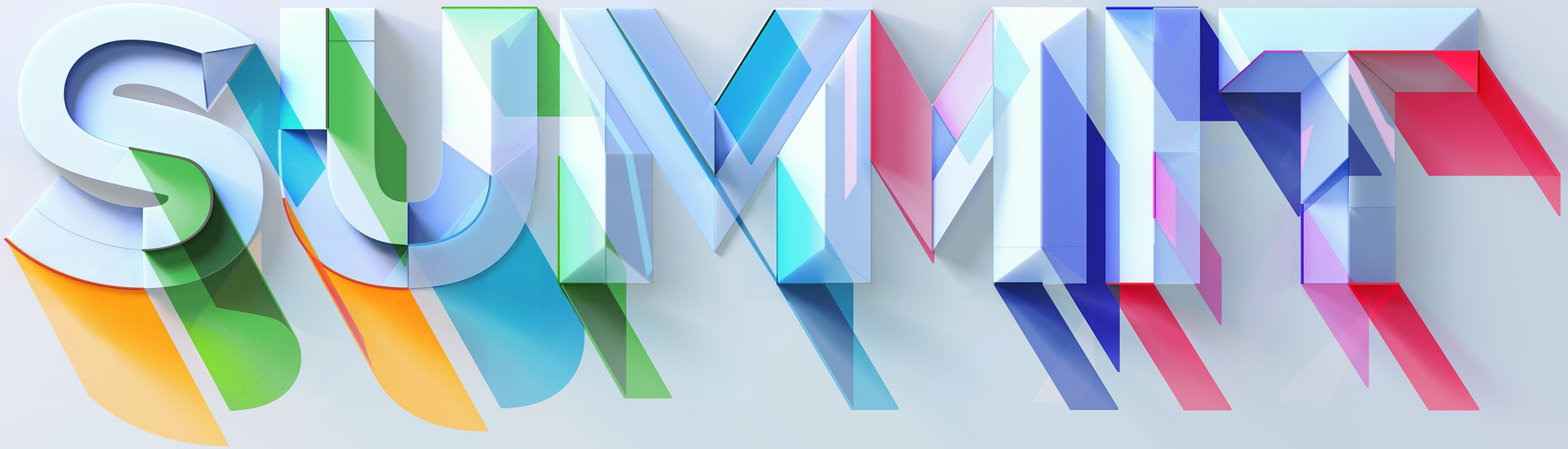
L768 - Create an AEM Custom Metadata panel in Creative Cloud apps in 90 minutes

James Lockman and Kevin Bhunut



Speakers

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1

Understand CEP components

2

Build CEP Panel

3

Manipulate Metadata using XMP Library

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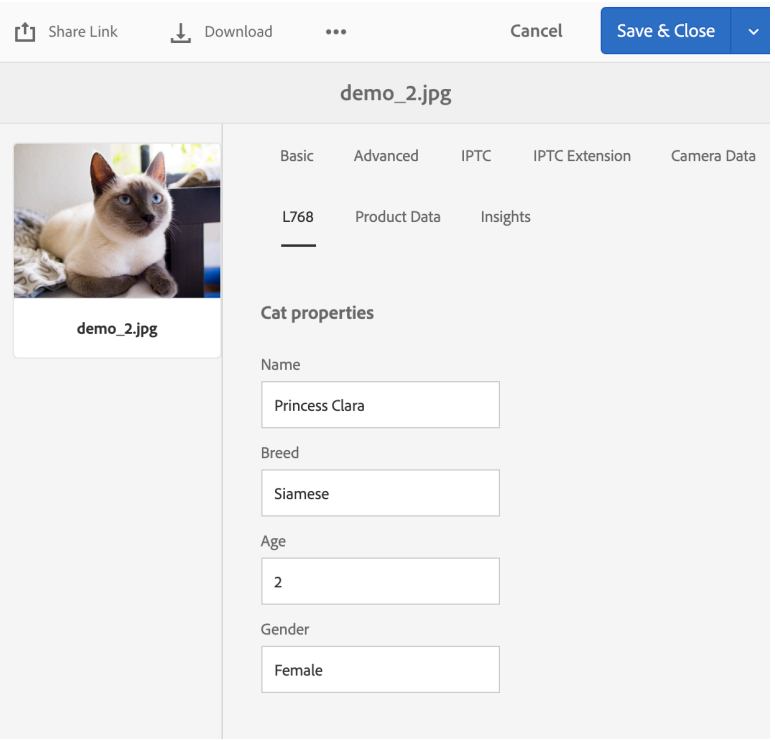
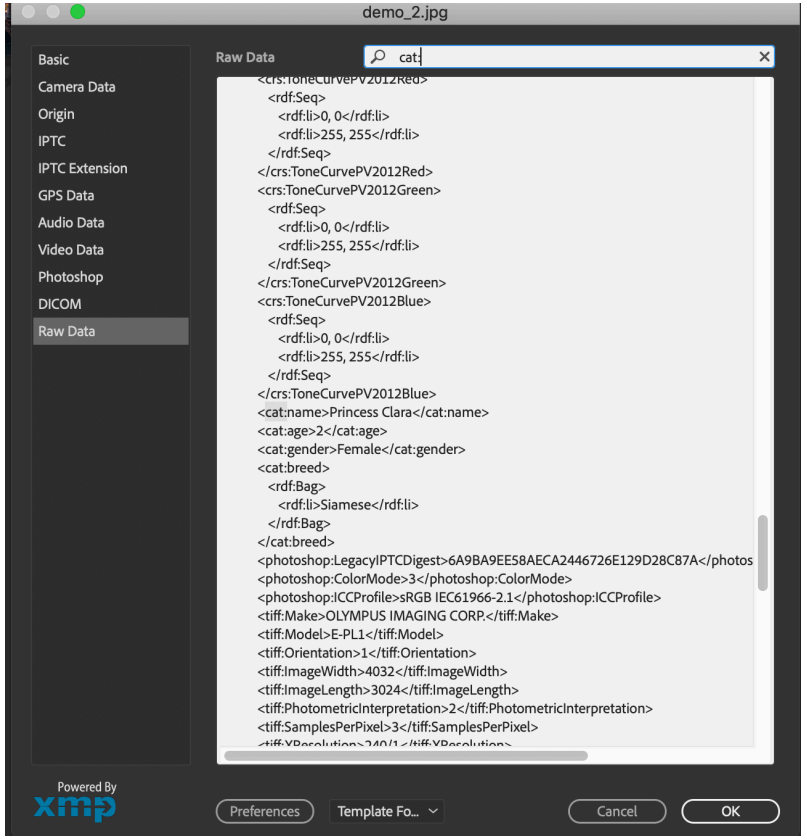
What problem are we trying to solve?

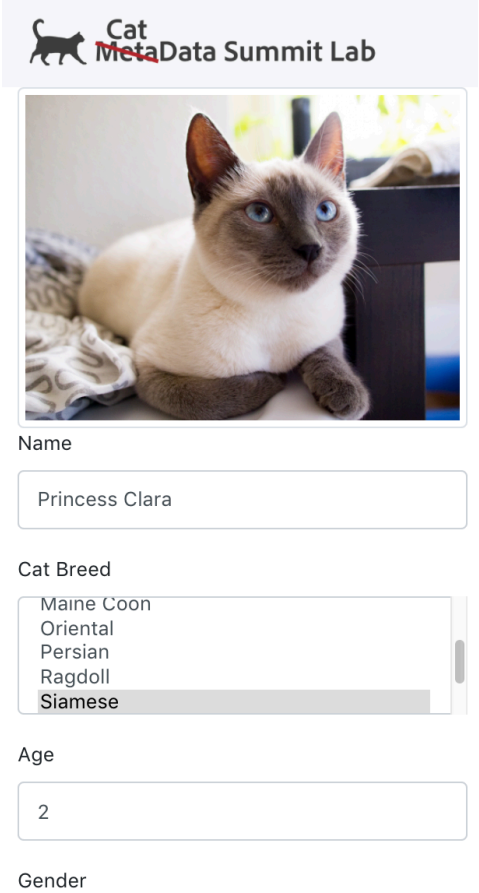
AEM



Adobe Bridge without our panel



Our custom CEP panel



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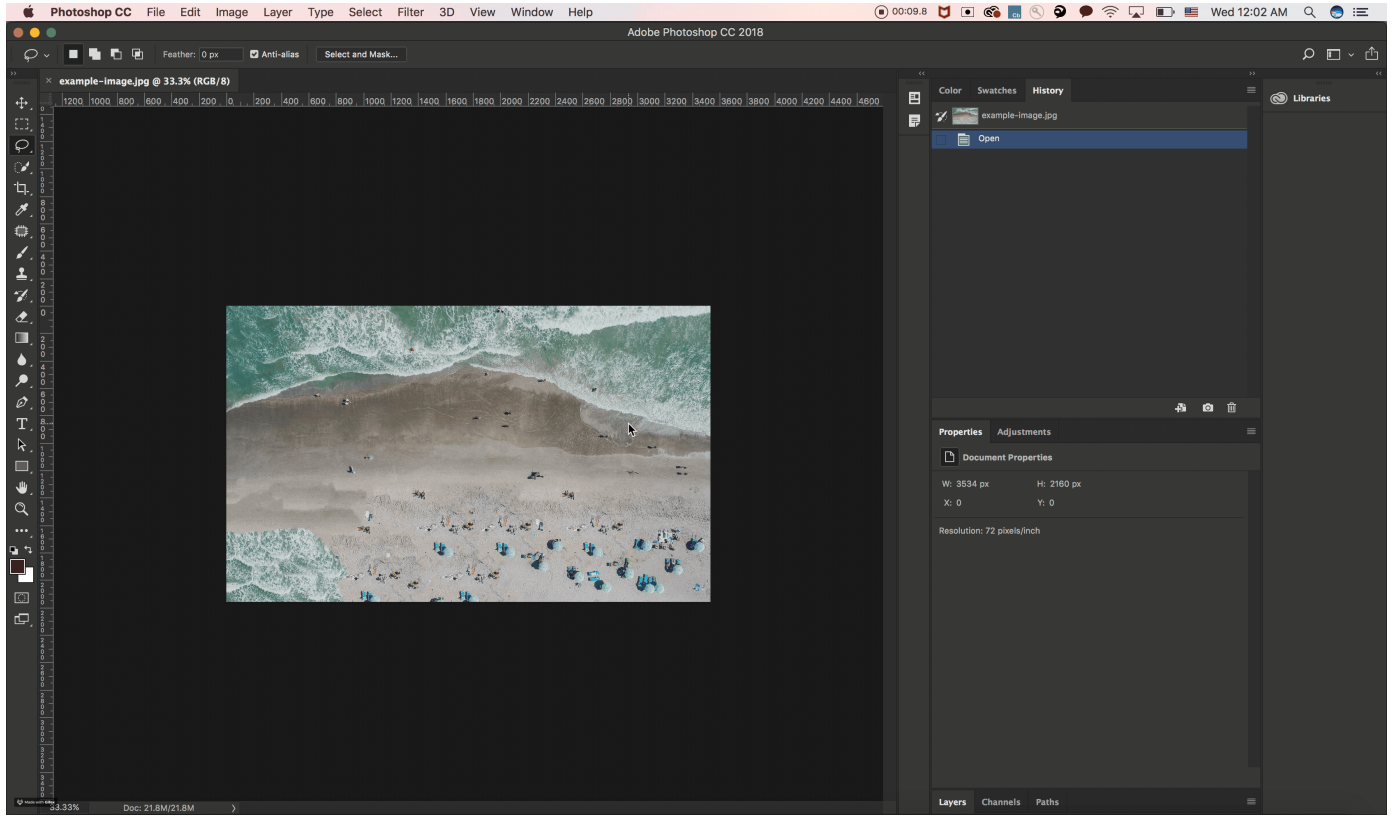
What is CEP?

The Adobe **C**ommon **E**xtensibility **P**latform (CEP) gives you the power to enhance and extend Adobe CC apps with the standard web stack: HTML, CSS, and JavaScript.



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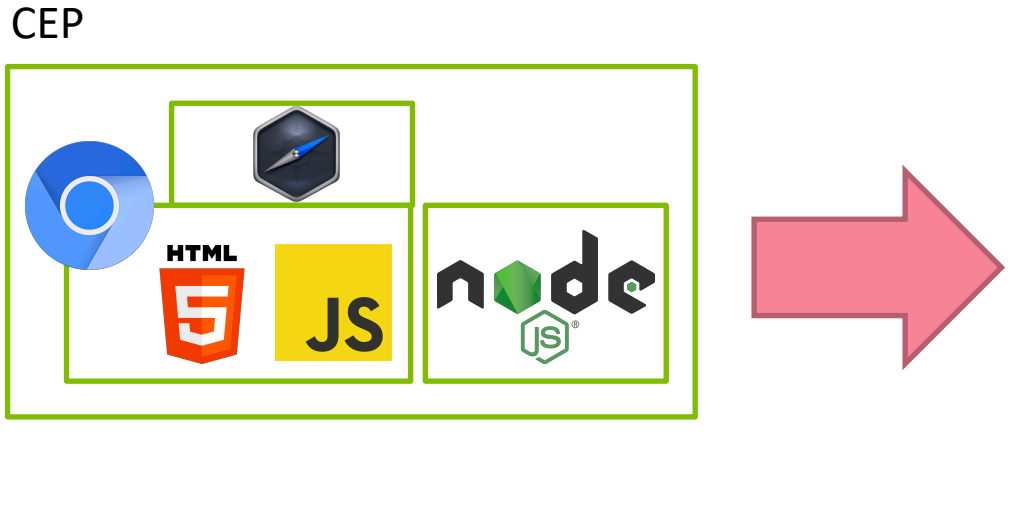
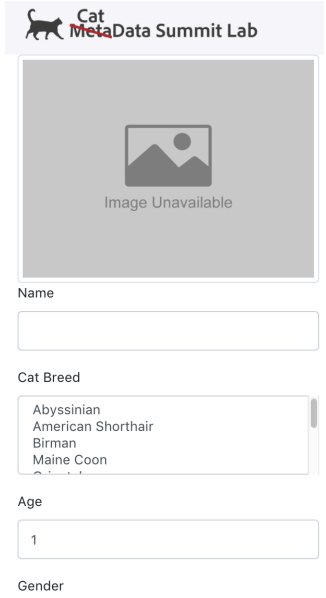
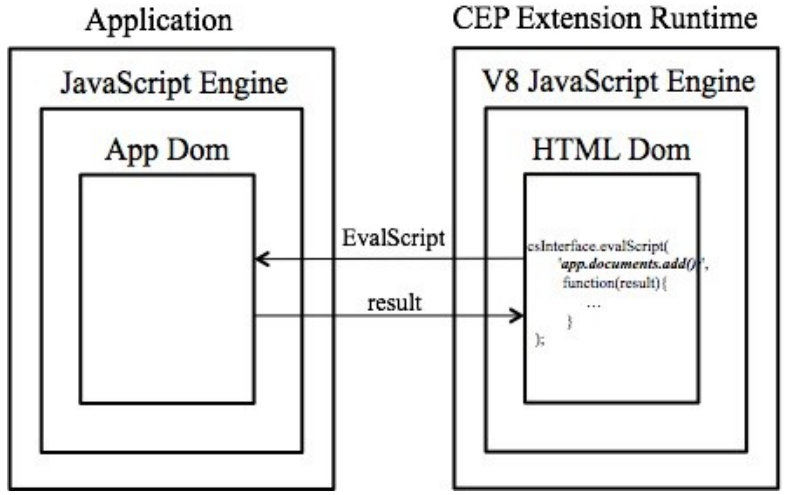
CEP Architecture

- HTML Engine is based on chromium Embedded Framework version 3 (CEF3)
- Node.js 8.6.0 (CEP 9)
- CEF3/Node integration with Node-Webkit 0.25 (CEP 9)
- Each CEP Panel has it own VM and cookie manager.







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Get Started - File Structure

- File Structure Example

Important: CSXS folder and manifest.xml are required for CEP Panel to function. manifest.xml contains CEP panel configuration such as name, id , display type, file path, startup instruction

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Get Started – JS Libraries

- CSInterface.js – This allow you to interact with CEP Engine and Application
  - Pull information about environment, file path, application version and UI theme.
  - Call JSX script, execute JSX code.
  - Open, Close, Edit Extension Panel
  - Flyout/Context Menu
- Vulcan.js – Communication between Other Applications and Extension.
  - Ie. Ask Photoshop to open a file from Bridge

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Get Started – Manifest.xml

- **ExtensionBundleId**: A unique bundle ID of extension package.
- **Extension Id**: A unique panel ID you assign to your panel.
- Host Name & Version

Application	Host ID	CC Version	CC 2014 Version	CC 2015 Version	CC 2015 Dot Version	CC 2017 Version	CC 2018 Version	CC 2019 Version
Photoshop	PHSP/PHXS	14 (CEP 4)	15 (CEP 5)	16 (CEP 6)	17.0.2 (CEP 7)	18 (CEP 7)	19 (CEP 8)	20 (CEP 9)
InDesign	IDSN	9 (CEP 4)	10 (CEP 5)	11 (CEP 6)	-	12 (CEP 7)	13 (CEP 8)	14 (CEP 9)
InCopy	AICY	9 (CEP 4)	10 (CEP 5)	11 (CEP 6)	-	12 (CEP 7)	13 (CEP 8)	14 (CEP 9)
Illustrator	ILST	17 (CEP 4)	18 (CEP 5)	19 (CEP 6)	20 (CEP 7)	21 (CEP 7)	22 (CEP 8)	23 (CEP 9)
Premiere Pro	PPRO	7 (CEP 4)	8	9	10.3 (CEP 6)	11 (CEP 6)	12 (CEP 8)	23 (CEP 9)
Prelude	PRLD	2 (CEP 4)	3	4	5.0.1 (CEP 6)	6 (CEP 7)	7 (CEP 8)	8 (CEP 9)
After Effects	AEFT	12	13	13.5	13.8.1 (CEP 6)	14 (CEP 6)	15 (CEP 8)	16 (CEP 9)
Animate (Flash Pro)	FLPR	13	14 (CEP 5)	15 (CEP 6)	15.2 (CEP 6.1)	16 (CEP 6.1)	18 (CEP 8)	19 (CEP 9)
Audition	AUDT	6	7	8	9.2.1 (CEP 6)	10 (CEP 6)	11	12 (CEP 9)
Dreamweaver	DRWV	13 (CEP 4)	15 (CEP 5)	16 (CEP 6)	-	17 (CEP 6.1)	18 (CEP 8)	19 (CEP 9)
Muse	MUSE	7.4	-	2015	-	2017	2018	-
Bridge	KBRG	6	-	6.3.1	-	-	8 (CEP 8)	9 (CEP 9)
Premiere Rush	RUSH	-	-	-	-	-	-	1 (CEP 9)

```xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ExtensionManifest xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    ExtensionBundleId="com.adobe.summit19.cepmetadata"
    ExtensionBundleVersion="1.0" Version="9.0">
    <ExtensionList>
        <Extension Id="com.adobe.summit19.cepmetadata.main" Version="1.0"/>
    </ExtensionList>
    <ExecutionEnvironment>
        <HostList>
            <Host Name="KBRG" Version="[8.0,99.9]"/>
            <Host Name="PHSP" Version="20.0"/>
            <Host Name="PHXS" Version="20.0"/>
        </HostList>
        <LocaleList>
            <Locale Code="All"/>
        </LocaleList>
        <RequiredRuntimeList>
            <RequiredRuntime Name="CSXS" Version="9.0"/>
        </RequiredRuntimeList>
    </ExecutionEnvironment>
```

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Manifest.xml – Continued.

- **Extension Id:**
- **MainPath**: Path to your index.html.
- **CEFCommandLine:** Chromium Command Line Switches
- **Type:** Your Panel UI type – Panel | ModalDialog | Modeless | **Embedded** | Custom
- **Menu**: Your panel name that will appear in the dropdown menu
- **Geometry**: Default size of your panel

Note: Each application has a specific Panel UI Type definition. A manifest can include multiple panel definitions.

```
20      </ExecutionEnvironment>
21      <DispatchInfoList>
22          <Extension Id="com.adobe.summit19.cepmetadata.main">
23              <DispatchInfo>
24                  <Resources>
25                      <MainPath>./client/index.html</MainPath>
26                      <CEFCommandLine>
27                          <Parameter>--enable-nodejs</Parameter>
28                          <Parameter>--persist-session-cookies</Parameter>
29                          <Parameter>--mixed-context</Parameter>
30                      </CEFCommandLine>
31                  </Resources>
32                  <Lifecycle>
33                      <AutoVisible>true</AutoVisible>
34                  </Lifecycle>
35                  <UI>
36                      <Type>Embedded</Type>
37                      <Menu>Summit 2019 CEP Lab</Menu>
38                      <Geometry>
39                          <Size>
40                              <Height>580</Height>
41                              <Width>334</Width>
42                          </Size>
43                          <MaxSize>
44                              <Height>800</Height>
45                              <Width>1200</Width>
46                          </MaxSize>
47                          <MinSize>
48                              <Height>400</Height>
49                              <Width>600</Width>
50                          </MinSize>
51                      </Geometry>
52                  </UI>
53              </DispatchInfo>
54          </Extension>
55      </DispatchInfoList>
56  </ExtensionManifest>
```

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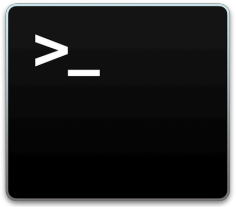
Let's Get Started

Enable unsigned extension support

Open  Terminal

```
defaults write com.adobe.CSXS.9 PlayerDebugMode 1
```

then

```
killall cfprefsd
```

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Let's Get Started

Copy **CatData_Summit_Lab** from

Desktop/Summit-2019-L768/resources/todo_lab

to

/Applications/Adobe Bridge 2019/CEP/extensions

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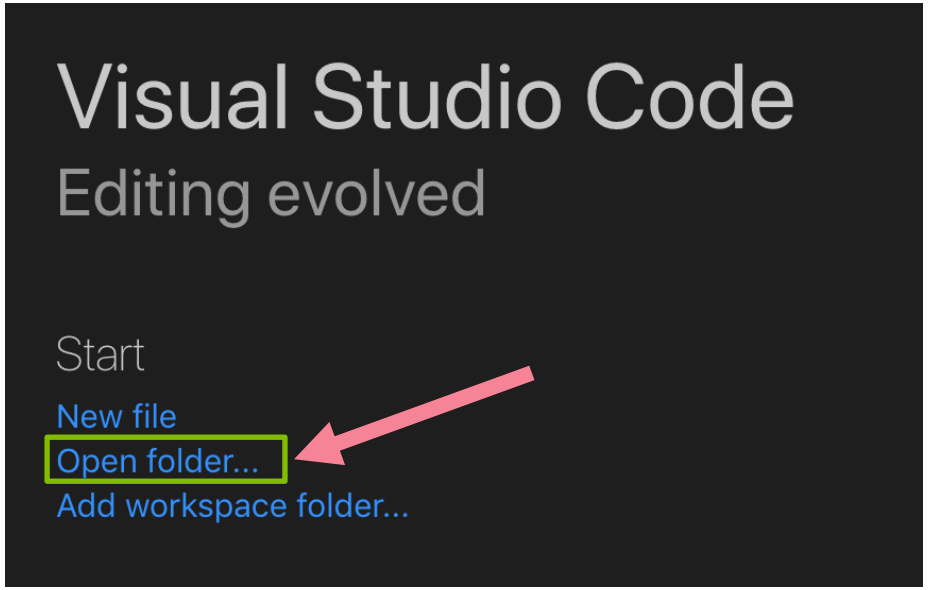
Open CEP Project in Visual Studio Code

Open Visual Studio Code



Open the following folder

Applications -> Adobe Bridge 2019 -> CEP -> extensions -> CatData_Summit_Lab

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Finalize the product

- Build and Sign Extension
  - Sign Extension
    - Using Self-Sign or CA generated Certificate
  - Using ZXPCMD

- Deploy Extension to End-Users
  - Exchange Marketplace
  - ZXPInstaller
    - http://zxpinstaller.com/
  - Anastasiy's Extension Manager
    - http://install.anastasiy.com/

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Post Lab

- You can grab today lab from
  - https://github.com/adobe-dmeservices/Summit_2019_L768
- Additional Resources
  - CEP Github
    - https://github.com/Adobe-CEP
  - CEP Cookbook
    - https://git.io/fjfgc
  - Check out Steve Kwak on Medium.com
    - https://medium.com/@stevekwak
- Feel free to email us on any question and follow up

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Q & A

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adobe.com/go/summit2019-l768

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