



Esri International Developer Summit
Palm Springs, CA

Getting Started with ArcGIS Runtime SDK for the Microsoft .NET Framework

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Agenda

- **What is the ArcGIS Runtime?**
- **ArcGIS Runtime SDK for .NET**
 - Platform
 - Highlights
 - Getting started
 - Sharing code
 - Offline
 - Migrating
 - Road Ahead



ArcGIS Runtime

Runtime built using C++

EXPLOITS THE CAPABILITIES OF THE DEVICE

Functionality exposed to developers via an API
native to the platform

INTUITIVE TO LEARN

Common functionality set and conceptual model

EASES MULTI PLATFORM DEVELOPMENT

Device Platforms



PHONE



TABLET



LAPTOP

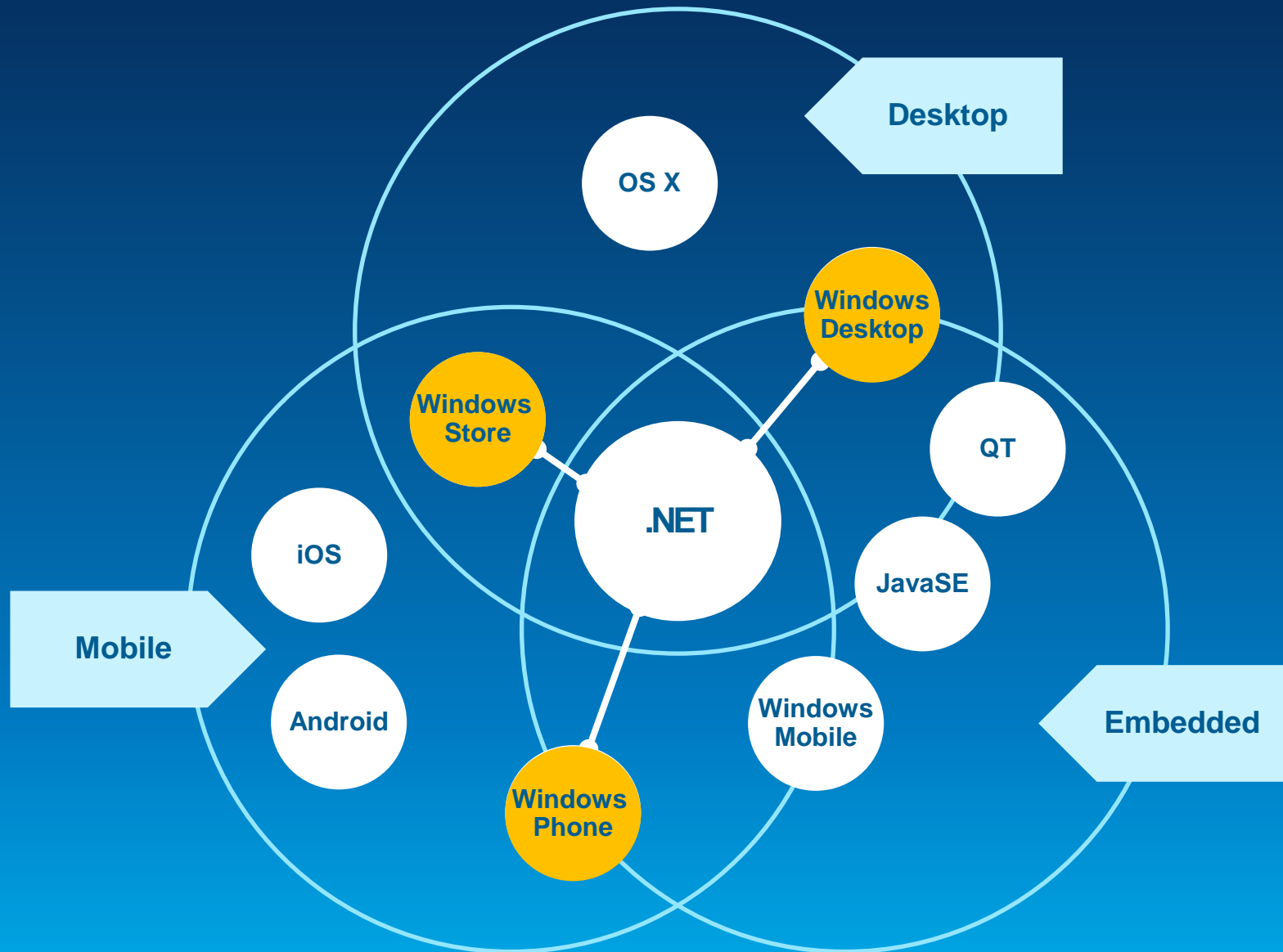


DESKTOP



EMBEDDED

Runtime platforms



ArcGIS Runtime SDK for .NET

- Supports .NET development on three platforms
- Shared API design and functionality



Windows
Desktop API



Windows
Store API



Windows
Phone API



ArcGIS Runtime



SDK Highlights

- Rich visualization with high-performance mapping
- Draw, query, identify, and select features and graphics
- Use data Portal and ArcGIS Server, ArcGIS Online
- Work offline with local basemaps and data
 - Editing and sync, Geocode, Routing
- Work with device sensors
- Perform advanced geometric operations locally
- Task-based asynchronous pattern
- MVVM friendly
- Simplified licensing model



Getting Started

- **Go to the Developers site**
 - <https://developers.arcgis.com/net>
 - Check system requirements
- **Download and install the public beta**
 - <http://betacommunity.esri.com>
- **Get more resources**
 - Toolkit
 - Samples
 - GitHub repos
- **Provide feedback**
 - Beta community (use forums, log issues)



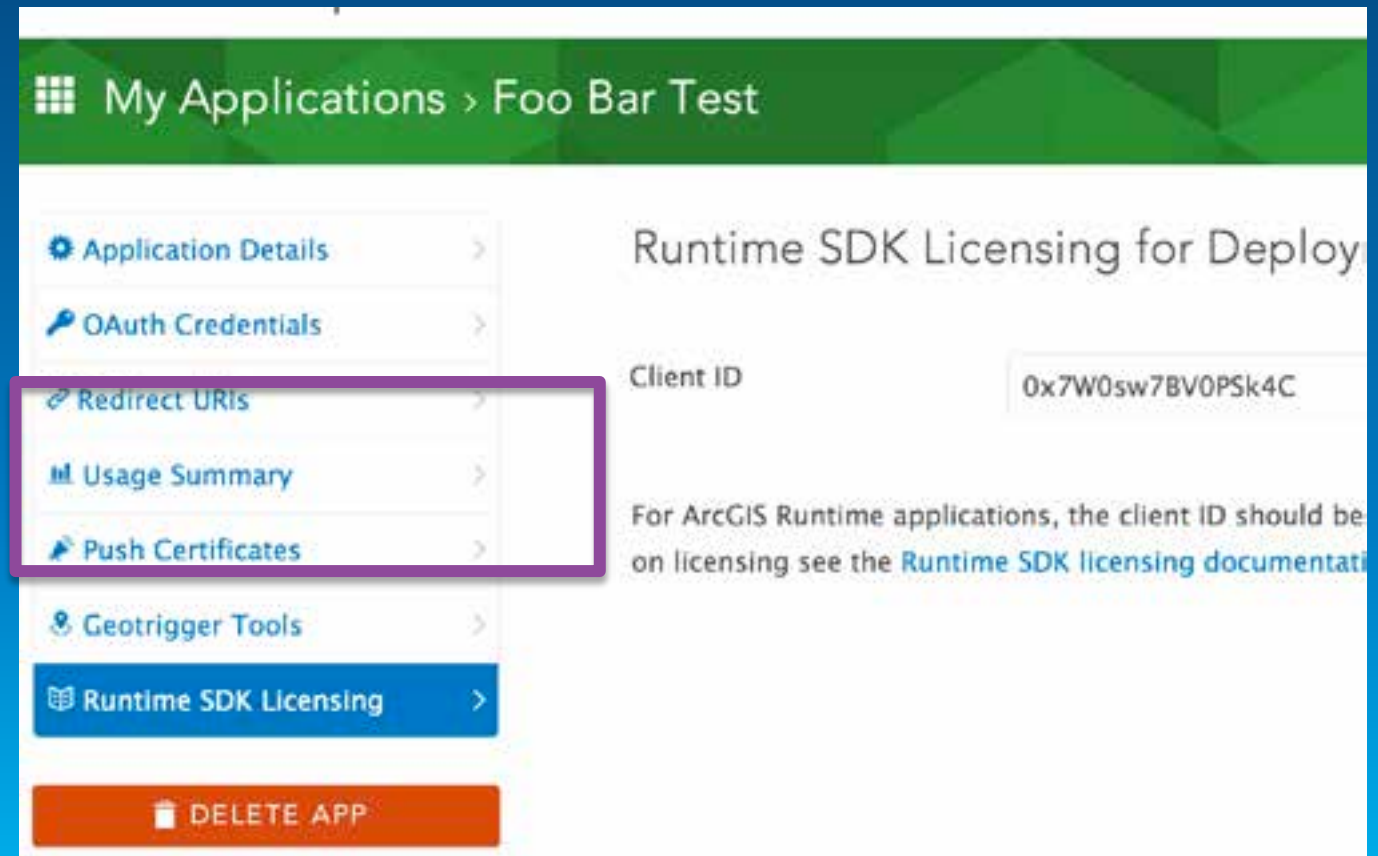
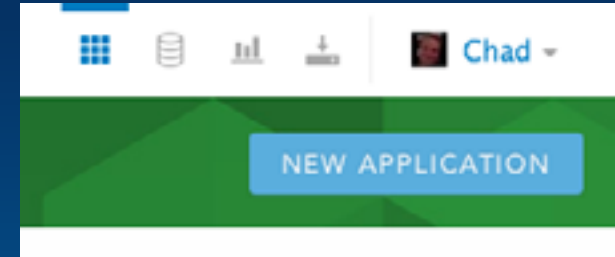
ArcGIS Runtime SDK Licensing

License Level	Available functionality
Developer (development and testing only)	All functionality (watermarks and debug messages will be generated, nag screens with local server*)
Basic	Connected - all functionality Offline - map viewing only
Standard	Connected and offline - all functionality, includes: <ul style="list-style-type: none">• Local locators (geocoding)• Local routing• Local geodatabase editing• Local geodatabase sync operations• Local server*

* For those SDKs that support it

How to license your app at the basic level

- <http://developers.arcgis.com>
- Under Application section, create a New Application (or select existing)
- Click on Runtime SDK Licensing
- Copy the Client ID and use it to set your clientID



How to license your app at the standard level

- **You have 2 options:**
 - 1. Use an organization account (ArcGIS Online or Portal for ArcGIS)**
 - Requires users of your app to log in with their account
 - 2. Use a license string obtained from Customer Service or your international distributor**
 - License burnt into the app
 - Extensions can also be added with this option

For more info speak to sales or product management

DEMO

Sharing code

Morten Nielsen



Model-View-View Model (MVVM)

Views

How to display information
Written in XAML

View

Platform-specific

Databinds

View Models

What information to display
Flow of interaction

View Model

Portable

References

Models

Data objects
Business logic
Etc.

Model

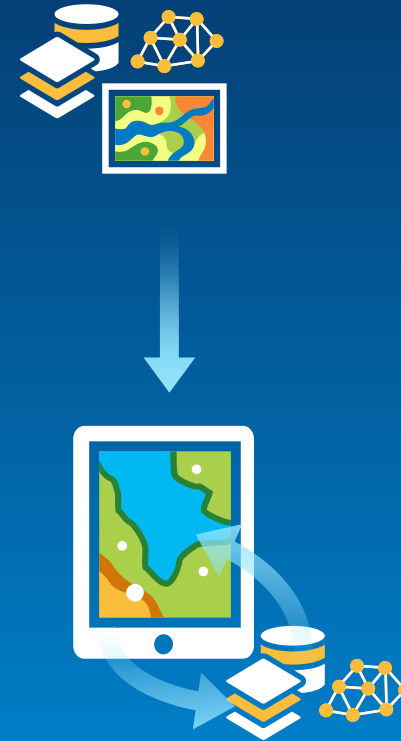
Offline

Antti Kajanus



Offline Summary

- **Basemaps**
 - Local ArcGIS Tiled Map Service Layer
 - Export Tile Cache Task
- **Features**
 - Feature Layer, Geodatabase Feature Table
 - Geodatabase Sync Task
- **Addresses**
 - Local Locator Task
- **Directions**
 - Local Route Task



.NET Product Story



Migration

Mike Branscomb



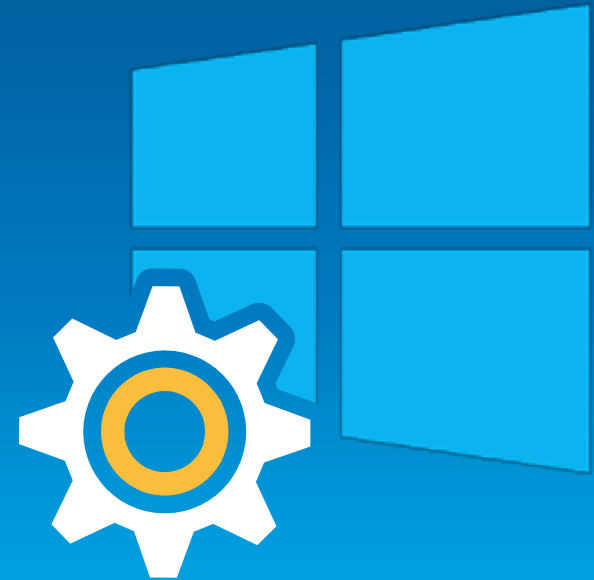
Preparing for the new .NET SDK

- **What about all the the great skills and knowledge I have from using the current WPF SDK?**
 - All still very relevant to the new .NET SDK
 - Shares many of the same concepts, class names and class members
 - But
 - Based on .NET 4.5
 - Extensive use of async Tasks instead of events
 - Designed for MVVM
 - Refined for consistency within the API and with other ArcGIS Runtime APIs
 - Built with the benefit of hindsight!

<http://blogs.esri.com/esri/arcgis/2014/03/07/getting-ready-for-the-new-net-sdk/>

Preparing for the new .NET SDK

- Do I need to migrate all my WPF apps?
 - Perhaps not...
 - Transition will involve some redevelopment
 - Review on an app-by-app basis
 - Does your app need functionality in the new API?
 - If no then continue to build with WPF SDK
 - If yes then plan for migration...
 - Start now by taking advantage of 10.2 / 10.2.2
 - And .NET 4.5 / C# 5.0



What's coming...



Next release...

- **Direct read of raster datasets***
- **Direct read of vector data (kml, shapefiles)**
- **3D***
- **Simplification**
- **Common conceptual model**
- **More offline capabilities**
 - **Feature service table**
 - **Versioned data support**

*Some apis will release items before others...

DevSummit Runtime sessions



ArcGIS Runtime SDK sessions Tuesday

Session Name	Time	Location
Deploying Windows Store Applications	2:30pm – 3:30pm	Demo Theater 1 – Oasis 1
Deploying Windows Phone Applications	5:30pm – 6:30pm	Mojave Learning Center
Squeezing Every Ounce of Performance from ArcGIS Runtime	5:30pm – 6:30pm	Mesquite B

ArcGIS Runtime SDK sessions Wednesday

Session Name	Time	Location
Building WPF Apps with the New .NET ArcGIS Runtime SDK	10:30am – 11:30am	Pasadena/Ventura/Sierra
Building Windows Store and Windows Phone Apps with ArcGIS Runtime SDK	1:00pm – 2:00pm	Primrose C/D
Building WPF Apps with Runtime SDK	2:30pm – 3:30pm	Demo Theater 2 – Oasis 1
Building Offline Apps with ArcGIS Runtime SDK – Part 1	4:00pm – 5:00pm	Primrose B
Building Offline Apps with ArcGIS Runtime SDK – Part 2	5:30pm – 6:30pm	Primrose B

ArcGIS Runtime SDK sessions Thursday

Session Name	Time	Location
The Road Ahead: ArcGIS Runtime SDKs	8:30am – 9:30am	Primrose A
Everything (or Anything) You Wanted to Know about the ArcGIS Runtime SDKs	10:00am – 11:00am	Primrose A
Building Windows Store and Windows Phone Apps with ArcGIS Runtime SDK	1:00pm – 2:00pm	Mesquite B
Migrating Your WPF Apps to the New ArcGIS Runtime SDK for .NET	1:00pm – 2:00pm	Pasadena/Ventura/Sierra
Building WPF Apps with the New .NET ArcGIS Runtime SDK	2:30pm – 3:30pm	Mesquite B

Questions?

- **Session Surveys**

<http://www.esri.com/events/devsummit/session-rater>



Understanding our world.