MobileHMI
Using Wireless or 3G Connectivity

APPLICATION NOTE

September 2013

Description: Guide to setup Wi-Fi/3G connection on Windows Phone 7 to connect to the MobileHMI server.
OS Requirement: Windows Vista x64/ Windows 7 x64/ Windows 8 x64/ Windows Server 2008 x64/ Windows Server 2008 R2 x64 / Windows Server 2012
General Requirement: Windows Phone 7 or 8, MobileHMI v10.7 or v10.8.

Introduction

Wherever there is a Wi-Fi network, you can use your Windows phone to connect to it in addition to connecting to a cellular network. You'll probably prefer a Wi-Fi connection because it's typically faster than your cellular data connection. It can also save on costs if you're not on an unlimited data plan, or if you can't connect to your cellular network for some reason. Some Wi-Fi networks are secured and may require a password before you can connect to the network.

This application note describes two different options which include how to connect from Windows Phone 7 or 8 to MobileHMI Server via Wi-Fi or 3G Connection.

Before you start

- MobileHMI Server is physically connected to the Internet/ DMZ to be accessible from anywhere. It is necessary to guarantee that server has external IP which is resolved to name.
- It is expected that you have already installed MobileHMI on development server as well as into Windows Phone 7 or 8. If you don't know how to do that, please refer to application note entitled *MobileHMI - Getting Started*.
- It is also expected that you are familiar with your Windows Phone Settings and have some Wi-Fi/Cellular connection available.

Connect to Wireless Network

You can connect to MobileHMI Server via Wi-Fi connection, but please notice the following options:

- *Intranet AP* – you can connect to local access point which has an access to external server. Make sure that port 80 is opened between client and server.
- *Public AP* – if you connect to public network you need to guarantee that connection to MobileHMI server has port 80 opened between client and server.

1. On **Start**, flick left to the **App** list, and then tap **Settings**, and then tap **Wi-Fi**.
2. Make sure that **Wi-Fi networking** is set to **On**. This ensures that your phone is actively searching for available Wi-Fi networks. If a network is found, your phone will list it here and let you know whether it's an open or secured network.
3. Tap the network you want to connect to.

Connect to Cellular Network

Cellular settings let you control the cellular data connection for your phone. If your connection is working the way you like, you shouldn't need to change anything. But if you're having connection problems, changing one or more settings may help:

1. On **Start**, flick left to the App list, tap **Settings**, and then tap **Cellular**.

Note: The settings that appear vary by mobile operator.

Setting	Does this
Active network	Displays the name of the cellular network that your phone is using.
Data connection	You might turn off your cellular data connection for different reasons, such as saving on costs if you're not on an unlimited data plan, or making your battery last a little longer. You can still make and receive phone calls, and send and receive text messages. But you can't do things like browse the web, send or receive email, or get updated info for apps unless you're connected to a Wi-Fi network.
Data roaming options	Determines if your data connection stays on when the phone is outside your mobile operator's network.
Mode selection	Determines which kind of cellular network your phone uses.
Highest connection speed	You can choose the highest connection speed for your phone to use. If you choose the highest one, your phone will use that cellular connection when it's available. But if there's lower signal strength for that faster network in your area, searching for or trying to

Setting	Does this
	stay connected to it can take extra battery power. When you choose a lower connection speed, your phone can connect to a slower cellular network that may have a stronger signal. This can save battery power.
Change network profile	Your phone's network profile determines the network settings for your phone, and then activates or updates your phone.
Change PRL	Your mobile operator provides the preferred roaming list (PRL) and prioritizes which network to connect to when your phone is roaming. You'll want to update your PRL when you travel to or from your home cellular network area.
Network type	Determines how your phone tries to connect if your home network isn't available. **Automatic**. Default setting. Your phone tries to connect to the best cellular network. If your home network isn't available, your phone tries to connect to another available network. **Home network only**. Your phone connects only to your home cellular network and prevents your phone from roaming when your home network isn't available.
Network selection	View a list of available networks in your current area, and then try to connect to one. The default setting is Automatic. If you turn on your phone and see a message that the selected network isn't available, you can select another network here.
Cancel update	Cancels an update that's in progress from your mobile operator. Appears only if an update is in progress.
Add APN	An access point name (APN) is the address your phone uses to connect to a GSM network. By default, APNs are set automatically when your phone is first set up. If your cellular data connection isn't working, try entering a new APN based on your location and mobile operator.

Setting	Does this
	To add an APN 1. Tap **Add APN**. 2. Do one or more of the following in the list below, and then tap **Done**: a. Tap **APN**, then type the address for the APN to use. b. Tap **User name**, then type the user name for your mobile account. c. Tap **Password**, then type the password for your mobile account. d. Tap **Proxy server/URL**, then type the address of the proxy server for your mobile account. e. Tap **Proxy port**, then type the port number.

Connecting to sample project

1. Launch the MobileHMI application by taping the MobileHMI icon. After startup it will show a welcome screen.
2. Click "Continue" and you will be asked for a URL address of your MobileHMI project. By default the *mobilehmi.iconics.com* URL is filled in. Also note the check box to "allow push notifications for alarms". With this checkbox enabled, you will receive immediate alarm status notifications to your Windows Phone.
3. Click "continue" and the application will direct to the ICONICS MobileHMI sample server. You can change the server connection later, as to allow the operator to visualize and control multiple projects from the phone. You will see three main options to be browsed:
    - Current alarms - Server
    - Asset catalog - Server
    - Landing page - Favorites

Note: Please notice that you can see the message below when you are connected via Cellular Network (you can click OK to continue if you are aware of it).
Warning: Not on Wi-Fi network. Continue?

4. Tapping any of these links will navigate you to predefined views on the example projects. For example Tapping the "landing" favorite can open a landing page of a project:

Figure 1: MobileHMI landing page

5. The next step is to create your own MobileHMI project on your development server. After you are done you will publish it to a web server using the integrated ICONICS tools.

Note: For more details on developing and publishing your MobileHMI project please refer to the ICONICS MobileHMI product documentation and other application notes.