Using SCOTTY™ Mobile over BGAN

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Overview
SCOTTY™ Mobile is a high quality video communications solution. It features an industrial PC with a high-speed data transfer system offering digital video recording, traditional H.320/H.323 videoconferencing, data conferencing, and other data services. The award-winning unit is rugged yet high tech, ideal for work in the field. It is waterproof and shock resistant (military-tested), with a high intensity, fifteen inch industrial display.

The unit can be easily connected to BGAN IP, ISDN and NATO standard encryption devices. SCOTTY is an all-in-one unit: DC power supply, multiple network interfacing (no extra adapters needed), high resolution camera, speaker, microphone, and echo cancellation are all built in. The SCOTTY switching matrix manages numerous inputs and outputs for external audio and video. Optional MPEG4 and H2.64 recording is available in two different recording resolutions: CIF or FD1.

SCOTTY Mobile has been tested over Inmarsat BGAN IP. Standard IP data offers high bandwidth in both directions, however bandwidth is not guaranteed. Streaming IP data provides guaranteed bandwidth at 32kbps, 64kbps, 128kbps or 256kbps, depending on the terminal.

This document describes the use of SCOTTY with the following two BGAN terminals:
- Hughes HNS 9201
- Thrane & Thrane EXPLORER 500
Product range
The SCOTTY Mobile video communication unit, offering:
- 1.5 Mbit/s H.320/H.323 codec
- H.264 video
- ISDN interface
- H.320 recording
- Win OS
- Cherry keyboard
- VGA output
- DC 10-32 V internal power supply.

Typical Users
- First responders.
- Broadcasters.
- Emergency response.
- Police Forces.
- Homeland security.
- Fire services.
- Military.

Key Features
SCOTTY offers the following main features over the BGAN network:
- High quality videoconferencing. Use BGAN standard IP data or streaming IP data, both easily selectable from the SCOTTY software.
- Data transfer and document sharing in parallel to videoconferencing.
- Far-end camera control.
- File transfer to and from remote locations.
- FTP server functionality.
- VPN connectivity (if required).
- Internet and email access.

Benefits to BGAN users
SCOTTY offers you the following main benefits:
- Ability to conduct high quality video communications over a BGAN network from remote and difficult environments.
- File transfer of information to and from remote locations.
- Document sharing.
- Dynamic video communications call rate.
- FTP server access.
- Camera control for surveillance applications.
- BGAN software can be loaded and configured directly from SCOTTY.
- VPN interconnectivity.
Setting up
The BGAN terminals are controlled by the BGAN LaunchPad software (available free from Inmarsat). This can be downloaded onto SCOTTY via floppy disk, USB port, or CD drive, or through the Ethernet port on Mobile unit. The software can then be run via the Windows software installed on SCOTTY.

Hardware Installation
The BGAN terminal can be connected to the SCOTTY unit over either Ethernet or USB. To use the Ethernet interface, connect a network cable to the Ethernet port on the SCOTTY unit and to the Ethernet port on the BGAN terminal. The HNS 9201 and EXPLORER 500 both have built-in DHCP servers; therefore, configure SCOTTY to obtain an IP address automatically.

SCOTTY Configuration
The SCOTTY Mobile requires minimal setup. After the system has booted up, Windows opens, you are presented with the SCOTTY Teleporter ICON.

Double click on the Teleporter Icon to start the application. Use the Dial button to enter the destination IP address, and click on Call to establish end to end video conferencing

Equipment Needed
For a basic configuration, you require the following equipment:
- SCOTTY Mobile unit.
- BGAN terminal.

BGAN Customization
No BGAN customisation is required.
Hints and tips

- Best results are achieved over a streaming IP connection, where the call bandwidth is one step lower than the selected streaming bandwidth. This leaves spare bandwidth for the overheads needed by the IP protocol.
- BGAN LaunchPad allows the configuration of error correction. Inmarsat recommends that you disable error correction for UDP applications. Refer to “BGAN LaunchPad Help” for details.

Technical Summary

The SCOTTY Mobile technical feature sets are summarized below:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Supported by Scotty Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>BGAN Launch Pad Installation</td>
<td>Yes</td>
</tr>
<tr>
<td>H.264, H.263, H.261 Video Codec</td>
<td>Yes</td>
</tr>
<tr>
<td>G.711, G.722, G.723.1, G.728 Audio Codec</td>
<td>Yes</td>
</tr>
<tr>
<td>Euro ISDN</td>
<td>Yes</td>
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<tr>
<td>Data: T.120</td>
<td>Yes</td>
</tr>
<tr>
<td>FTP/Store and Forward</td>
<td>Yes</td>
</tr>
<tr>
<td>Hardware solution</td>
<td>Yes</td>
</tr>
<tr>
<td>Windows Operating System</td>
<td>Yes</td>
</tr>
<tr>
<td>NTSC &amp; PAL Support</td>
<td>Yes</td>
</tr>
<tr>
<td>Audio Video composite output</td>
<td>Yes</td>
</tr>
<tr>
<td>BGAN Standard IP and Streaming IP support</td>
<td>Yes</td>
</tr>
<tr>
<td>BGAN ISDN support</td>
<td>Yes</td>
</tr>
<tr>
<td>Far-end camera control</td>
<td>Yes</td>
</tr>
<tr>
<td>Ethernet, LAN, USB, RJ45 ports</td>
<td>Yes</td>
</tr>
<tr>
<td>Built-in CCD Camera</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Further details and support

Inmarsat Contact
Customer_care@inmarsat.com

SCOTTY Contact
Christopher Halverson
Manager Government Accounts
SCOTTY Group Austria GmbH
Taslastrasse 4
A8074 Grambach, AUSTRIA

http://www.scottygroup.com/
Tel +43 316 409 426
Fax +43 316 409 426 53

www.inmarsat.com/bgan

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