World Health Organization

Operations Support and Logistics (OSL)

WHO EMERGENCY ICT FIELD MANUAL

Installation & Operation Manual

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1. OVERVIEW

Information and Communication Technology (ICT) is a core function and service for emergency response. ICT is also a critical security tool. ICT plays a vital role in ensuring that WHO staff that respond during emergencies will have:

1. The ability to access information;
2. The ability to communicate;
3. The right to personal security.

1.1 Objective

The primary objective for ICT function is to support the work of WHO health technical teams in their provision of assistance to governments and people in affected areas, by providing ICT services in the most efficient and speedy way possible. This is to ensure that the following Staff Safety Requirements are met:

- Staff safety is priority in any operation;
- Staff location and staff movement must be tracked;
- Staff need to be able to communicate and call for assistance at any time.

1.2 Inter-UN Agency Liaison

The provision of ICT services during health emergencies must be coordinated with other UN Agencies. There are benefits from sharing resources, including:

- **Sharing infrastructure (VSAT, radio)**: Cost savings can be achieved by installing a smaller number of telecommunications links with greater capacity.
- **Sharing technical expertise:** with common equipment staff can service more than one organization, or alternatively, staff from different organizations can provide technical backup to each other, thus providing a better service to end users.
- **Sharing premises:** Sharing staff and infrastructure depends often on whether the actual office premises are co-located. If this is not the case then sharing staff and infrastructure does become more difficult, though not impossible.

There are also constraints to sharing such resources:

- Sharing infrastructure. Any sharing has to be done on the basis that each agency is satisfied that they can retain control over service levels. In addition, agreements on costs need to be worked out in a way that each agency can see that there is indeed a cost benefit associated with this approach. This cost benefit may not simply be in terms of cost of implementation and ongoing costs, but also in terms of reduced need for technical support for example.

- Sharing technical expertise: This can be a cost-efficient strategy whether or not the technical infrastructure is shared. There will be heavy demands placed on the technical staff supporting these implementations, and a well-functioning support relationship between the staff of the different agencies on the ground will enable the individual staff to cope better, and to provide a better service to their particular end users.
- Sharing premises: Where this is possible, it enables important economies of scale to be achieved in the technology area, not only on the telecommunications front, but in terms of support to end users of PCs, laptops, phones, applications, and messaging services. It also enables services such as radio room and videoconference facilities to serve a greater number of users.

2. TELECOMM KITS

Operations Support and Logistics Unit has developed together with IT department a series of different Field Telecommunication Modules, responding to the specific needs encountered along the years during outbreak responses based on different scenarios, covering from individual needs up to small team requirements, in terms of connectivity, printing and power supply; all of them based on Began network services. In addition, this manual will also address the use of other satellites devices based on other networks, used by OSL during operations support.

2.1 Contents of different Modules

1. Module 0.1: Deep Field Personal Computer Module – 1 Staff:

   A Tactical Backpack kit that contains everything that a Responder may need to operate or stay in touch during an emergency response. Multiple forms of communications including a mobile satellite system, rugged mobile phone and an Iridium sat phone. A solar battery kit is included to be able to operate off the grid.

   A very robust shoulder bag is included for carrying all the equipment including a laptop (no included). Kit contains multiple cables, adapters and international travel adapter for self-sufficiency.

Weight: 7kg

Figure 1 Deep Field Personal Computer Module – 1 Staff

2. Module 0.2: Deep Field Personal Computer Module – (Camera Bag):

   A light shoulder kit that contains everything that a Responder may need to operate or stay in touch during an emergency response. Multiple forms of communications including a mobile satellite system, rugged mobile phone and an Iridium sat phone. A solar battery kit is included to be able to operate off the grid.

   A very robust shoulder bag is included for carrying all the equipment including a laptop (not included). Kit contains multiple cables, adapters and international travel adapter for self-sufficiency.

Weight: 7kg

Figure 2 Deep Field Personal Computer Module – Camera Bag

3. Module 0.3: Personal Computer Module – Logistician:

The kit comes with two Mobile satellite systems that are always ready. Connect to the Internet or make calls to anywhere in the world regardless of the local infrastructure.

The included Solar Power Kit powers your laptops, satellite phones, smartphones, USB light, and other DC or USB operated devices as a one-stop power supply in the field.

Setup a quick meeting room with the ultra-portable and very bright Pico projector and ensure that all can hear and talk with the wireless speaker phone.

Weight: 18kg

Figure 3 Personal Computer Module – Logistician

4. Module 1.2: Backup Connectivity:

Mobile satellite connectivity system that is always ready. Store it for emergency preparedness or deploy it as your auto-failover solution for your Internet link. In addition, with the supplied handset, make calls to anywhere in the world regardless of the local infrastructure.

Weight: 9kg

Figure 4 Backup Connectivity

5. Module 1.3: Connectivity Traveler / Field Presence:

Mobile satellite system with voice, data and wireless LAN capabilities. With the solar battery and panels, the system can operate completely off the grid. The included rugged smartphone can be loaded with the Explorer Connect App that will allow simplified configuration of the BGAN and for using the smartphone as an IP phone for the BGAN voice service.


Weight: 9kg

Figure 5 Connectivity Traveler / Field Presence

6. Module 2.0: Infrastructure Network:

Kit providing the basic network infrastructure services for expanding the network supporting a small team of emergency responders. Simply plug in the Switch to your router or network to expand it with additional PoE ports. Connect the AP directly to the switch, and with some minimal configuration (or pre-configured device) you have a dual-band WIFI Network.


Weight: 10kg

Figure 6 Infrastructure Network

7. Module 2.1: Infrastructure Wireless Extension:

Easily expand the coverage of your WIFI or connect two networks using the weatherproof high-performance Access Points. Comes with all the necessary cables, mounting hardware and power Injectors for the job.


Weight: 18kg

Figure 7 Infrastructure Wireless Extension

8. Module 3.0: Printing Module - Light:

Ready to use small office AiO printer with accessories and consumables packed in a rugged case. A must have for any quick deployment or when printing services are required.

Figure 8 Printing Module – Light

9. Module 3.1: Printing Module - Normal:

Printing services for a medium office or operations hub. The kit includes two laser printers and a multi-function printer in their original boxes. It is accompanied by two accessory cases that contain a small network switch and all the accessories and consumables needed to support an immediate printer service deployment. The kit comes in two cases and are shipped together with the printers (in original packaging).

Figure 9 Printing Module - Normal

10. Module 3.2: Printing Module – Heavy Duty:

Printing services for a medium office or operations hub. The kit includes two laser printers and a multi-function printer in their original boxes. It is accompanied by two accessory cases that contain a small network switch and all the accessories and consumables needed to support an immediate printer service deployment. The kit comes in two cases and are shipped together with the printers (in original packaging).

Figure 10 Printing Module – Heavy Duty

11. Module 9.1: Solar Power System:

The Team Solar Power System Kit is a mobile energy storage system that can be charged from multiple energy sources such as solar panels, wind turbines, fuel cells or utility power. This kit provides enough power to operate most technical field devices like telecommunications and satellite equipment, networking, computers, printers, or enough power to run a fully outfitted small mobile office.

Figure 11 Solar Power System

12. Module 9.2: Solar Power System Extension:

The Team Solar Power System Extension Kit provides Module 9.1 with an additional 3 Batteries (1,440Wh) and 2 Solar panels (250W). Such that in total, Module 9.1 Team SPS has a total power storage of 1920Wh and a total Solar Input of 750W.This will allow for faster charging in the sun and provide many more hours of usage after sunset. Off-grid hours of operation will depend on the load and daylight hours.

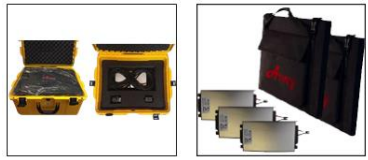

Figure 12 Solar Power System Extension

13. Module 9.3: Individual Solar Power:

The Responder Solar Power Kit powers your laptops, satellite phones, smartphones, USB light, and other DC or USB operated devices as a one-stop power supply in the field. Easy to carry and use anywhere. charged via AC, DC or Solar power. New USB C “PD” (Power Delivery) port with up to 45W for the new laptops using USB C power ports.

Figure 13 Individual Solar Power

3. SATELITE NETWORKS

There are several satellite networks available. UN agencies are using mostly the following ones:

- Thuraya (voice and data)
- Iridium (voice)
- Inmarsat M (Voice and data)

One common thing for all these is the fact that they need to "see" the satellite. They do not work inside without an external outside antenna.

3.1 Voice Communications:

3.1.1 Thuraya

Thuraya is a small pocket satellite phone which also contains a GSM mobile phone and GPS receiver. The use is very similar than the use of mobile phone. The device comes with charger with different plugs and manuals in English, French, Arabic and Russian.

Figure 14 Thuraya Satellite Phones

For dedicated satellite connection go to **menu**, choose "system preferences" and choose "satellite only". Then the antenna is extended and pointed to the satellite direction.

When "satellite only" has been chosen, it takes some time for the phone to get connected. The GPS receiver in the phone sends the phone's position to the satellite and the satellite points a very narrow spot beam towards the phone. Sometimes this takes several minutes. When you see test "Thuraya" and the name of the country where you are on the screen, the phone is ready to dial.

How to make a call:

the caller must dial always first the international prefix + or 00, then the country code, area code and finally the local phone number.

Thuraya airtime matrix is quite complex and the price depends where the call is originated and to where is called. Cheapest call is from one Thuraya phone to another, less than one US dollar per minute. However, compared to using mobile phones to call abroad, Thuraya is usually much cheaper to all destinations.

Even if Thuraya Sat Phones are mainly designed for voice communication, with a data cable and program installed on a laptop computer, Thuraya can be used for data at speed of 9.6 kbps (use this possibility like a latest option, if required).

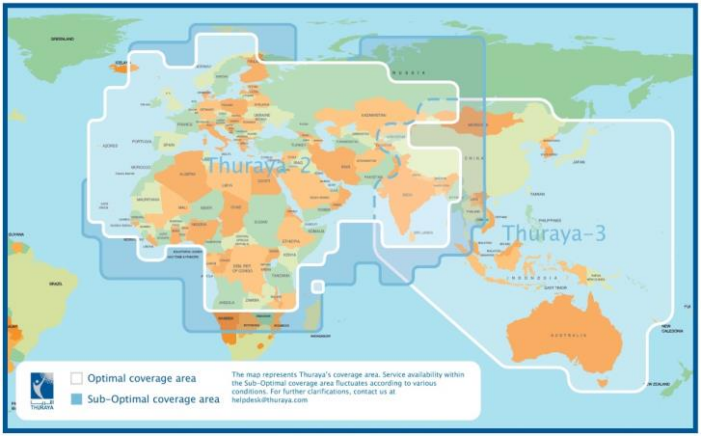

Figure 15 Thuraya Coverage Map

3.1.2 Iridium

Iridium is perhaps a bit easier to use than Thuraya. Dialing is done with country code just like with Thuraya. The phone also has address book just like a mobile telephone. Iridium Sat Phones are mainly designated for voice communication, however, like mentioned with Thuraya ones, it can also be used for data at the same slow speed with an external data connection kit. Nevertheless, because the call jumps from one satellite to another when one goes behind the horizon, there are issues with the synchronization.

Figure 16 Iridium Satellite Phones

Iridium is using 66 low-orbiting satellites and is still today the only truly global satellite phone system. Iridium phones are made by Motorola, and they do not have GSM or GPS.

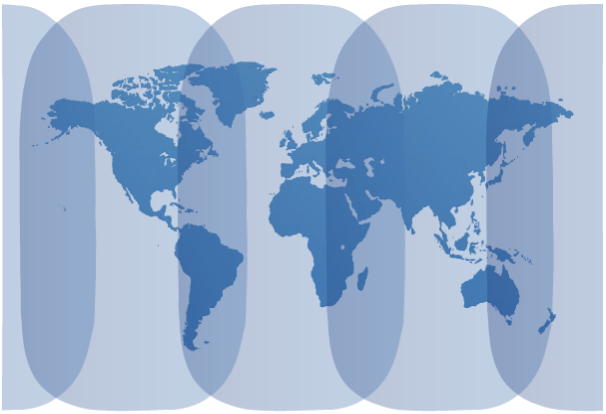

Figure 17 Iridium coverage

3.2 Data Communications

3.2.1 Thuraya IP +

Thuraya IP+, use the same network than Thuraya Sat Phone, but providing a highest bandwidth rates for data transmission (up to 384 kbps). So, coverage is the same than Thuraya Sat Phone (see Figure 11 for Thuraya Coverage Map). Thuraya IP+ is one of the most compact and portable satellite broadband terminals available in the market today, enables users to access e-mail, corporate networks and the Internet, and transfer files.

Figure 18 Thuraya IP+ Terminal

3.2.1.1 Pointing the Antenna

In order to obtain the best possible signal, it is important that the Thuraya IP+ antenna is pointed correctly towards the satellite.

The antenna must have a clear line of sight to the satellite without any obstacles blocking the signal, and the pointing direction of the antenna should be as accurate as possible.

Figure 19 Thuraya IP+ back screen

1. Once powered on (red button), Thuraya IP+ terminal will automatically attempt to locate itself using GPS.

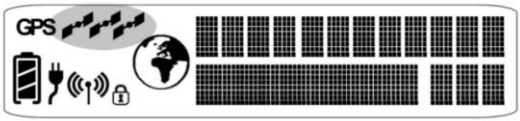

Figure 20 Thuraya IP+ back screen

2. Use the displayed signal strength and the pointing sound to find the highest possible signal strength, while slowly rotating and tilting the satellite terminal.

As a rule of thumb, the signal strength should typically be above 50 or more for the Thuraya IP+ to be able to establish a data session. However, the required signal strength can vary, depending on a number of factors. Once the Thuraya IP+ obtains sufficient signal strength from the satellite it will automatically connect and establish an IP data session.

3.2.1.2 Ethernet (LAN) Connection

1. Power up your computer.
2. Connect the Ethernet (LAN) to the LAN port of the computer.
3. Connect the other end of the cable to the Ethernet(LAN) connector on the Thuraya IP+ as shown below in the connector panel. (the connector panel is placed on the side of the Thuraya IP+).

Figure 21 Thuraya IP+ LAN connection

4. Power up (push the power button) and wait for screen display.

3.2.1.3 Access and Configuration of Thuraya IP+ modem

1. To access the Thuraya IP+, connect your computer via Ethernet or WLAN, run supported browser and enter http://192.168.128.100 into the browser address field. You will get the modem's HOME SCREEN below, which included the configuration menu (Please refer the Thuraya IP+ Manual for further details).

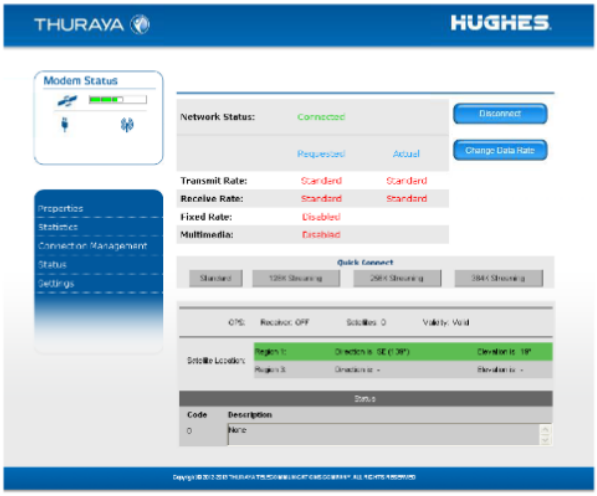

Figure 22 Configuration's menu of Thuraya IP+

3.2.2 BGAN

3.2.2.1 What is BGAN?

The Broadband Global Area Network (BGAN) is a mobile satellite service that offers high-speed data (up to 492 kbps) and voice telephony. BGAN enables users to access e-mail, corporate networks and the Internet, transfer files and make telephone calls.

3.2.2.2 Coverage and satellite position

The Inmarsat® BGAN services are based on geostationary satellites situated above the equator. Each satellite covers a certain area (footprint). The coverage map below shows the footprints of the BGAN system.

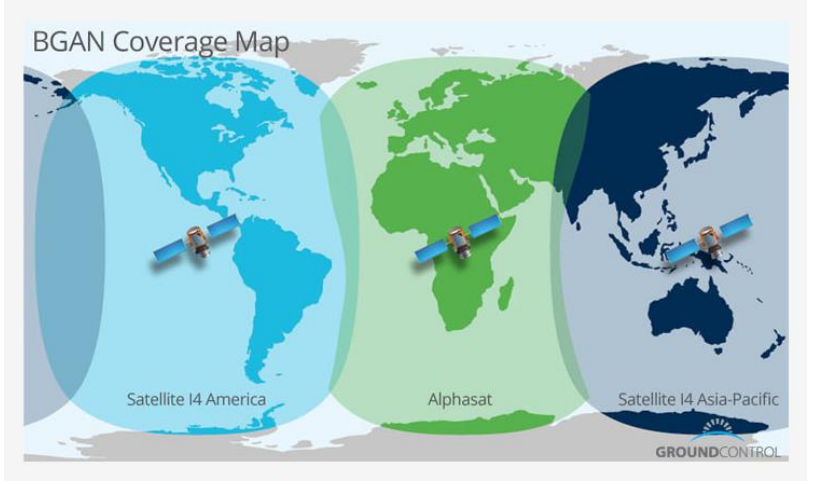

Figure 23 Coverage of the BGAN Inmarsat

3.2.2.3 BGAN Terminals: Explorer 510 & Explorer 710

Both terminals, the EXPLORER 510 and EXPLORER 710, are the smallest/fastest BGAN broadband mobile terminal with integrated antenna terminal providing high-speed data and voice communication via satellite through the Broadband Global Area Network (BGAN). It is ideal for connecting laptops, smartphones, or tablets from anywhere in the world. This ultra-portable ultra-rugged terminal has Internet speeds of up to 464 Kbps, as well as phone service to any connected smartphone, turning them into a satellite phone to place or receive phone calls from anyone in the world.

Figure 24 BEGAN Terminals: Explorer 510 and Explorer 710

Furthermore, as a standard WIFI hotspot it's able to connect respectively with up to 8 and 11 devices simultaneously without any configuration changes. It has an amazing wireless range of 100 meters, so the terminal can be outside, while someone can be connected wirelessly inside.

3.2.2.4 Pointing the Antenna

To obtain the optimum bandwidth and operating time on BGAN network, it is important that the antennas are pointed correctly towards the satellite, adjusting its position with great precision. The antenna must have a clear line of sight to the satellite without any obstacles blocking the signal.

1. Find the approximate direction of the satellite.
2. Use the pointing sound and/or Pointing page to find the highest possible signal strength, while slowly rotating and tilting the satellite terminal.
3. Push the power button briefly to accept when you have obtained the highest possible signal strength (in the web interface, click **Accept**).
4. The antenna now starts to establish a connection to the BGAN network.

As a rule of thumb, the signal strength should typically be over 50 or more for the antenna to be able to establish a call or data session. However, the required signal strength can vary, depending on a number of factors.

3.2.2.5 LAN Connection (USB)

The Explorer 510 does not have LAN connector, but you can use the USB to LAN Converter Cable supplied with your EXPLORER 510 to connect your computer.

Figure 25 Explorer 510 BEGAN connection panel

The Explorer 710 has TWO LAN connectors, and one ISDN interface which use the same connector type. In this case you can connect your laptop using a LAN cable to the appropriate network connector.

Figure 26 Explorer 710 BEGAN connection panel

3.2.2.6 Access and Configuration of EXPLORER 510 / 710 modem

If you want to use your smartphone with the EXPLORER 510 and/or with the EXPLORER 710, install the **EXPLORER Connect app**, which is available for iPhone at the Apple Store and for Android phones at Google Play.

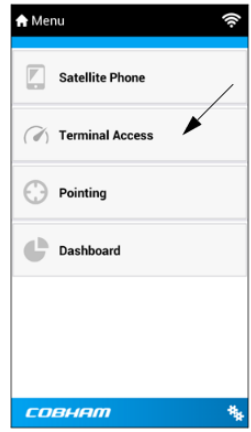

Figure 27 Explorer 510 / 710 BEGAN smartphone configuration menu

If you are not using the EXPLORER Connect app, you can use the built-in web interface for configuration and operation of the EXPLORER 510 / EXPLORER 710.

1. Connect the USB to LAN Converter Cable to the USB interface for the EXPLORER 510, or the LAN cable to the LAN connector in the EXPLORER 710.
2. Connect your LAN cable from the antenna to your computer.

3. Your computer should now be connected to the BEGAN ANTENNA and you should be able to access the web interface for further setup adjustments.

4. Open your browser and enter the IP address of the terminal in the address bar. The default IP address of the terminal is **192.168.0.1**

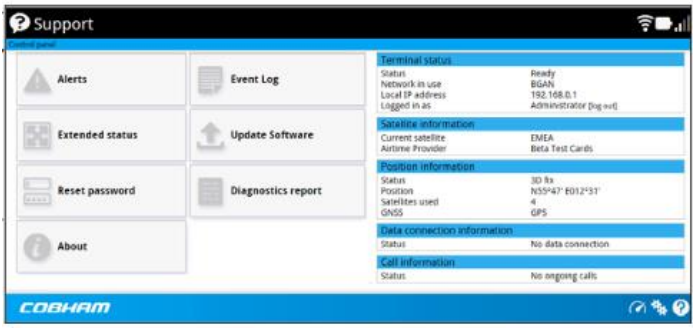

Figure 28 Explorer BEGAN ANTENNAS web configuration menu

4. TELECONFERENCE / VIDEO SET UP

One of the great facilities that the OSL Telecomm Kit provides (both Basic and Extended Kits) is the possibility to facilitate a Teleconference – voice and video -, with Country / Regional and HQ Offices, for coordination and reporting purposes.

The kits provide 3 different possibilities of establishing a Teleconference (for voice, video and/or sharing screens):

- Cisco Jabber application
- Skype application
- WebEx application

All of them allow voice and video conference, but the two last ones also provide the possibility of screen sharing at the same time.

In order to be able to use these possibilities, you might need to plug the webcam and the microphone/speaker devices prior launching the applications.

4.1 Plugging and installing external devices.

The computer in the Telecomm kit includes in the mother board the speakers, a microphone and a webcam, suitable for supporting teleconference and videoconference needs for one or two people. For larger groups, it may be necessary to improve its capacities.

Both included external devices (HD Webcam C615 and Jabra SPEAK 410 USB) are plug and play. Just plug them to the USB ports of the computer and wait for the "ready to use" confirmation. Once this is done you will be able to see them in the list of Devices installed.

1. Click **Windows Start** button, and select **Devices and Printers**

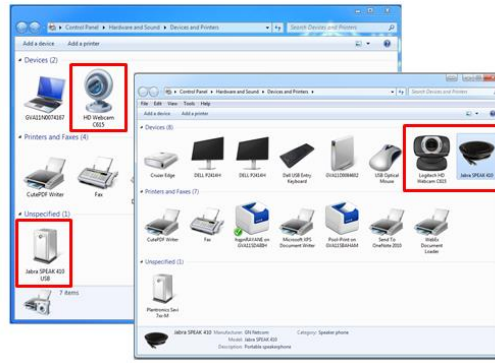

Figure 29 Setting up the webcam and speakers

Note: Devices' name and icons may change from one computer to another due to the version of software and divers present in the computer, but if they are properly installed they should be apearing on the list of devices.

4.2 Cisco Jabber Utility

4.2.1 Configuration of the application

This is a corporative tool, allowing voice and video conferences, and text chat as well between 2 or more people. Being a corporative tool, contains the complete WHO contact list, and is automatically updated (only will work on corporate computers with synergy profile).

1. Click **Windows Start** button, select **All Programs,** select **My WHO Applications** and then select **Cisco Jabber** application**.**

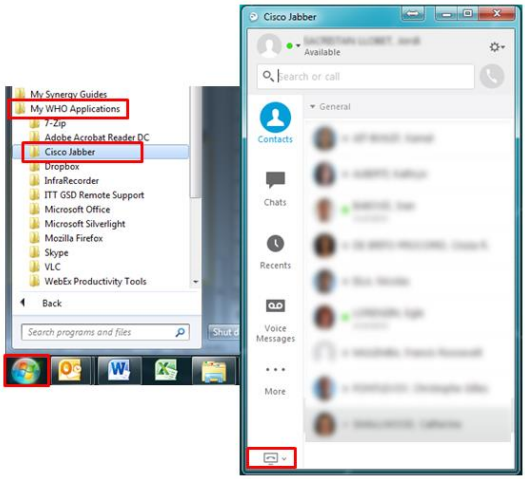

Figure 30 Cisco Jabber Configuration (1)

2. From the main screen click on the bottom icon, and select **Use my computer for calls,** then **select Audio Options…**

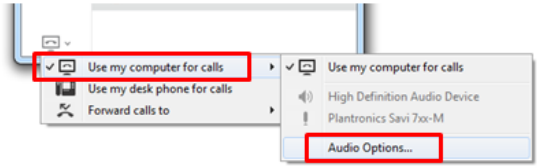

Figure 31 Cisco Jabber Configuration (2)

3. In the Options select **Audio**, then click on the **Speaker dropdown menu**, and select either *Speakers (USB Audio Device) or Speakers Jabra SPEAK 410 USB)*, or if you want to use the one of the computer –or the device is not connected - select the other option.

   Then click on the **Microphone dropdown menu** and select either *Microphone (USB Audio Device) or Microphone Jabra SPEAK 410 USB)*, or if you want to use the one of the computer or the one from the HD Webcam 615, select the pertinent option.

   Click on the **Apply** button.

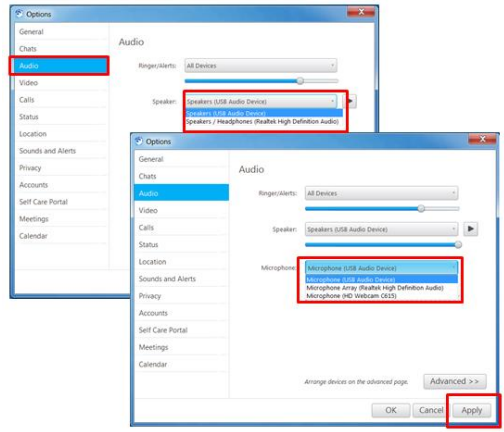

Figure 32 Cisco Jabber Configuration (3)

4. In the Options select **Video**, then click on the **Camera dropdown menu**, and select *HD Webcam C615*, or if you want to use the one of the computer –or the device is not connected - select the *Integrated Webcam* option.

   Click on the **Apply** button and finally **OK**.

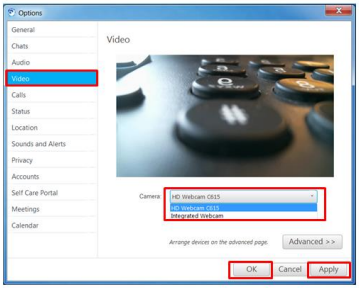

Figure 33 Cisco Jabber Configuration (4)

Now you are ready to establish a teleconference or a video conference with anyone.

> Note: List of devices and definition names may change, depending on if they are connected or not to the computer and drivers definitions.

4.2.2 Using the application

Once all devices have been installed and configured, for establishing a teleconference or a videoconference (either with a single person or with a group), proceed as follows:

1. From the main Cisco Jabber menu, select the desired name from your list (or search in the directory). You also can enter directly the telephone name (+ Country code and telephone number) in the *Search or call*.

   For corporate Teleconferences, enter the GPN bridge number provided in the *Search or Call*.

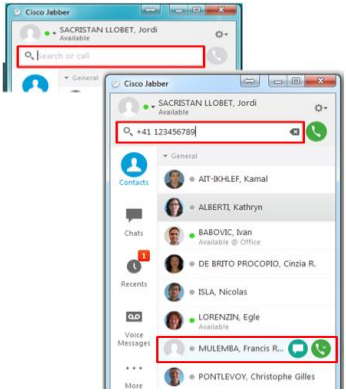

Figure 34 Cisco Jabber user interface (1)

Note: Users with a green bullet means they have the Jabber application active, so chat and phone and video is active. The ones with a grey bullet maybe not login into the application, so chat will not be active, **BUT they maybe still reachable by phone or video call.**

2. Click on **Call** (green button) to initiate the communication. When established it, a new communication screen will pop up, showing video - if available-, and allowing at the same time chat conversation as well.

   You will be able from the screen to activate/deactivate the microphone, adjust volume, etc., and terminate the call. Moreover, you can add new participants, clicking on the profile with a plus icon at the right side just over the texting area, if desired.

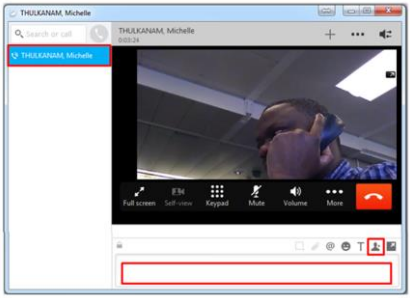

Figure 35 Cisco Jabber user interface (2)

4.3 Skype Utility

4.3.1 Configuration of the application

This is **NOT corporative tool**, allowing voice and video conferences, text chat AND Screen sharing; thus, facilitating presentations and document revision online, between 2 or more people. Nevertheless, the software is available in the **Synergy Resources (WHO Applications).**

The user account is not linked to the WHO Synergy Profile, so it HAS TO BE a personal one. All participants need to have their own personal account to be able to join the teleconference or the videoconference, but at the same time facilitates the inclusion of external people into it, as it is a worldwide well-known tool used).

1. Click **Windows Start** button, select **All Programs,** and then select **Skype** application**.** Enter your *user name* and *password* in the **Sign in** screen.

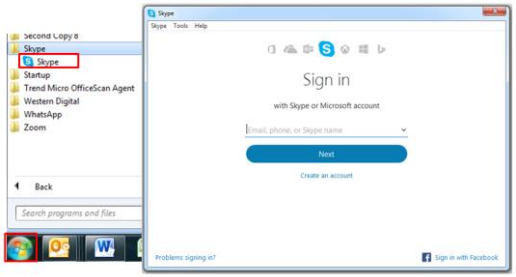

Figure 36 Skype Configuration (1)

2. From the main screen, on the top menu click on **Tools**, and then select **Options…**

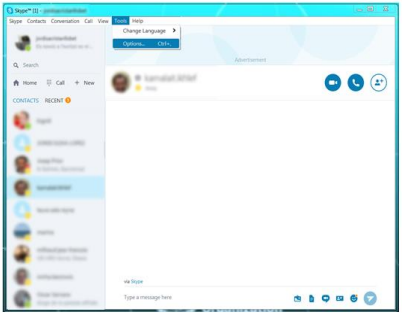

Figure 37 Skype Configuration (2)

3. In the **Options** select first **General Settings** and ensure *Start Skype when I start Windows* and *Sing me in when Skype starts* are both <u>un-checked</u>.

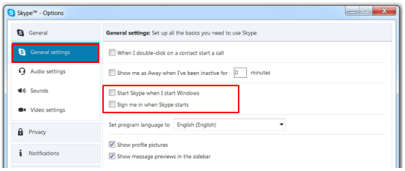

Figure 38 Skype Configuration (3)

4. Still in the **Options** menu, select **Audio settings**, and in **Microphone** select from **dropdown menu** the *desired device of any listed down* (in the example: the list shows the Jabra SPEAKER 410 USB, the HD Webcam C615 and the one integrated on the laptop, due they have been plugged).

Do the same for the **Speakers** option, and in **Ringing** select *Use selected speaker*.

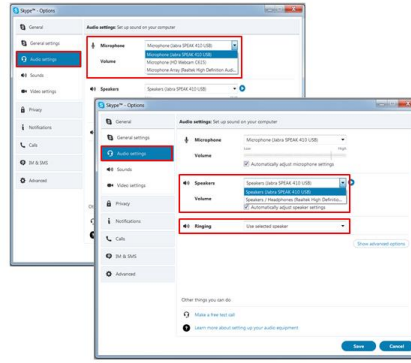

Figure 39 Skype Configuration (4)

5. Now select **Video Settings**, and in **Select webcam** dropdown menu select one of the listed devices (in this example: *HD Webcam C615* and *Integrated Webcam*).

   Click **Save**, to save configuration and return to Skype main screen.

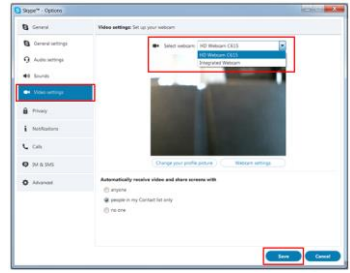

Figure 40 Skype Configuration (5)

Now you are ready to establish a teleconference or a video conference with anyone.

4.3.2 Using the application

Once all devices have been installed and configured, for establishing a teleconference or a videoconference (either with a single person or with a group), or for sharing the screen with others, proceed as follows:

4.3.2.1 Person to person communication

From the main Skype menu, select the desired name from your list (or search in the directory). Once selected, if the person is online (showing a green, yellow or red balloon in his/her contact details; an empty balloon indicated the person is offline and not reachable) you will be able to chat, to call or to establish a videoconference.

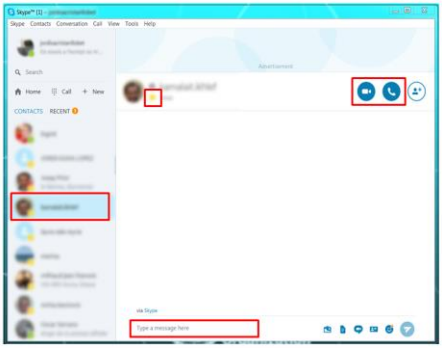

Figure 41 Skype user interface (1)

4.3.2.2 Group communication

To create a new group conversation (more than 2 people), from the main Skype main page, click + **New,** then select the participants from your *Contacts* list; when done, click **Add.** The group is now created and can start the communication.

Additionally, a joining **link** is provided to be sent to anyone else (not in the contacts list) for joining too.

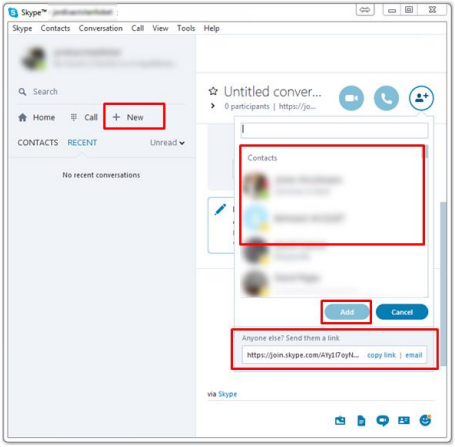

Figure 42 Skype user interface (2)

4.3.2.3 Sharing Presentations and/or screens with others

To share the screen, a document, a presentation using Skype whatever in a 2 people or group conversation, from the main screen, on the top menu click on **Call**, and then select **Share Screens…**

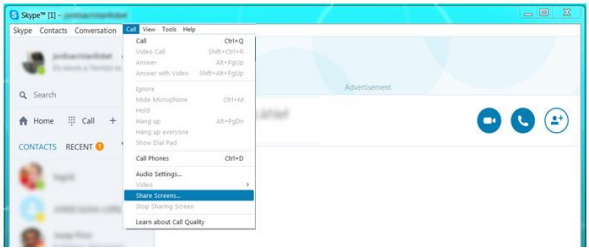

Figure 43 Skype user interface (3)

From the pop-up screen, select the screen you want to share with others (if you have more than one screen), and then select **Start**. People inside of the conversation will see now your screen and any application used on it (for example PowerPoint presentation).

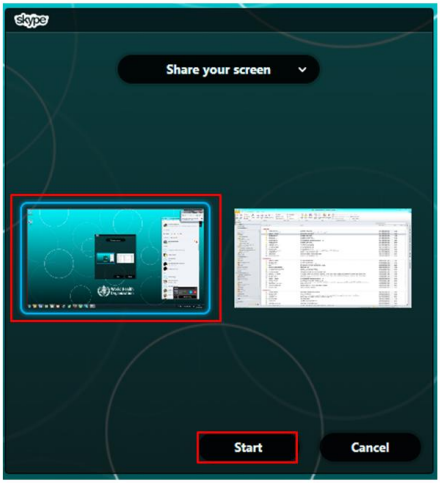

Figure 44 Skype user interface (4)

To stop sharing at any time, just click on **Stop**; screen will not be shared any more, but conversation will be maintained.

4.4 WebEx Utility

This is a corporative tool too, allowing voice and video conferences, text chat AND screen sharing, thus facilitating presentations and document revision online. Because it is a fully supported corporative tool, contains the complete WHO contact list, and it can be easily set up with a generic account or GPN bridge number, and any user can connect to it with either a corporate email or a private one; thus, allowing external participants joining in (either by email or by phone).

4.4.1 Configuration of the application

There are different ways to do access to the WebEx. But here, in order to facilitate the process, only the **Web Browser** version is presented (does not need any installation and at the same time, it works for NON-Synergy computers too).

1. Open Internet Explorer or any other **Web Browser and type the following address:** *https://who.webex.com/who* **in the address bar, and then press enter.**

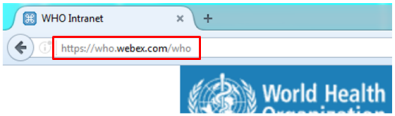

Figure 45 Webex access page

2. In the new web page, enter the provided *number* (from the organizer of the meeting), into the **Enter the meeting, event, or session number to join** and click on **Join** button.

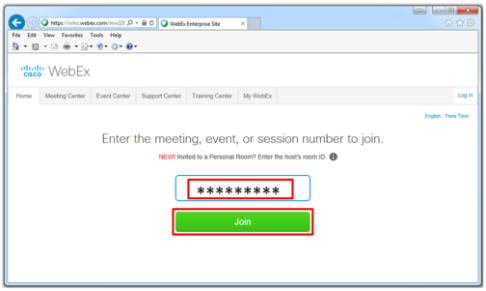

Figure 46 Webex session page

3. Once you enter in the meeting room, you will be asked for **Your name** and **Your email address** (in order to be identified in the conversation), then click on **Join Meeting.**

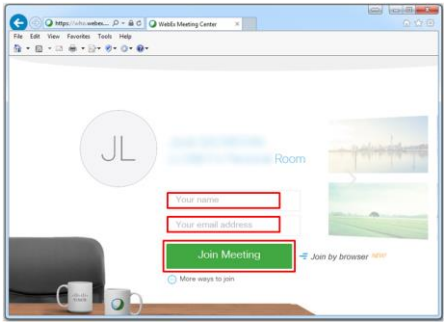

Figure 47 Webex login page (1)

4. If the meeting is not yet started, you will be prompt with a screen informing you of it and requesting if you want to **Notify the host** that you are waiting.

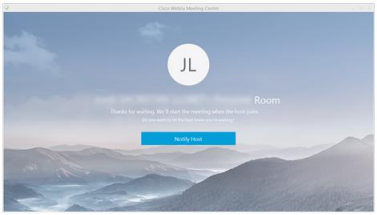

Figure 48 Webex login page (2)

5. If the meeting is already started, you will be joined, and a configuration screen will be pop up, to configure your **Audio and Video Connection.**

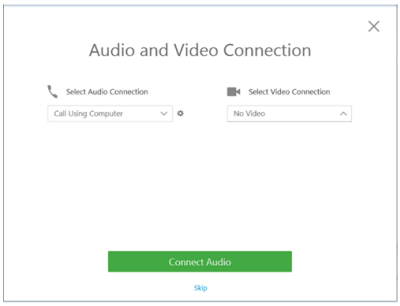

Figure 49 Webex configuration (1)

6. Ensure that for **Select Audio Connection** the option is *Call Using Computer*. For the **Select Video Connection**, click on the dropdown menu and select the desired device (in this example is *HD Webcam C615*). Then, once done, click on **Connect Audio and Video.**

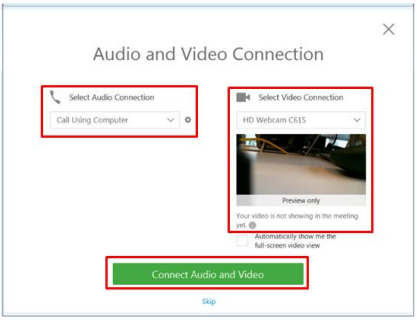

Figure 50 Webex configuration (2)

7. Now you are connected, and you have joined the Teleconference Room.

4.4.2 Using the application

To access the WebEx Session, follow the steps from 1 to 5 of the previous chapter (4.4.1). (You may be prompted for Audio and Video Configuration -if not done before-, prior entering to the selected WebEx Meeting Room).

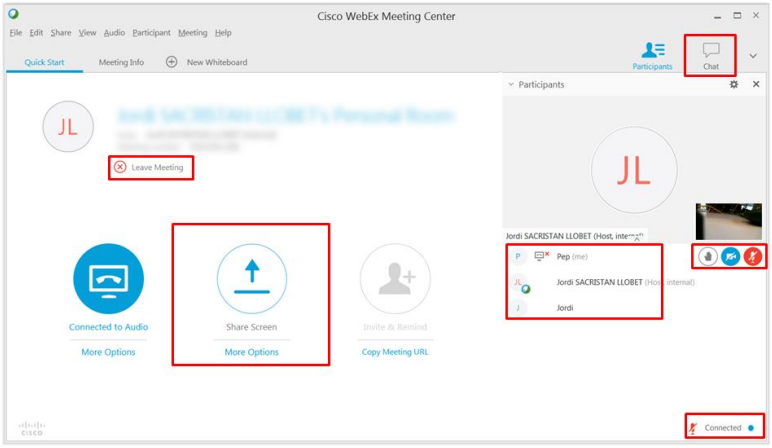

Figure 51 Webex user interface

Basic understandings:

Once connected, you will be able to participate in the meeting. The list of **Participants** shows who is connected, who is hosting the meeting and the status of each partcipant (microphone muted, video on/ off, who is speaking, etc).

Beside of the list you will see your status (in this example microphone is off, and the your video is on). In addtion you have the possibility of requesting the floor using the “hand” icon.

The tool offers as well the possibility of having a text **Chat** (person to person or with all members at the same time).

If users share their screen with you, this will be shown in the video screen placed on the top right of your screen, and if you need to share your screen with others, you just need to click on **Share Screen** button.

Meeting Room will be automatically closed when meeting is finished by the hosting member, but if you need to leave before, just clisk on **Leave Meeting** botton.

Important: Please, always remember to mute your microphone when not talking to the group as this may help on reducing drastically the backwards noise during conversations.

5. SETUP FOR A DEPLOYMENT MISSION

The different modules are designed to support a team within an emergency deployment ensuring the requirements for facilitating a tailored and professional outbreak field response. An adequate combination of them allows a quick setup and full adaptability to the different contexts and scenarios.

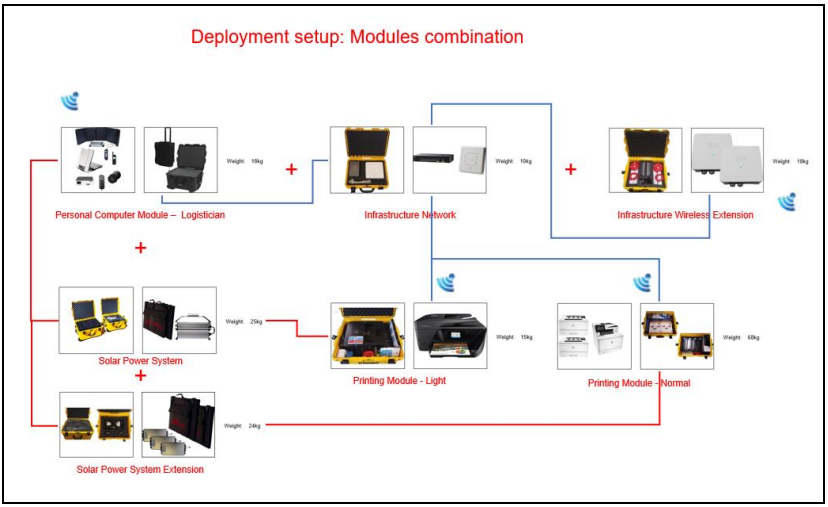

Figure 52 ICT deployment modular concept

The use of different Satellite Networks, with different coverage and service provided, allows improve cost/efficiency rates depending on deployment locations: Thus, meanwhile Thuraya covers mostly Europe, Asia, Africa and Oceania, but not America; voice and data services are provided separately; on the other hand, BEGAN's network has a Worldwide coverage and provides both services integrated (voice and data).

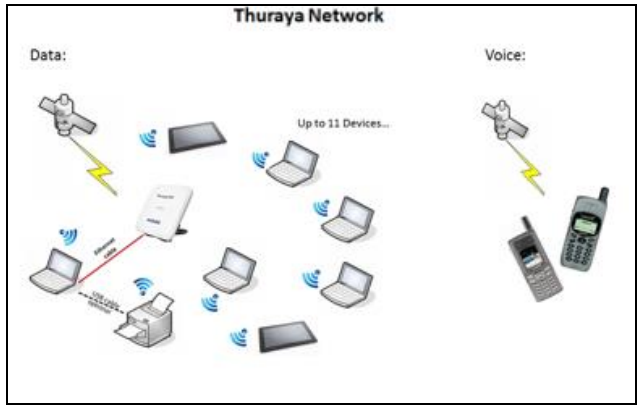

Figure 53 Standard Thuraya field network

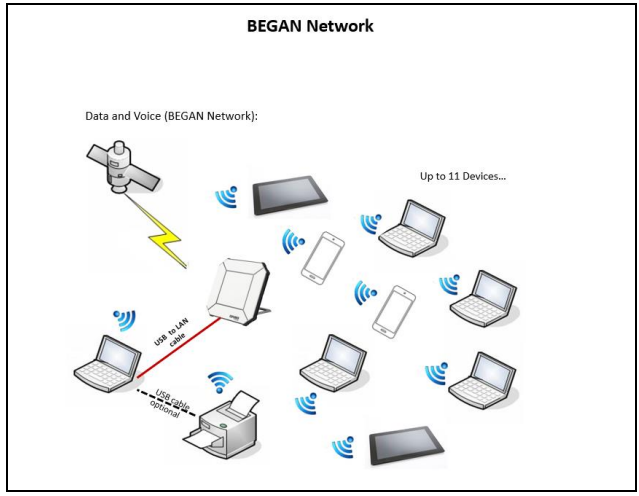

Figure 54 Standard BEGAN field network

6. BASIC OFFICE LAN SETUP

6.1 WAN (Wide Area Network)

Provide the data communication over satellite, microwave or terrestrial lines between offices. Devices used for its infrastructure are BGAN, RBGAN, M-4 terminal, VSAT modems, microwave modems, ADSL, or Dial-up modems.

6.2 LAN (Local Area Network)

Provide interconnection of local devices such as desktops, notebooks, printers, videoconference devices (VTC units) and IP phones.

6.3 Internet Protocol

The computer requires an Internet Protocol (IP) address for data communication, such as file sharing, printing, internet access, across the network. In general, a special computer called the Dynamic Host Configuration Protocol (DHCP) server is present on the network to automatically assign an IP address to the computer. If that is not the case, the computer will need to be assigned a manual IP address. **The local IT contact can be asked about this.** To assign an IP addresses to the computer follow the next steps.

Note: Only do this if required by the IT Specialist, as mentioned normally IP address is automatically assigned.

1. Click **Windows Start** button, and select **Control Panel,** and then select **Network and Sharing Centre.**

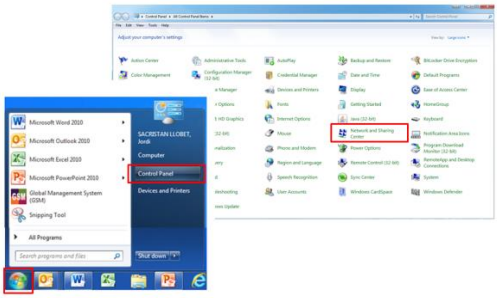

Figure 55 Windows network configuration (1)

2. Click on **Change adapter settings,** Right Click on **Local Area Connection** and select **Properties.**

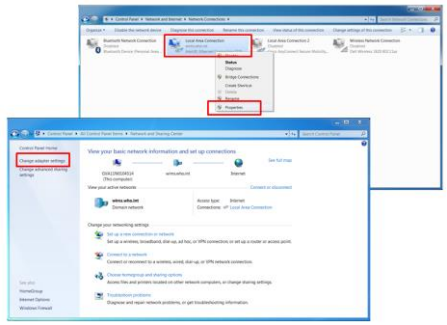

Figure 56 Windows network configuration (2)

3. Select **Internet Protocol Version 4 (TCP/IPv4)** and click on **Properties.**

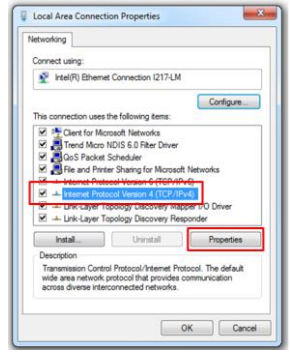

Figure 57 Windows network configuration (3)

4. Select **Use the following IP address** and enter the IP address provided by the network administrator.

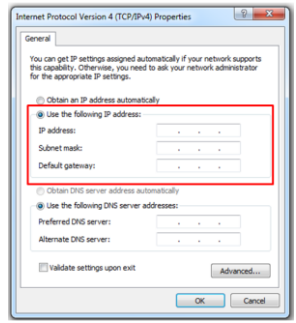

Figure 58 Windows network configuration (4)

5. Click **OK**

> **Note:** The computer may have been configured to use a specific IP address. This may cause network communication problems if a DHCP server is on the network. In that case, select "Obtain an IP address automatically" in the above dialogue box and click "OK".

6.4 Wireless Networks

Wireless networks allow access to the office network\internet without using network cables. To access a wireless network please ensure that the following three elements are configured correctly:

1. The wireless network adaptor on the computer must be enabled.
2. The wireless radio on the computer must be on.
3. The network identifier (SSID) of the wireless network that needs to be connected to must be configured correctly.

6.4.1 Ensuring that the Wireless Network Adaptor is Enabled

1. Click **Windows Start** button, and select **Control Panel,** and then select **Network and Sharing Centre.**

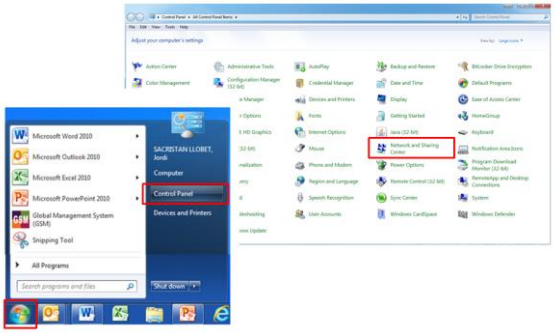

Figure 59 Windows wireless network configuration (1)

2. Click on **Change adapter settings,** as can be seen below, the **Wireless Network Connection** is **Disabled**. To enable it, right click **Wireless Network Connection** and select **Enable.**

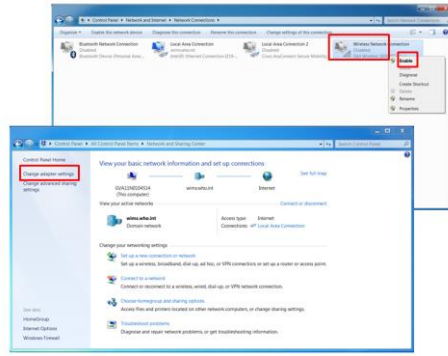

Figure 60 Windows wireless network configuration (2)

3. Now, you will see the **Wireless Network Connection Enabled,** and if already connected to a WiFi, the name of the network.

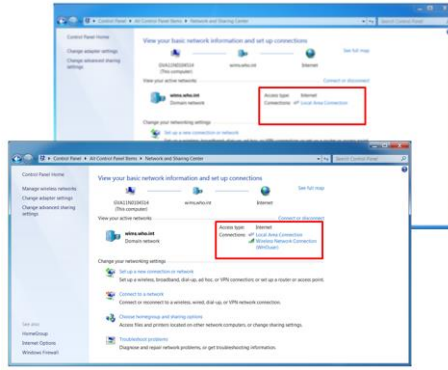

Figure 61 Windows wireless network configuration (3)

Note: If the Wireless Network Connection was already enabled, this last screenshot would be the one seen after selecting the Network and Sharing Centre option.

6.4.2 Turning the Wireless Radio ON

This is normally done by either pressing simultaneously a key combination on the keyboard **Fn + F2** or by flicking on a switch (This will depend on each model of laptop).

Figure 62 Windows wireless radio on/off

6.4.3 Configuring the SSID (Wireless Network Identifier)

In general, the SSID of the wireless network is broadcast to the computer automatically. This means that the network administrator has configured the wireless network name to be sent to the computer once it is in range, requiring no intervention.

1. If the SSID is broadcast, Windows 7 will automatically indicate that a wireless network is available and a balloon confirming the successful connection will appear:

Figure 63 Windows wireless SSID

If, however the SSID is not being broadcast, it will need to be manually added, so that the computer can join the wireless network. To do so:

2. Click **Windows Start** button, and select **Control Panel,** and then select **Network and Sharing Centre.**

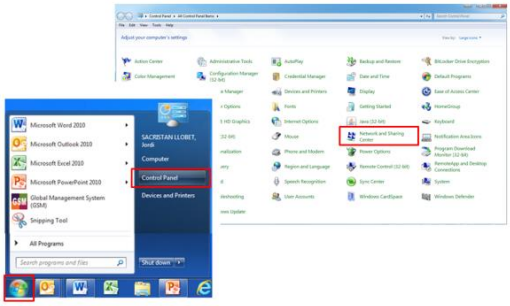

Figure 64 Windows wireless SSID configuration (1)

3. Click on Manage wireless networks, and in the new screen select Add.

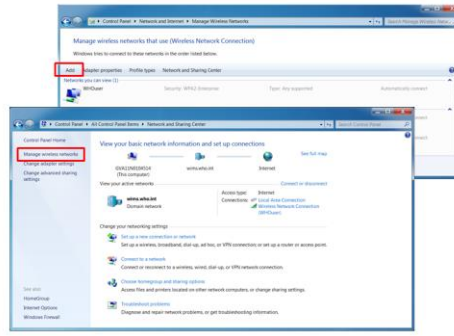

Figure 65 Windows wireless SSID configuration (2)

4. You will be prompt to choose one of the two options, select **Manually create a network profile**. Then in the new screen type in the **Network name**, e.g. `hotspot`, select **Security type** (e.g. `Open`, `WEP`, `WPA`, `WPA-2`) according with wireless networks encryption setup. Enter the **Security Key** (should be provided by the Network manager), and the select Next to register it.

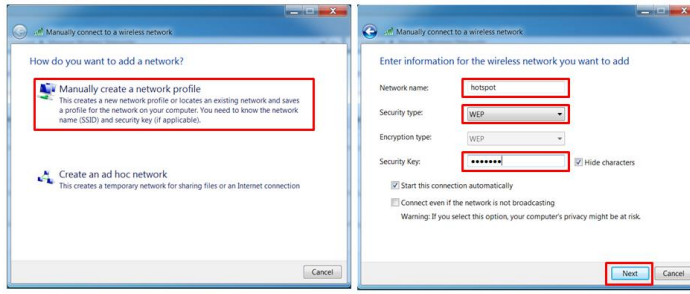

Figure 66 Windows wireless SSID configuration (3)

6.5 Sharing Resources of your Network

To share data on the network, the following two steps need to be performed:

1. Know where the data is being stored. (the computer name)
2. Install and share the resources.

The shared resource can be a folder containing files and other information, a CD drive, or a printer.

6.5.1 Finding the Computer Name

1. Click on **Windows Start** button, type *System* on **Search programs and files**, and from the resulting list select: View advanced system settings**.**

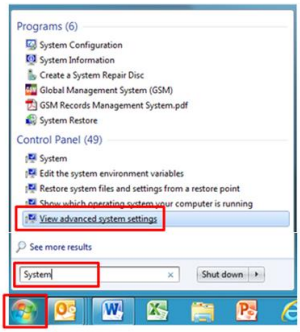

Figure 67 Sharing network resources (1)

2. Select the **Computer Name** tab.

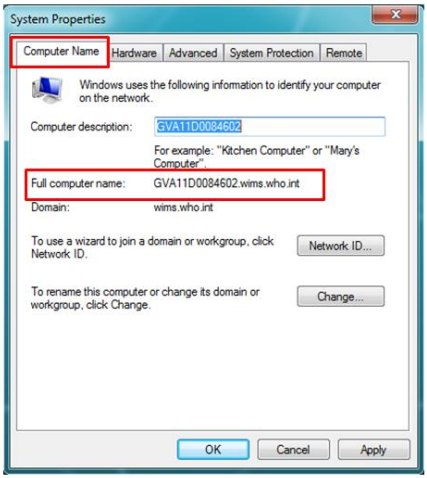

Figure 68 Sharing network resources (2)

3. In the above example the Full Computer Name is GVAD0084602.wims.who.int

Note: The computer name can be used as follows to access resources for files and printers: `\\GVAD0084602\ressource_name`

6.5.2 Installing and sharing your Printer

If you need to print, a printer will need to be installed on the notebook. Installation of the printer can be done in one of two ways:

1. Install the printer via the CD-ROM, USB Key, or software downloaded from the Printer Manufacturer web page. If installation is done locally, insert the CD or the USB Key into the computer and follow the wizard, and/or following the wizard that appears when the printer is plugged in.
2. Install a printer that is already available on the network via printer sharing (this could be through LAN, Wireless and Bluetooth).

6.5.2.1 Installing a Printer

1. Insert the CD or USB Key that came with your printer and set the printer up by following the wizard. This is an automated process. At the end of this process, the printer will be setup and the following steps will not need to be followed.
2. If the CD of the printer is not available or if the above process fails, make sure that the printer is off and connect it to the computer.
3. Turn the printer on.
4. Windows 7 will normally automatically setup and configure your printer.
5. If the above process fails, Windows will present a wizard where the printer hardware manufacturer and model will need to be chosen, and from there it may be necessary to download drivers from the web site.

6.5.2.2 Sharing the Printer with Colleagues

The team may only have one printer to share. If printer is connected though the Wireless network, you just need to install it in the desired computer like mentioned in the previous section.

If printer is connected to one computer through a cable, to enable printer sharing so that all computers can connect to the printer over the network, do the following on the computer where the printer is directly attached:

1. Click **Start**, then **Devices and Printers.**
2. Right click on the printer that needs to be shared and choose **Printer Properties.**

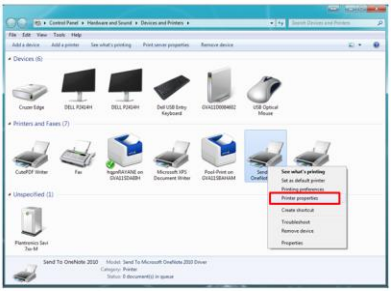

Figure 69 Install and share your printer (1)

3. Select **Sharing Tap,** then tick on **Sharing this printer** and type a name for the shared printer, e.g. `MyPrinter`, and click **OK.**

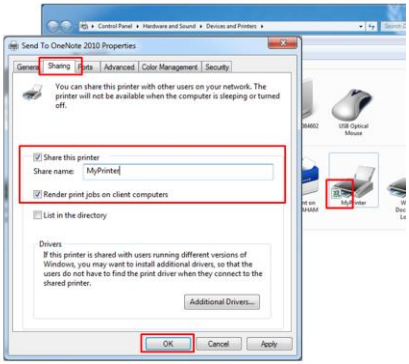

Figure 70 Install and share your printer (2)

4. The printer that has just been shared has a *shared icon* next to it, indicating that it has been successfully shared as: `\\GVAD0084602\MyPrinter`

Note: The printer can also be renamed from the **General** tab of the above window, to match the shared name to be more consistent.

6.5.2.3 Using a Shared Printer

To access the shared printer on the network, follow the steps below

1. Right click the **Windows Start** button and select **Open Windows Explorer.**

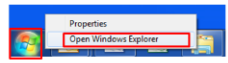

Figure 71 Use a shared printer (1)

2. Type in `\\ComputerName\SharedPrinterName` and press **Enter**. For example, if connecting to the printer that was setup above the following would be typed in `\\GVAD0084602\MyPrinter`,

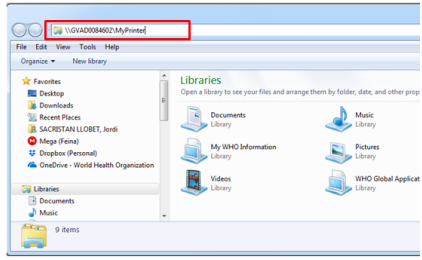

Figure 72 Use a shared printer (2)

The shared printer can now be used from any application.

> **Note:** To be able to install and use a shared printer, the computer that is sharing the printer **MUST** be turned ON.

6.5.3 Sharing files

Files can also be shared on the network. For this to be done, the computer name must be identified for the machine were the files are and the folder needs to be shared.

To share the folder that contains the documents, do the following:

1. Right click the **Windows Start** button and select **Open Windows Explorer.**

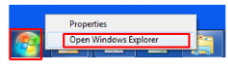

Figure 73 Sharing files (1)

2. Navigate to the folder that contains the documents that need to be shared.

3. Right click the folder and select **Share with,** and then select **Specific people…**

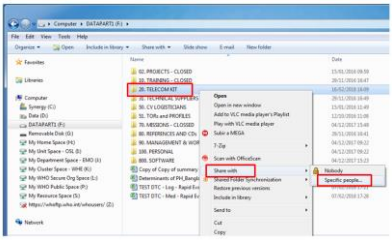

Figure 74 Sharing files (2)

4. Type the name and click **Add** or click the arrow to find someone (or to select everyone) and then click **Add.** You can also select the permission level clicking on the small arrow of the new added name. Then finally click on **Share** button.

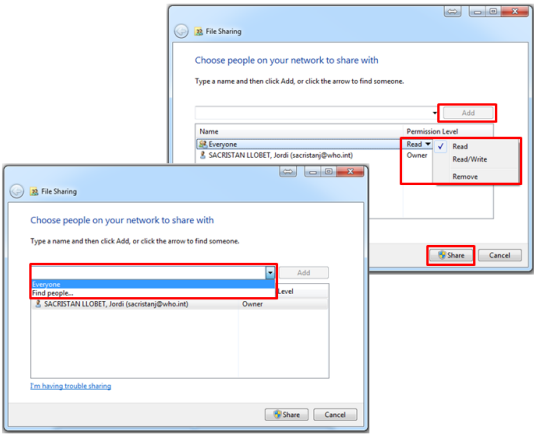

Figure 75 Sharing files (3)

5. Once this is done, you will get a window indicating that it has successfully been shared as: `\\Gva11d0084602\20.telecom kit` (and offering the possibility of sending the link by email or copying and paste the link into another program). Click **Done** button to finish.

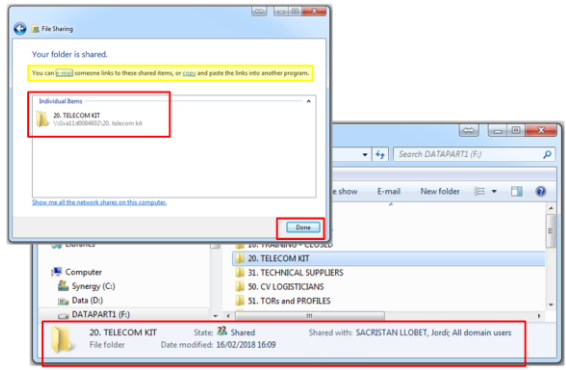

Figure 76 Sharing files (4)

> **Note:** It can be noticed that the folder that has just been shared has now a *shared State* notification, indicating that it has successfully been shared, and with who.

6.5.3.1 Using a Shared Folder

To access the shared printer from any computer on the network, follow the steps below

1. Right click the **Windows Start** button and select **Open Windows Explorer.**

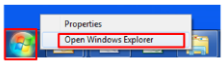

Figure 77 Sharing files (5)

2. Type in `\\ComputerName\SharedFodlername` and press **Enter**. For example, if connecting to the folder created above, type in `\\Gva11d0084602\20.telecom kit`

6.6 Accessing Email from Internet

6.6.1 Using Outlook Web Access (WHO)

With Microsoft Outlook Web Access, a Web browser can be used to access a mailbox to read e-mail and send messages:

1. Open Internet Explorer, or any other Web browser.
2. Type `outlook.who.int` in the following the Address Bar, then press **Enter.**

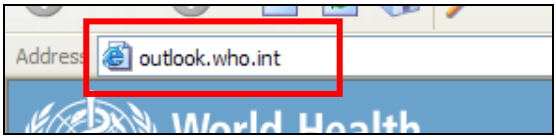

Figure 78 Outlook web access

3. If any Security Alert window appears, click **Yes** to proceed.
4. On the next screen, enter your username and password.

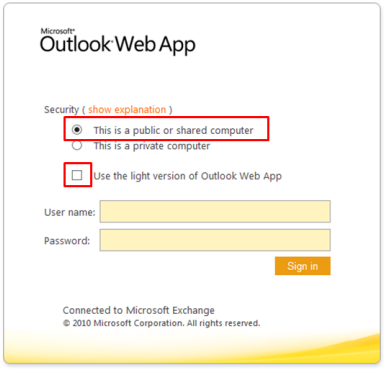

Figure 79 Outlook web login

> **Note:** Click the **Use the light version of Outlook Web App** option if using a low-speed connection. This option still give access to e-mails but will use a less network-intensive interface.

5. Click on **Sign In.**
6. The next screen gives the ability to read, write, reply to, and forward e-mails, among other functionalities.

> **Note:** Remember to always log off when finished using Outlook Web Access and close ALL Internet Explorer windows on the computer.

6.7 Improving Overall Performances

When sending e-mails with attachment, browsing the web, sharing files, the overall performance of the computer can be improved to allow better communication.

6.7.1 Compressing (zipping) files

Compressing (zipping) files, folders, and programs decreases their size and reduces the amount of space they use on your drives or removable storage devices (like USB keys).

E-mail attachments should be, as much as possible, compressed using the steps below. Compressing attachments will reduce the size of the attachment; therefore, improve the speed with which the e-mail is sent.

1. Right click the **Windows Start** button and select **Open Windows Explorer.**

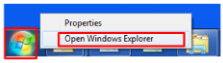

Figure 80 Compressing files process (1)

2. Navigate to the folder or the file that needs to be compressed.
3. Right on the file or on the folder and choose **Send To** and then **Compressed (zipped) Folder.**

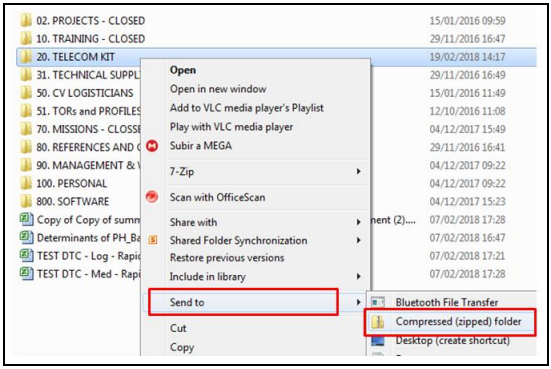

Figure 81 Compressing files process (2)

The above will create a Zipped folder. Compressed folders can be identified by the zipper on the folder icon.

4. If needed, attach the Zipped folder to an e-mail.

> **Note:** Under certain circumstances, Zip files cannot be attached to an e-mail. To work around this problem, rename the Zipped folder by removing the extension. Zip. The recipient of the e-mail will need to rename it back, by adding the. Zip extension.

6.7.2 Resizing JPEG pictures

Picture cannot be compressed (zipped) with the above method.

1. To reduce the size of a JPG file, right-click on it and select **Open with,** then select **Microsoft Office 2010.**

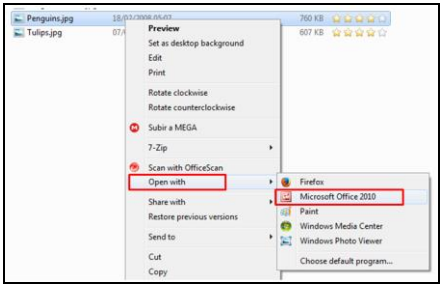

Figure 82 Resizing picture files (1)

2. Select **Edit Pictures …,** and then **Resize.** From the new menu, select **Predefined width x height**, and then select **Web - Large (fits a 640X480 screen).**

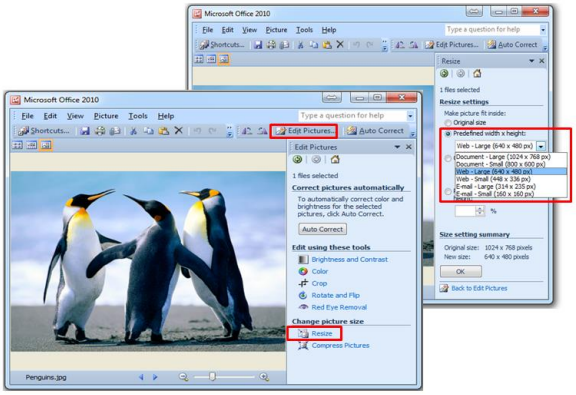

Figure 83 Resizing picture files (2)

3. After, select **File**, then **Save As…**, type the file name (here for example we use `Small` after the original name, otherwise original file will be replaced), and **Save**.

Figure 84 Resizing picture files (4)

6.7.3 Extracting files from a Zipped folder

1. To extract a single file or folder, double-click the compressed folder to open it. Then, drag the file or folder from the compressed folder to a new location.

2. To extract all files or folders, right-click the compressed folder, and then click **Extract All**. In the **Compressed (zipped) Folders Extraction Wizard**, specify where the extracted files should be stored and click **Extract**.

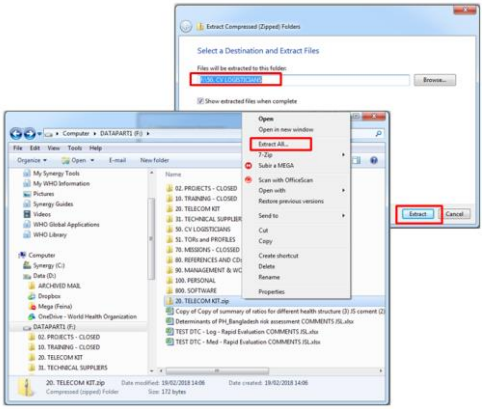

Figure 85 Extract Zipped files (1)

6.7.4 Compress pictures in a Word or PowerPoint document

MS Word and MS PowerPoint documents may also contain pictures that increase dramatically the size of the file. Pictures within these documents can be compressed while saving the file.

1. While inside the document (either from MS Word or MS PowerPoint), Go the menu **File**, then chose **Saves as.**

2. Click on the **Tools** drop-down menu.
3. Select **Compress Pictures.**

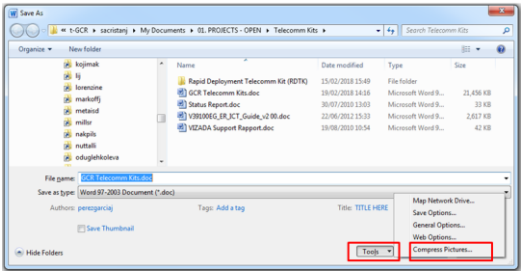

Figure 86 Compressing images in word or PowerPoint docs (1)

4. From the Compress Pictures windows, change the resolution to **Screen (150 ppi)** and make sure that **Delete cropped areas of pictures** check boxes is enabled.

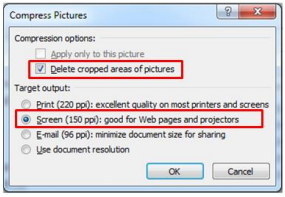

Figure 87 Compressing images in word or PowerPoint docs (2)

5. Click **Ok.**
6. Type a new file name and click **Save.**

> **Note:** Remember that compressing pictures may reduce the quality of the images; therefore, make sure that an original version of the file is kept.

6.7.5 Internet Explorer settings

To improve the speed connection while browsing the web, certain advanced settings can be changed in your Internet Explorer settings

1. Click the **Windows Start** button, and then select **Control Panel**.

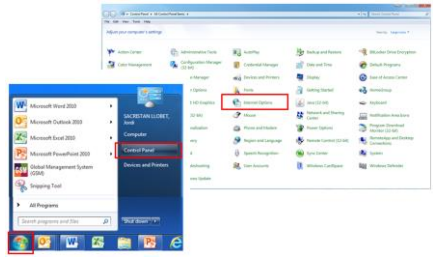

Figure 88 Tuning Internet Explorer settings (1)

2. Click the **Internet Options** icon, and select the **Advanced** tab.

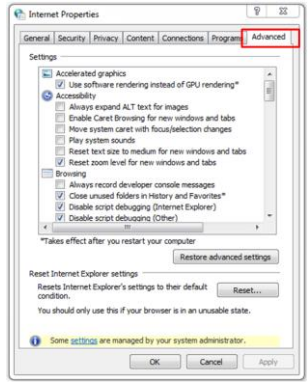

Figure 89 Tuning Internet Explorer settings (2)

In the Browsing node

1. Disable Display a notification about every script error.

In the Multimedia node

2. Disable enable automatic Image Resizing.
3. Disable Play animations in web pages.
4. Disable Play sounds in web pages.
5. Disable Show pictures.
6. Disable Smart image dithering.

7. PRIOR TO DEPARTURE CHECKLIST

Prior to departure, go through the following check list:

- Ensure the Anti-Virus Definitions\Software is up-to-date.
- Ensure that all the required documents are saved.
- Ensure that all required software is installed.
- Ensure that there is a backup of the data and the software.
- Logon at least once to the computer.
- Ensure the user account has sufficient rights on the computer to accomplish the needs. (right to install software, right to configure devices, etc.)
- Ensure that the necessary power and phone adaptors are available.
- Bring extra batteries if possible.

If no computers: save required files in two external devices. (2 USB Key)

8. COMPUTER SECURITY TIPS

Computers have become a prime target of thieves! Remember to:

- Label all equipment and cables.
- Take the security cable and use it to chain the notebook to a secure spot.
- Keep the notebook in sight while going through security checkpoints.
- Tape a business card to the notebook.
- Avoid leaving your notebook in hotel baggage-hold rooms.
- Lock the notebook in a secure place.

Note: The safety and security of the notebook is your own responsibility