Windows Phone development

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Evaluations and questions

GOTO GUIDE APP

Let's Get Started

Today's Talk:

What You Need To Get Started

Dev Center & Tools

Design Principles

UI Framework & XAML

Controls

Pages & Navigation

Live Tiles

Launchers & Choosers

Web Content

Making Money

Additional features

Dev center & tools

Dev Center

Design Guidelines

Developer Tools & SDKs

Videos, Blogs, Samples, Publish

http://developer.windowsphone.com/

Tools

Visual Studio, Blend, Emulator, Device Unlock, App Deploy, Store Test Kit

Design Principles

Pride in craftsmanship
More with less
Fast and fluid
Authentically digital
Win as one

Using a common UI model and ecosystem creates complete end-to-end user scenarios. In other words, try not to reinvent the wheel. Innovation is great, but not at the expense of the user experience.

UI Framework & XAML

UI Framework

Signature & Standard Controls

Layouts

Tree based

Retained mode / composited framework

Fully extensible

  UserControl & Panel

  Styling

  Templating

  Subclassing

XAML

eXtensible Application Markup Language

A declarative, markup-based language to define your user experience

Everything you can do in XAML you can do in code – it's just easier in XAML.

```csharp
StackPanel stackPanel = new
StackPanel();

TextBox textBox = new TextBox();
stackPanel.Children.Add(textBox);

Button button = new Button();
stackPanel.Children.Add(button);
```

```xml
<StackPanel>
    <TextBox/>
    <Button/>
</StackPanel>
```

App manifest

Define application parameters
  - Display name
  - App icon
  - Supported resolutions
  - Tile template
  - Tile images

Declare capabilities used by app

Specify hardware requirements

Packaging metadata

Use this page to set the UI details that identify and describe your applicatio

Display Name:

Description: Sample description

Navigation Page: MainPage.xaml

App Icon:

...

Supported Resolutions:

☑ wvga   ☑ wxga   ☑ 720p

Tile Template: TemplateFlip

☐ Support for large Tiles

Tile Title:

Tile Images: Small: Medium:

tools & ui framework

demo

Controls

Reusable & Customizable

Embody the Windows Phone design principles

Signature Controls
Panorama, Pivot, LongListSelector, AppBar

Standard Controls
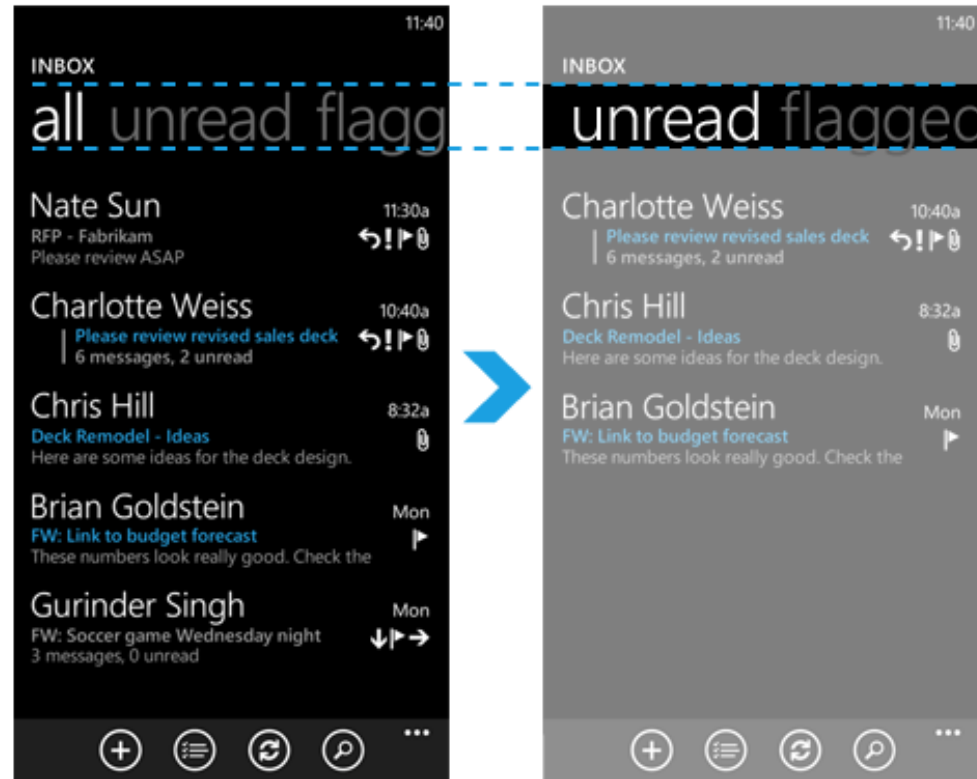Map, WebBrowser, Ads, Intrinsic Controls (Button, TextBox, Grid, etc)

Toolkit Controls
DatePicker, TimePicker, Rating, AutoCompleteBox, etc
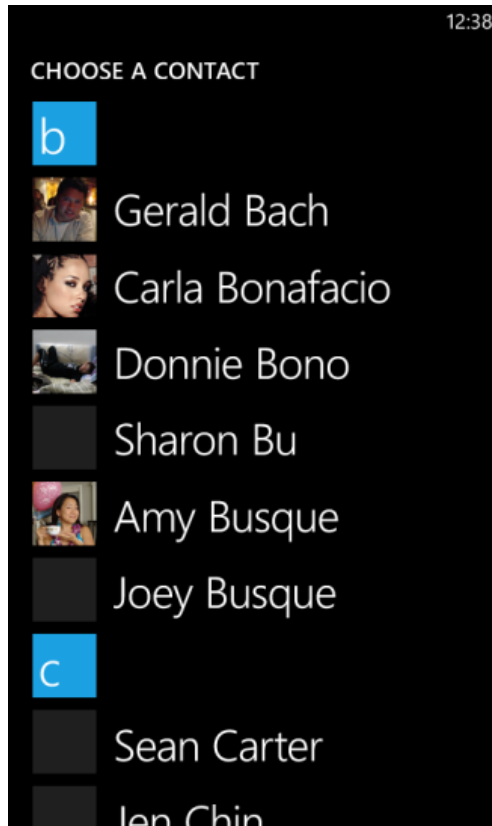
Signature Controls: Panorama
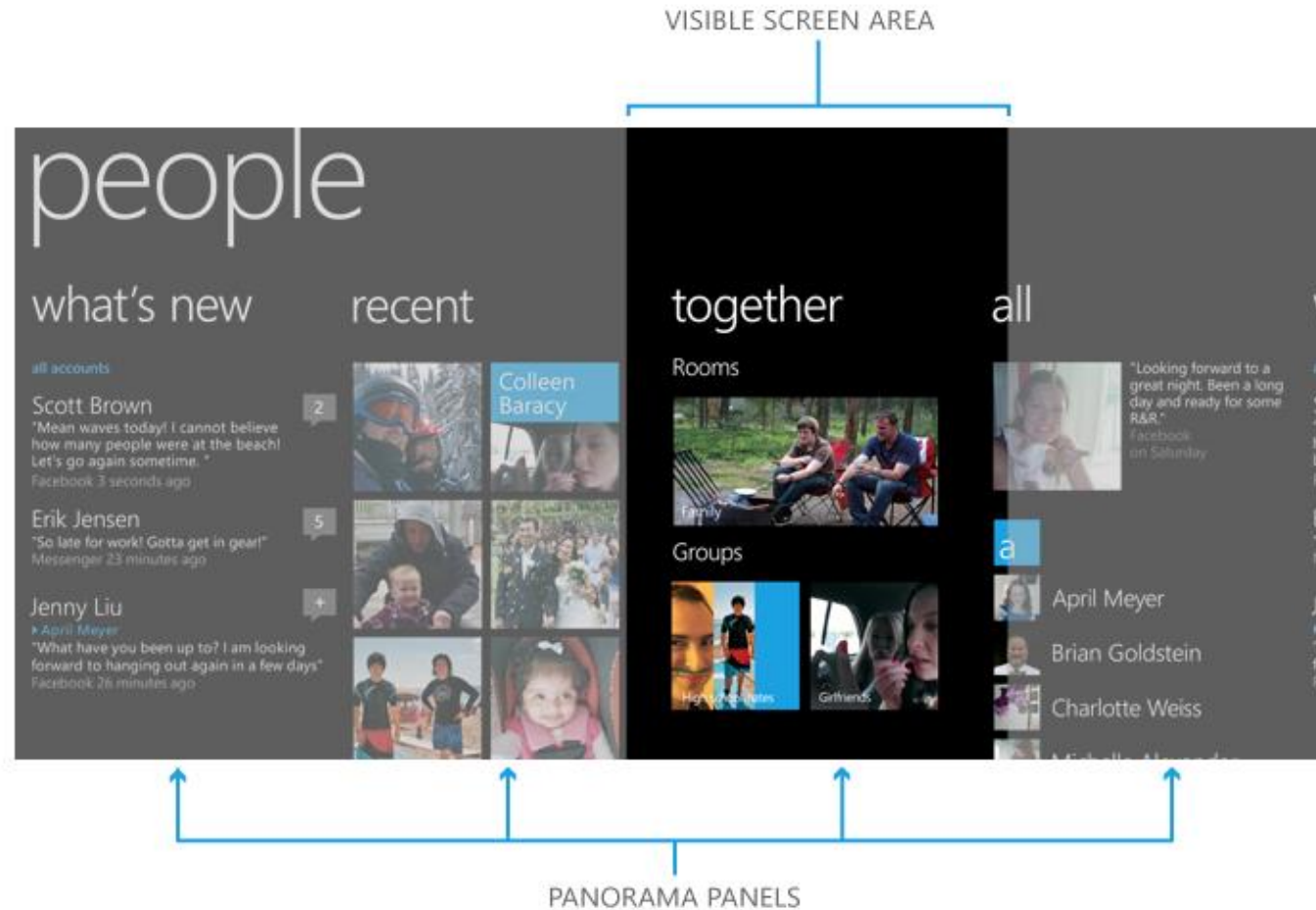
Signature Controls: Pivot
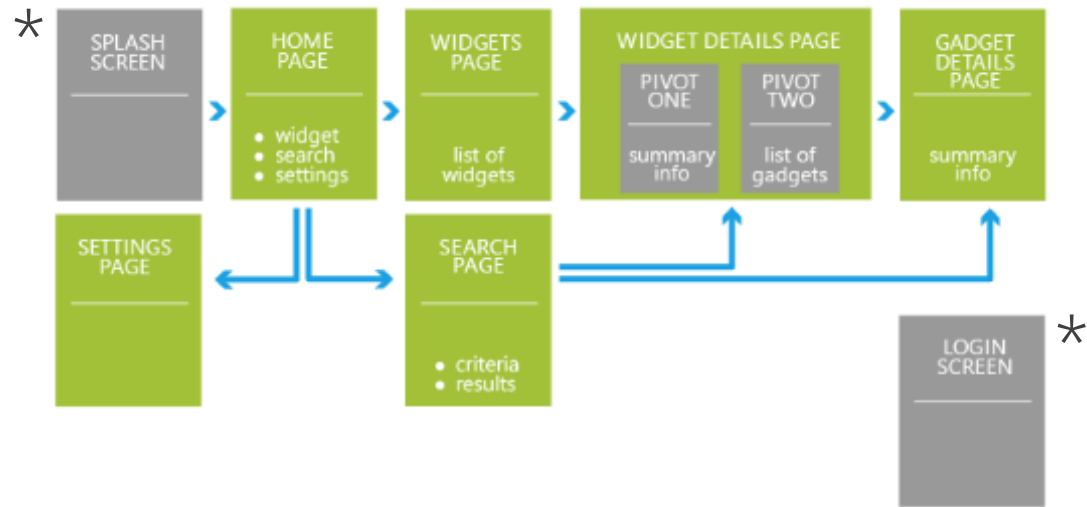
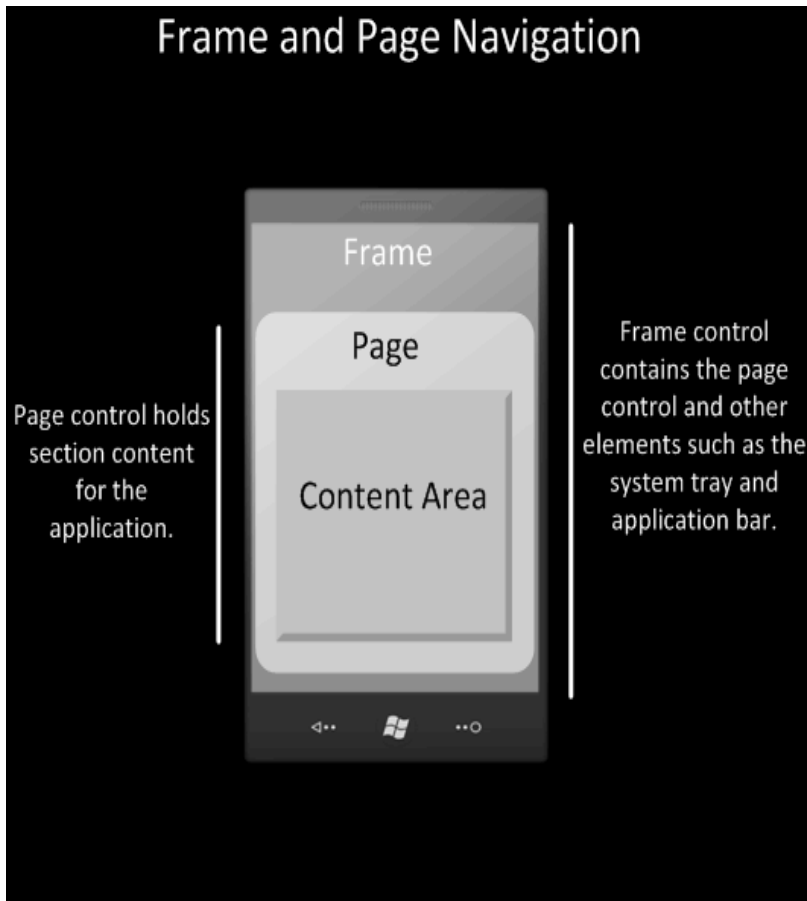# Signature Controls: LongListSelector

Sticky Headers

JumpList

Grid View

controls

demo

Pages & Navigation

Frame and Page Navigation

Page control holds section content for the application.

Frame

Page

Content Area

Frame control contains the page control and other elements such as the system tray and application bar.

* SPLASH SCREEN

HOME PAGE
- widget
- search
- settings

WIDGETS PAGE
list of widgets

WIDGET DETAILS PAGE
PIVOT ONE
summary info
PIVOT TWO
list of gadgets

GADGET DETAILS PAGE
summary info

SETTINGS PAGE

SEARCH PAGE
- criteria
- results

LOGIN SCREEN *

*Screens

Transient UI the user does not navigate to

Shown in a Popup control by a Page.

Windows Phone Live Tiles

Live Tiles provide glanceable access to information users care the most about

Live Tiles can be updated:

From within your app while it is running
As a scheduled task when your app is not running
In response to Push Notifications

Windows Phone Live Tiles

All apps have at least one tile, known as the default tile

> Created by user pinning your app to the Start Screen
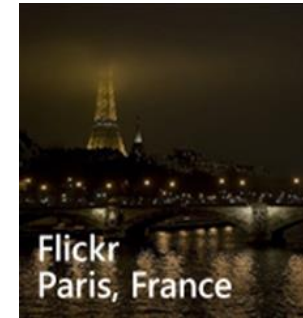>
> Launches main app page

Apps can create additional (secondary) tiles

> Created programmatically
>
> Can launch to any page in your app

Static or Dynamic Content

> Image / text Based
>
> Apps can generate image from XAML content

In Windows Phone 8.0, you can support three different tile sizes

Flickr
Paris, France

S 1

S 1
Skype

Thomas Fennel
Build 2013 FTW!!!

Skype
S 1
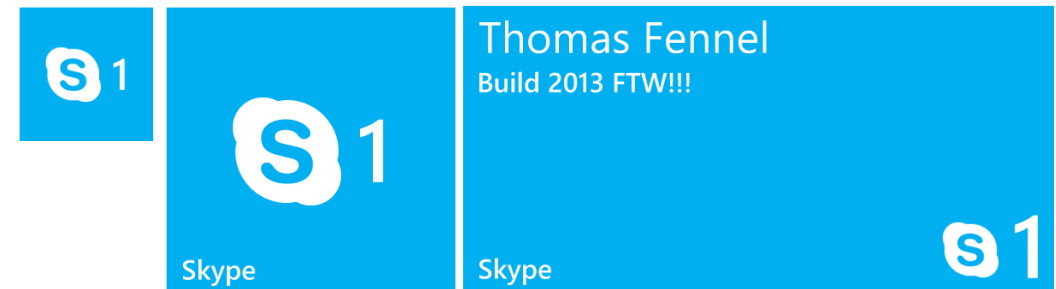
Windows Phone 8 Supports Three Tile Templates

Flip
Flips from front to back

Similar to the WP 7 Tile template

Iconic
Clean iconic layout designed to reflect Windows Phone design principles
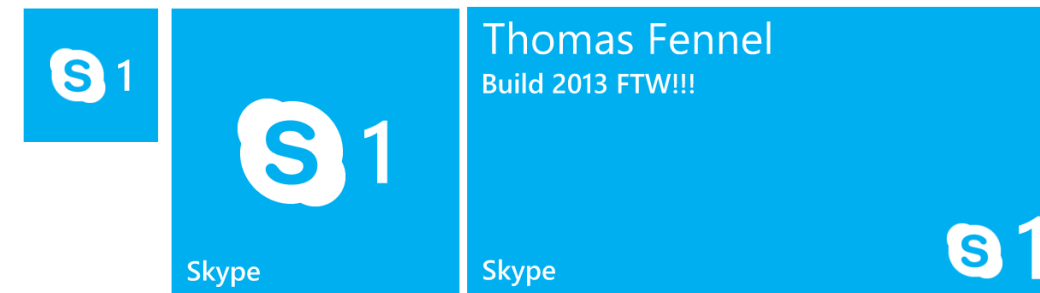
Cycle
Cycles through up to nine images

Live lock screen

Applications can show content and a count on the lock screen
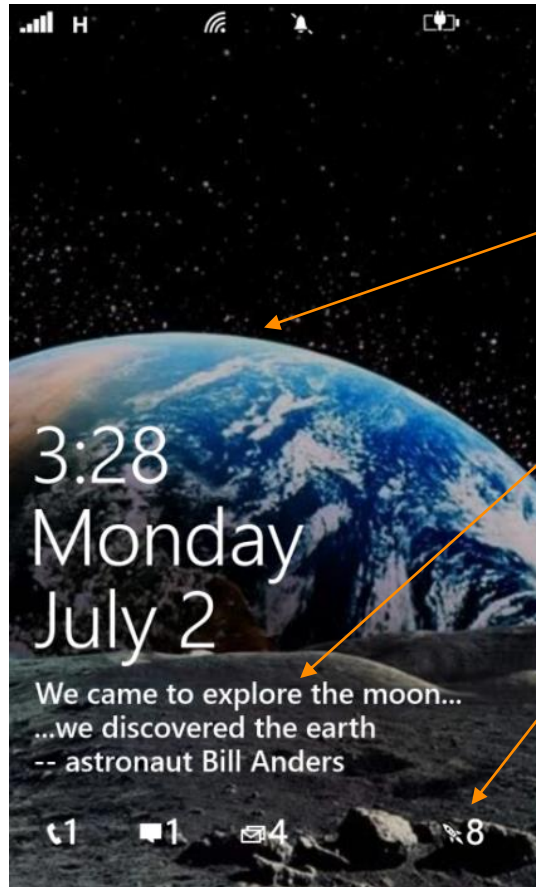
Lock screen settings or deep link from app

Background image

Detailed status is the content from the primary tile (if available)

Quick status shows designated icon with count from primary tile (when > 0)

live activity

demo

Launchers & Choosers

Enables an app to reuse common functionality from the phone

Microsoft.Phone.Tasks

Launchers

Simply launches an experience, like the browser or a map

You pass data to the launcher, but it does not return data to your app

Choosers

Launches an experience to return data to your app, like a photo

Launchers & Choosers

AddressChooserTask

AddWalletItemTask

BingMapsDirectionsTask

BingMapsTask

CameraCaptureTask

ConnectionSettingsTask

EmailAddressChooserTask

EmailComposeTask

GameInviteTask

MapDownloaderTask

MapsDirectionsTask

MapsTask

MapUpdaterTask

MarketplaceDetailTask

MarketplaceHubTask

MarketplaceReviewTask

MarketplaceSearchTask

MediaPlayerLauncher

PhoneCallTask

PhoneNumberChooserTask

PhotoChooserTask

SaveAppointmentTask

SaveContactTask

SaveEmailAddressTask

SavePhoneNumberTask

SaveRingtoneTask

SearchTask

ShareLinkTask

ShareMediaTask

ShareStatusTask

SmsComposeTask

WebBrowserTask

launchers & choosers

demo

Web Content

WebBrowser control
- Standard XAML control
- Embed in your app – can even "host" the entire app

IE10 Based
- HTML5 support
- Hardware accelerated
- Built for touch
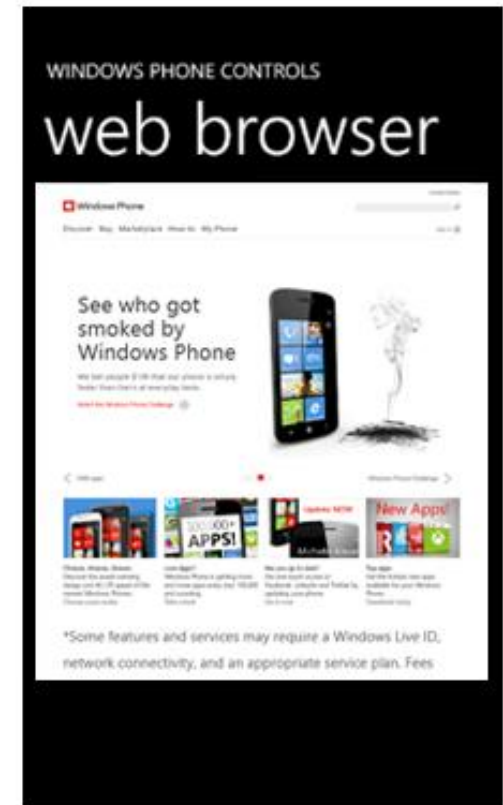
IE10 Hardware-Accelerated Web Platform

CSS 2D Transforms

CSS 3D Transforms

CSS Animations

CSS Backgrounds & Borders

CSS Color

CSS Device Adaptation*

CSS Flexbox*

CSS Fonts

CSS Grid*

CSS Image Values (Gradients)

CSS Media Queries

CSS Multi-Column Layout*

CSS Namespaces

CSS OM Views

CSS Regions And Exclusions*

CSS Selectors

CSS Transitions

CSS Values And Units

Data URI

DOM Element Traversal

DOM HTML

DOM Level 3 Core

DOM Level 3 Events

DOM Style

DOM Traversal And Range

DOMParser And XMLSerializer

ECMAScript 5

Formdata

HTML5 Application Cache

HTML5 Async Scripts

HTML5 BlobBuilder

HTML5 Canvas

HTML5 Drag And Drop

HTML5 Forms And Validation

HTML5 Geolocation

HTML5 History API

HTML5 Parser

HTML5 Sandbox

HTML5 Selection

HTML5 Semantic Elements

HTML5 Video And Audio

JavaScript Typed Array

ICC Color Profiles

IndexedDB

Page Visibility

Pointer (Mouse, Pen, And Touch) Events*

RequestAnimationFrame

Navigation Timing

Selectors API Level 2

SVG Filter Effects

SVG, Standalone And In HTML

Web Messaging

Web Sockets

Web Workers

XHTML/XML

XHR (Level 2)

XHR CORS

making money

Making Money

Paid Apps

Trial -> Paid

In-App Purchase

Ads

Payment Methods

Leading Credit Cards

Mobile Operator Billing:
3x greater sales than when only credit card is available
More Mobile Operator partners than Google Play
30 Total!
Access to markets with low credit card penetration

Alipay & PayPal:
10x purchases in China!
Paypal option vs Credit Card

List of MOs:
http://msdn.microsoft.com/library/windowsphone/help/jj215902(v=vs.105).aspx

Tips on Making Money

Use Trial API or Freemium (IAP)
70x more downloads, 7x more revenue

Use Live Tiles
Top 50 apps are 3.7x more likely to have Live Tiles

Use Push Notifications
Top 50 apps are 3.2x more likely to use these – keeps users engaged

Use Ad Control with Localization
More local relevance drives more clickthroughs

Follow the Windows Phone Design Principles
Conformant apps are featured in the store more frequently

Tips on Making Money

Localize Your App
Language, currency, symbols

Publish Globally
Fastest growth occurring in new markets

Watch Your Memory Usage
Apps that use < 90MBs of memory work well on all devices – performance tools help

Act on Feedback
Prompt for reviews and feedback… and fix

Update Frequently
Top 50 apps are updated every 2-3 months

additional features

VoIP and video chat

Lync lets you connect with coworkers

- Corporate presence, IM, and multi-party chat
- Search for corporate contacts
- Single tap to join conference from appointment

Skype lets you reach business partners

- Call Skype accounts for free via audio/video
- Send instant messages to one person or an entire group even while you're in a video or phone call

- VoIP + Video capabilities are available to developers
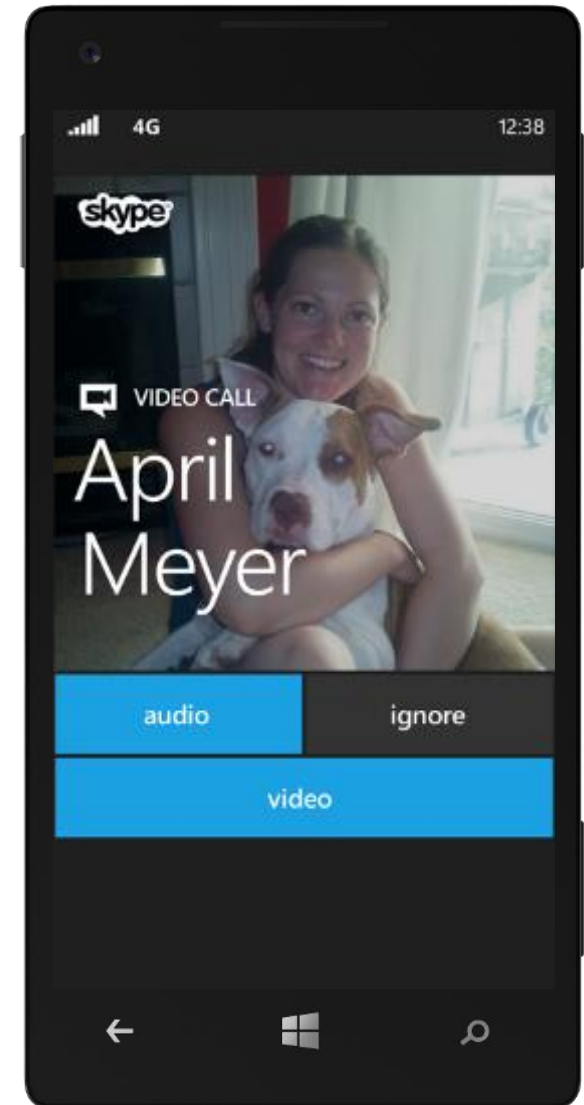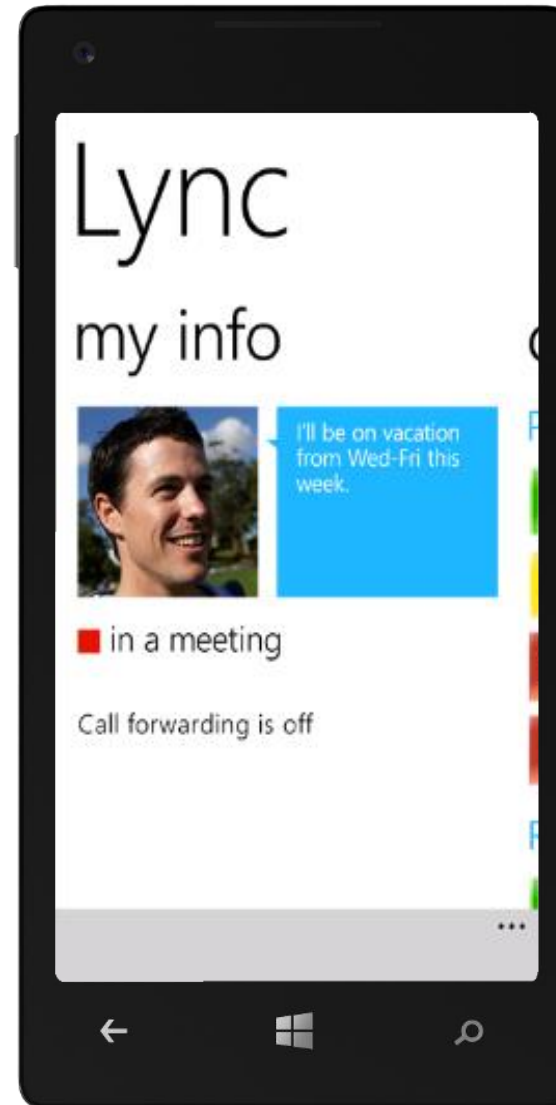
Near Field Communication (NFC)

A new way to send

- Tap to send data
- Interact with NFC tags
- Establish Wi-Fi or Bluetooth connection
- Tap to pay via Secure SIM element
- Available to developers through the Proximity API
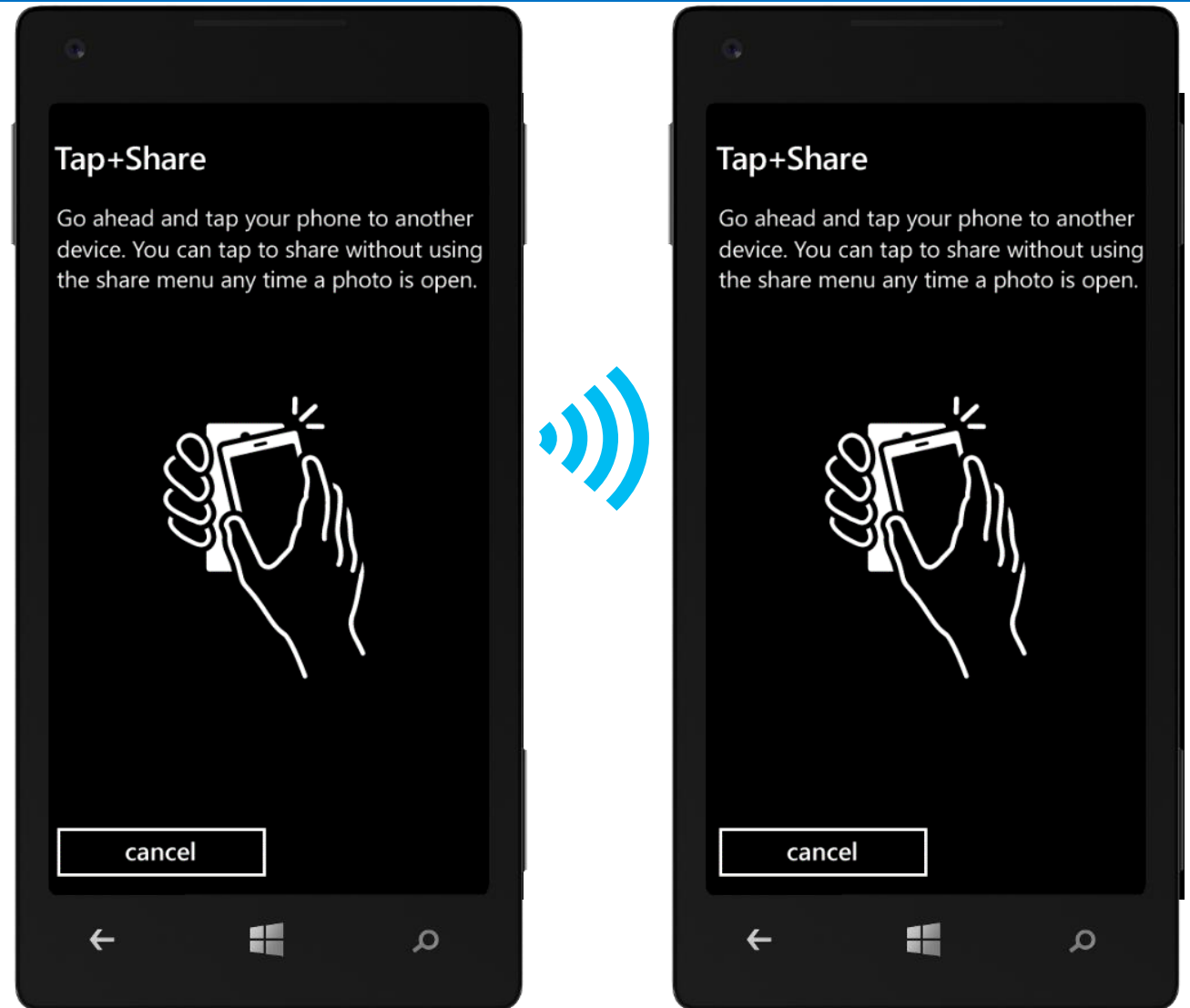
Wallet

A password-protected place to store your credit and debit cards, loyalty and membership cards, and coupons

Card balances are kept up to date

Real-time announcements of offers and deals

Wallet is extensible by developers
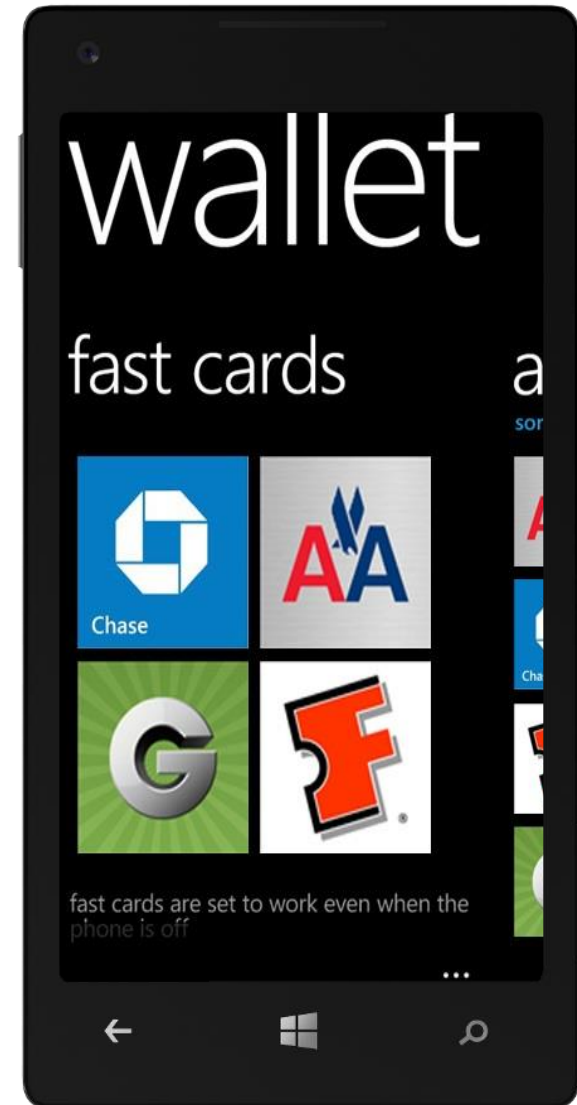
Wallet != NFC
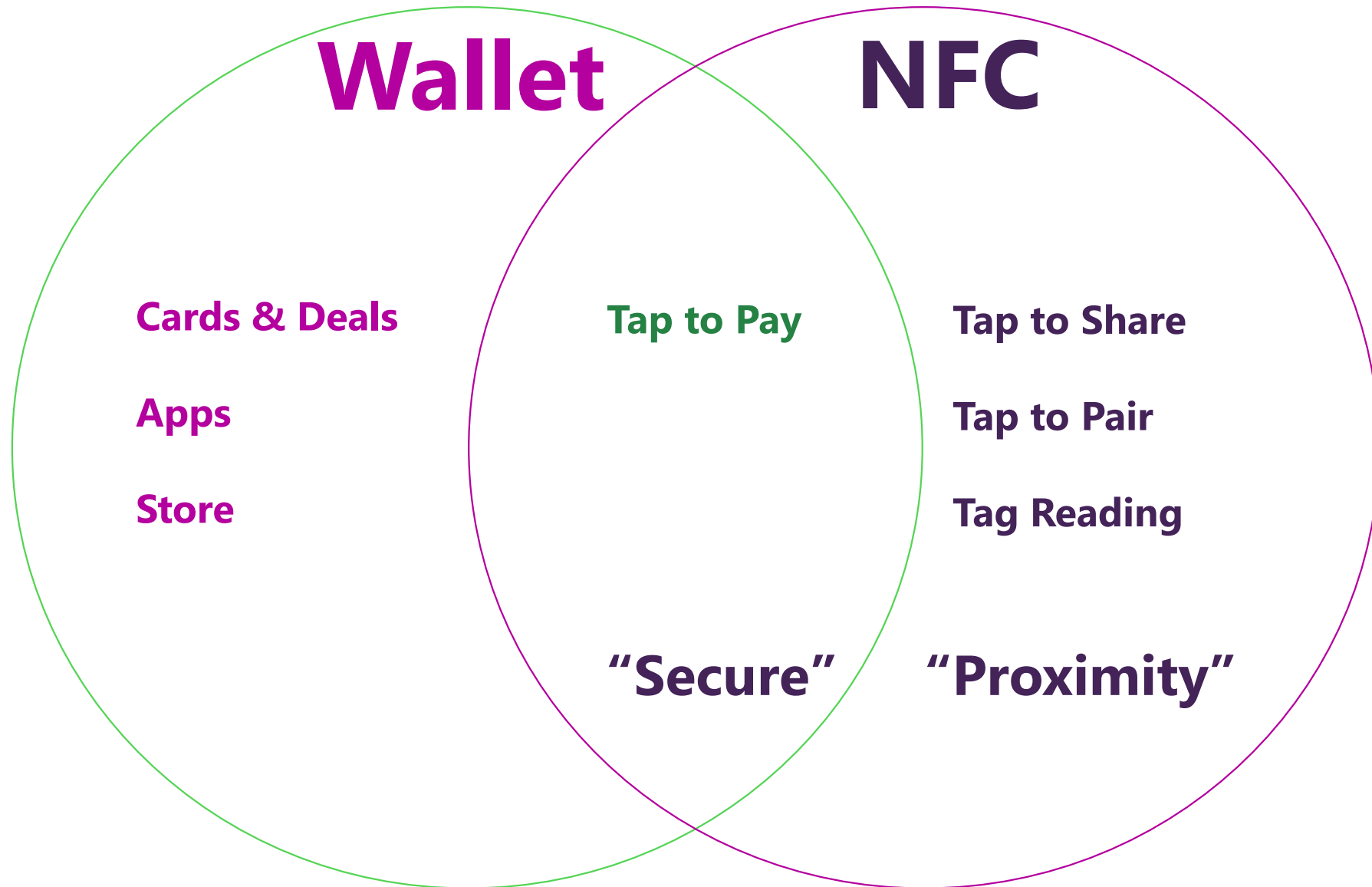
Maps and directions

World-class maps to quickly get to appointments

Built-in maps with core NAVTEQ technology and street data from Nokia in all phones

View offline maps without coverage or data connection

Nokia Drive (turn-by-turn directions) with voice

Map control and APIs available for developers
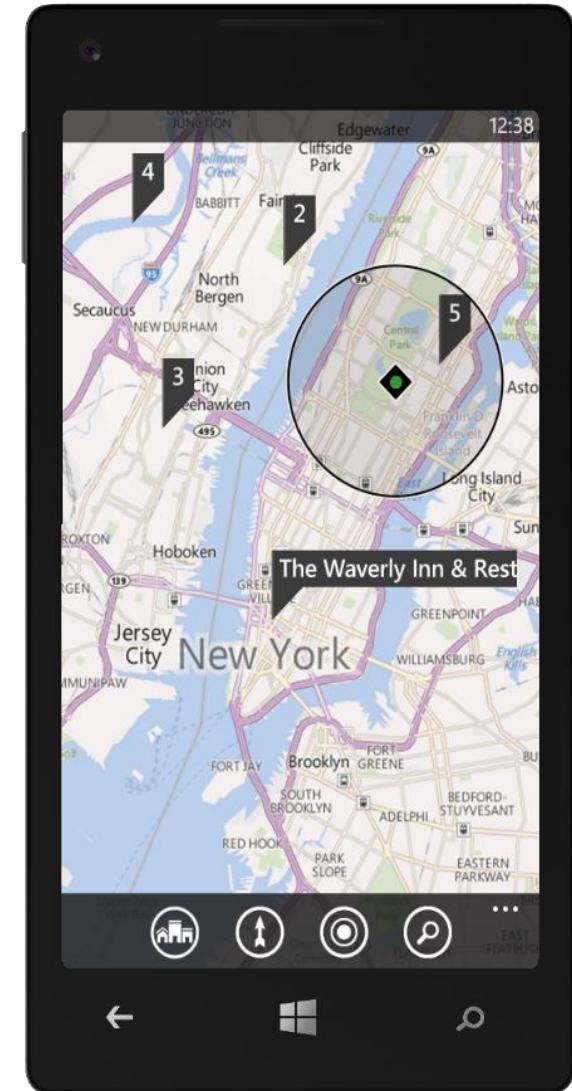
Native Code: Ease of Porting

Native code makes it easier to share code

1   Share common code between Windows 8 and Windows Phone 8

2   Simplifies porting apps between iOS/Android

3   Take advantage of native Open Source Libraries

Native Code for Killer Games

Bluetooth API

Third party apps can communicate through Bluetooth

App to app communication
App to device communication

Speech

It's time to have a conversation with your app

Use programmatic voice commands to launch a particular deep-linked page in the app

Speech recognition combined with speech synthesis allows developers to create conversational apps
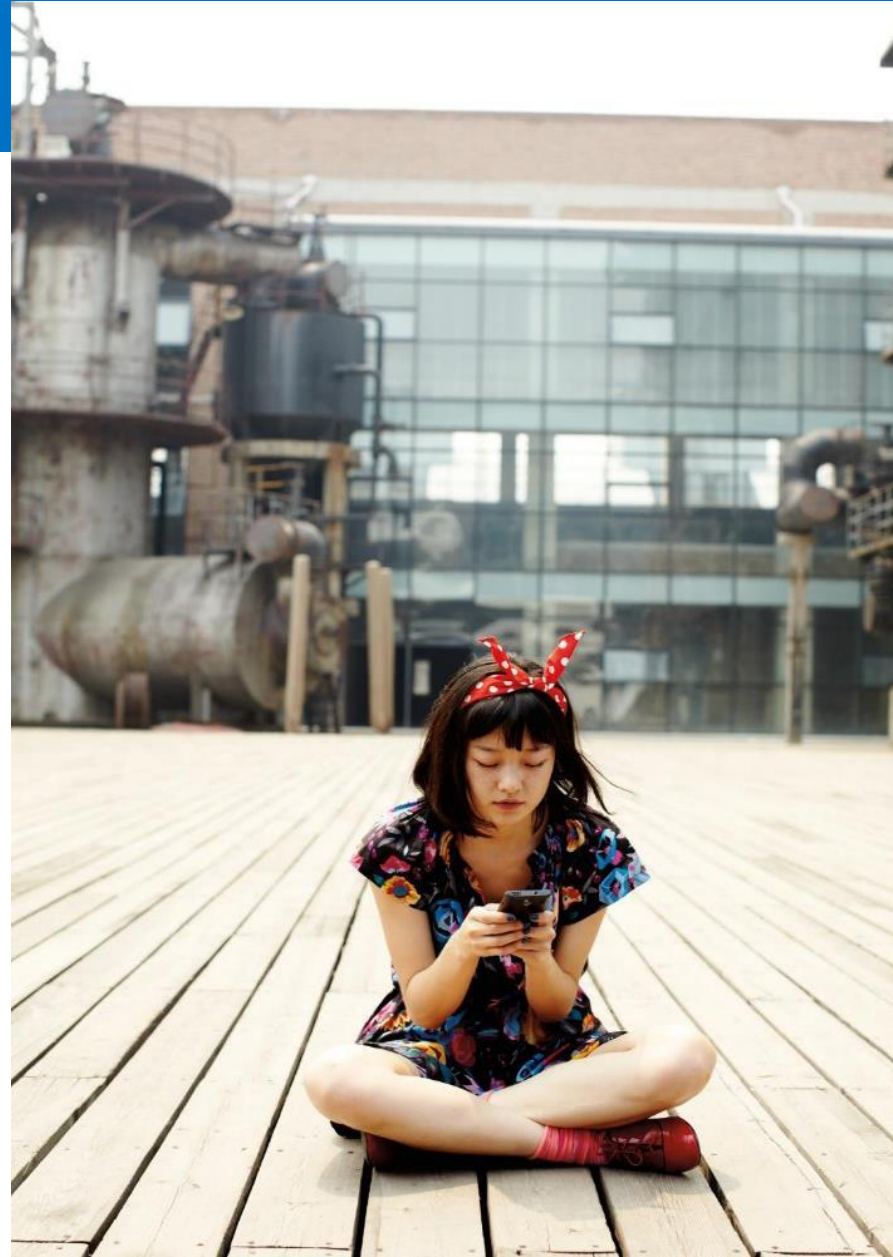
Lock screen notifications

Applications can show content and a count on the lock screen

Lock screen settings or deep link from app

Detailed status is the content from the primary tile (if available)

Quick status shows designated icon with count from primary tile (when > 0)

Lens apps
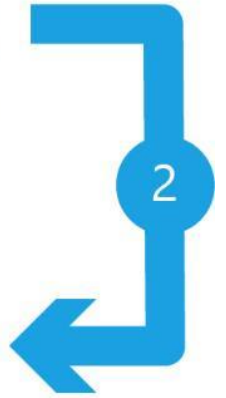
Custom URI Associations

Launch another app to enhance your experience

Call with Skype

Play an album on Spotify

Post a message on Twitter

Launch your app from core experiences

Browser

Messaging

Email
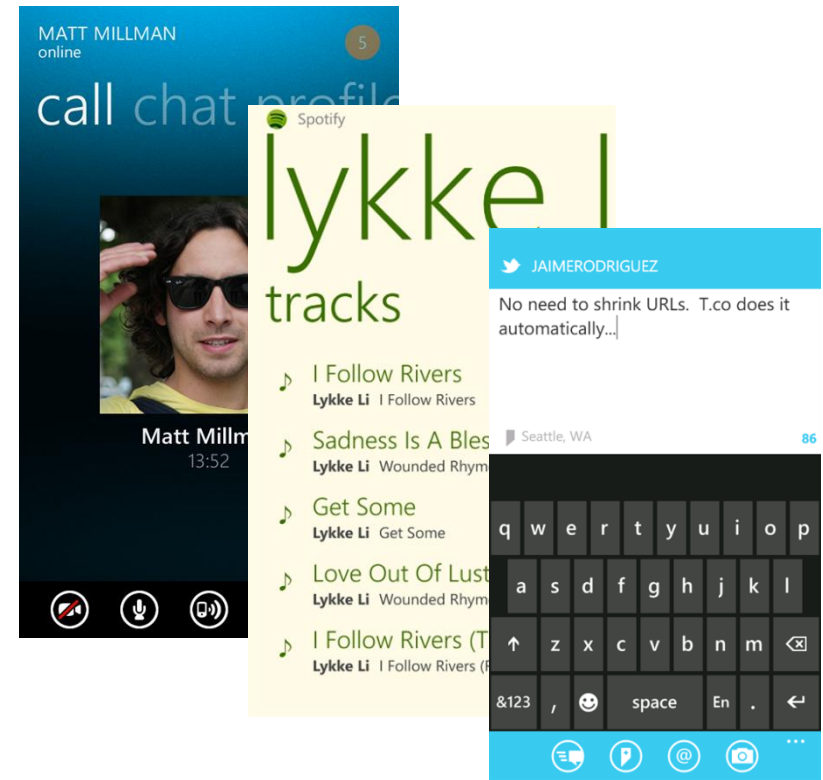
File Type Associations

Launch another app as a handler for a file you own

Microsoft Word

Adobe Reader

Launch your app when the user invokes a file you can interpret

It Has Never Been Easier to Learn

We have an amazing amount of online training on all aspects of Windows Phone development

40 hours of video or audio training!

Slides, video, audio, self-assessments

Jump Start	http://aka.ms/wp8js
Design Boot Camp	http://aka.ms/wp8designbootcamp
Training Kit	http://aka.ms/wp8hol
Absolute Beginners	http://aka.ms/wpdevbegin

Questions?

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