Maine Technical Source

Leica GS16 GNSS Receiver + CS20 Data Controller with Captivate Software
RTK Rover Wizard: Leica SmartNetNA

Be Captivated

Captivate

SmartNet North America

Any Constellation - Any Application - Open to All

Maine Technical Source – November, 2017

Leica Geosystems Captivate Software

This Quick Guide outlines the steps within the Leica Captivate Software, from the **Settings > Connections > RTK Rover Wizard** to create a new Profile for Network RTK Surveying using the GS16 GNSS Receiver and CS20 Data Controller with a Cellular Internet connection to the **Leica Geosystems SmartNetNA, (Real-Time Network).**

New! – **Leica SmartNet - Built on reliable high performance Leica GPS technology**

Finally, surveyors, engineers, contractors an municipalities no longer need to incur cost or hassle of setting up and monitoring temporary base stations. Through affordable subscription service, you can gain access to the Leica SmartNet RTK Network and its extensive array of 1,300 permanent base station with coverage for 44 states and 8 provinces. The Leica SmartNet RTK Network allows you to locate positions via internet for both "Nearest Site" and "Network" RTK solutions.

If you want to request a subscription **please call Dan Blais @ 800-322-5003 extension 121.**

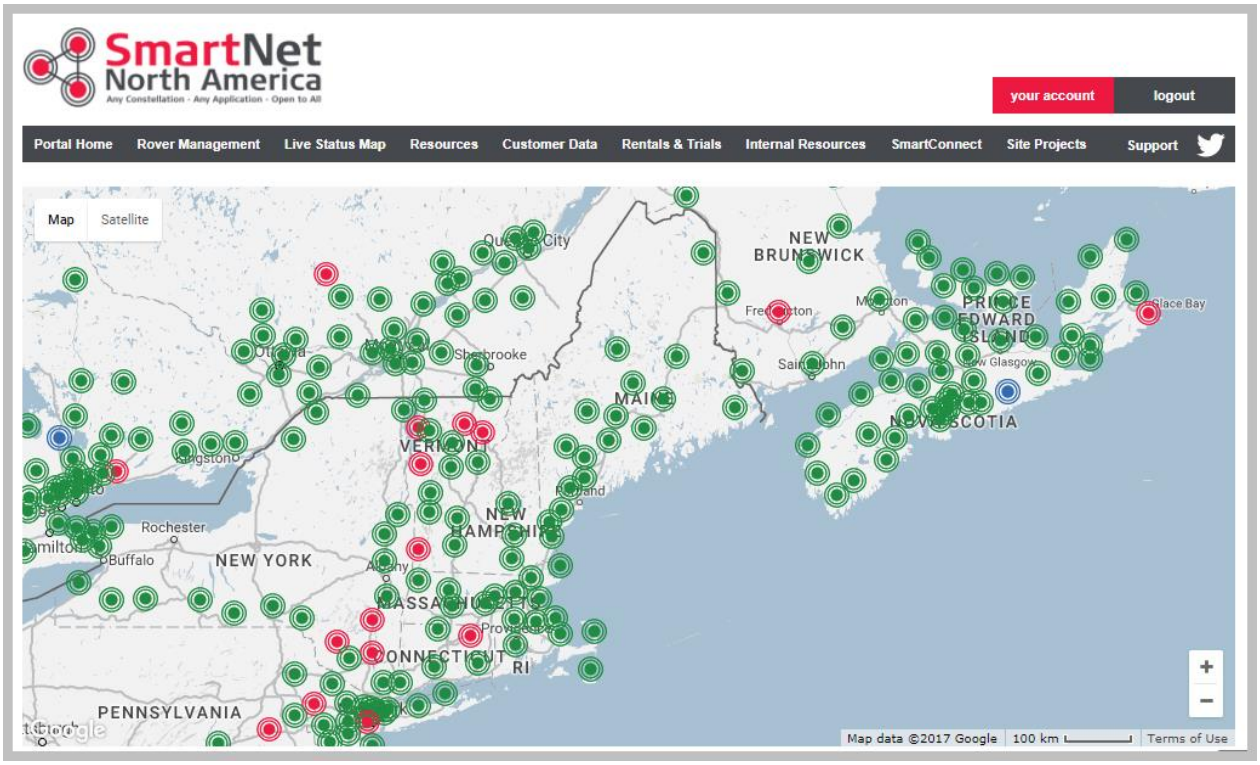
Why use the Leica SmartNet Network?

Save Money. No need to invest in a base station, when you can receive corrections for a 1st order control Network Base Station. Should you already own a base station, even another brand of equipment, you can easily convert it into a productive quickly. Fast rover initialization to get you up to speed and productive quickly.

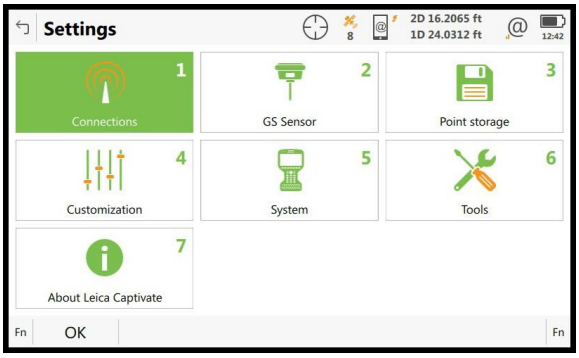
- Fast rover initialization to get you up to speed and productive quickly.
- Real-time data collection - errors are instantly corrected in the field.
- Centimeter-level accuracy up to 40 Kilometers from each base station.
- Reduce dependency on ground control monuments.
- Flexibility to connect with Leica SmartNet RTK network, anytime - day or night.
- Superior Leica reliability, backed with around-the-clock monitoring by MTS.
- Direct Internet connectivity with password-restricted access.

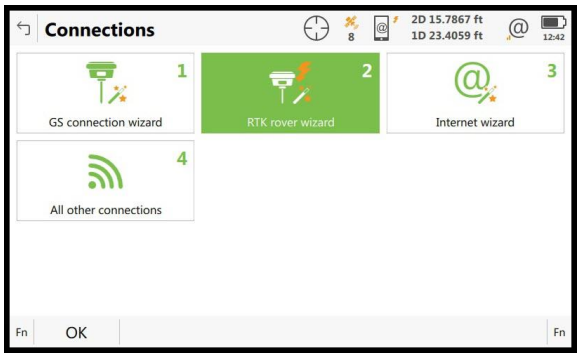
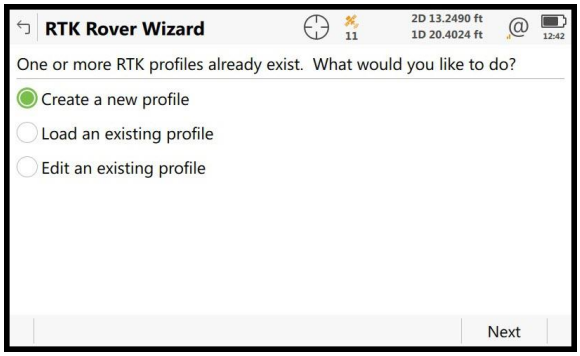
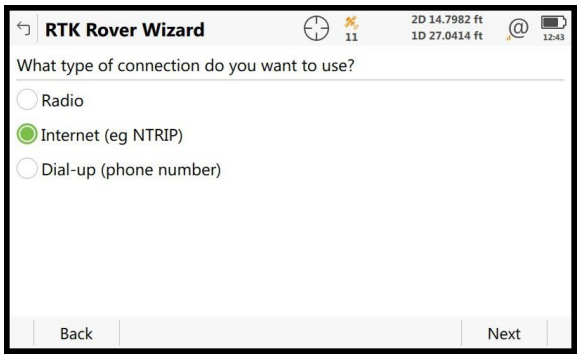
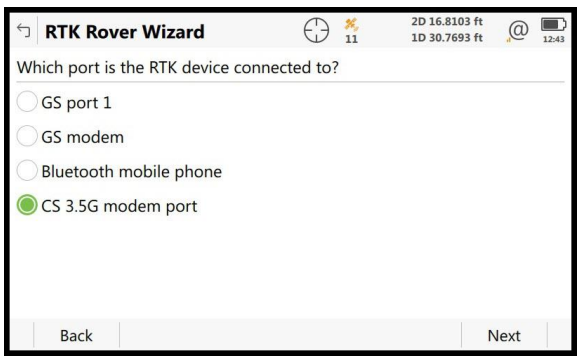
If you need more information on our different Subscription plans for centimeter-accuracy or Rentals to test drive on a project give us a call.

If you have questions or require assistance, contact Dan Blais or Bob LeMoine at Maine Technical Source at (800) 322-5003.



SmartNet North America - RTN coverage map for the Maine Technical Source – New England Region, November 2017.

Step 1- From the Captivate Software Main Menu, Job Carousel, Select any current Job,	
Step 2- From the Apps Carousel, Select **Settings > Connections**,	

Step 3- From the **Connections** panel, Select **RTK rover wizard** Select F1 OK	
Step 4- From the **RTK Rover Wizard** panel, One or more RTK profiles already exist. What would you like to do? Panel, select the option, **(•) Create a new profile** Select F6 Next	
Step 5- From the **RTK Rover Wizard** What type of connection do you want to use Panel, select the option: **(•) Internet (eg NTRIP)** Select F6 Next	
Step 6- From the **RTK Rover Wizard** Which port is the RTK device connected to? Panel, select the option: **(•) CS 3.5G modem port** Select F6 Next	

Step 7- From the **RTK Rover Wizard** Which RTK device is being used?

If you are using AT&T, or T-Mobile Cellular Service with a SIM card in the CS20 Data Controller, select the option

(•) GSM/GPRS/UMTS device

Select F6 Next

Step 8- From the **RTK Rover Wizard** Which RTK device is being used?

If you are using Verizon Wireless Cellular Service (No SIM card) in the CS20 Data Controller, select the option

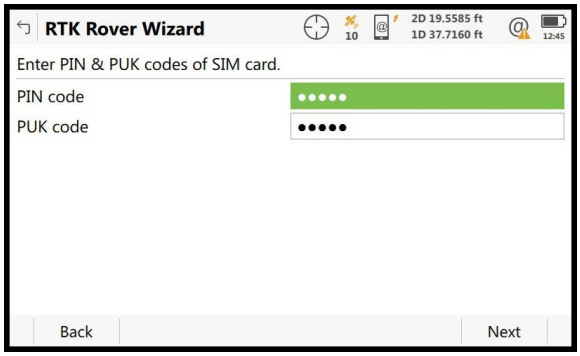
(•) CDMA device

Select F6 Next

Step 9- From the **RTK Rover Wizard** Enter PIN & PUK codes of the SIM card, panel

Leave the Defaults, Do Not Change, Do Not Enter ANY Information here,

Select F6 Next



Step 10-

From the **RTK Rover Wizard** How is the device connecting to the Internet, select the option,

(•) Using GPRS/CDMA Internet Connection

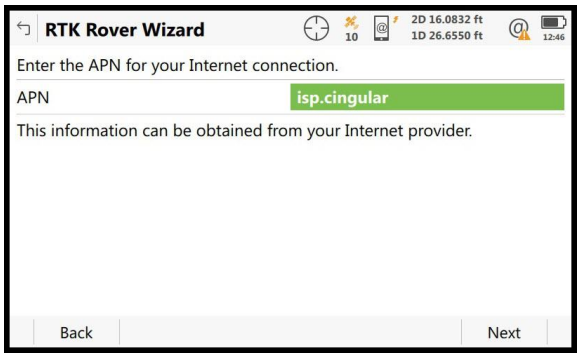
Select F6 Next

Step 11-

From the **RTK Rover Wizard**
Enter the APN for your Internet connection

Enter the APN value
The APN is required if using SIM card,

For AT&T: isp.cingular or broadband
For T-Mobile: epc.tmobile.com
Select F6 Next

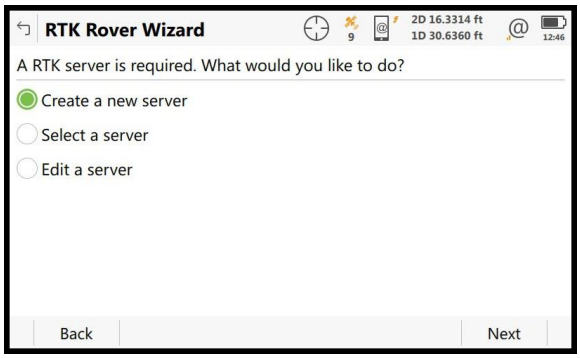


Step 13-

From the **RTK Rover Wizard**
A RTK server is required.
What would you like to do?

(•) Create a new server

Select F6 Next



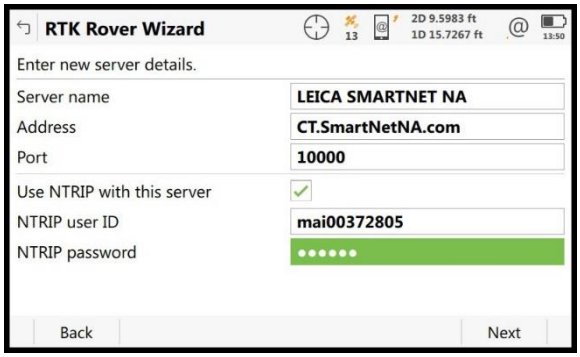
Step 14-

From the **RTK Rover Wizard**
Enter new server details

Server name: LEICA SMARTNETNA
Address: CT.SmartNetNA.com
Port: 10000
Use NTRIP with this server [√]
Enter your NTRIP user ID
Enter your NTRIP password

Note: The IP Address will vary by State Abbreviation code, use the State your located in.

Select F6 Next



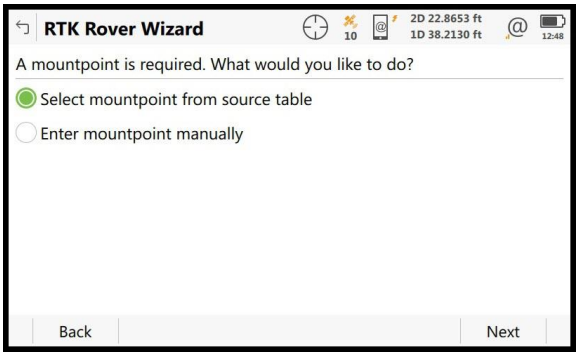
CT.SmartNetNA.com
MA.SmartNetNA.com
ME.SmartNetNa.com
NH.SmartNetNA.com
NY.SmartNetNA.com
RI.SmartNetNA.com
VT.SmartNetNA.com

Step 15-

From the **RTK Rover Wizard**
A mountpoint is required.
What would you like to do?,

(•) Select mountpoint from source table

Select F6 Next

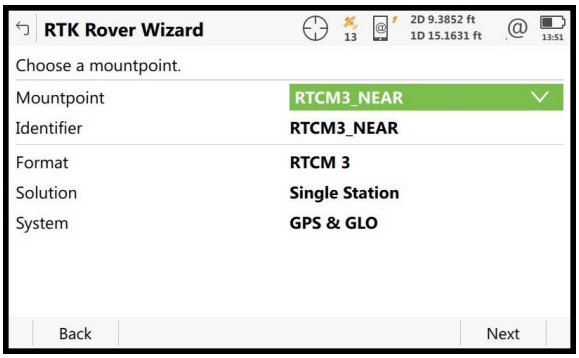


Step 16-

From the **RTK Rover Wizard**
Choose a mountpoint

From the **Mountpoint** drop-down menu, Browse the list, **select a Mountpoint,** The Identifier, Format, Solution and System details, describe the Mountpoints, or RTK Data Product.

Select F6 Next

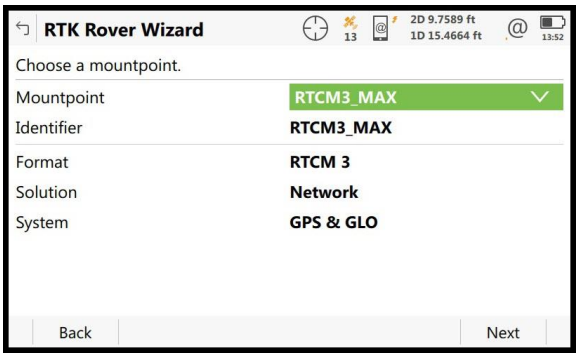


Step 18- (Other mountpoint options)

From the **RTK Rover Wizard**
Choose a mountpoint

From the **Mountpoint** drop-down menu, Browse the list, **select a Mountpoint,** The Identifier, Format, Solution and System details, describe the Mountpoints, or RTK Data Product.

Select F6 Next



Step 19-

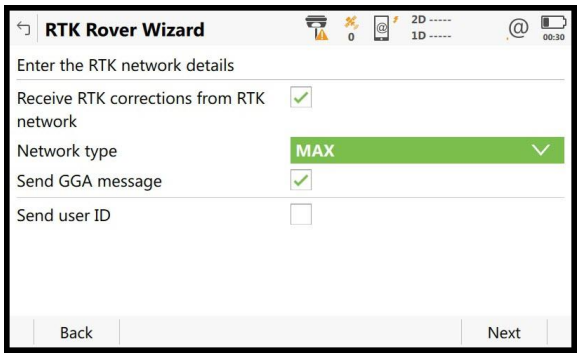
From the **RTK Rover Wizard**
Enter the RTK network details

Receive RTK Corrections from RTK [√]
network

Network type [MAX]

If you selected a **MAX** Mountpoint, You MUST select/match the **Network type: [MAX]**

Select F6 Next



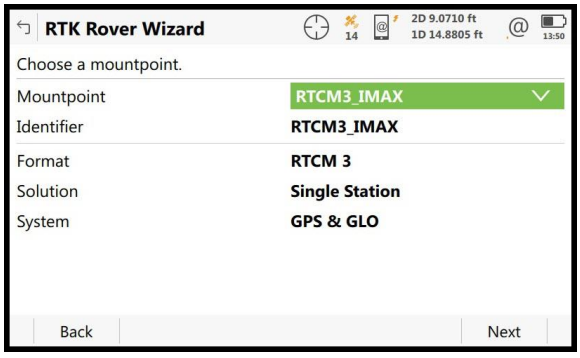
The Network type **MAX** = Network RTK Corrections from Multiple Network RTK Base Stations, based on your RTK Rover's position.
The RTK Rover computes the MAX Network solution.

Step 20- (Other mountpoint options)

From the **RTK Rover Wizard**
Choose a mountpoint

From the **Mountpoint** drop-down menu, Browse the list, **select a Mountpoint,** The Identifier, Format, Solution and System details, describe the Mountpoints, or RTK Data Product.

Select F6 Next



Step 21-

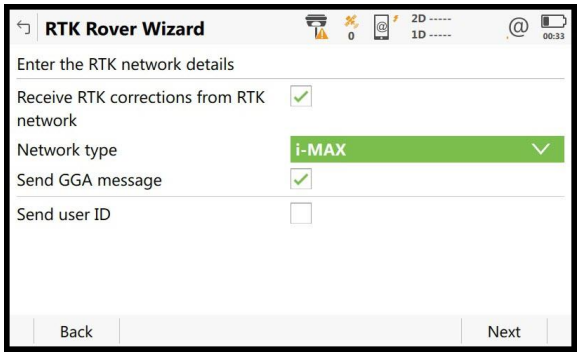
From the **RTK Rover Wizard**
Enter the RTK network details

Receive RTK Corrections from RTK [√]
network

Network type [i-MAX]

If you selected a **i-MAX** Mountpoint, You MUST select/match the **Network type: [i-MAX]**

Select F6 Next



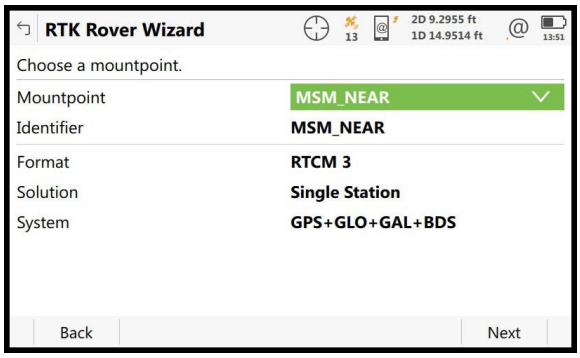
The Network type **i-MAX** = Individual MAX Network RTK Corrections from Multiple Network RTK Base Stations, based on the RTK Rover's position.
The Network RTK Server computes these **i-MAX** RTK Corrections, sends them to the Network RTK Rover.

Step 22- (Other mountpoint options)

From the **RTK Rover Wizard**
Choose a mountpoint

From the **Mountpoint** drop-down menu, Browse the list, **select a Mountpoint,** The Identifier, Format, Solution and System details, describe the Mountpoints, or RTK Data Product.

Select F6 Next



The Network type **Nearest MSM** = Single Baseline RTK; **MSM = Multiple Satellite Measurements,** Corrections from the Closest Network RTK Base, Based on the RTK Rover's position.

Step 23-

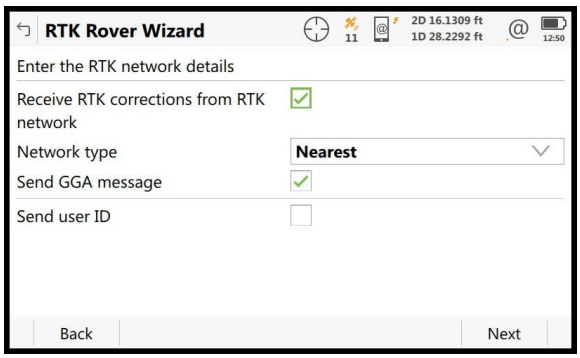
From the **RTK Rover Wizard**
Enter the RTK Network details

Receive RTK Corrections from RTK network [√]

Network type [Nearest]

If you selected a **Nearsite** Mountpoint, You MUST select/match the **Network type: [Nearest]**

Select F6 Next



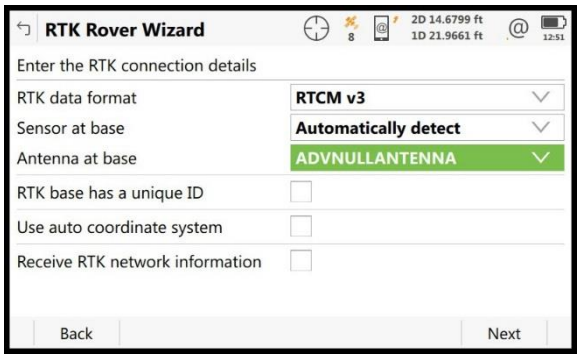
The Network type **Nearest** = Single Baseline RTK Corrections from the Closest Network RTK Base, Based on the RTK Rover's position.

Step 24-

From the **RTK Rover Wizard**
Enter the RTK Network details

RTK data format [RTCM v3]
Sensor at Base [Automatically detect]
Antenna at Base [ADVNULLANTENNA]

Select F6 Next



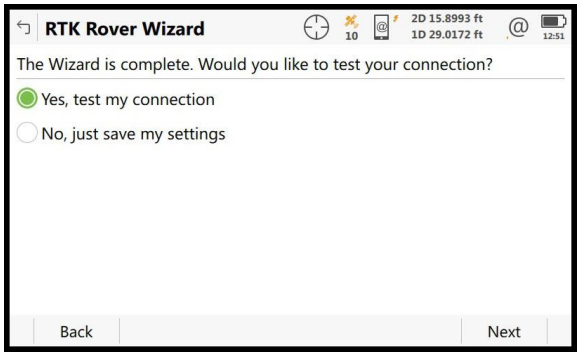
Step 25-

From the **RTK Rover Wizard**
The Wizard is complete. Would you like to test your connection?

(•) Yes, Test my connection

This tests/verifies the New Servers IP Address, Port and User's Credentials…

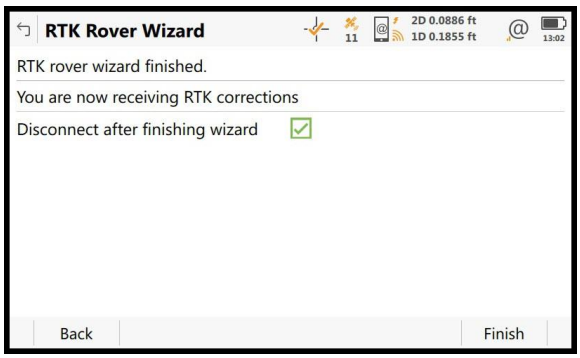
Select F6 Next



Step 26-

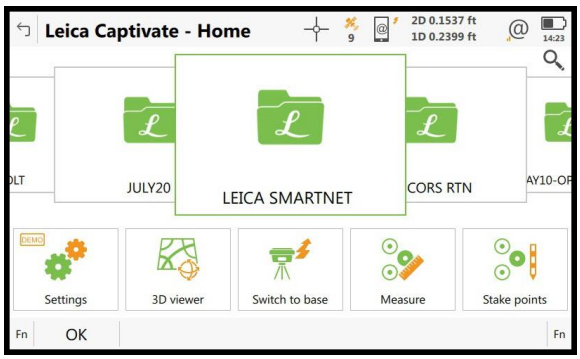
From the **RTK Rover Wizard,**
RTK rover wizard finished

Select **F6 Finish**



Step 27-

The User is returned to the Captivate Main Menu



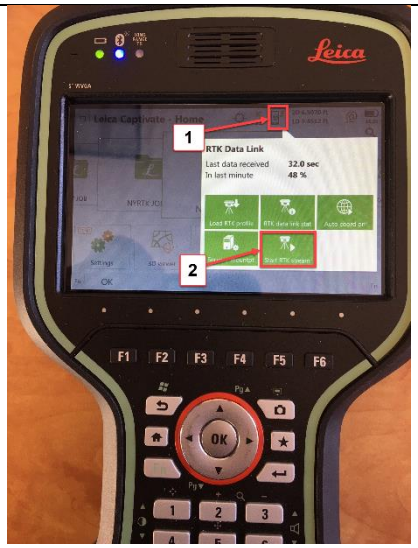
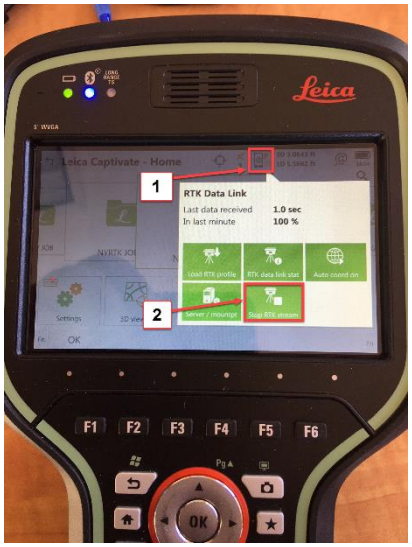
Step 28-

To Start the RTK Data Stream,

(1) ***Using the Stylus, Tap on the Cellphone icon on the Top-Row Task Bar,***

(2) Then Select/Tap **Start RTK Stream,**

This will Start the RTK Data Link, the RTK Rover will iterate from an

Autonomous/Navigated GNSS Solution to a RTK Float Solution, then to a RTK Fixed Solution, so the RTK user can Start Measuring, or Staking Out Points.	
Step 29- To Stop the RTK Data Stream, ***(1) Using the Stylus, Tap on the Cellphone icon on the Top-Row Task Bar,*** **(2)** Then Select/Tap **Stop RTK Stream,** This will stop the RTK Data Link.	

If you need technical assistance configuring the Internet Connection; configuring the Cellular Modem Device in the Leica CS20 Data Controller, or the Cellular Modem device in the Leica GS16 GNSS receiver; there are PDF Quick Guides available on the MTS Blog page, that provide detailed instructions for Configuring the Data Controller, or GNSS Receiver's internal Cellular Data Modems using AT&T GSM/GPRS cellular network, or Verizon Wireless CDMA cellular Networks for Network RTK Rovers.

blog.mainetechnical.com

Filename: GS16-CS20-RTK Rover Wizard_Leica SmartNetNA_Quick Guide_Rev1.2