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Comparison: MENOS System Vs BGAN System

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Abstract

The paper will talk about satellite systems and their relationship to the Internet network, which is the actual future Systems satellites, and the progress reached his Arab states. In the competition to innovate and develop new systems keep pace with the world countries, where this paper discusses the comparison between the two systems (BGAN system and MENOS system), as the first followed by the European countries, while the second follows the Arab States Broadcasting Union. And we can see of the most important advantages and disadvantages of the two systems, in terms of the fundamental aspects of interest to each of the relevant scientific researchers and companies.

Keywords: *MENOS, BGAN Network, NEWTECH.*

1. Introduction

Satellite communication is considering is one of important of modern communication systems, because it was coverage a big wide area, even the world by using only three satellite systems, and for example of system like a (NILE sat, ARAB sat, …. etc.) It is also used in television stations, the weather (prediction), and sometimes in international communication, access to Internet and radio stations. Although the researchers are doing research mainly about how to resolve the problem associated this system, and it Summed up the cost, high power needed to and bulky earth station, and put them in a certain place.

Over time devolved a system resolve almost problem of earth station and VSAT system, consider a first system resolve problems, like (roaming, high cost to install, ease of Maintenance), but cost is not an easy for small businesses, and small TV stations and they need for the technician, or engineer communications expert for the installation terminal.

VSAT system is a well-known and that is compared mostly with satellite systems. This paper is investigating two different satellite systems, they compared with VSAT system, and each system have an advantages, specification and geographical area that work in it, that MENOS system and BGAN system, they considered a satellite system using IP networks.

2. BGAN

The BGAN is (Broadband Global Area Network). and is an IP communication over satellite, and its technology provide reliable communications for voice, and data applications in remote locations by INMARSAT satellite is a global satellite, internet network with telephony using portable terminals.

The terminals are normally used to connect a personal or local laptop/computer, to access broadband Internet in remote locations.

Although when as long as line-of-sight to the satellite available, the terminal can be used anytime and anywhere. The advantage of BGAN terminals is that unlike other satellite Internet services, which require bulky and heavy satellite dishes to connect the satellite, a BGAN terminal is a small terminal about the size of a laptop, and

thus can be used and carried easily. The network is provided by INMARSAT and uses three geostationary satellites called to provide almost global coverage.

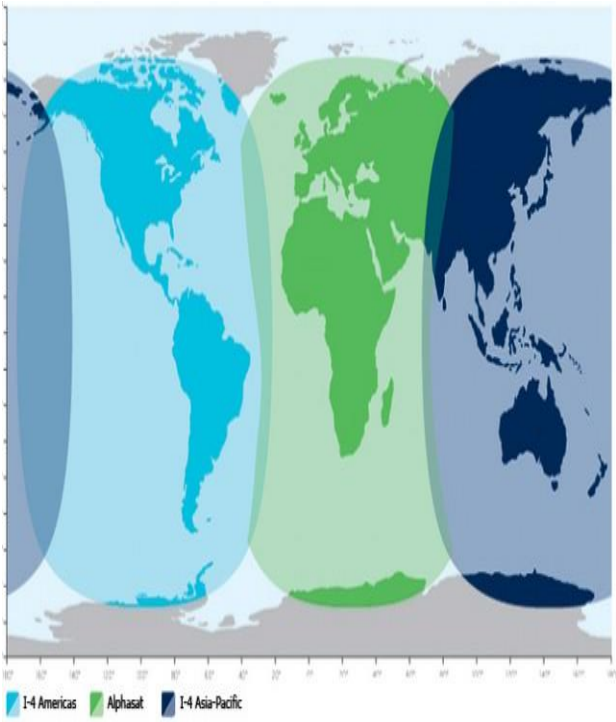

Figure 2-1: BGAN Coverage Map

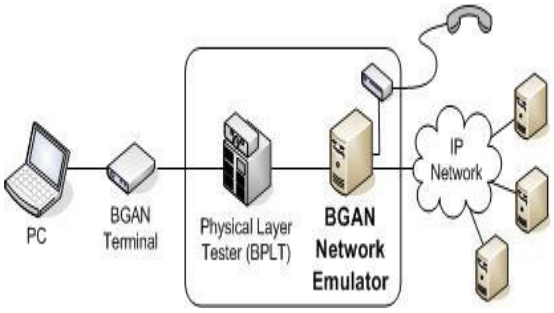

Figure 2-2: BGAN Network

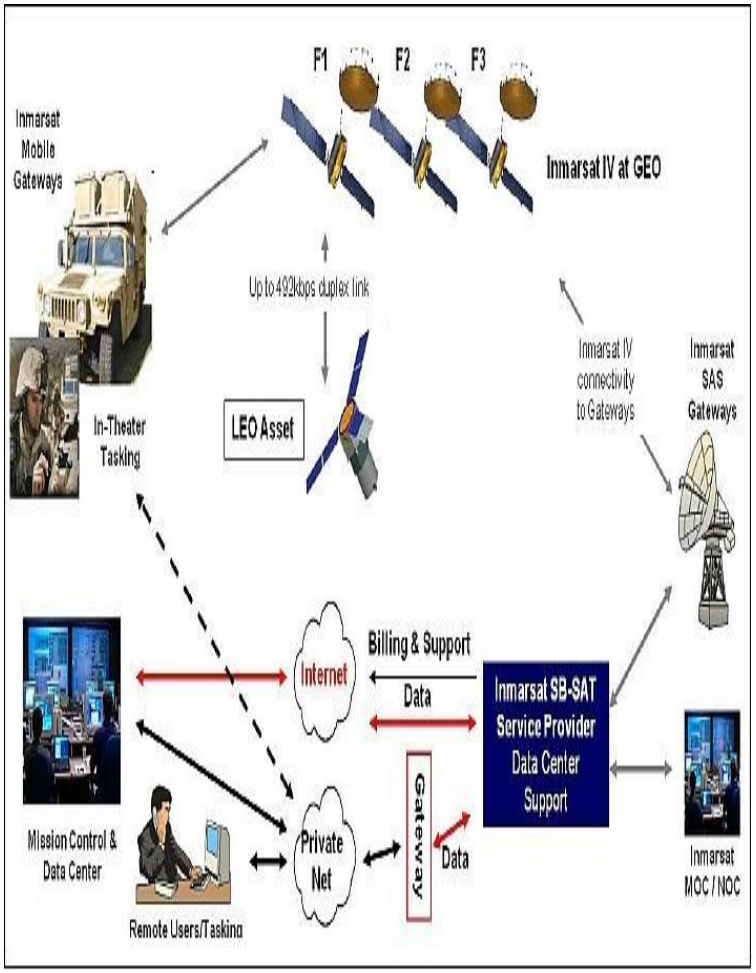

Figure 2-3: The BGAN Connectivity Explains

Figure 2-4: BGAN Example

3. MENOS

The MENOS is a new revolutionary, networking concept, used to exchange multimedia content over satellite. It is intended primarily for all broadcasters, allowing them to share multimedia (video and audio ...), material among several sites scattered across a wide geographical area. It has been designed to provide these broadcasters, not only with the fastest and most effective technologies to perform the multimedia exchange, but also with a complete range of tools to facilitate the related coordination tasks, and improve people collaboration across the network. In traditional satellite contribution systems, television and radio material, is exchanged as real-time transmissions from one ground station to another.

MENOS multimedia is Exchange over satellite and allowing Exchange video, and audio material among several sites.

A large geographical area by using a terminal device can be used by any person, and been designed to Facility, Work Broadcasters, and improve people collaboration across the network material exchanged transmits, through a central station, which provides permanent satellite IP connectivity among all remote stations. The MENOS content transmitted in real-time, or be transferred as data files, also be retained in the central hub station for archiving, and later access by other stations, MENOS uses the satellite Advanced DVB-S2, Modulation technology and ensures the optimum efficiency of the bandwidth usage, and thus reduces operational costs.

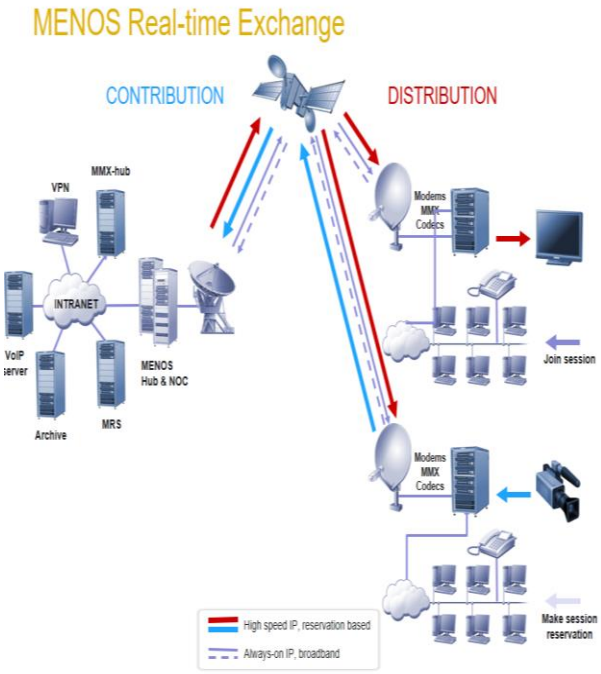

Figure 3-1: MENOS Connectivity

Figure 3-2: MENOS Terminal

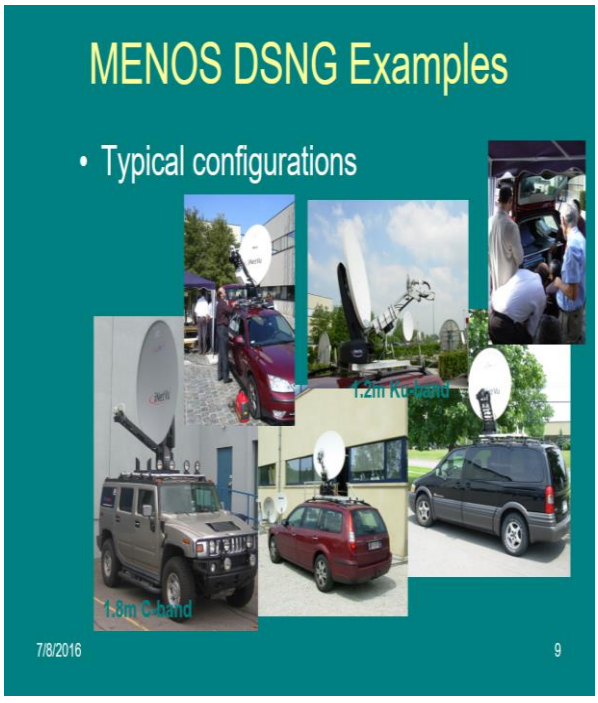

Figure 3-3: MENOS DSNG

Table 1: Comparison between MENOS & BGAN

Title	Menos	Bgan
SLA, Committed Bitrate	0.4 - 1Mbps	256-384kbps
Live Streaming (upload) $/min	0.5 - 1	23-31
File Transfer (Store/Forward) $/MB	0.14	7
Additional subscription fees $/month	0	1000
Extra Internet download $/MB	0	7
Annual operating cost (usage average 2h/day) $/year	27 - 68k	740 - 1030k
Cost	Cheaper than BGAN	30-3100 (2.75mpbs-550mpbs)
Time to installation station	3 hour to SIP-IP 9 hours to SIP-IP	5 min (is simple)
Start the service	Few seconds because it's connected to central hub	2-6 mints after install the station
TV exchange	Available	Not available
Voice exchange	Available	Available
Data transmission channel	Multiple audio channel according to need quality	Only a single channel
Estimated VNs networking service	Available & secure	Available & secure
Video	Available TO	Available

conferencing service	Multi channel (multi video conference)	but single channel
Audio conferencing Service	Available TO Multi channel (multi video conference)	Available but single channel with specific phone
Remotely training Service	Available	Not available
Internet service	Available, high speeds, low cost, Use (VPN)	Available with speed up to 490 kbps
Radio Archiving Service	Available	Not available
TV Archiving Service	Available	Not available
Maintenance	Simple under the guidance of the main Station	Available but by the main company
The cost of training	Low cost is very low in terminals	With manual datasheet
Coding and modulation	Open (DVB-S2MPEG2-4-WM9)	TURBO 16QAM/0-QPSK
Future expansion	Continuously, available at A reasonable cost	

4. Discussion

Table above explain the other advantages of the system MENOS that after the installation of the system work equipment and connected to begin actual operation of the system. After a few seconds, and systems like any other system, needs for maintenance, and we find that the maintenance is available for engineers and technicians from outside the manufacturer NEWTECH company through continuous training available, through the company's training centers, while BGAN system has to be the manufacturer Network Innovations for maintenance work, as they should be in paper view a kind of monopoly, all that shows us MENOS system feature in the after-sales services accounted for the NEWTECH company.

The other side we see outweigh BGAN on the other system in the terminal installation of a time, when it takes about five minutes' installation time, while MENOS system takes about three hours to install, in general from paper perspective we see that MENOS system outperforms BGAN system in general of the specified style "caption", from the drop-down menu of style categories.

5. Conclusions

The conclusion of this paper will discuss all the advantages available, and raised almost scientific research where we see that, the most important points for any system is the speed used for the projected system, cost, and see through the above table that the speed used in the best MENOS system, compared with BGAN system, squad's vast reaches more than doubled in speed, and relatively less the cost.

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