LUMIA APP LABS #16

HERE LAUNCHERS FOR WINDOWS PHONE

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Windows Phone

NOKIA Developer

CONTENT.

- HERE applications
- HERE Launchers API
- URI Scheme for HERE apps
- Other APIs for launching apps

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HERE APPLICATIONS

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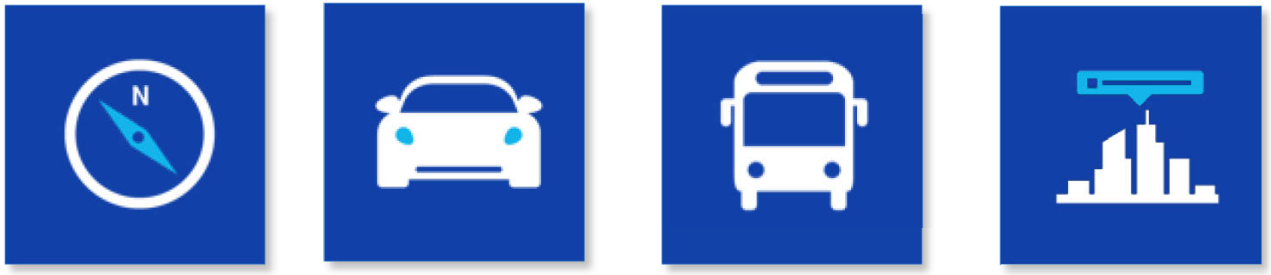
HERE APPLICATIONS



HERE Maps

HERE Drive

HERE Transit

HERE City Lens

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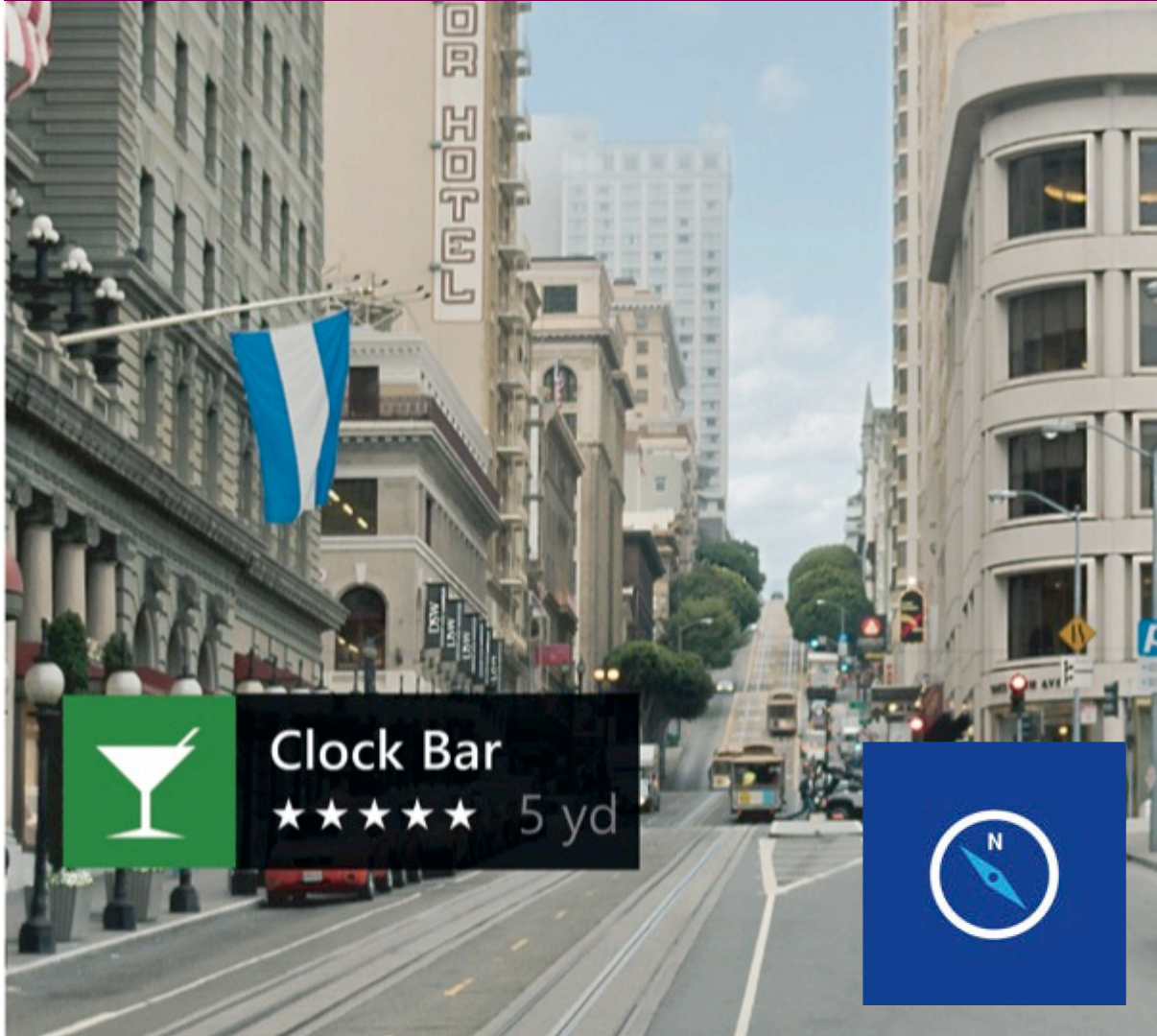
HERE MAPS

Your compass to discovery

HERE Maps shows you the best of where you are and makes it easier than ever to get where you're going.

Find what you are looking for, discover the hidden gems nearby, and get there any way you like.



HERE DRIVE

The open road made easy.

HERE Drive and HERE Drive+ brings drivers the best turn-by-turn voice guided navigation experience to reach any destination safely and easily—even without a data connection for a true offline experience.

We give drivers options that are based on what's important in their daily lives. The best route between point A and point B is more than just a highlighted line, it's a personal path.

We inform drivers about the situation on the road before they get behind the wheel. There's no reason that speed limits or the next turn should ever come as a surprise.

We invite people to explore the world, while feeling secure that HERE Drive will be there with them for every turn, even if reception isn't.

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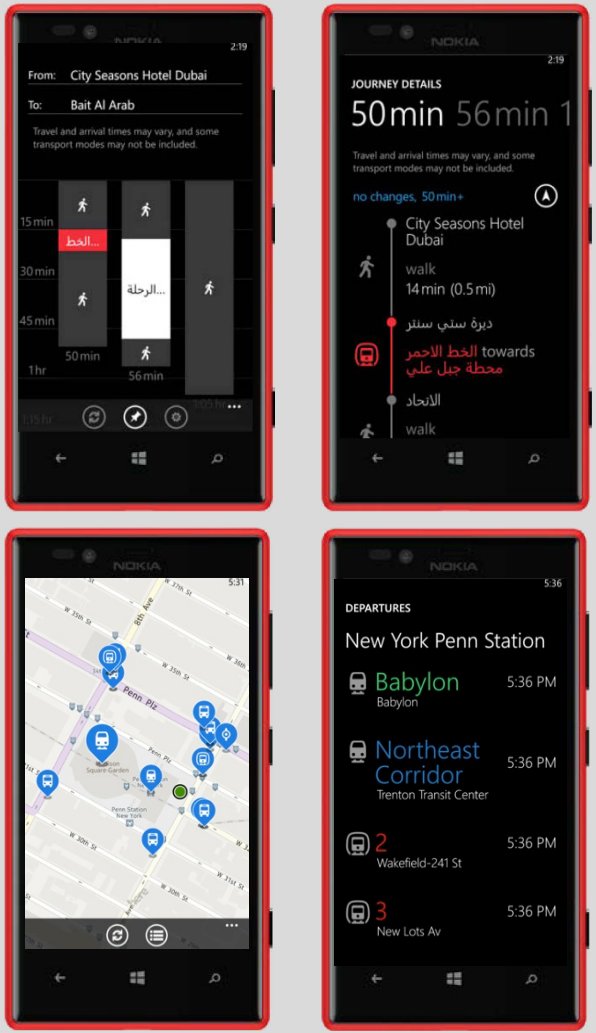
HERE TRANSIT

The best way around town

Simply type in your destination and see all the route options to get you there—integrating bus, train, ferry and more. Compare routes and choose the route and time that work best for you. All with an intuitive and ‘glance and go’ interface.



HERE MAPS

HERE Keeps You Going, Everywhere

29K
UNIQUE BUILDINGS
IN 45 COUNTRIES

LIVE TRAFFIC INFO
in **32**
COUNTRIES

LIVESIGHT
BRINGS AUGMENTED REALITY TO WINDOWS PHONE, WITH SIGHT AS THE ULTIMATE USER INTERFACE

HERE DRIVE+

VOICE GUIDED, TURN BY TURN NAVIGATION WITH SPOKEN STREET NAMES, EVEN WITHOUT A DATA CONNECTION

60+
FREE VOICE GUIDANCE OPTIONS **TO DOWNLOAD**

IN **94**
COUNTRIES

TOTAL ROAD LENGTH ON HERE DRIVE+

WHICH IS **113**
TIMES THE DISTANCE
BETWEEN EARTH AND MOON

TRUE OFFLINE
SUPER-FAST MAPPING WITH NO DATA CHARGES

HERE TRANSIT

700+
CITIES
IN MORE THAN **50 COUNTRIES**

here

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2013

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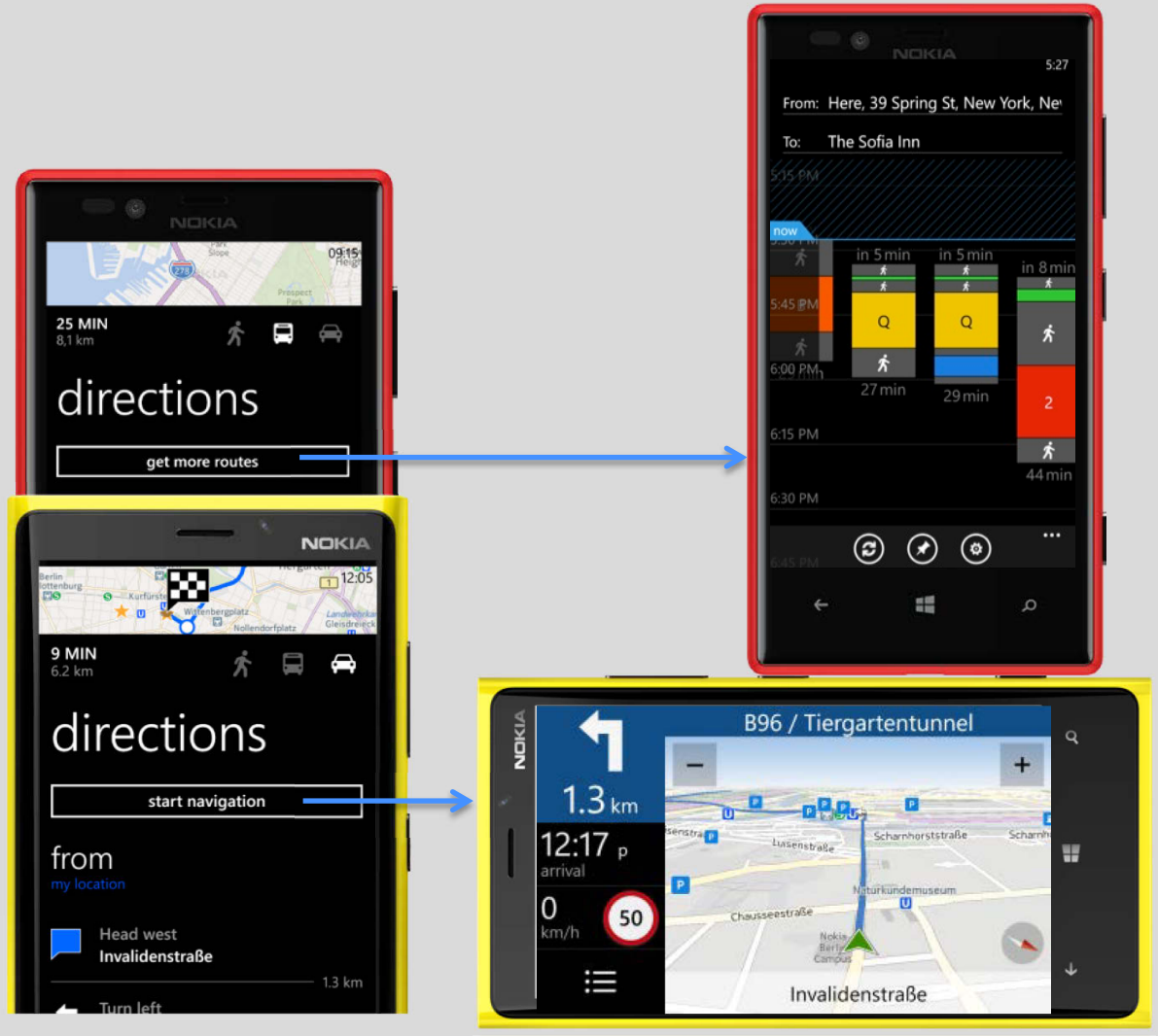
here

HERE APPS

They also work together, and now with launchers you can also tap into their functionality with just couple of lines of code.



HERE LAUNCHERS API

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HERE LAUNCHERS API

- The API providers Launchers that allow integration with public transit as well as Maps and Drive navigation in a very easy manner:
  - Using ready made (open source) library, or by
  - Using the defined protocol directly.
- Open source project available at: https://projects.developer.nokia.com/here_launchers
- Documentation available at: http://www.developer.nokia.com/Resources/Library/Lumia/

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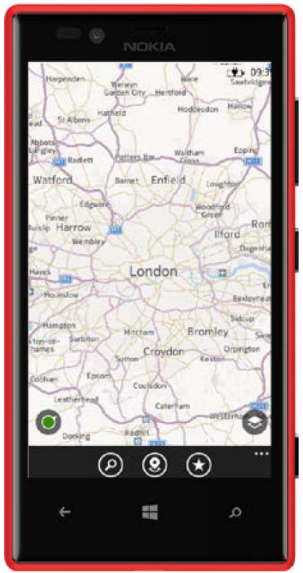
QUICK START FOR THE API

1. Add the library into your project
   - Right-click the "References" folder and Select "Add Reference“
   - Click the "Browse" button and Locate the library file and click "Add"
2. Add namespace to the C# file
   - using Nokia.Phone.HereLaunchers;
3. Construct launcher, give values and execute




```
ExploremapsShowMapTask showMap = new ExploremapsShowMapTask();
showMap.Location = new GeoCoordinate(51.501249,-0.126271);
showMap.Zoom = 10;
showMap.Show();
```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REMEMBER TO SET APPID

- You need to have Application ID and token, and to get these go to: https://developer.here.com/myapps
  - Register on the site,
  - Add new application to obtain the ID & Token
- On debug build the API will continue to work without an application ID but will issue a warning in the debug output. In release builds however the call to Show() will throw an InvalidOperationException (MSDN) if the Application ID is missing.

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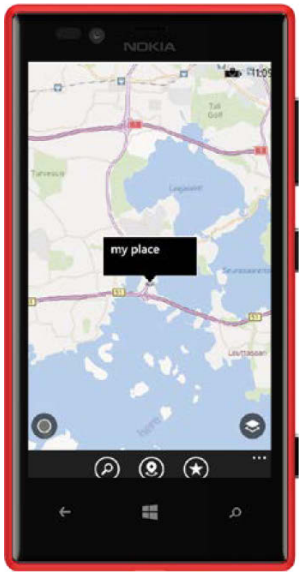
HERE LAUNCHERS (1/6)

- ExploremapsShowMapTask
  - Starts Maps with the map centered to a location

Variable	Description
LocationRectangle ViewPort	Viewport of the map.
GeoCoordinate Location	Center coordinate for the map view.
double Zoom:	Zoom level for the map view. Allowed values from 1.0 to 20.

- ExploremapsShowPlaceTask
  - Starts Maps with the map centered to a place

Variable	Description
GeoCoordinate Location	Location coordinate for the place.
string Title	Title to be used with the place.
double Zoom	Zoom level for the map view. Allowed values from 1.0 to 20.0.



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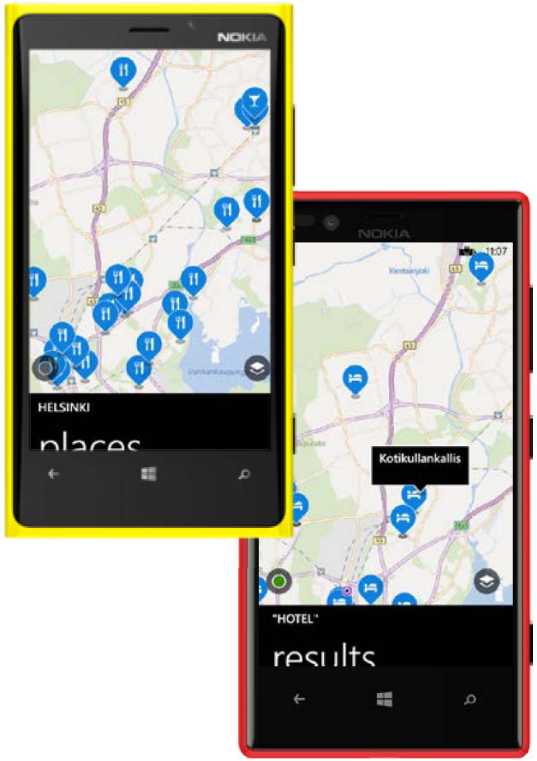
HERE LAUNCHERS (2/6)

- ExploremapsSearchPlacesTask
  - Starts Maps with the maps search active

Variable	Description
GeoCoordinate Location	Center coordinate for the map search.
string SearchTerm	Search query to be performed.

- ExploremapsExplorePlacesTask
  - Starts Maps with the nearby POIs shown

Variable	Description
GeoCoordinate Location	Center coordinate for the map
List<string> Category	list of categories to limit which categories are shown in the map



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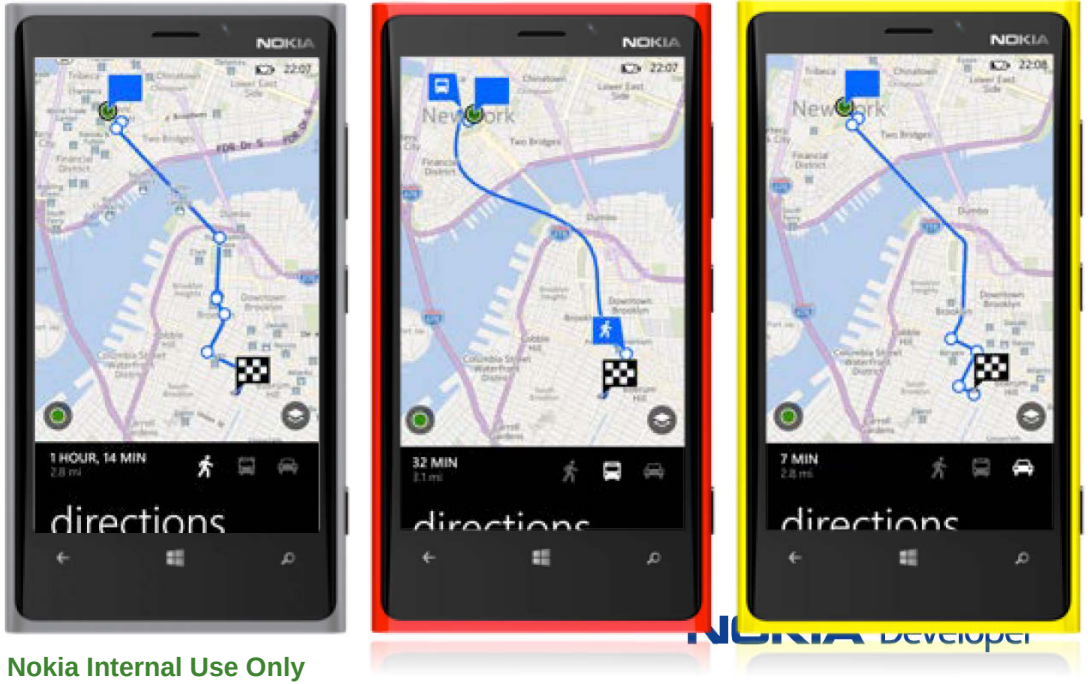
HERE LAUNCHERS (3/6)

- DirectionsRouteDestinationTask
  - Starts Maps with a route shown in the map

Variable	Description
GeoCoordinate Destination	Destination location
GeoCoordinate Origin	Departure location
RouteMode Mode	Preferred route mode



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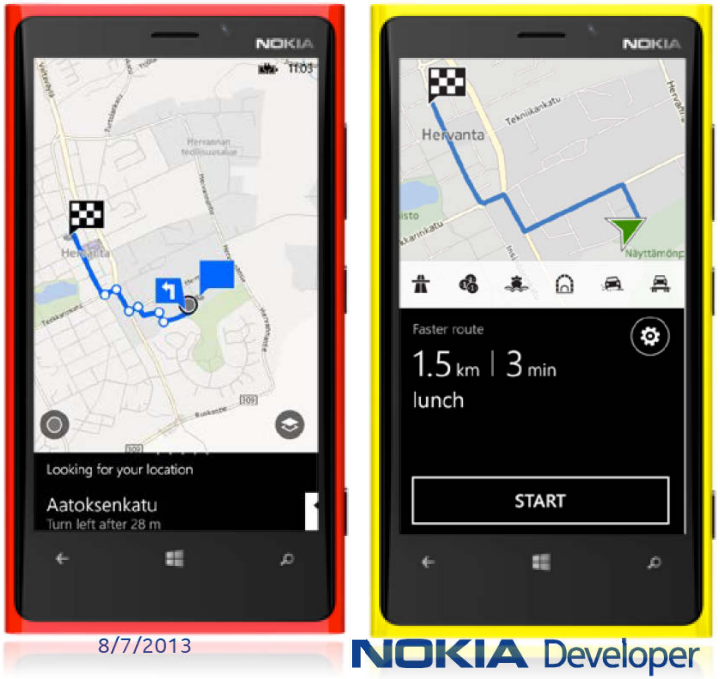
HERE LAUNCHERS (4/6)

- GuidanceWalkTask
  - Starts Maps with walking guidance turned on.
- GuidanceDriveTask
  - Starts Drive with destination set.

Variable	Description
GeoCoordinate Destination	Destination coordinate
string Title	Destination title



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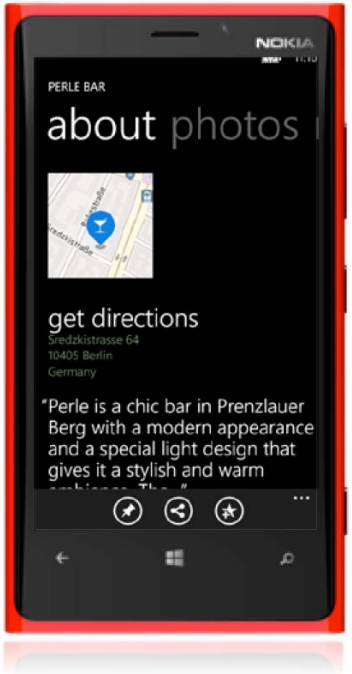
HERE LAUNCHERS (5/6)

- PlacesShowDetailsByLocationTask
  - Starts Maps with the places view for the selected location.

Variable	Description
GeoCoordinate Location	Place coordinate
string Title	Custom place title

- PlacesShowDetailsByIdHrefTask
  - Starts Maps with the places view for the selected place.

Variable	Description
string Id	Nokia Place Id
string Href	Nokia Place Href
string Title	Custom place title



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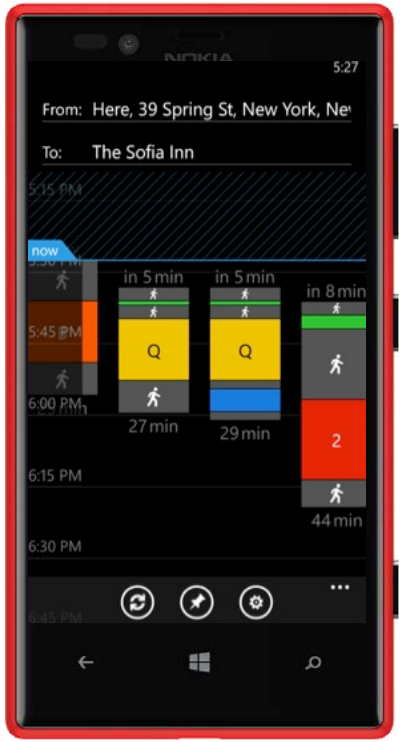
HERE LAUNCHERS (6/6)

- PublicTransitRouteDestinationTask
  - Starts the journeys view.

Variable		Description
GeoCoordinate Destination	(req)	Destination coordinate for the journey.
string DestinationTitle	(opt)	Destination title to be used with journey route.
GeoCoordinate Origin	(opt)	Origin coordinate for the journey.
string OriginTitle	(opt)	Origin title to be used with journey route.
DateTime ArrivalTime	(opt)	Desired arrival time to the destination.
DateTime DepartureTime	(opt)	Desired departure time from the origin.

- PublicTransitSearchStopsTask
  - starts the nearby stops view.



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URI SCHEME PROTOCOL

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URI SCHEME PROTOCOL

- Windows Phone 8 introduces the possibility for your app to register to a predefined kind of URI scheme. This will allow you to launch your application from various sources and with various optional parameters.
- The URI is passed as string to Windows.System.Launcher.LaunchUriAsync() function call, and system then passes the URI to the application registered for handling it.

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URI SCHEME PROTOCOL FOR HERE APPS

- Five different URI schemes specified for Here apps:
  - directions : for routing use cases.
  - explore-maps : for exploring map and map services.
  - guidance-drive : for drive navigation.
  - guidance-walk : for walk navigation.
  - places : for showing places.
  - public-transit : for public transit related use cases.
- Here launchers are wrappers for the URI scheme protocols

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URI SCHEME PROTOCOL FOR HERE APPS

- When using the URI Schemes protocol directly, you form the URI string as:

<Protocol>://v<VersionMajor>. <VersionMinor>/<action>/<noun>/?{Parameters}

- For example if you want to use the URI Scheme implemented in the ExploremapsShowMapTask, you could form it as follows:

explore-maps://v2.0/show/map/?latlon=52.530806,13.4127509&zoom=15&appid=<AppId>

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PARAMETER FORMATS AND ENCODING

GeoCoordinate

- Latitude/longitude pair separated with comma. Latitude comes first, and longitude last.
- Both values must comply with Double number specifications. For example: "52.53,13.41".

BoundingBox

- Four Double numbers separated by comma; order is North, West, South, East coordinates. For example: "52.6755,13.76134,52.33812,13.08835".

Double

- Each double number must have dot as a decimal separator. To ensure this, please use InvariantCulture when converting double numbers to string.
- For example: string doubleStr = doubleNum.ToString(System.Globalization.CultureInfo.InvariantCulture);

String

- URL encoded string. To ensure valid encoding, use the Uri.EscapeDataString() function for encoding all string parameters.

DateTime

- 'Sortable date/time pattern' formatted date-time string. To ensure correct format, please use ‘s’ argument with the toString function.
- For example: string encodedTime = dateTimeVariable.ToString("s");

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OTHER APIS FOR LAUNCHING APPS

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MS- URI SCHEMES

```
private void Button_gridbut_Click(object sender, RoutedEventArgs e){
     if (sender == DriveButton){
          LaunchTheTask("ms-drive-to");
     }else if (sender == WalkButton){
          LaunchTheTask("ms-walk-to");
     }
}
private void LaunchTheTask(String start){
     string launchStr = start;
     launchStr = launchStr + ":?destination.latitude=" +
     oneMarker.GeoCoordinate.Latitude.ToString(System.Globalization.CultureInfo.InvariantCulture);

     launchStr = launchStr + "&destination.longitude=" +
     oneMarker.GeoCoordinate.Longitude.ToString(System.Globalization.CultureInfo.InvariantCulture);

     launchStr = launchStr + "&destination.name=" + DestinationNameBox.Text;

     Windows.System.Launcher.LaunchUriAsync(new Uri(launchStr));
}
```


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MS- MAPS LAUCHER TASKS

```
MapsDirectionsTask mapsDirectionsTask = new MapsDirectionsTask();
mapsDirectionsTask.Start = new LabeledMapLocation(OriginTitle.Text, OriginMarker.GeoCoordinate);
mapsDirectionsTask.End = new LabeledMapLocation(DestinationTitle.Text, DestinationMarker.GeoCoordinate);
mapsDirectionsTask.Show()
```

```
MapsTask mapsTask = new MapsTask();
mapsTask.Center = oneMarker.GeoCoordinate;
mapsTask.SearchTerm = SearchTermBox.Text;
mapsTask.ZoomLevel = map1.ZoomLevel;
mapsTask.Show();
```

```
MapsTask mapsTask = new MapsTask();
mapsTask.Center = oneMarker.GeoCoordinate;
mapsTask.ZoomLevel = map1.ZoomLevel;
mapsTask.Show();
```

```
MapsTask mapsTask = new MapsTask();
mapsTask.Show();
```


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