June 4, 2009

Hughes is pleased to announce the release of software version 3.6.3.5 for the BGAN 9201 terminal. This release includes many new features such as the new BGAN X-Stream service recently announced by Inmarsat, and a full internal web browser for configuration and control of the 9201 terminal. The new software version Upgrader will be available through the LaunchPad upgrade service as well as on both the Inmarsat support page: http://www.inmarsat.com/Support/BGAN/Firmware.aspx and the Hughes BGAN support page: http://www.bgan.hughes.com

Installing this release

WARNING: DO NOT unplug or interrupt the terminal's power supply or Ethernet connections during the firmware upgrade. Doing so could corrupt the firmware loaded onto the terminal.

1. Run the ZIP file, which will unpack the BGAN upgrader into:
   c:\BGAN_PC_Upgrader2.8_V3.6.3.5
   or
   BGAN_MAC_Upgrader2.8_V3.6.3.5

2. Connect the Ethernet port of the BGAN modem to be upgraded to the LAN port of the computer using a standard Ethernet cable. Insert a SIM card into the BGAN modem.

3. Connect an AC/DC converter (supplied in the BGAN install kit) to the BGAN modem, If it does not power on automatically, press the power button to turn it on.

4. Run BGANupgrader.exe file in the above folder or simply click the MAC upgrader.

5. On the BGAN Upgrader Window, click the "Upgrade" button.
   a. During the Upgrade process, it is imperative that the power supply and Ethernet connections to the BGAN modem are not removed or interrupted.
   b. The status and progress of the Upgrade is shown in the BGAN Upgrader window.

6. The upgrade process will proceed. After ~2 minutes, a window will pop-up indicating the upload is complete. The upgrader will then reset the modem, reconnect and retrieve the software version.

7. After ~30 seconds, the following message will appear in the window: "Software version was retrieved!" If there is an error retrieving the software version, check the Ethernet connection and use the "Get SW Version" feature from the "Tools" menu.

8. Terminal has been successfully upgraded, and the power and Ethernet connections can be removed.

If you want to upgrade another terminal, there is no need to close the BGAN Upgrader window. Just repeat steps 2 through 8, but omit step 4.

If an earlier software upgrade was unsuccessful then the modem will power-up in a bootrom mode and the LEDs will show a pattern of flashing and solid red/green colors (refer to the user guide for more details). You can also force the modem to power-up in this mode by pressing the audio button when you power-up the modem. The upgrader can still be used to re-upgrade the modem if it is in bootrom mode. However, in bootrom mode DHCP is not supported and you must set the computer IP address to 192.168.128.101

Release Notes for 3.6.3.5 (Since 3.6.1.5)

New Features:

Web Browser
- Added extensive Embedded Web Browser MMI with the following features
  - Properties Web Page to view User Terminal Information and facility to get Syslog for diagnostics
  - Setup Web Page to configure UT parameters
  - Statistics Web Page for monitoring PS/CS Usage Information
  - PDP Contexts Web Page for manually configuring and establishing PDP contexts for the PC/laptop you are using and other devices
  - Wireless LAN Web Page for configuring Wireless LAN access
  - WLAN WEP Web Page for setting up Wireless Security features
    - includes SSID broadcast enable/disable and MAC filtering for added security
  - ACA Web Page for defining static PDP context definitions for Automatic Establishment
  - ISDN Web Page for configuring MSN Numbers and MO call Trigger Type
- Embedded Browser Java applet for monitoring Signal Strength and Beam Information.
- User CS and PS Call Statistics accessible via both the Hughes Embedded Browser and at commands:
  - Lifetime CS/PS Call Statistics, which can not be reset
  - Trip CS/PS Call Statistics which accumulate until reset by the user

- Versions of the web pages formatted for wireless PDA's, Blackberry's and iPhones allow full terminal configuration and control. The UT queries the connecting device screen resolution to determine whether to load the normal or the mobile version of the web pages.

X-STREAM
- Support for new Inmarsat BGAN X-STREAM service activated from LaunchPad or web browser PDP context activation and ACA pages.

Miscellaneous

- Satellite Information has been modified for new satellite locations
  - Global_beam_freq=10994,11168,10828,12330,12446,12292
  - Ocean_region=   1435, 250, -980, 1435, 250, -980
  - Satellite_id=   5, 6, 7, 5, 6, 7
- Support for LOA timer
  - indefinitely with external antenna
- Support for Lease Mode functionality
- 24/7 PDP Keep Alive
  - UT will re-establish a PDP context if torn down by the network due to inactivity
- Streaming Inactivity Timer (Enable/Disable of the Streaming Inactivity Timer functions dynamically, no reboot is required.)
  - UT will automatically tear down a streaming PDP context due to inactivity
- UT configurable IP address using the last two IP octets
- Configurable DHCP address allocation range
- Ability to disable the UT DHCP Server from the Setup Web Page or via the at_ihinit at-command.
- Support for multiple globally assigned static IP addresses
- Enhanced Automatic Context Activation (ACA) functionality to allow multiple address range definitions
- Additional AT-command support
  - IMETER for reporting call statistics
- Allow user to control the mobile originated CS call type (Speech, 3.1 kHz, UDI or RDI) from the MSN number instead of the Bearer Type. This is useful for ISDN devices (such as the Nera handset) that do not supply the bearer type in the call set up.
- When activating a PDP Context from the Web Page the UT checks the minimum QoS values against the negotiated values and deactivates the context if the negotiated QoS is not good enough.
- Added error messages to the bottom of the PDP Context Web Page to indicate failure reasons.
  - If Negotiated QoS is rejected by the UT, Error Message will be 'QoS not Accepted'
  - If PDP Context Activation is Rejected, Error Message will correspond to the Cause Value that is returned by the network, such as 'Network Failure' or 'User Authentication Failed'

Bug Fixes

- Fixed VxWorks Blackhole Flag which was making host unreachable in 3.6.2.8
- Corrected problem with displaying of the APN field on the Web Browser
- Auto Power On option is now functional when changed on Web Browser
- Improvements to ISDN interface to reduce Bit Error Rates
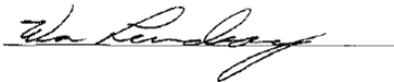- Fixed problem with AT-Command port which was causing periodic lockups

- WLAN WEP key data is now consistent between the Web Browser and LaunchPad

Known Issues
- PDA based web pages do not always automatically update because not all PDAs have Java by default.
- DHCP lease renewal errors are seen on some PDAs running Windows Mobile 6. It appears that Windows Mobile is not renewing the lease early enough and allows it to expire before renewing. The unit recovers but displays a pop up error. Increasing the DHCP lease time to 3 minutes can help.
- The SSID broadcast disable feature is not supported in earlier units equipped with the Agere WLAN card. These units are MCN 3003920-0001. MAC address filtering does work and can be used for added security.

Should you have any questions regarding this notice please do not hesitate to contact me at +1-858-452-4658 or bill.lindsay@hughes.com.

Sincerely,

Wm Lindsay
Sr. Program Director