Streamlining the Revit Process with Custom Add-ins

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Class summary

In this instructional demo, we will discuss ideas on how to get started programming custom Add-ins and how to Beta test your creations company-wide. We will also investigate how to calculate the difficulty level for coding a specific idea and when it is time to take your code to the next level.

Key learning objectives

At the end of this class, you will be able to:

- Use the sample code examples and create a starting template
- Determine how to best implement new Add-ins company-wide
- Understand the level of difficulty for specific Add-in tasks
- Decide when a custom Add-in is worth building or buying

A little about myself..

My background

- Registered Architect
- Full-time BIM Manager
- Programming was a hobby (no formal training)
- Started with the Revit API over 5 years ago
- Teamed with Stephen Faust, Revolution Design

A few ground rules..

This is only a 60 minute class, I will move quickly, therefore:

- Save questions until the end – unless it is of great importance
- Keep in mind that I am not formally trained in programming
  - Not as concerned with teaching the terminology or acronyms (DLLs)
- Handout contains more detail on the installation and specifics
- The examples I will show are in C# (No VB, Macros or Dynamo)

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Setting up your Programming Environment

- Download the Current Revit SDK
  - Plenty of resources available
- Download Visual Studio Express (Microsoft)
- Download RevitLookup Tool (Github)

Using the Sample code examples

- Installing Add-in Manager
- Installing RevitLookup Tool
- Create Visual Studio Starting Template
- Using Revit Add-in Samples
  - Samples from RevitAPI.chm (Help File)
  - How RevitLookup Tool works

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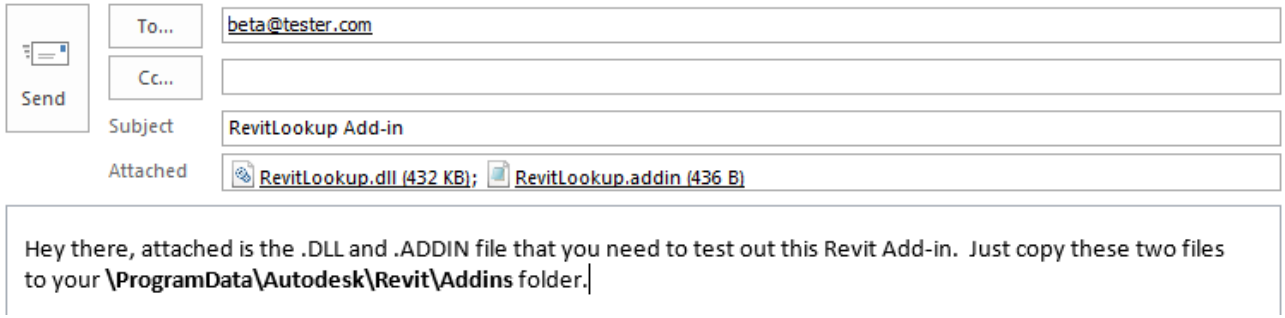
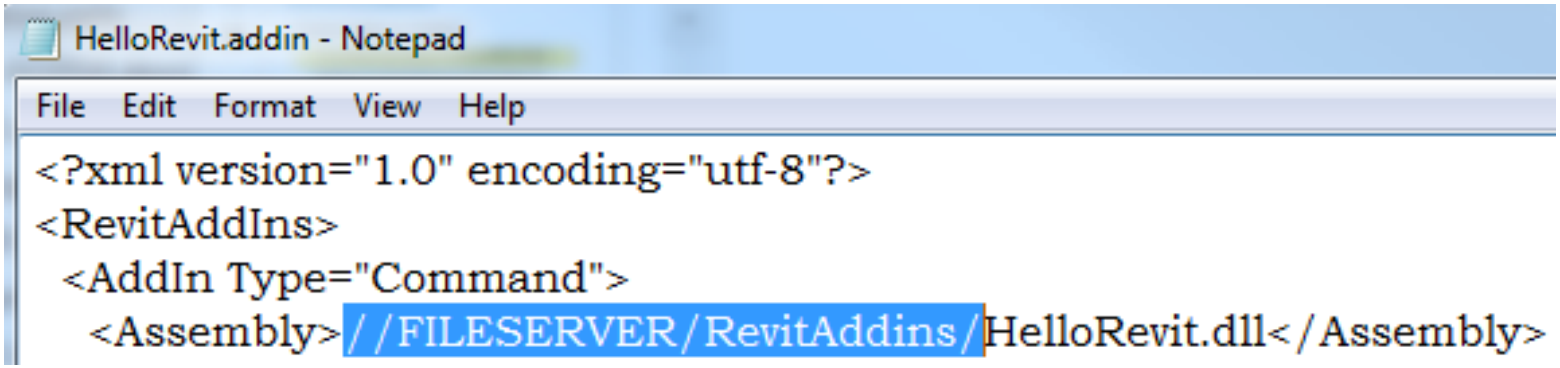
Implement your Add-in inside your company

- Sending your Add-in files through email



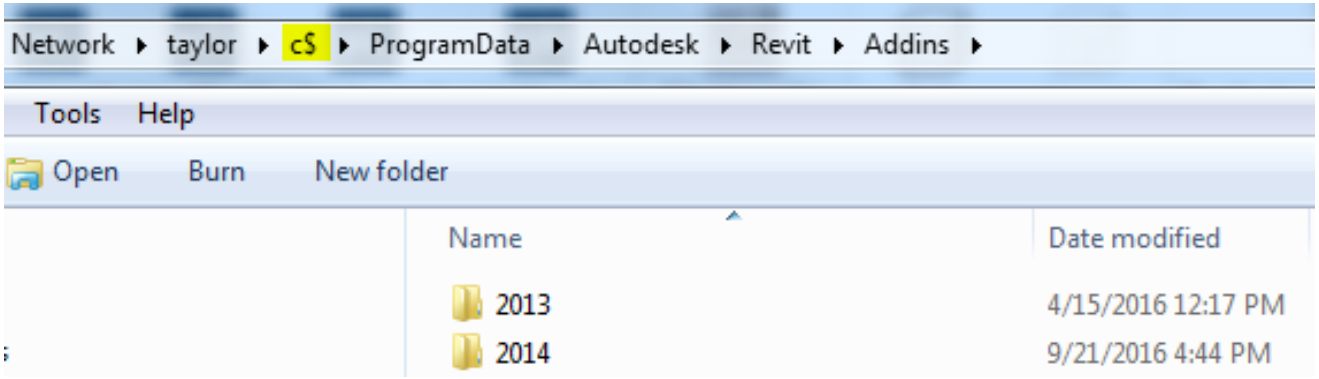
Implement your Add-in inside your company

- Modifying the .Addin file to point to a file server



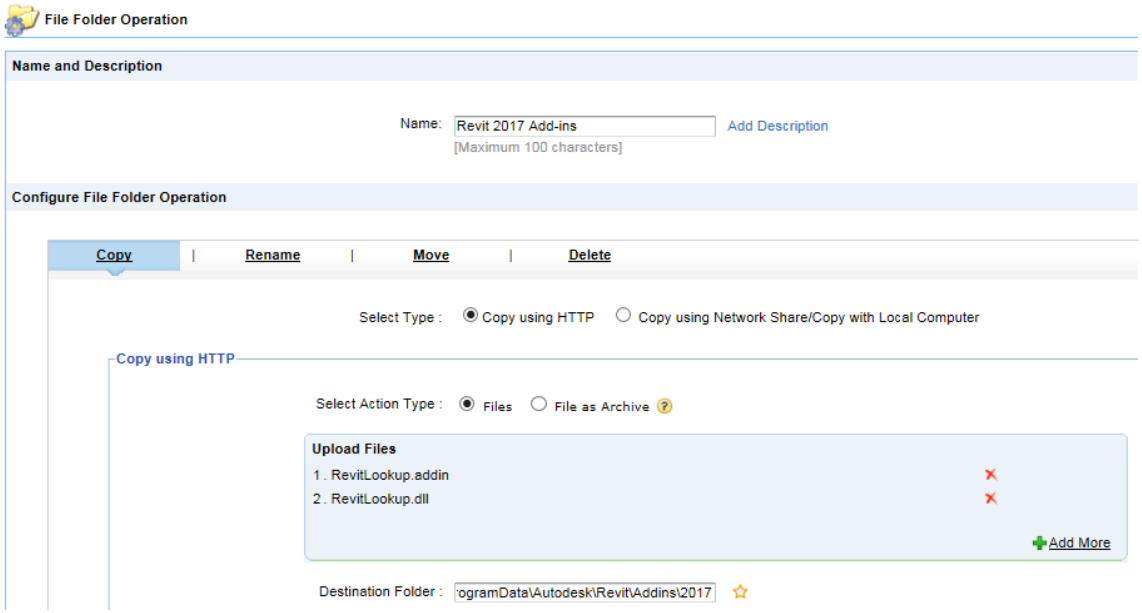
Implement your Add-in inside your company

- Copying files remotely to individual computers



Implement your Add-in inside your company

- Pushing out files using I/T management software



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The Difficulty level of building your Revit Add-in

VS.

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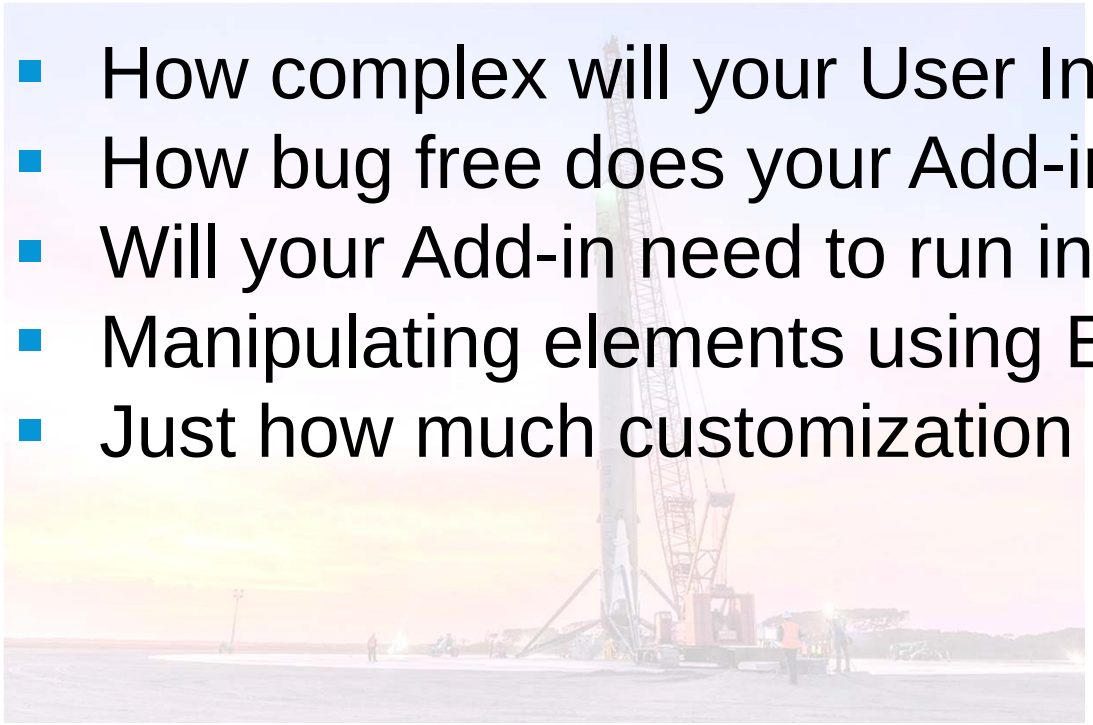

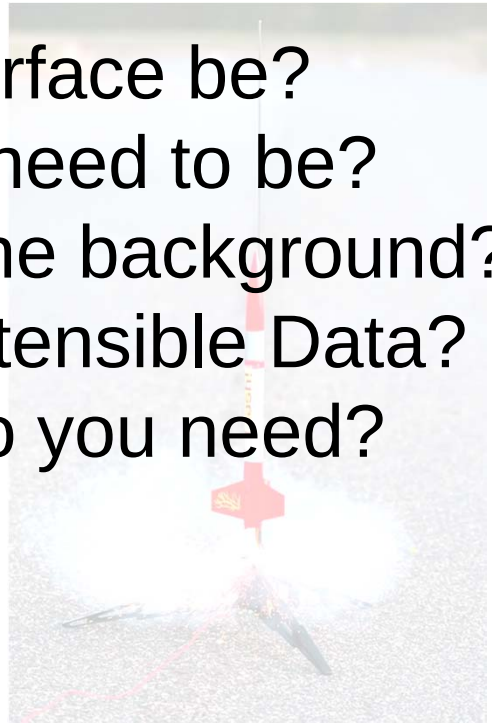

- How complex will your User Interface be?
- How bug free does your Add-in need to be?
- Will your Add-in need to run in the background?
- Manipulating elements using Extensible Data?
- Just how much customization do you need?

The Difficulty level of building your Revit Add-in

Complex tasks

- Instant Updaters and Extensible Storage
- 3D element manipulation (Transform coordinates)
- Complex User Interface – Real-time drag-drop

Simple tasks

- List all elements from Revit project
- Update specific parameters
- Simple data shown in Dialog Boxes

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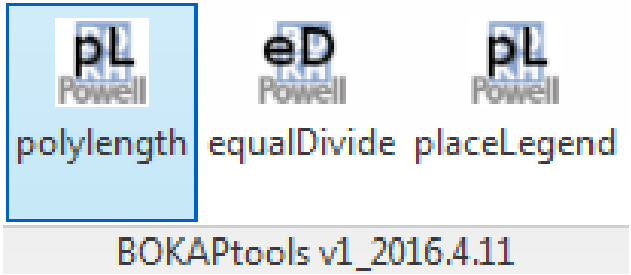
Your Revit Add-in: To Build or Buy?

- Does your firm expect a custom solution?



Your Revit Add-in: To Build or Buy?

- Can you purchase a Network(portable) License?

License Type Comparison

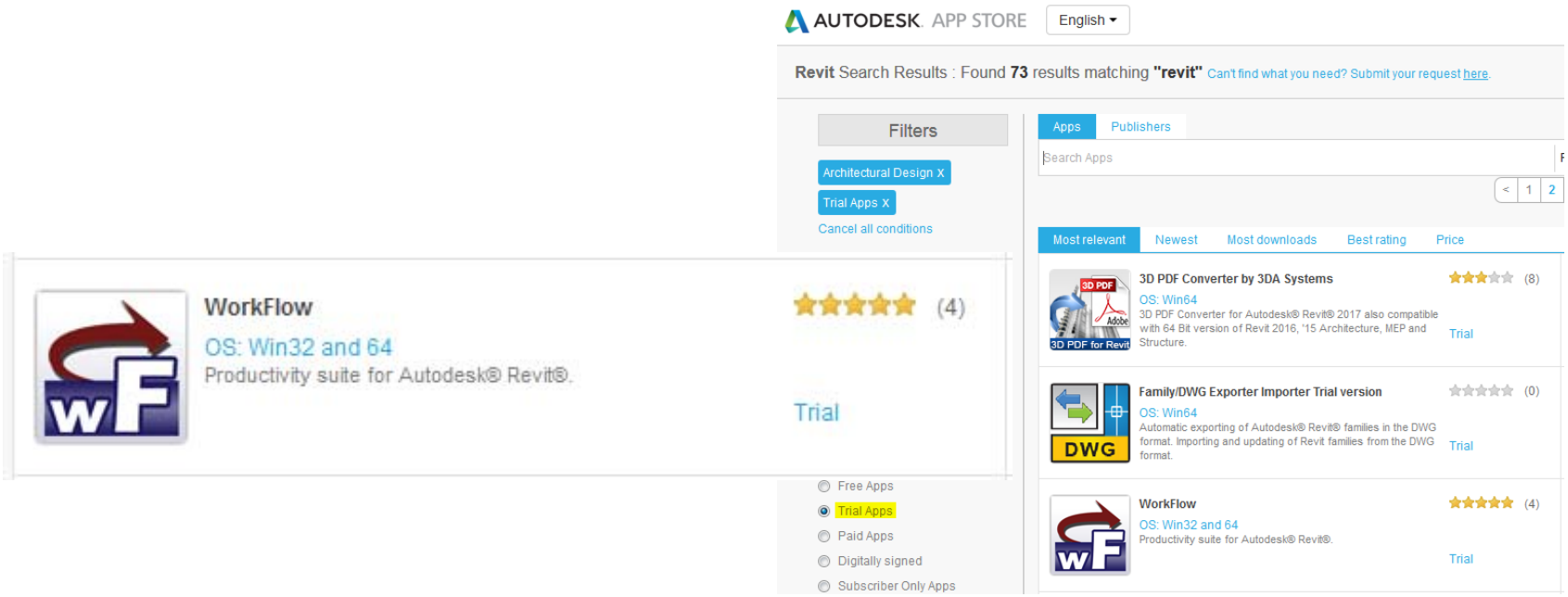
	Standalone License	*Portable License*
Single Dialog Activation	✓	✓
Move License(s) Between Computers		✓
Internet Connection Required For Checkout / Return		✓
Can be Used Offline	✓	✓
Check Out or Return a License From Anywhere		✓

Your Revit Add-in: To Build or Buy?

- How do you make suggestions or get support?

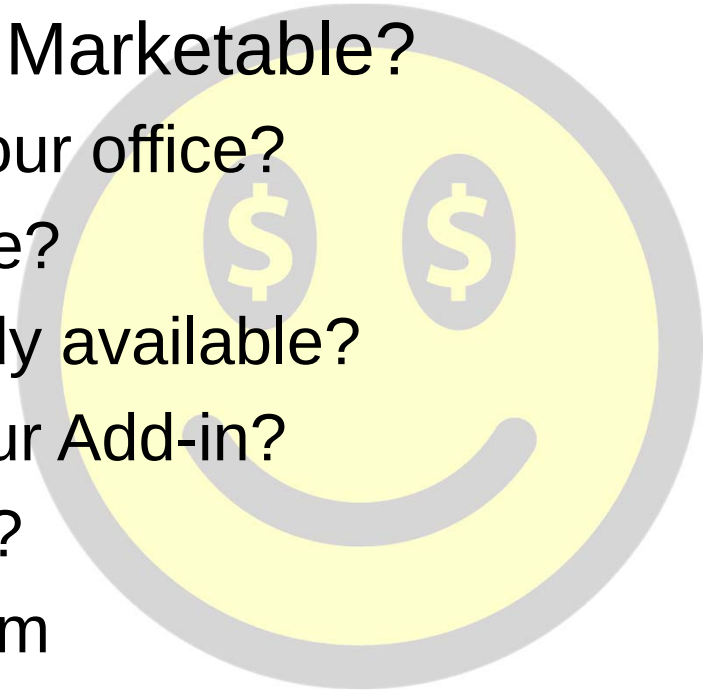
Your Revit Add-in: To Build or Buy?

- Is there a trial version available?



Conclusion: Where do I go next with my Add-in?

- So, you created something Marketable?
  - Did you design it while at your office?
  - Marketing and Selling online?
  - Competition – Add-in already available?
  - How much to charge for your Add-in?
  - Simple Installer or complex?
  - Setting up a licensing system



Class Survey – Help me, Help you..

- Please fill out your Class survey!
  - Chance to win something
    (No Coding necessary)

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