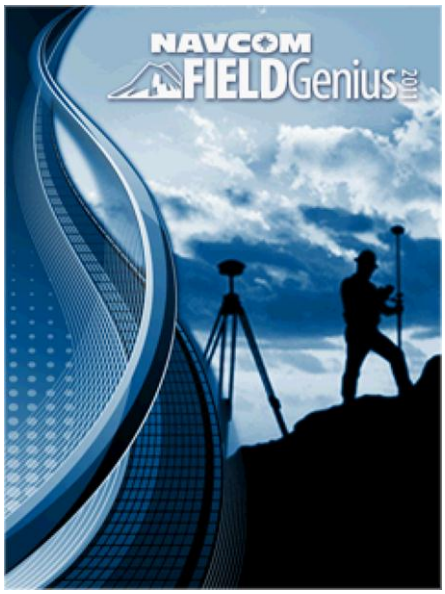
Creating a GPS GSM Network Rover Profile and Connecting to a GPS Network Data Correction Service



June 22, 2011

Creating a GPS GSM Network Rover Profile

Introduction

This guide describes how to create a GPS GSM network rover profile.

Important Note: You only need to create a particular profile once. After that NavCom FieldGenius will preserve and use this already-created profile. You are also welcome to create more profiles such as for a UHF radio GPS profile, but in this guide we explain how to create a GSM Network GPS profile.

Currently the NavCom SF-3040 does not support having an internal GSM modem so we will utilize the modem inside a Nautiz X7 data collector.

Before you Begin

Before you can access a GPS network data service, you must have already established an Internet connection. If you don't know how to do this, please refer to the guide, "*Creating a Local Internet Connection on a Nautiz X7 Hand Held Computer*".

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Creating a GPS GSM Network Rover Profile, *continued*

Step	Action	Display
1	• Turn on your **Nautiz X7**. This starts up the Windows Mobile 6.1 Operating system. **Note**: Don't be alarmed if you display is slightly different from the image on the right. We may have set up our display differently to yours. • Tap on the  button. From within the pull-down menu: • Tap on **NavCom FieldGenius** selection. This takes you to the Device ID screen.	 

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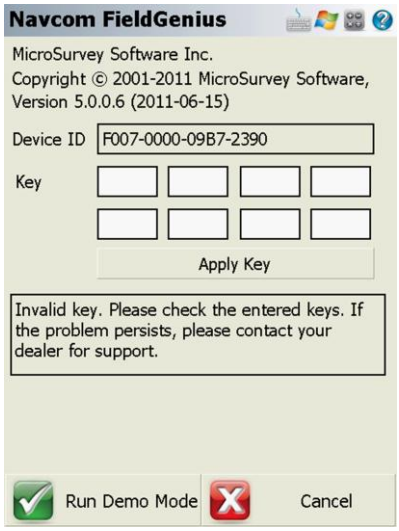
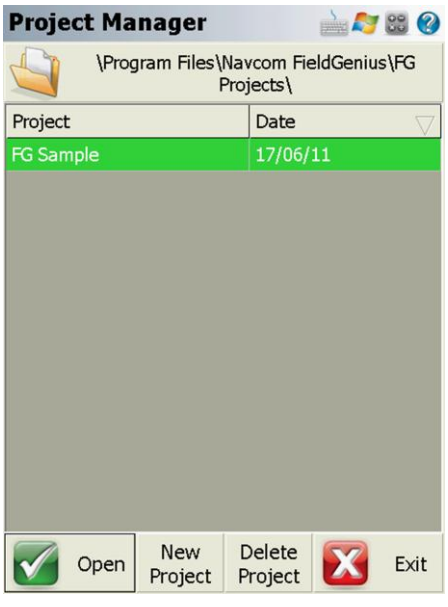
Step	Action	Display
2	In the Device ID screen: • Enter your Key in the **Key** field. • Press the **Apply Key** button when finished. **Important Notes**: NavCom FieldGenius will remember your key, therefore, you will only have to enter your key once. Once a correct key is entered, you will not see this screen again. Keys are provided by NavCom. If you do not have a key, please contact your local NavCom representative. This takes us to the Project Manager screen.	
3	In the Project Manager screen: Since this is a new installation, we only see the sample project that comes included with NavCom FieldGenius. We will create a new project. • Tap on the **New Project** button. This takes us to the Create New Project screen.	

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Step	Action	Display
4	In the Create New Project screen: • Enter a name for your new project. In this example, we are calling the project "*Friday Job*". You should enter a more appropriate name. • Press the **OK** button when done. This opens the Project Review screen.	

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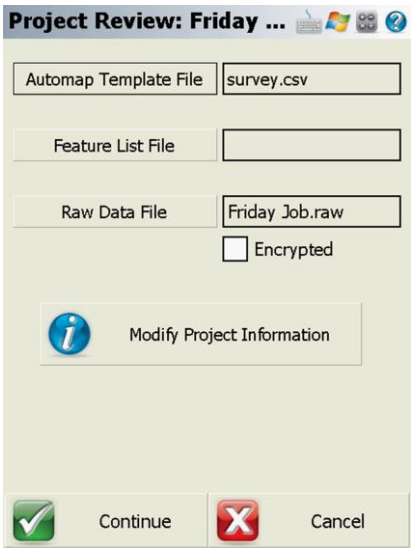
Step	Action	Display
5	In the Project Review screen: **Automap files** contain pre-defined descriptions that can be used in NavCom FieldGenius. The template library that you select will be copied into the project's folder with a name of yourprojectname_automap.csv, and any changes that you make to the Automap Library will affect only the project library, not the template library. Use the **Feature List** field to select a feature list that you want to use with the project, for collecting GIS point attributes. The **Raw Data File** field indicates the name of the raw file that is going to be used. You can select a different one by pressing the button and either creating a new raw file or choosing the one to open. The **Modify Project Information** button will take you directly to the Project Information screen. There you can enter notes about the project. • Leave these fields as they are. • Press the **Continue** button. This takes us to the Unit Settings screen.	

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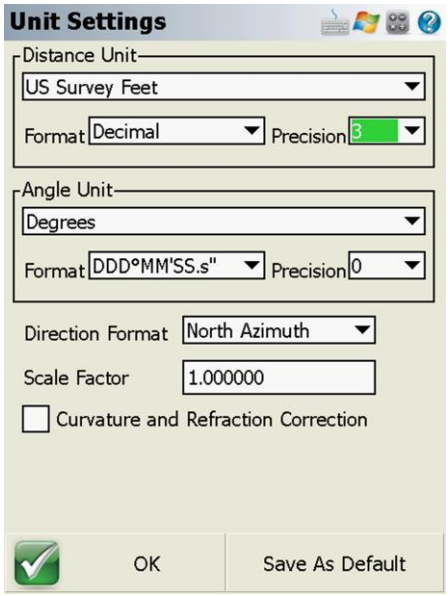
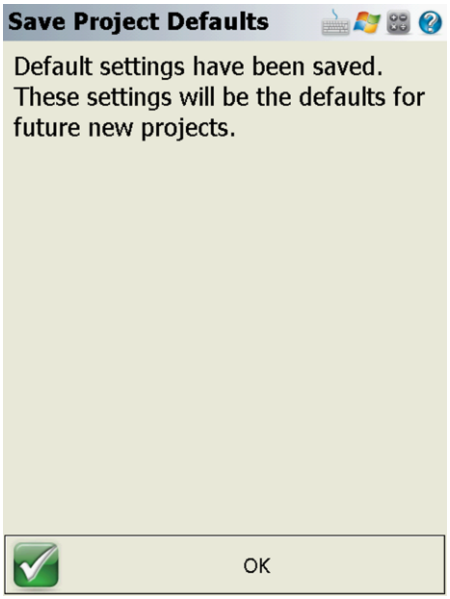
Step	Action	Display
6	In the Unit Settings screen: • Select which units you would like to work in. **Important Note**: Once this has been set, you cannot change this project's units again. Since we typically prefer to work in these units, we will press the **Save As Default** button. This will make whatever we select here the future default unit setting. • Press the **Save As Default** button. This takes us to the Save Project Defaults screen.	
7	In the Save Project Defaults screen: • Press the **OK** button. This takes us to the NavCom FieldGenius Assistant screen.	

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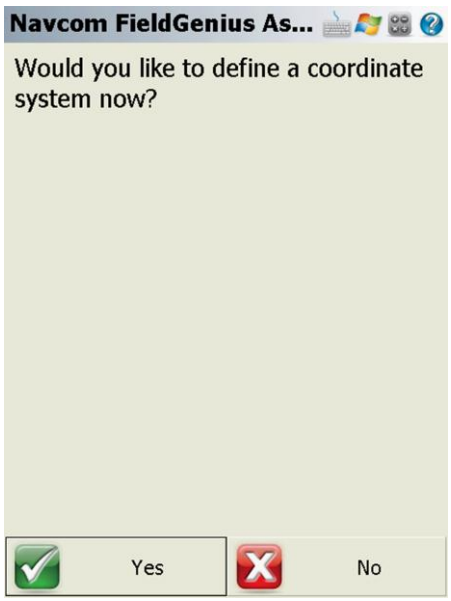
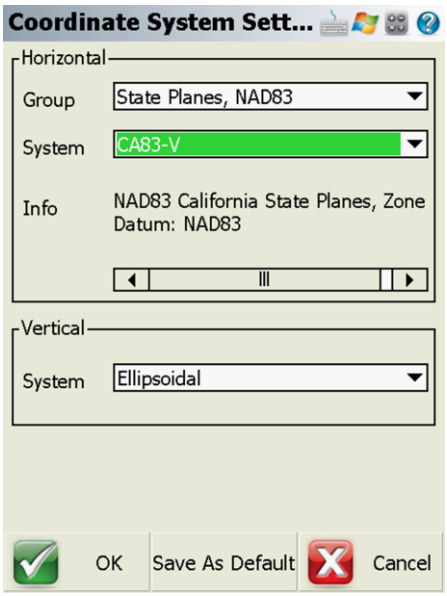
Step	Action	Display
8	In the NavCom FieldGenius Assistant screen: We are prompted to select a coordinate system. • Tap on the **Yes** button. This takes us to the Coordinate System Settings screen.	
9	In the Coordinate System Settings screen: • Select the coordinate system you wish to work in. In this example we will be selecting a California State Plane coordinate system with no geoid model. Since we will be typically working in this coordinate system, we will save it as a default. • Press the **Save As Default** button. This takes us to the Coordinate System Settings screen.	

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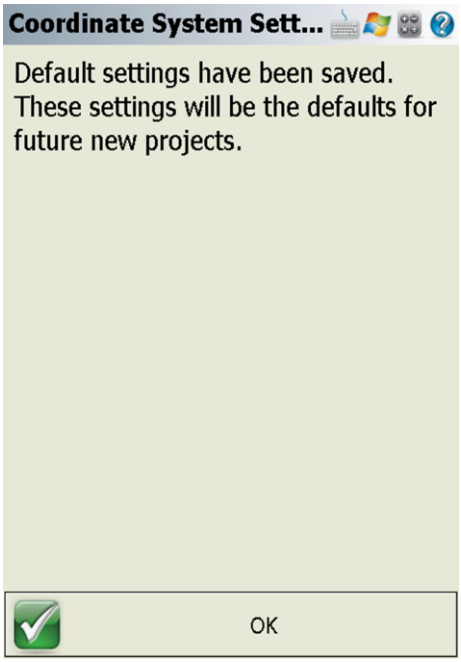
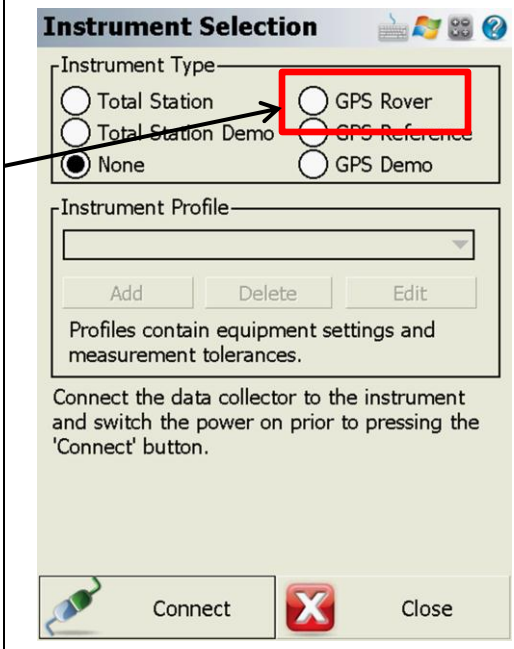
Creating a GPS GSM Network Rover Profile, *continued*

Step	Action	Display
10	In the Coordinate System Settings screen: • Tap on the **OK** button. This takes us to the Instrument Selection screen.	
11	In the Instrument Selection screen: • Tap on the **GPS Rover** radio button. This makes the **Instrument Profile** field active. **Note**: This is the screen where you can create new profiles or select previously created instrument profiles. This step continues on the following page.	

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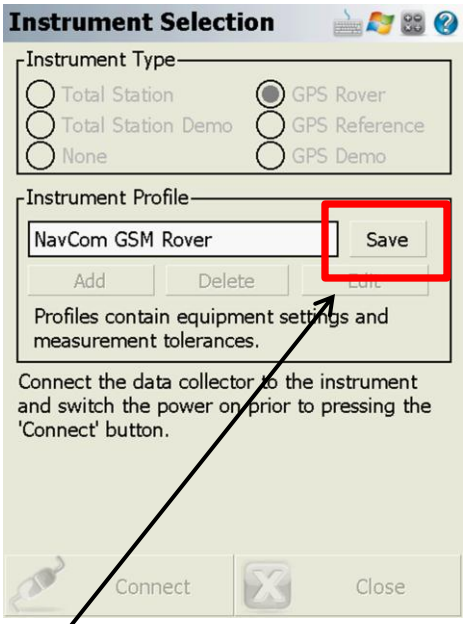
Creating a GPS GSM Network Rover Profile, *continued*

Step	Action	Display
11	This step continues from the previous page: • Enter a name for your instrument profile in the **Instrument Profile** field. Instrument profiles are used to save your particular instrument's settings so that you don't have to remember them or have to set them each time you create a new project or select an instrument to use. In this example, we will call it *NavCom GSM Rover*. You may give your profile a more meaningful name if this one is not suitable. • Press the **Save** button. This saves the profile name and activates more buttons.	

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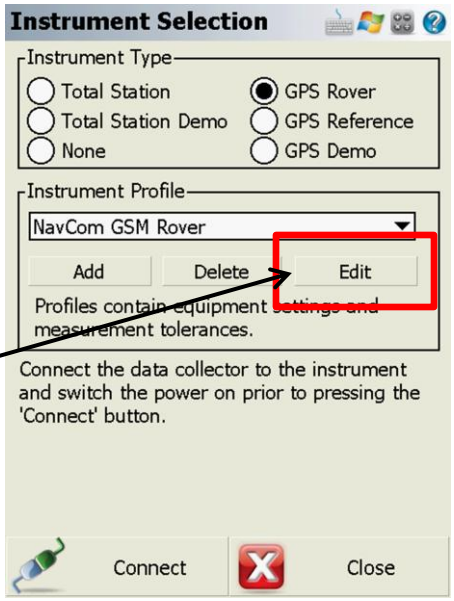
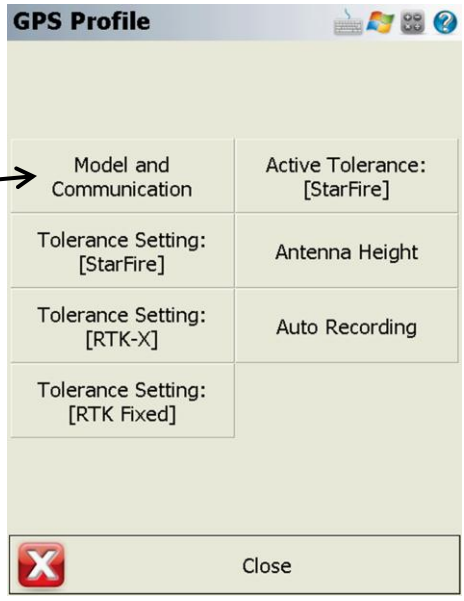
Creating a GPS GSM Network Rover Profile, *continued*

Step	Action	Display
12	Continuing in the Instrument Selection screen: With your newly created instrument profile name in the **Instrument Profile** field, • Press the **Edit** button. This takes us to the GPS Profile screen.	
13	In the GPS Profile screen: • Tap on the **Model and Communication** button. • Ensure that your GPS receiver is turned on. This takes us to the Model and Communication screen.	

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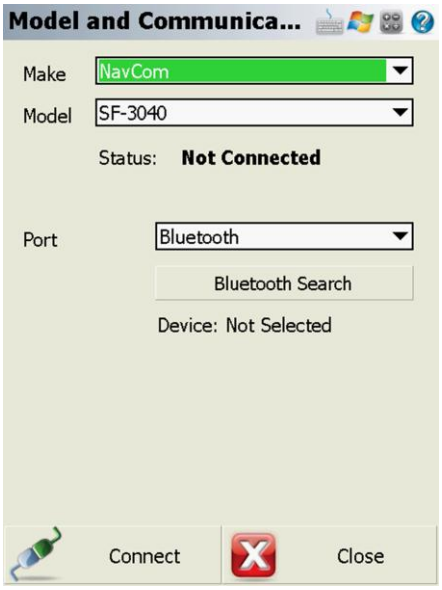
Step	Action	Display
14	In the Model and Communication screen: We see that the default **Make** and **Model** fields already have the GPS receiver we intend on using in them. • Ensure that the **Port** field is set to *Bluetooth*. • Press the **Bluetooth Search** button. This takes us to the Select Bluetooth Device screen.	
15	In the Select Bluetooth Device screen: We see in this screen all of the Bluetooth devices that your data collector has found. If you do not see your GPS receiver, press the **Refresh List** button and another search will be performed. • Tap on your GPS receiver's button. In this example, our receiver is named *SF-304012590*. This takes us to the Link Configure screen.	 **Note**: Don't be alarmed if your screen does not have the same devices listed in the image above.

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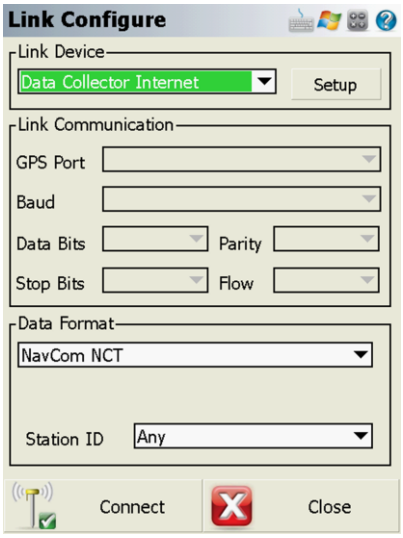
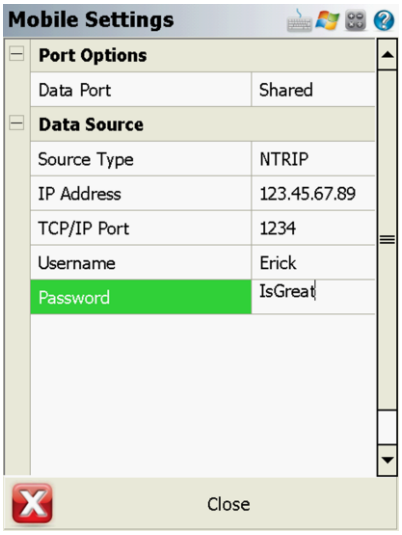
Creating a GPS GSM Network Rover Profile, *continued*

Network GPS Data

In the guide, *Creating a Local Internet Connection on a Nautiz X7 Hand Held Computer*, we created a connection to the Internet. Now we will enter the network settings to connect to your GPS network correction service using that Internet connection.

Step	Action	Display
16	In to the Link Configure screen: • Ensure that *Data Collector Internet* has been selected in the **Link Device** field. • Press the **Setup** button. This takes us to the Mobile Settings screen.	
17	In the Mobile Settings screen: • Enter your IP address, TCP/IP port, user name, and password in the appropriate fields. • Leave the remaining fields as they are in the image on the right. • Press the **Close** button when finished. This returns us to the Link Configure screen.	

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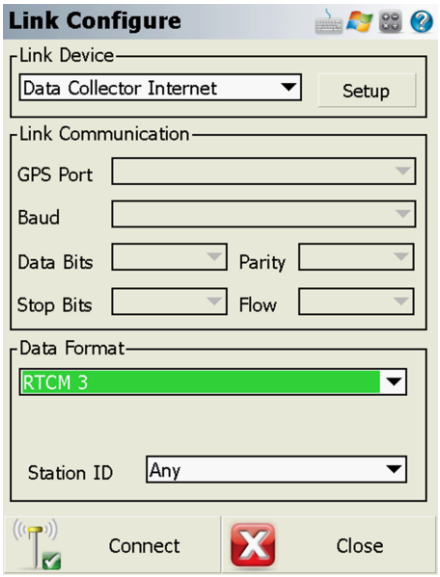
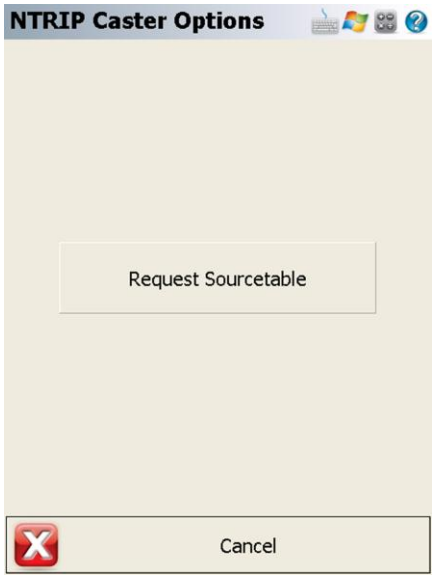
Step	Action	Display
18	In the Link Configure screen: • Press the **Connect** button. When NavCom FieldGenius connects with your GPS Network GPS data service, you will be taken to the NTRIP Caster Options screen.	
19	In the NTRIP Caster Options screen: Since this is the first time we have connected to this service, we are only presented with a **Request Sourcetable** button. If we had done this before then the last mountpoint that we selected would also be in this list. • Tap on the **Request Sourcetable** button. This takes us to the NTRIP Sourcetable screen.	

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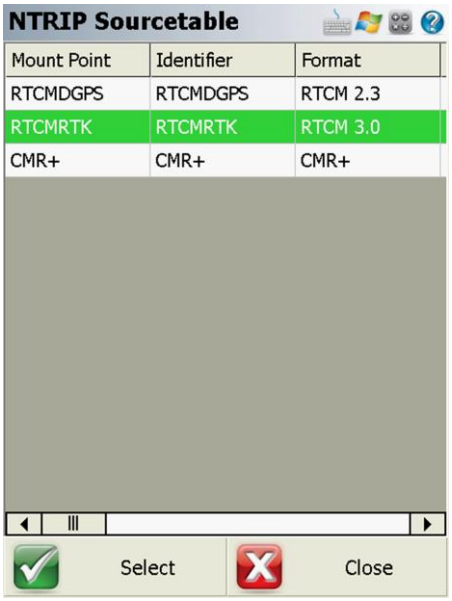
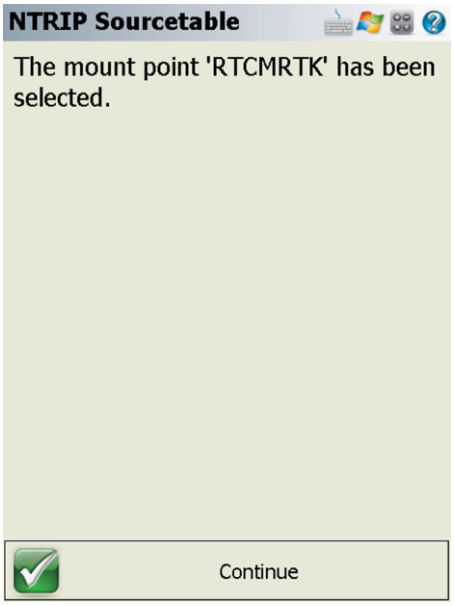
Step	Action	Display
20	In the NTRIP Sourcetable screen: Here we are presented with a list of all of the mountpoints our GPS network data provider is offereing. **Note**: Don't be alarmed if your mountpoint list does not match the screen on the right. Your provider may offer different services. • Select the mount point you wish to use by tapping on it. In this example we are selecting the RTCM 3.0 RTK mountpoint. • Press the **Select** button. You are then taken to the NTRIP Sourcetable acknowlegement screen. • Press the **Continue** button. You are now taken to the MapView screen.	 

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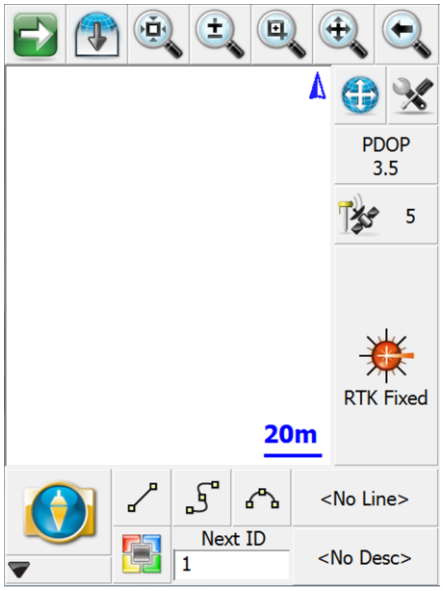
Creating a GPS GSM Network Rover Profile, *continued*

Step	Action	Display
21	In the MapView screen: You are ready to start measuring.	

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Creating a GPS GSM Network Rover Profile, *continued*

Congratulations

You have successfully created a NavCom GPS GSM rover profile.

You then made a connection to your GPS receiver via Bluetooth.

From there you connected to your GPS network correction provider and started receiving network data.

Remember, NavCom FieldGenius will preserve these settings in the instrument profile. You only have to create this profile once. In other words, you don't have to follow these steps each and every time you want to survey using GPS and the Internet.

Glossary

GPS – Global Positioning System
GSM – Global System for Mobile Communications
CDMA – Code Division Multiple Access
ISP = Internet Service Provider
SIM - Subscriber Identity Module
RTCM - Radio Technical Commision for Martitime
RTK – Real Time Kinnematic