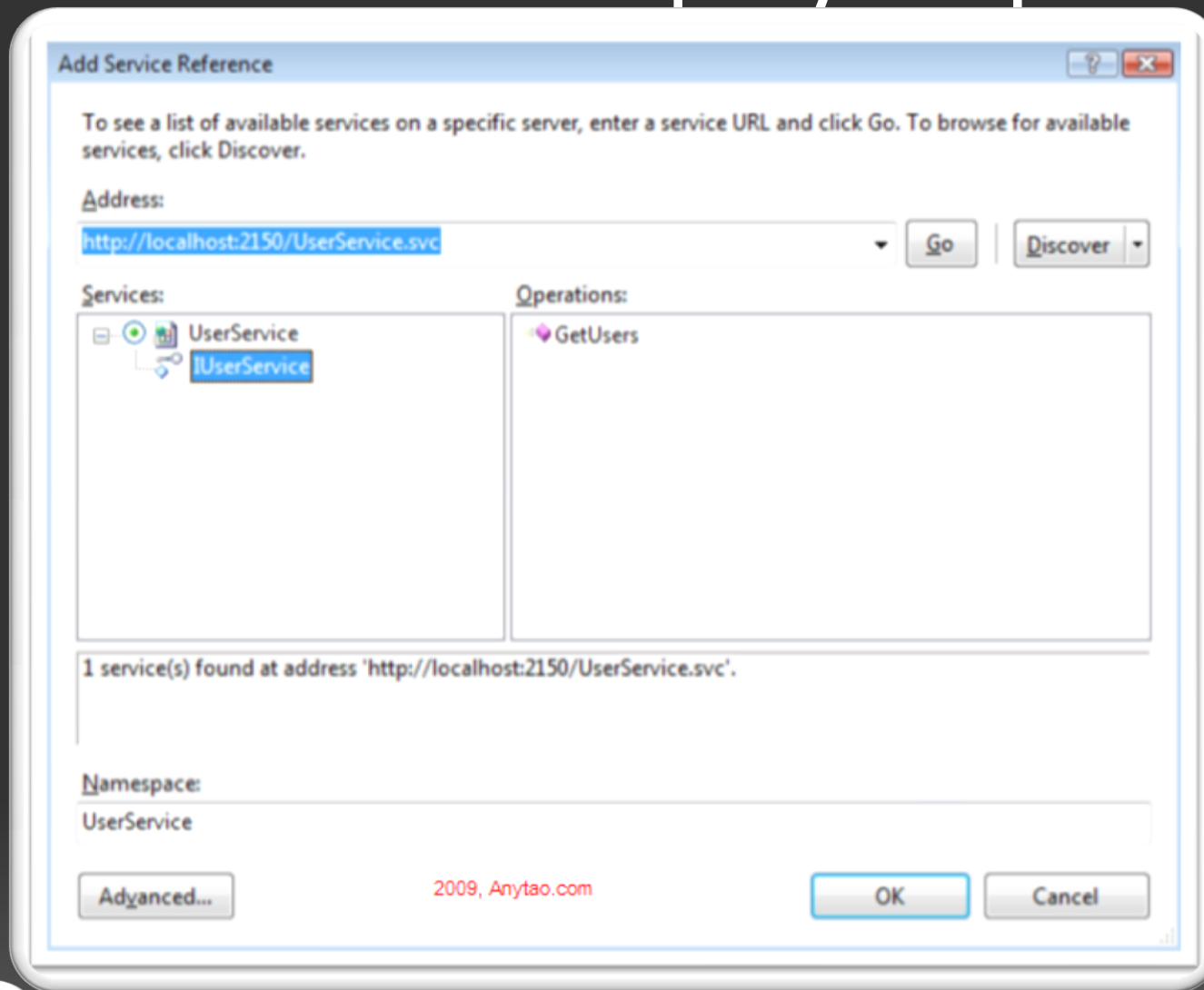
```
<?xml version="1.0" encoding="utf-8" ?>
<access-policy>
  <cross-domain-access>
    <policy>
      <allow-from http-request-headers="*">
        <domain uri="*" />
      </allow-from>
      <grant-to>
        <resource path="/" include-subpaths="true" />
      </grant-to>
    </policy>
  </cross-domain-access>
</access-policy>
```

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## Cross-domain supported?

# General step by step



4

## Add Service Reference

# General step by step

```
private void btnGetUsers_Click(object sender, RoutedEventArgs e)
{
    userServiceClient client = new userServiceClient();

    client.GetUsersCompleted += new EventHandler<GetUsersCompletedEventArgs>(client_GetUsersCompleted);
    client.GetUsersAsync();
}

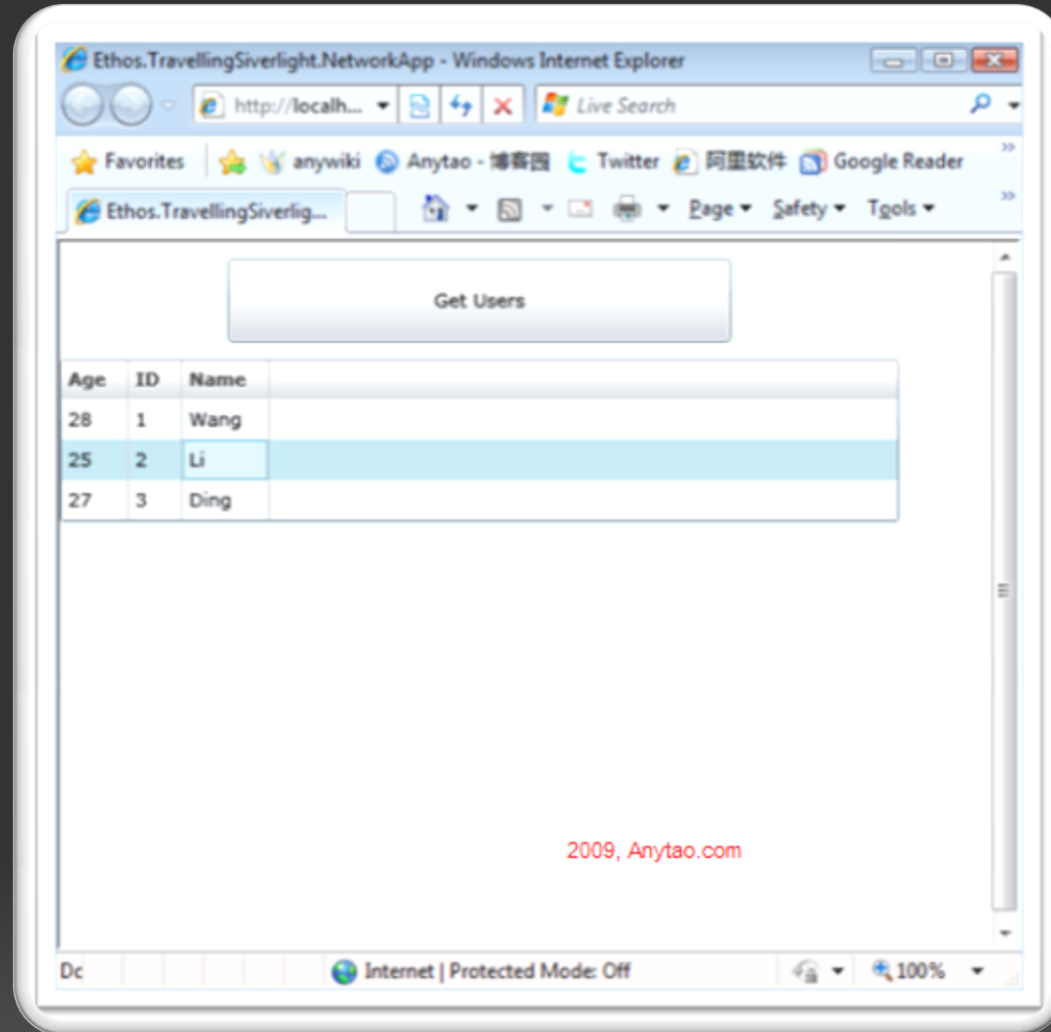
void client_GetUsersCompleted(object sender, GetUsersCompletedEventArgs e)
{
    if (null == e.Error)
    {
        this.dgUsers.ItemsSource = e.Result;
    }
}
```

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## Asynchronous call in Silverlight

# General step by step



Result, data binding or else

# Demo

**WCF SOAP**

# Demo

**WebClient**

# Demo

**WCF REST**



# More consideration

- Validation
- Serialization: XML or Json
- Data paging
- Authentication
- Exception
- Business Logic

What is Silverlight?

Network

Something new



# UnitTest in Silverlight

- Install Jeff Wilcox's Silverlight Unit Test Framework

<http://www.jeff.wilcox.name/>

- Write the Unit Test code
- Run Unit Test Project

# Demo

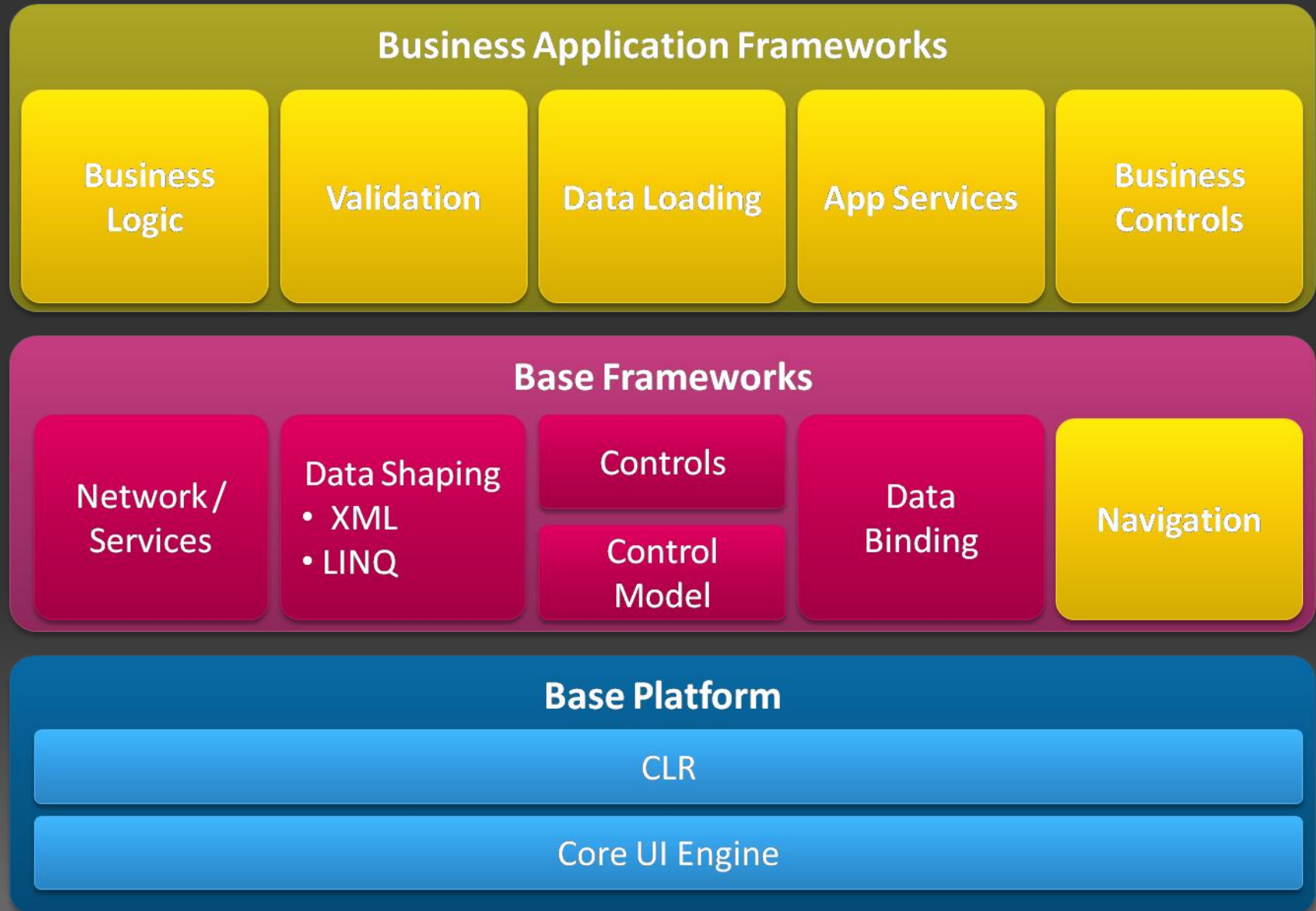
Unit Test for silverlight

# Silverlight Mesh-enabled

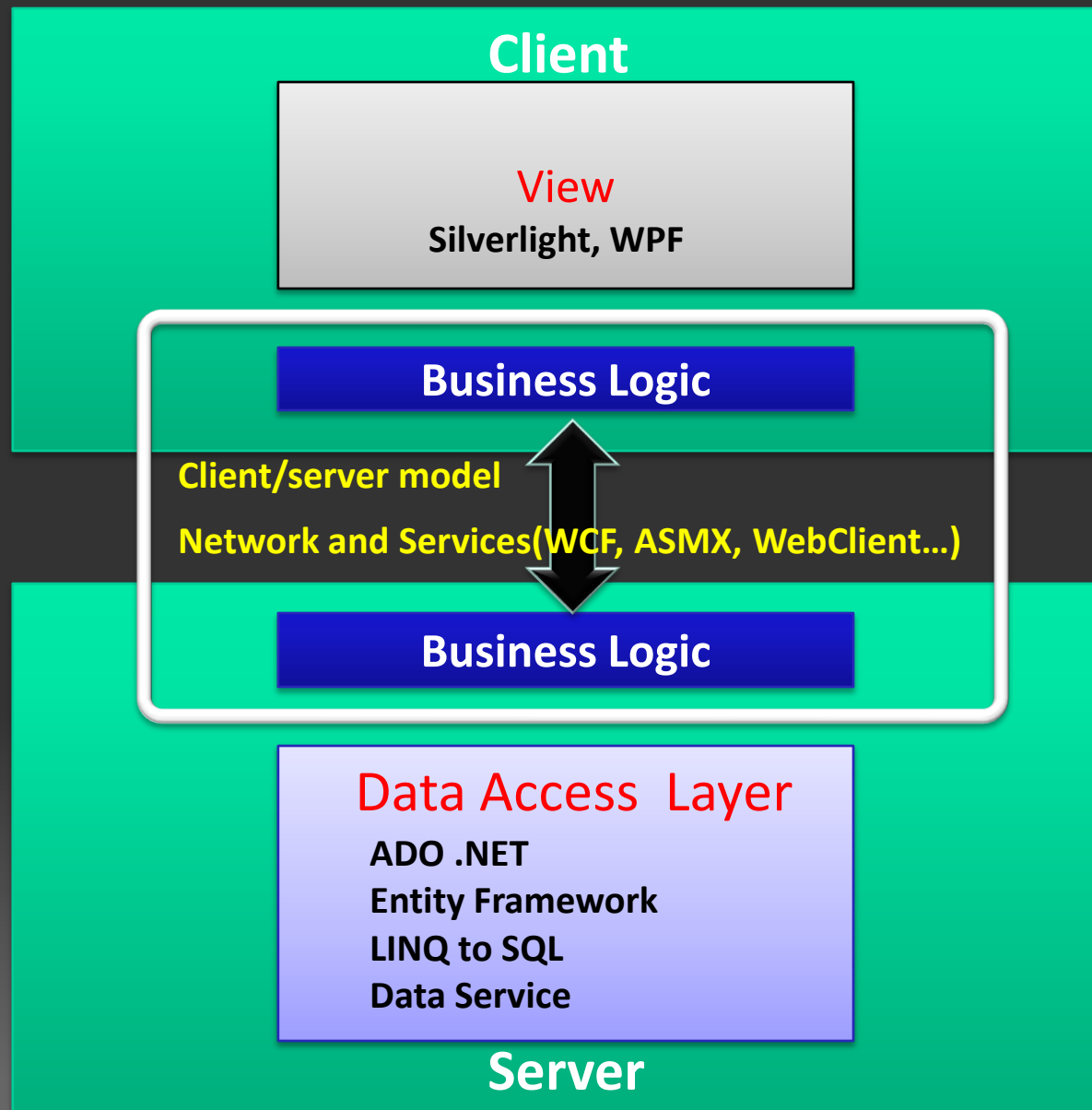
# Demo

Silverlight Mesh-enabled Web  
Application

# Design & Architecture



# N-tier for Silverlight App

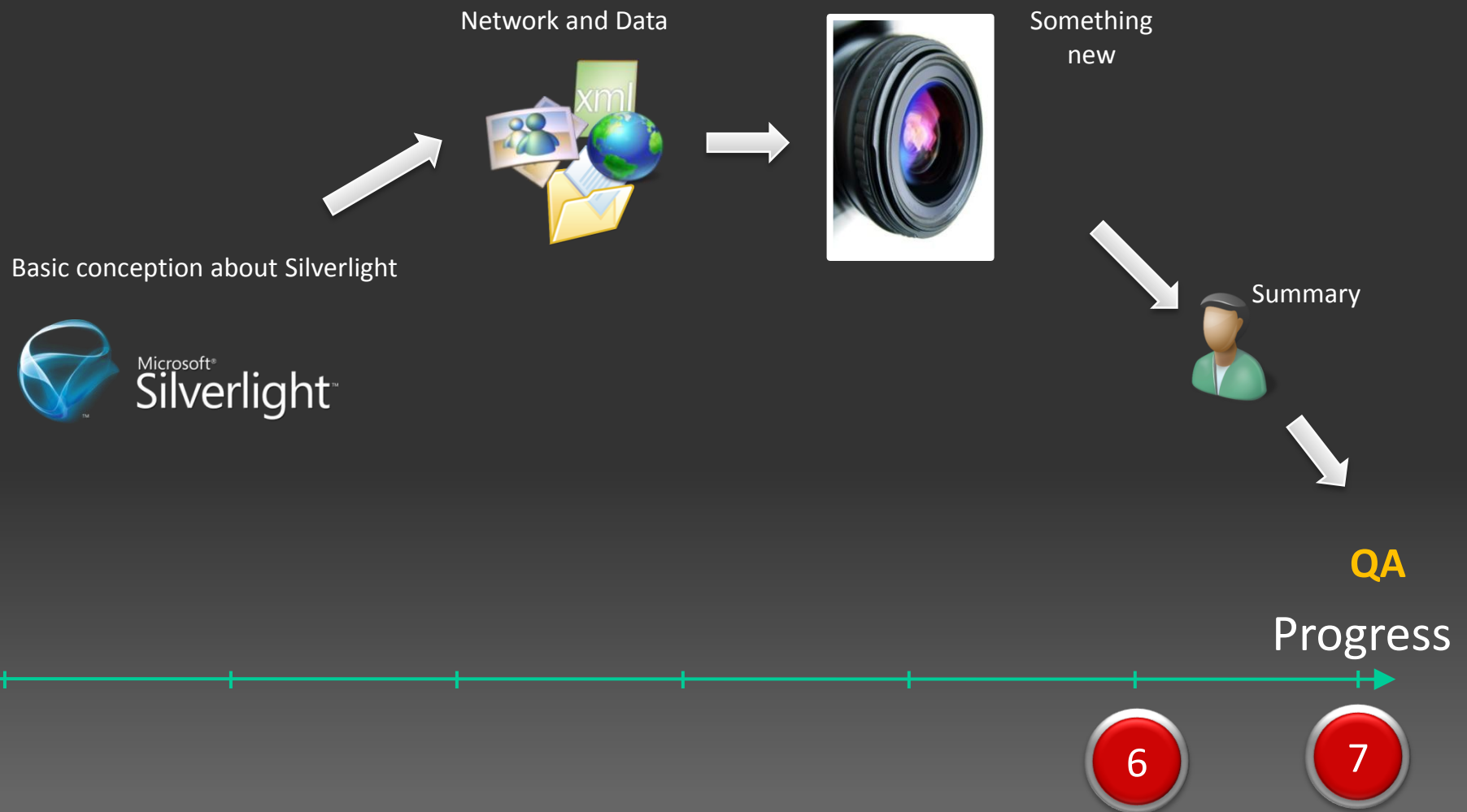




# Silverlight in our project

# Summery

Level





<http://www.anytao.com>

# All in



<http://www.silverlight.net>

<http://www.anytao.com>

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