



Multimedia Exchange Network over Satellite



SHAPING THE FUTURE OF SATELLITE COMMUNICATIONS

MENOS Key Features

MENOS is a revolutionary networking concept used to exchange multimedia content over satellite. It is intended primarily for professional broadcasters, allowing them to share video and audio material among several sites scattered across a large geographical area. It has been designed to provide these broadcasters not only with the fastest and most cost-effective technologies to perform the media 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. This requires the reservation of a satellite segment for a fixed time duration, a manual line-up procedure, and expensive uplink equipment. At the receive site, the transferred material needs to be used on the fly or recorded. The coordination between the two stations, or between the stations and the Network Operating Center, must typically be done via terrestrial or mobile telephony.

MENOS is fundamentally different: with IP as the core-protocol, all exchanged material transmits through a central hub station, which also provides permanent two-way satellite IP connectivity among all remote stations. The multimedia content can be transmitted in real-time or be transferred as data files. It can also be retained in the central hub station for archiving and later access by other stations. The reservation of the bandwidth and the line-up procedure are automatic and the uplink stations are smaller and much less expensive than traditional systems. The two-way IP connectivity is ideal for VoIP coordination channels, e-mail exchange, Intranet and Internet access and other collaboration tools.

MENOS is also unique in the way it uses the satellite capacity. Advanced DVB-S2 modulation technology, combined with the statistical multiplexing of the data, voice, television and radio signals, ensures the optimum efficiency of the bandwidth usage and thus reduces operational costs.

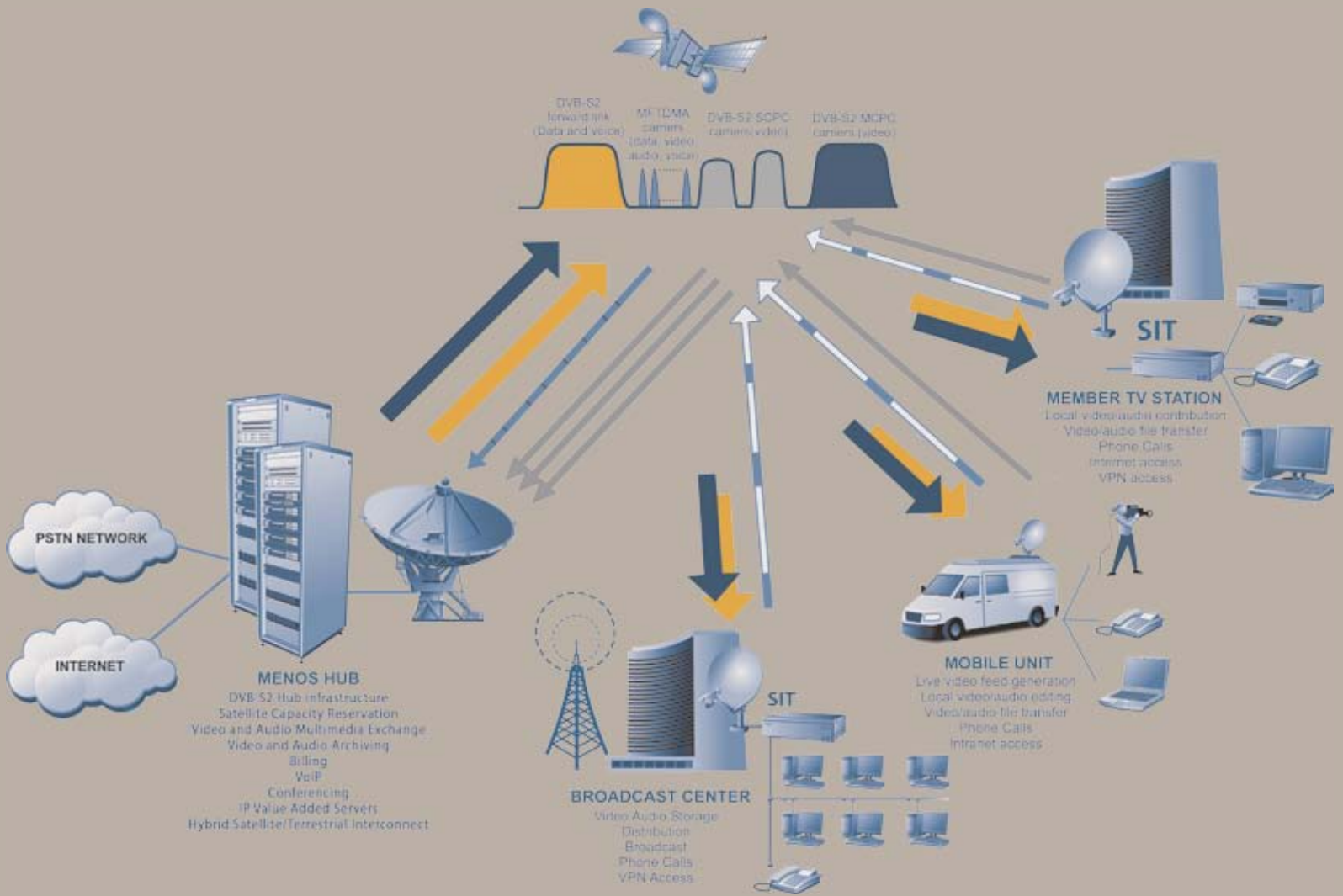
- **Small, cost effective and easy to use terminals**
- **Automated satellite session reservation**
- **Automated configuration of hub & remote equipment**
- **Real time television and radio content exchange**
- **Store and forward content exchange**
- **Selectable quality profiles in SDTV and HDTV**
- **Low bit-rate Fast News Gathering (FNG)**
- **Central Archiving and Local Content Storage**
- **Central Monitoring**
- **VoIP coordination channels**
- **Always on Broadband Intranet/Internet access**
- **Optimum use of satellite capacity**
- **Central Accounting & Billing**

Professional equipment

Broadband systems

IP software

MENOS



MENOS Key Services

Worldwide Content Availability

Worldwide network interconnectivity allows the best quality content to be made available to all participating users. Adding new broadcast distribution networks will only be successful if there is compelling content

Intuitive, Easy to Use Booking System

Whether you need to book single events or schedule regular program exchanges, the interface has been proven to be easy to understand & use. Everything is automated too, so you don't need technical specialists around to help. All users have integrated VoIP coordination channels built into the terminals

Live TV & Radio Contribution/Exchange

Occasional video contribution links can be booked for news, sports & live events. Content ingested into the network can be received by all users, regardless of the origin of the content with automatic adaptation to regions with high rain-fading

Store/Forward File Based TV & Radio Contribution/Exchange

Files based news stories & production content can be transferred, supporting alternative broadcaster workflows. File transfer transmission allows different ways of transmitting TV and Radio content using best-effort or night capacity at better prices

Local & Central Archiving of TV/Radio Content

Re-transmission of the content can be requested if live sessions were missed. The archived content is fully classified with metadata to search & find what you need

Hosted Dedicated "Virtual Network" Services

Dedicated resources of the platform can be offered as a hosted "virtual network" (VN), enabling full services without the investment & operational costs of a separate platform. This provides very attractive "grow on demand" strategies for network deployment

Affordable Terminals & Usage Costs

The cost-effective terminals are offered in different configurations, depending on needs: Fixed TV or Radio terminals, SNG TV trucks/vans and Flyaway terminals for Fast News Gathering. All the services use shared satellite resources, which lowers the cost per usage, compared to traditional satellite networks. The billing is integrated & automated too

Live Fast News Gathering Contribution/Exchange

Occasional low quality video contribution links can be booked for fast news gathering services. Fast News gathering content is transmitted with fly-away terminals transportable and deployable in minutes, anywhere in the MENOS coverage area.

Distance Learning / Distance Training

A number of specific distance learning scenarios are especially suitable for the MENOS system.

Connectivity from/to everywhere without previous infrastructure

Install a MENOS terminal and get connected everywhere in the MENOS network. Remote locations, remote schools, universities, hospitals, distribution towers can be connected for different services using MENOS terminals.

MENOS Industry Recognition

MENOS has received multiple industry awards

- IBC2009, Amsterdam
 - Winner: Judges Award
 - Winner: Innovation Award – Content Delivery
- Cabsat 2010, Dubai
 - Winner: Most innovative project of the year



MENOS Key Advantages

Easy-to-use terminals

Once installed, MENOS terminals are connected to the network in an always-on mode. All network services and terminal features are available on a single graphical user interface. Starting a video or audio transmission requires no line-up procedure as the bandwidth reservation is done automatically.

Lower terminal cost

Because all communications are established via a central hub, MENOS terminals require much less power and smaller dishes than point-to-point media exchange systems. The transmission equipment in the terminal is IP-based, resulting in an overall terminal cost that is only a fraction of the cost of other types of satellite TV or radio uplinks.

Higher flexibility

In a MENOS system, the bandwidth is negotiated dynamically or reserved automatically depending on the requested speed of delivery and the nature of the exchanged material. The multimedia material can be stored anywhere in the network, including in a central archiving system where it can be previewed and accessed by any other remote station via another satellite transmission.

Lower operational costs

By using the most advanced satellite transmission technologies such as DVB-S2 and by sharing dynamically the available bandwidth among various applications, MENOS reduces the costs linked to the space segment. On the ground, operational costs are also kept to a minimum thanks to the ease of use of the terminals and the automation of the network management. The integrated billing & reporting system automatically collects and formats billing and accounting data according to specific business rules.

Additional source of revenues

MENOS is much more than a system to exchange video and audio: it allows the development of many other IP-based services such as Voice over IP (VoIP), corporate VPNs and Internet broadband access services.

High Quality of service

In a professional broadcast exchange network, the quality of service is paramount. As a fully automated system where all remote operators always have access to a voice or data communication channel, MENOS reduces the risk of human error. The equipment is very reliable and all transmissions can be backed up in the central archiving system.

Shaping the future of satellite communications

Newtec is world renowned as a market leader in Satellite Communications, delivering an extensive range of highly innovative products and solutions.

Since our foundation in 1985, TV broadcasters, Telecom Service Providers, Integrators and Satellite Operators from all over the world have been relying on the exceptional performance and reliability of our unrivalled products.

At Newtec, we are committed to further innovating and in turn revolutionizing the satellite communications industry. We are able to achieve this through our passion for continually developing and perfecting new technologies. We design applications that use these technologies to best serve the specific needs of our customers. As part of our philosophy of openness, Newtec is also an active participant and a trendsetter in many industry standards.



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