

# Facts

xantic

Together with Stratos

## BGAN

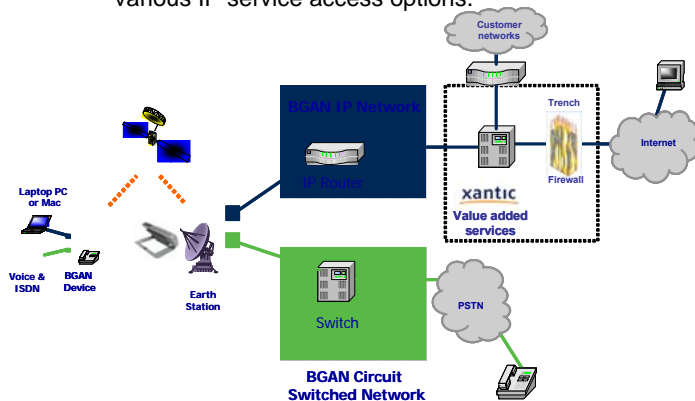
### IP Service access options

Data communication in BGAN is based on the Internet Protocol (IP). Just like with a telephone network, a number (IP address) is needed to enable communication. This factsheet describes the different IP service access options offered by the Xantic BGAN solution.

#### Empower your BGAN network

In order to allow users to get the best out of BGAN, Xantic offers a range of services designed to increase security, save money and offer the highest flexibility in terms of access.

This is possible thanks to Xantic's value added infrastructure, which is located as close as possible to Inmarsat's BGAN Satellite Access Station in Burum, the Netherlands. Situated between the BGAN IP network and the internet, the infrastructure can be linked to your corporate network. It also provides the various IP service access options.



is handed out to a single (virtual) device and cannot be used by anyone else on the internet to identify themselves with.

- The PRIVATE IP addresses are not used on the internet, but can be used by any company to manage the internal communication within the corporate networks. It is therefore possible that a (PRIVATE) IP address is used within several different networks.

#### Dynamic versus Static

IP addresses can also be classified by the way they are used:

- DYNAMIC IP addresses are not fixed for a certain device; each time the terminal connects to the network, a new IP address is obtained on request. This IP address is then kept until the terminal logs off.
- A STATIC IP address is fixed and tied to a certain SIM. It does not change every time the SIM logs on.
- Therefore, a generic division can be made between *dynamic public*, *static public*, *dynamic private* and *static private* IP addresses.

#### Network address translation (NAT)

To enable terminals with a private IP address to access the internet, they must be assigned a public IP address from the viewpoint of the internet. This process is called network address translation and can be done by the Xantic value added infrastructure.

#### RegularAccess

RegularAccess is a form of internet access where a BGAN terminal gets a dynamic private IP address in the range 10.0.x.x. The Trench firewall takes care of the necessary address translation to allow this terminal to access the internet. There is no extra charge for RegularAccess and the solution is ideally suited for customers with typical Office application needs.

#### IP communication

Communication between a data terminal in BGAN on the one hand and the internet or a corporate network on the other runs over an IP protocol. To enable this communication, the BGAN terminal needs access to the network with an IP address. An IP address can be seen as a telephone number for data communication. Xantic BGAN offers several access options in this field with different service characteristics and pricing options.

#### Public versus private IP addresses

The IP address range is subdivided into PUBLIC and PRIVATE IP address ranges:

- The PUBLIC IP address range consists of unique IP addresses, which means that it

RegularAccess supports web browsing, email, ftp, instant messaging like MSN and Yahoo, and even Skype. Several VPN solutions are also supported, but the success rate is highly dependent on the setup of the corporate VPN access node. More complex applications like non-Skype IP telephony solutions, videoconferencing, certain type of crypto equipment and the use of servers are not supported by RegularAccess. Nonetheless, this type of access is the perfect fit for most BGAN users.

### TransparentAccess

TransparentAccess is an internet access solution where a BGAN terminal gets a public IP address from Xantic's range of public IP addresses. This address can be dynamically or statically allocated (i.e. it can change with each connection or remain always the same). If the terminal is to be used in the US, it will have two static addresses: A US address and a global address. The US or global address is allocated depending on the location of the terminal (inside or outside of the US).

The Trench provides firewall protection if needed and no network address translation (NAT) occurs in the network. Depending on the terminal type, however, address translation may be performed by the BGAN terminal between your equipment and the BGAN network.

TransparentAccess is ideally suited for applications that are highly sensitive to address translation and need a public IP address. Some typical application examples are crypto devices, videoconferencing units, IP telephony, some VPN applications and web and email servers. Of course, all the applications that function with RegularAccess will also work with TransparentAccess. There will be a small monthly fee per TransparentAccess order.

### StaticAccess

StaticAccess is an internet access mechanism where a BGAN terminal always has the same public IP address from the perspective of the internet. This contrasts with the TransparentAccess solution, where two different static IP addresses are needed if the terminal is to be used in the US.

The main difference is that, with StaticAccess, the Xantic value added infrastructure performs network address translation (NAT) on a single public IP to handle the BGAN internal addressing.



StaticAccess is a great tool for users who always need to have the same IP address and are not really concerned about address translation. Typical examples of circumstances in which StaticAccess is ideal are email, web and streaming servers behind a BGAN terminal and/or BGAN terminal to BGAN terminal communication where the application requires an IP address to be entered in order to reach the other terminal. There is a small monthly charge per StaticAccess order.

### BusinessAccess

In addition to various ways of accessing the internet, the Xantic value added infrastructure also enables seamless integration with your corporate network.

This integration consists of a secure connection to the Xantic infrastructure and IP addressing tailored to the specific needs of the relevant corporate network. See the BusinessAccess factsheet for more details.

### Customer Services

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	Static		Dynamic		NAT
	Public IP	Private IP	Public IP	Private IP	
<b>RegularAccess</b>				√	√
<b>TransparentAccess</b>	√		√		
<b>StaticAccess</b>	√				√
<b>BusinessAccess</b>		√		√	