Case Study

# Emergency Backup for Voice, Video and Data

Emergency Backup for Voice, Video and Data

## Shanghai Telecom, China

***"Since the people of Shanghai will be depending on Shanghai Telecom for keeping communication lines open during times of disaster or emergencies, their equipment must be totally reliable."***

Bright Lei, General Manger, ENC

### Challenge

**Provide emergency backup for voice, video and data traffic in case of major outage of fixed or mobile communication lines**

### Solution

**Megaplex-2100 Multiservice Access Multiplexers are mounted in trucks serving as mobile VSAT transmission stations.**

### Benefits

- **Multiple services supported using a single platform**
- **High voice compression rates maximize limited satellite bandwidth while maintaining high voice quality**
- **Internal echo canceller compensates for long delay of satellite link**
- **Data buffers on Megaplex V.35 links compensate for varying delay of satellite links**

## *Shanghai Telecom Deploys Megaplex-2100 for Mobile Satellite Backup Transmissions*

### *Emergency Backup for China's Largest City*

Strategically located where the great Yangzi River meets the sea, the city of Shanghai has historically served as China's main industrial center and port for foreign trade. As befitting one of the most important financial centers in Asia today, Shanghai sports crisscrossing highways, an underground railway, a new airport, a modern stock exchange, as well as a high-rise skyline in the new Pudong economic zone. With a growing population of over 13 million, Shanghai is also China's most populous metropolis.

Shanghai Telecom (a subsidiary of China Telecom) fields an emergency communications backup network for the Shanghai Municipal government. Shanghai Telecom is responsible for ensuring that all video, voice and data services normally available from Shanghai Telecom, as well as from mobile carriers, are backed up in case normal transmissions lines go down. For this purpose Shanghai Telecom employs various wireless technologies, such as microwave, spread-spectrum, LMDS, VSAT, and INMARSAT. "Since the people of Shanghai will be depending on Shanghai Telecom for keeping communication lines open during times of disaster or emergencies, their equipment must be totally reliable," says Bright Lei, General Manger of ENC, RAD's local distributor who worked with Shanghai Telecom on this project.

### *Multiple Services in a Single Unit*

Shanghai Telecom required a versatile and compact, yet rugged solution that could be mounted and operated in trucks for tactical deployment and transmission when regular land lines are down. "RAD's Megaplex™-2100 Modular Access Multiplexer with its wide range of user interfaces and robust system reliability fit the bill," says Lei. The 17 inch/43 cm wide, 4U high Megaplex-2100 unit holds up to 12 interface modules, in addition to dual power supplies and common logic (control) modules for critical system component redundancy.

ENC

RAD data communications

# Emergency Backup for Voice, Video and Data

Case Study

## Emergency Backup for Voice, Video and Data

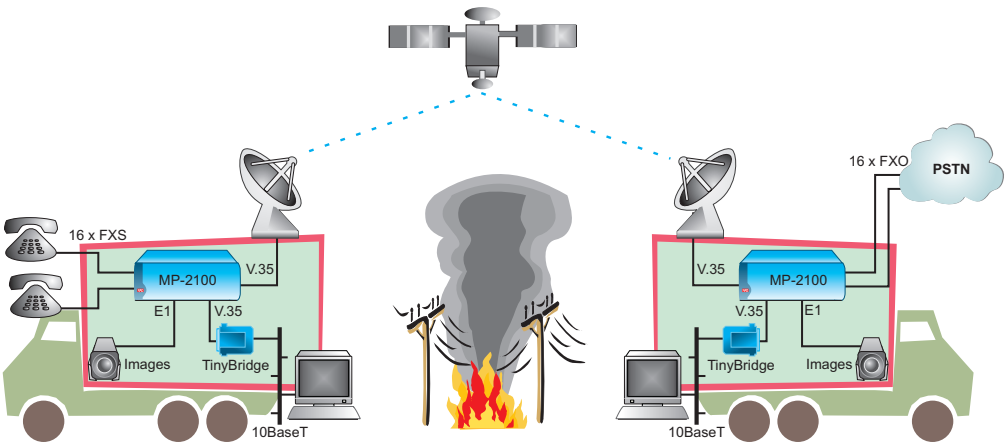
### Shanghai Telecom, China

***"The Megaplex proved to be a very versatile solution, allowing Shanghai Telecom to reliably transmit voice, video and data services from mobile units over the backup satellite links using a single device."***

Bright Lei, General Manger, ENC

To fit Shanghai Telecom's application, each Megaplex unit was equipped with VC-16 and VF-30 modules to connect and compress voice services using minimal bandwidth. High speed E1 modules with 2 Mbps interfaces were installed to connect video transmission. Finally, HS-2 high speed data modules with V.35 interfaces, operating together with RAD's TinyBridge miniature Ethernet bridges, were used for connecting LAN traffic. The multiplexed data stream was then transmitted over an ML-20N module V.35 main link to the truck mounted satellite transmission device. At another mobile truck site, the beamed satellite transmission is received and connected to the PSTN.

Using the Megaplex-2100 enabled connecting multiple services over the same satellite link, both maximizing the limited bandwidth of this precious resource and also saving the cost and space of using different equipment for the various services. "The Megaplex proved to be a very versatile solution, allowing Shanghai Telecom to reliably transmit voice, video and data services from mobile units over the backup satellite links using a single device," says Lei.




RAD data communications

**www.rad.com**


**International Headquarters**
RAD Data Communications Ltd.
24 Raoul Wallenberg Street
Tel Aviv 69719, Israel
Tel: 972-3-6458181
Fax: 972-3-6498250
email: market@rad.com

**Shanghai Office**
RAD China
Unit 11, 16/F, Central Plaza
227 Huangpi Road N.
Shanghai 200003, China
Tel: 86-21-63758691/2
Fax: 86-21-63758693
email: shanghai@raddata.com.cn
http://www.raddata.com.cn