Code Map and the Code Index Sdk

Jean-Marc Prieur, Senior Program Manager,
Microsoft, Visual Studio Application LiveCycle Tools
Jean-Marc.Prieur@microsoft.com

Agenda

Dependency diagrams

Code Map in Update 1

Bulk indexing

Query API

Architecture Tools in Visual Studio 2012 Ultimate

Code Index SDK

Visual Studio
ALM Days 2012

Architecture Tools in Visual Studio 2012 Ultimate

# Dependency diagrams

Visual Studio 2012 RTM Ultimate	Performance and Scalability	By leveraging a SQL database: the code index	I want to understand the dependencies in big Visual Studio Solutions Top-down, and bottom-up
Visual Studio 2012 Update1	Usability and entry points	By many UX improvement and a better integration with Visual Studio (Code Map)	I want to build a small code map of important code alongside my editor, so that I can understand relationships and navigate easily between disparate locations

Demo

Understanding the architecture with dependency graphs

Code Map
Demo
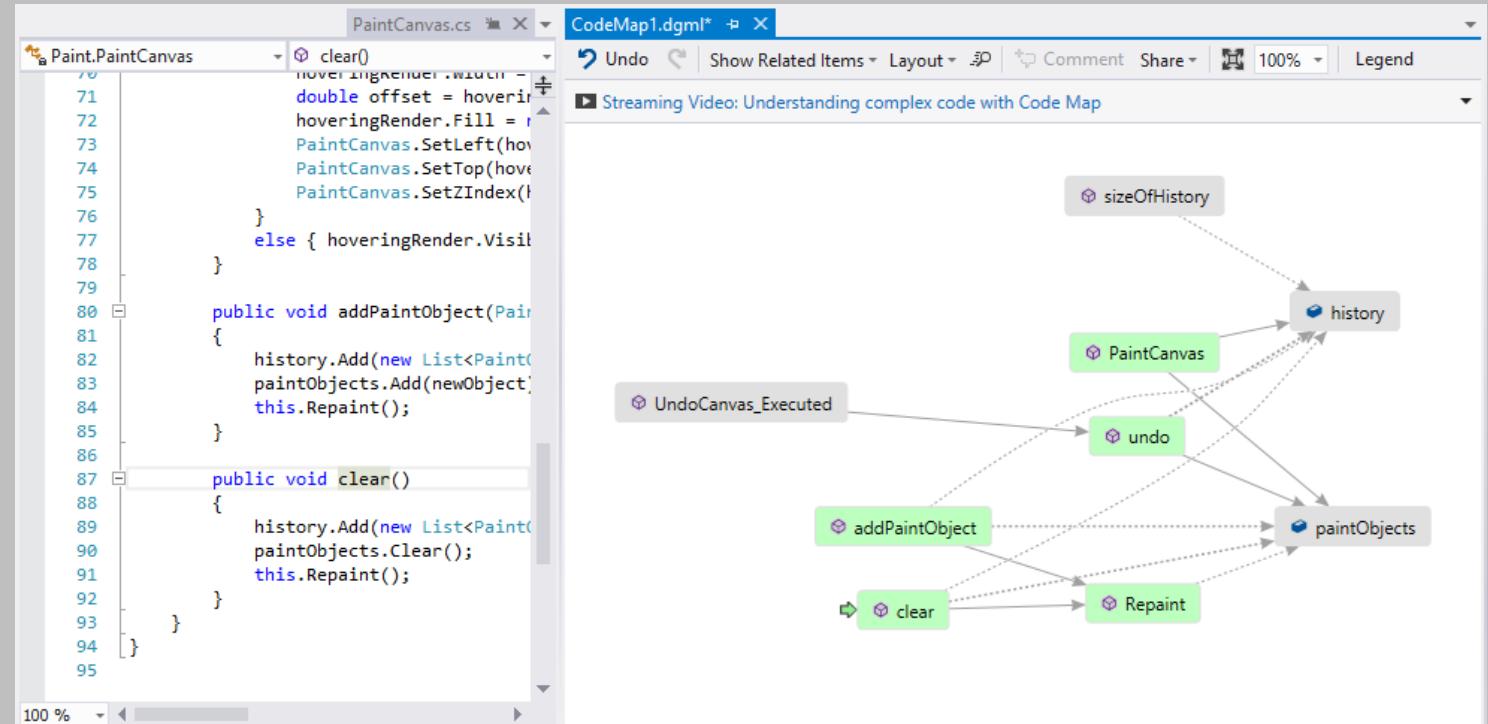
Finding and fixing a bug with Code Map

Code Index

Demo

Where is the code index?

Visual Studio
ALM Days 2012

Code Index SDK

Why use the Code Index SDK?

Pre index binaries on my machine

to be more productive when I use the dependency graphs

Leverage the indexed information

In order to feed it into in-house tools that make me more productive.

What shall I break if I do this change?

Visual Studio
ALM Days 2012

Bulk indexing : using the code index Sdk build targets

How to install it?

Visual Studio Visualization and Modeling Sdk

Visual Studio Sdk

Visual Studio Ulimate
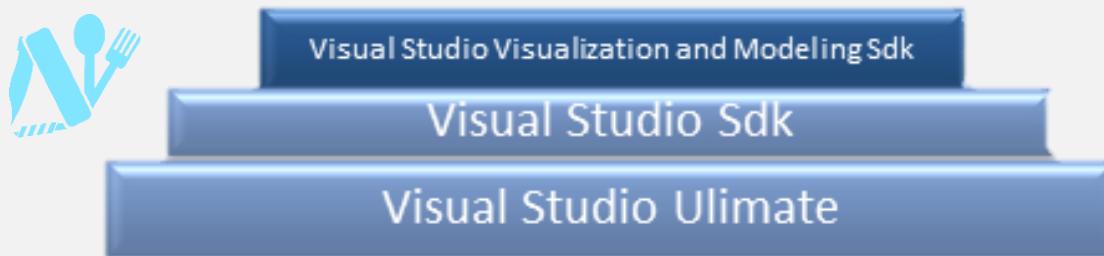
What does it bring?

| Computer ▸ Local Disk (C:) ▸ Program Files (x86) ▸ MSBuild ▸ Microsoft ▸ VisualStudio ▸ v11.0 ▸ Repository |

Name	Date modified	Type	Size
sampleProject.proj	22/10/2012 13:52	PROJ File	1 KB
Microsoft.VisualStudio.Repository.Runtime.Source.Loader.dll	14/09/2012 04:50	Application extens...	180 KB
Microsoft.Repository.targets	12/07/2012 18:50	TARGETS File	7 KB
Microsoft.Repository.Build.Tasks.dll	14/09/2012 04:50	Application extens...	26 KB
Microsoft.Repository.Build.Runtime.Loader.dll	14/09/2012 04:50	Application extens...	14 KB

Visual Studio
ALM Days 2012

Bulk indexing assemblies into the code index

Using a build project

```xml
<?xml version="1.0" encoding="utf-8" ?>
 <Project DefaultTargets="LoadArtifacts" ToolsVersion="4.0"
         xmlns="http://schemas.microsoft.com/developer/msbuild/2003">


<PropertyGroup>
        <Repository>VS2012RTM_Update1</Repository>
</PropertyGroup>


<ItemGroup>
        <ArtifactsToLoad Include="C:\Program Files (x86)\Microsoft Visual Studio 11.0\**\*.dll" />
        <ArtifactsToLoad Include="C:\Program Files (x86)\Microsoft Visual Studio 11.0\**\*.exe" />
 </ItemGroup>


<!-- Import the core Repository tasks and targets-->
<Import Project="$(MSBuildExtensionsPath)\Microsoft\VisualStudio\v11.0\Repository\Microsoft.Repository.targets"/>
</Project>
```

Bulk indexing assemblies into the code index

Calling MsBuild directly

```
Msbuild
"%ProgramFiles(x86)%\MSBuild\Microsoft\VisualStudio
\v11.0\Repository\Microsoft.Repository.targets"
[ /t:LoadFiles ]
/p:LoadFileSpec=Folder\*.dll | Folder\**\*.dll
[ /p:CreateRepository=false ]
[ /p:RepositoryServer=SqlServerInstanceName ]
[ /p:Repository=DatabaseName ]
```

Bulk indexing assemblies into the code index

Calling MsBuild directly (default values)

```
Msbuild
"%ProgramFiles(x86)%\MSBuild\Microsoft\VisualStudio
\v11.0\Repository\Microsoft.Repository.targets"
[ /t:LoadFiles ]
/p:LoadFileSpec=Folder\*.dll | Folder\**\*.dll
[ /p:CreateRepository=true ]
[ /p:RepositoryServer=localdb\v11.0 ]
[ /p:Repository=Microsoft.VsCodeIndex ]
```

Code Index

Demo

Indexing a few binaries with an MsBuild project

Leveraging the indexed information

Samples on the code gallery

And beyond

Statistics about your code

Discover ignored tests

Dump the public API

A Query API
as an Entity Framework wrapper

Enterprise code search

Enterprise code query

Visual Studio
ALM Days 2012

Code Index query API

Demo

Demo of the code index query API samples

Visual Studio
ALM Days 2012

Code Index query API

Demo

Let's find what is new in the update!

Links

Code Index SDK samples on the Code gallery:
http://code.msdn.microsoft.com/site/search?query="Code Index"&f[0].Value="Code Index"&f[0].Type=SearchText

Download the VsVm SDK (bring the build rules to bulk index assemblies)
http://code.msdn.microsoft.com/vsvmsdk

Learn more
http://blogs.msdn.com/b/visualstudioalm/archive/tags/code+index/

Visual Studio
ALM Days 2012