Building Cross Device Experiences with Project Rome

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Owner
Champion DS

Level: Introductory to Intermediate.

Code Again for the First Time!

Session Title Goes Here Use Two Lines if Needed

Speaker Name
Title
Organization

Level: Intermediate, etc.

Let's talk Windows 10 and UWP….

Users have multiple devices

60% of users in US, China, India and Brazil use a PC, Phone *and* Tablet

~42% begin an activity on one device and finish on another

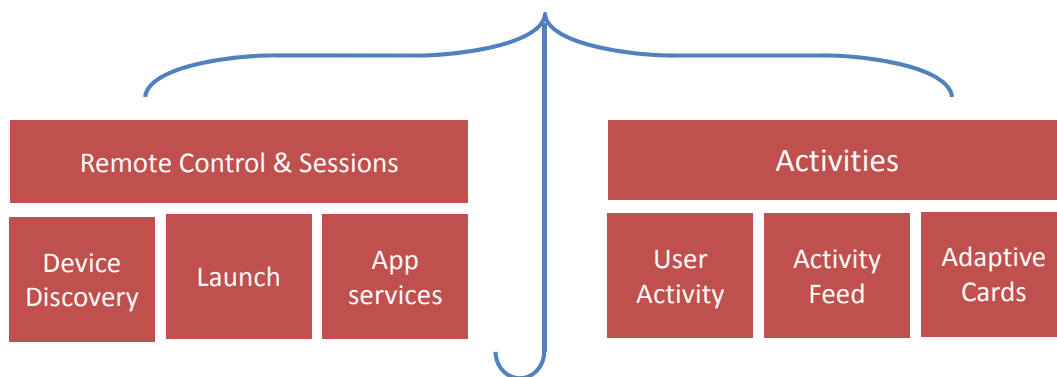**82%** of consumers live in a heterogeneous environment

Project Rome

Enables the user to connect, manage and control any connected app or device, proximally or from the cloud

Exposes the user's device graph, enabling the app developer to pivot on the devices, apps, platforms and services

Empowers human centric experiences that evolve with understanding of the individual's environment

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PROJECT ROME

Remote Control & Sessions			Activities		
Device Discovery	Launch	App services	User Activity	Activity Feed	Adaptive Cards

Smart Glass

Added a second screen to Xbox apps

Connects Phone and PC to Xbox

Cross platform on Windows/iOS/Android
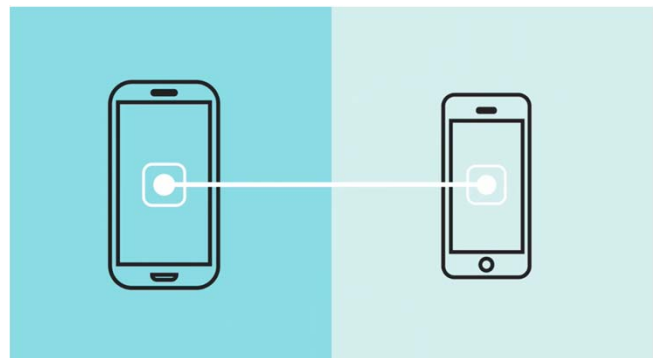
Proximal connections on the same
network

App2App Communications

Launch apps via Contract or Uri

Simple communication between apps

Background services that can share
functionality between apps

Native experiences for URIs

APP URI HANDLERS

Custom Protocols

Register a custom protocol handler
with Windows (i.e. **myapp://**)

Could share deep links between
machines or users

If app is not present on the machine,
the App Store opens to the app

App Uri Handlers

Register app on Windows machine to handle basic web uris

If you selects uri, routed to app instead of website

If app is not on machine, user continues on to website

DEMO
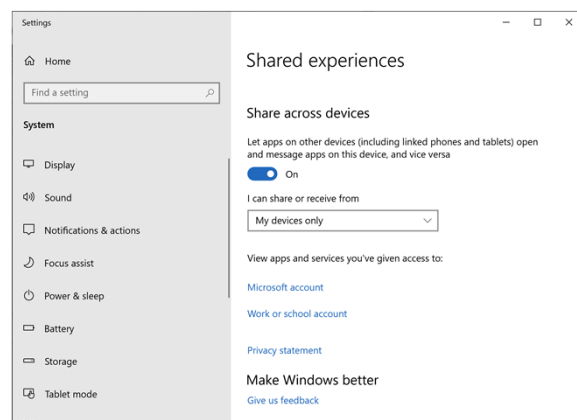## Implementing AppUriHandlers

Sharing with others
NEARBY SHARE

Enabling Shared Experiences

User can enable sharing between their devices or others around them

Have the ability to enable/disable certain apps
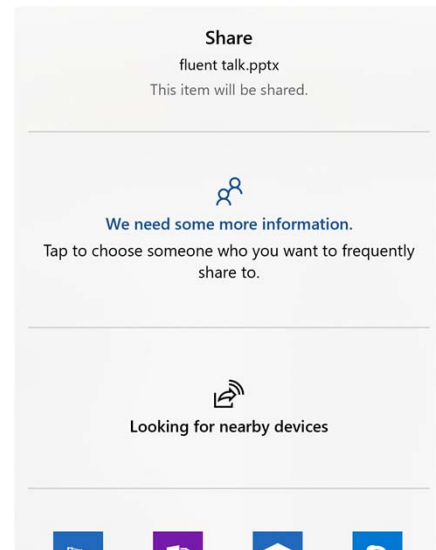
Enable Nearby Share

Nearby Share

Built in to Windows (April 2018 update)

Shares by Bluetooth proximity

Built into the SDK via the RemoteSystemWatcher

Share
fluent talk.pptx
This item will be shared.

We need some more information.
Tap to choose someone who you want to frequently share to.

Looking for nearby devices

DEMO
Nearby Share

Extending the experience

CROSS DEVICE INTERACTIONS

Extending the experience

Launch app on a difference device

Share information between devices

Augment the experience

Create companion experiences

Provide additional information
to second screen

Allow user interaction from
second screen

Enrich the experience

Remote control experience

Enabling messaging
between devices

DEMO
Remote Control

Remote App Services

Remember those app services we talked about in the beginning?

Any service can be enabled to be accessed remotely

Now apps can talk to each other across machines

Enable Remote App Service

AppServiceConnection exposes an isRemote property to identify if services are remote

Manifest
```
<uap:Extension Category="windows.appService"
IsRemote="true" EntryPoint="AudioPlayer.AudioPlayerTask">
```

Maximum messaging size is 64k

Remote App Service Lifetime

Service is created on request and lasts the length of the connection

Client has the ability to terminate the service

App service is subject to UWP life cycle events

Time to have a party...

REMOTE SESSIONS

Remote Sessions

Allow others to share a
connected experience

Connects over Bluetooth or LAN

Communicates through
ValueSets

Creating Remote Sessions

Create a new session with a **RemoteSystemSessionController**

Discover and connect to sessions with a **RemoteSessionWatcher**

Broadcast **ValueSets** to group or individuals

Ideas for Remote Sessions

Scrum Poker

Voting Apps

Messaging App

DEMO
Team Messanger

Past, present, and future

CURRENT STATE

Features in 2017…

	Cloud Discovery	Nearby Discover	Nearby Share	Launch & Send Message	Receive Message	User Activities	Sessions
Windows	■	■		■	■	■	
Android	■	■		■			
iOS	■	■		■			
MS Graph	■	N/A	N/A	■	N/A	■	

Features in 2018…

	Cloud Discovery	Nearby Discover	Nearby Share	Launch & Send Message	Receive Message	User Activities	Sessions
Windows	■	■	■	■	■	■	■
Android	■	■	Share From Only / Share To Coming Soon	■	■	■	Coming Soon
iOS	■	■	Coming Soon	■	■	■	Coming Soon
MS Graph	■	N/A	N/A	■	N/A	■	Coming Soon

SDKs

Platform	Samples	SDK Package
Windows	Project Rome for Windows samples (GitHub)	sdk April 2018 Update
Android	Project Rome for Android samples (GitHub)	Download 0.13.0
iOS	Project Rome for iOS samples (GitHub)	pod v0.13.0
Graph	Microsoft Graph	rest Beta

Learn more about Project Rome

https://aka.ms/ProjectRome

- Documentation

- Code Samples
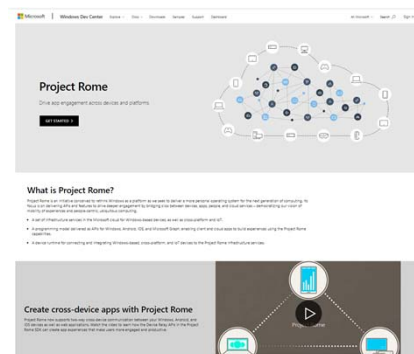
THANK YOU

QUESTIONS OR COMMENTS?

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