Communication response to Extreme Events

Initial RESPONSE & RECOVERY from hours to a few days!

How can Earth Observation and Surveillance, Satellite Navigation and Telecommunications technologies can collaborate for a crisis management and restoration to normal?

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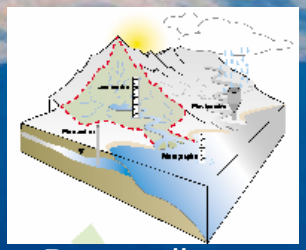
Contribution of satellites in risk management

Earth Observation

Meteo forecast

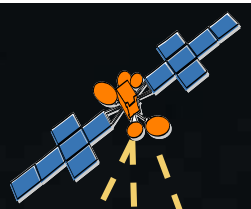
Cartography

Damage assessment

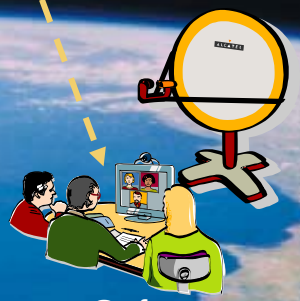


Data collect

Telecommunications

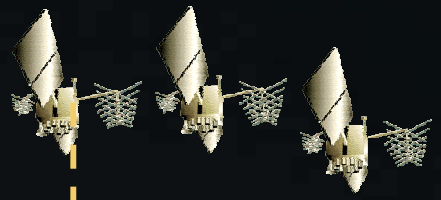


Alert and localisation



Safety communications

Positioning and navigation

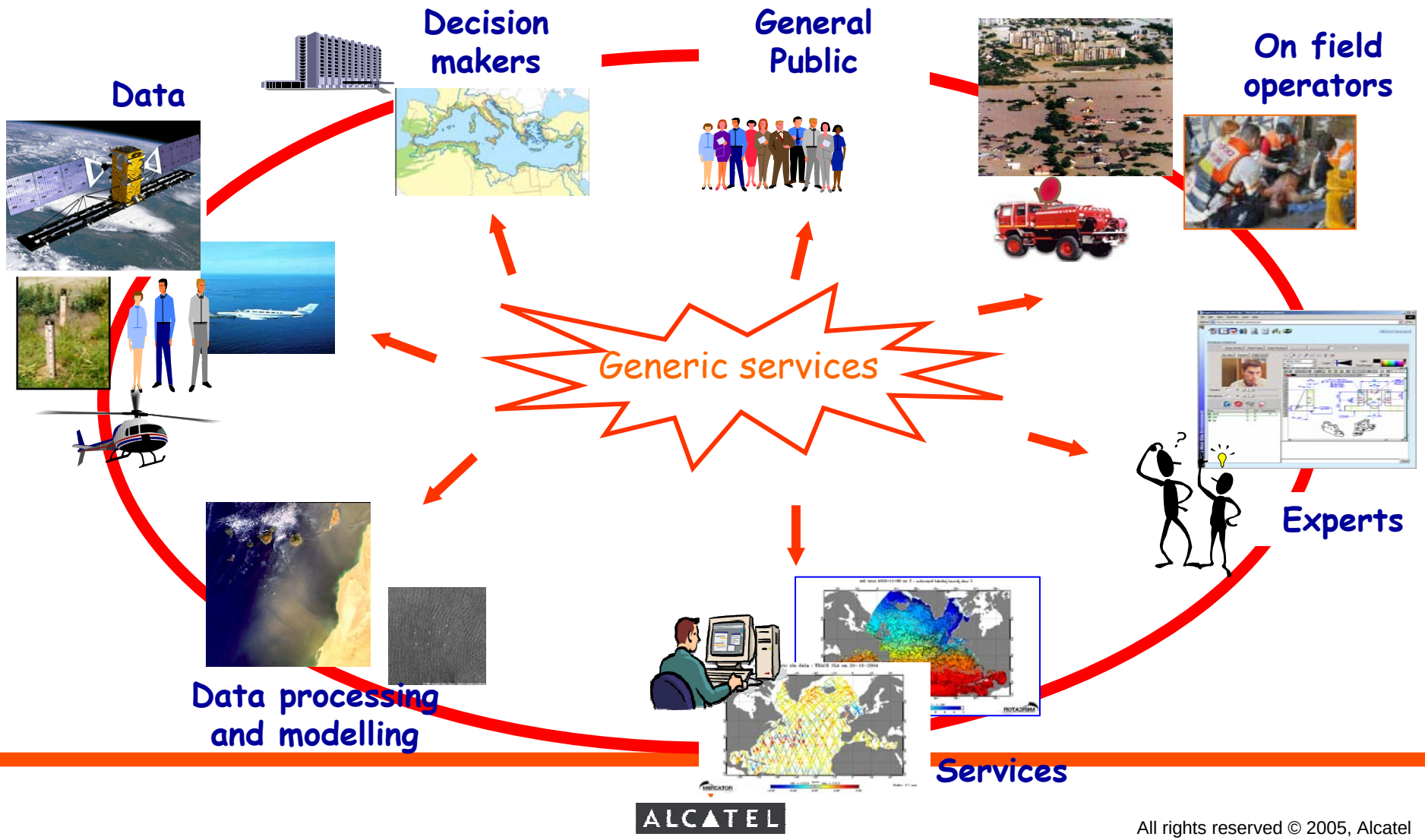


Topography survey

Rescue guidance

Prevention → **Forecast** → **Alert** → **Crisis** → **Post-crisis**

Security operations: the different contributors



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Case Study: Noviaskia!

EO Satellites

GPS

EGNOS

Civil TC satellite

Highly Secure TC satellite

Platforms of services

EO (France - UK)

TC (France - UK)

NAV (Italy – France)

Driveaway Highly Secure SATCOM

TRACKS Truck Secured Civil SATCOM

Krokus Truck 1 Field Information Node Shelter

Operational Centre

(Zegrze – MCI Conference room 2)

Civil Secure and Highly Secure SATCOM Terminals

Krokus Truck 2 Field Information Node Shelter

Command car With WiFi access point

WiFi Local network +GSM/GPRS network

Portable terminals

Situation Centre

(Zegrze – MCI *Conference room 1)*

On-field Exercice

(Debe dam)

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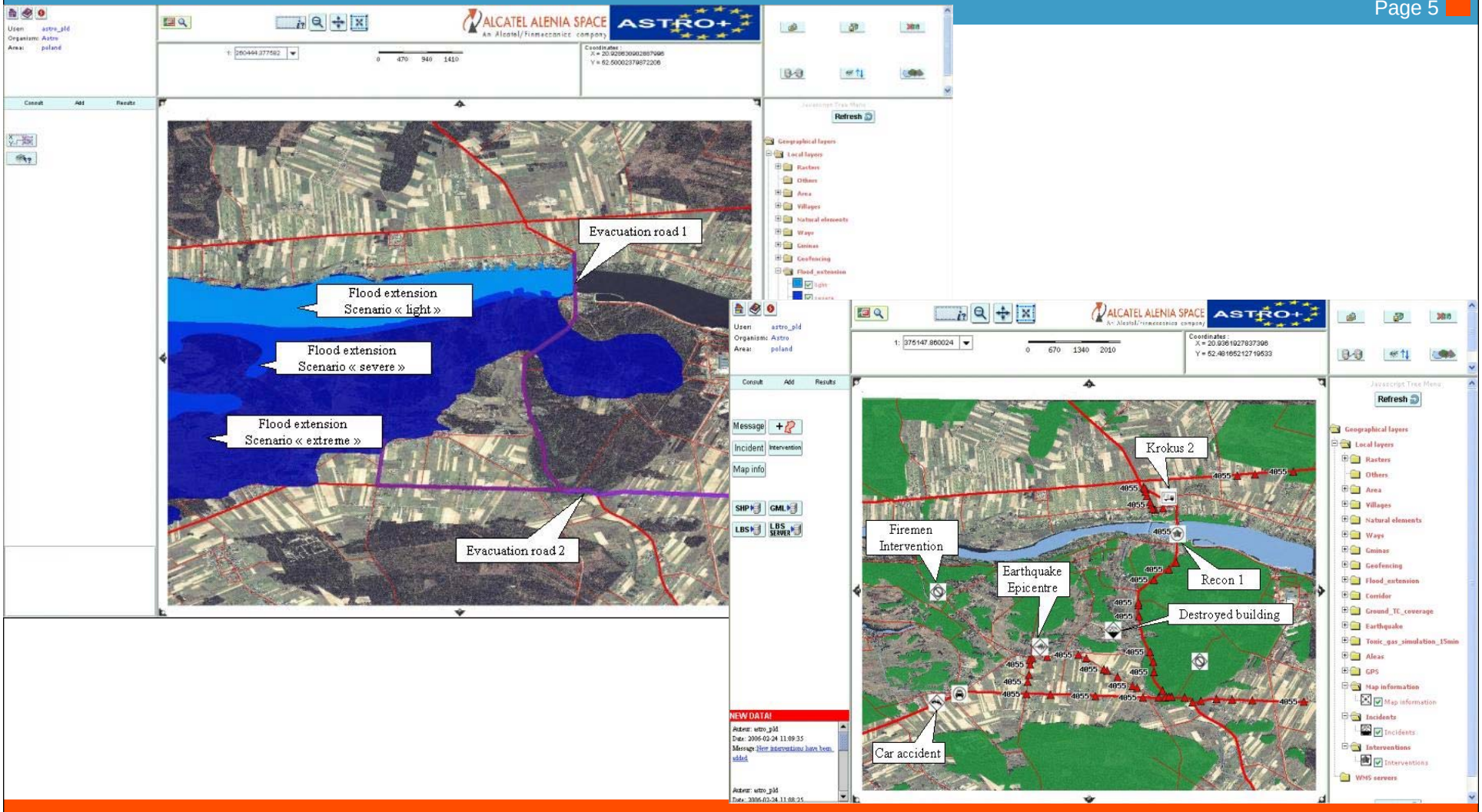
Applications: Localisation flood (simulation & evacuation plan)



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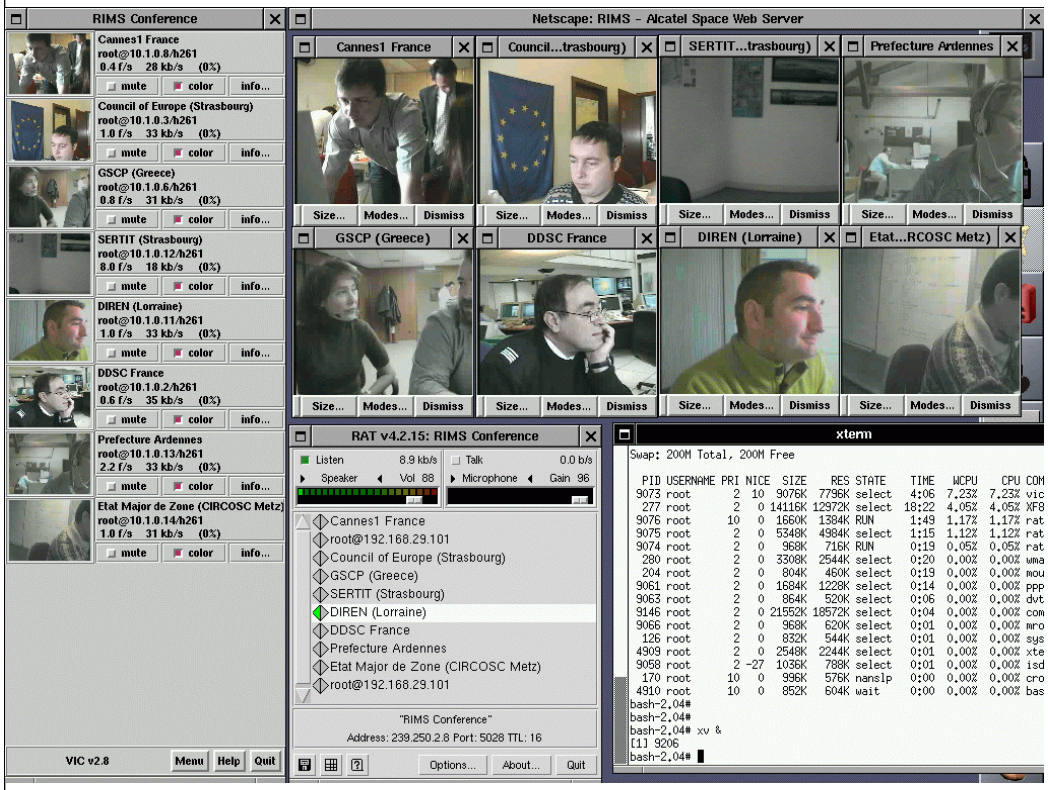
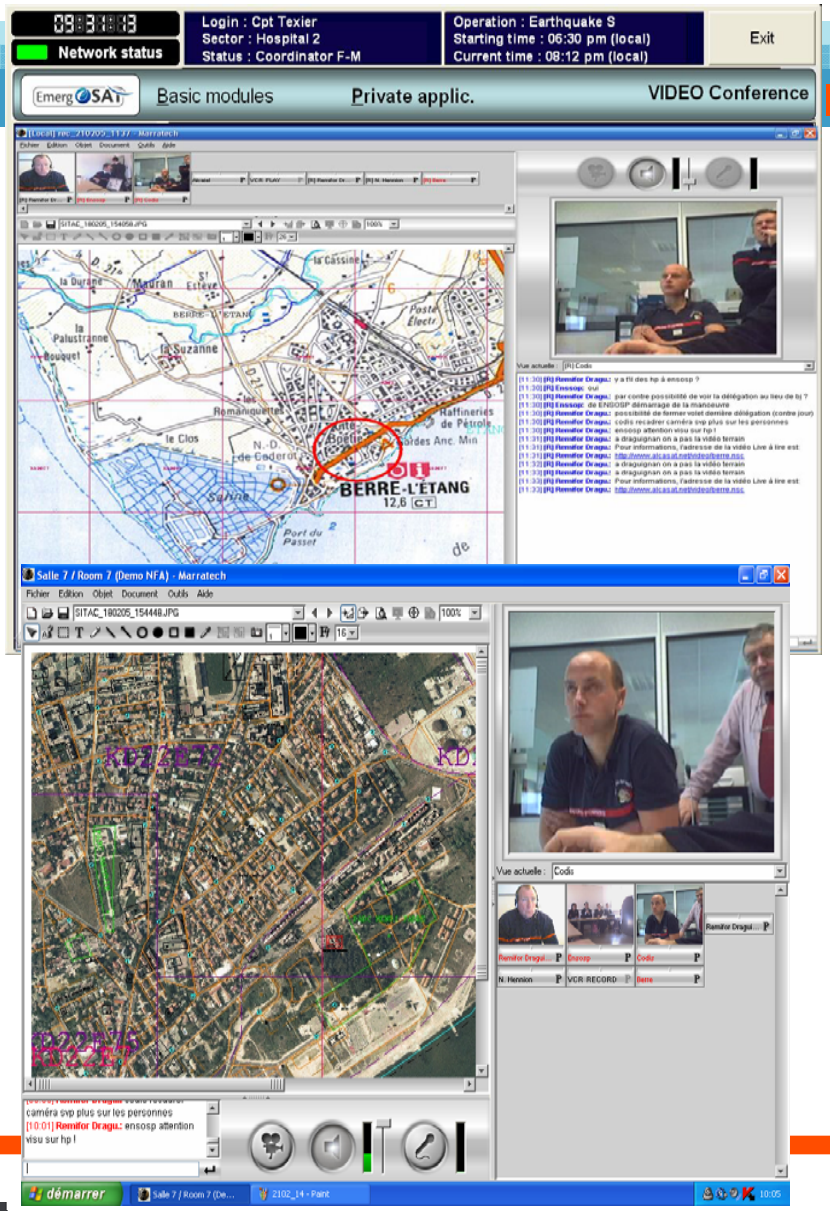
Applications: Collaborative work





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Emergesat Model, the Swiss army knife of telecommunications for disaster recovery

Main components:

- Auto pointing and Satcom antenna
- Control unit + ODU + IDU DVB-RCS
- Reduce service backup (Inmarsat BGAN)

Supported terminals:

- WiFi 802.11g (2) + long distance antenna
- Micro BTS GSM (3) + omni directional antenna
- applications servers
- Tablet PC WiFi + webcam
- micro-helmet +perif + ToIP + GSM
- autonomous energy

Main supported information applications:

- Video conferencing, including sharing of data and whiteboard
- Live video streaming from field locations
- WIFI capability surrounding mobile satellite communication terminal
- Integrated ruggedized PC Tablets for extensive use by in-field teams
- Internet access to World Wide Web
- Fully managed voice / media services (VoIP, GSM)
- Open Tactical Geographic Information System (Picture & Map Analysis)
- Location based services
- Generic data collect and sharing

Enhanced & specialized applications for crisis management:

- ➔ Victims Management
- ➔ Population flow management
- ➔ Tactical decision support
- ➔ Request and offers
- ➔ Epidemiologic data collect
- ➔ Medical Assistance (tele medicine)

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Several Terminals packaging

Logistics vs customers:

- Several models to adapt to different traffic needs
- Large range of power amplifiers and antenna size
- Several Terminal packaging according to mobility needs (transportable, fix, fast, deployable on vehicle, on ships)

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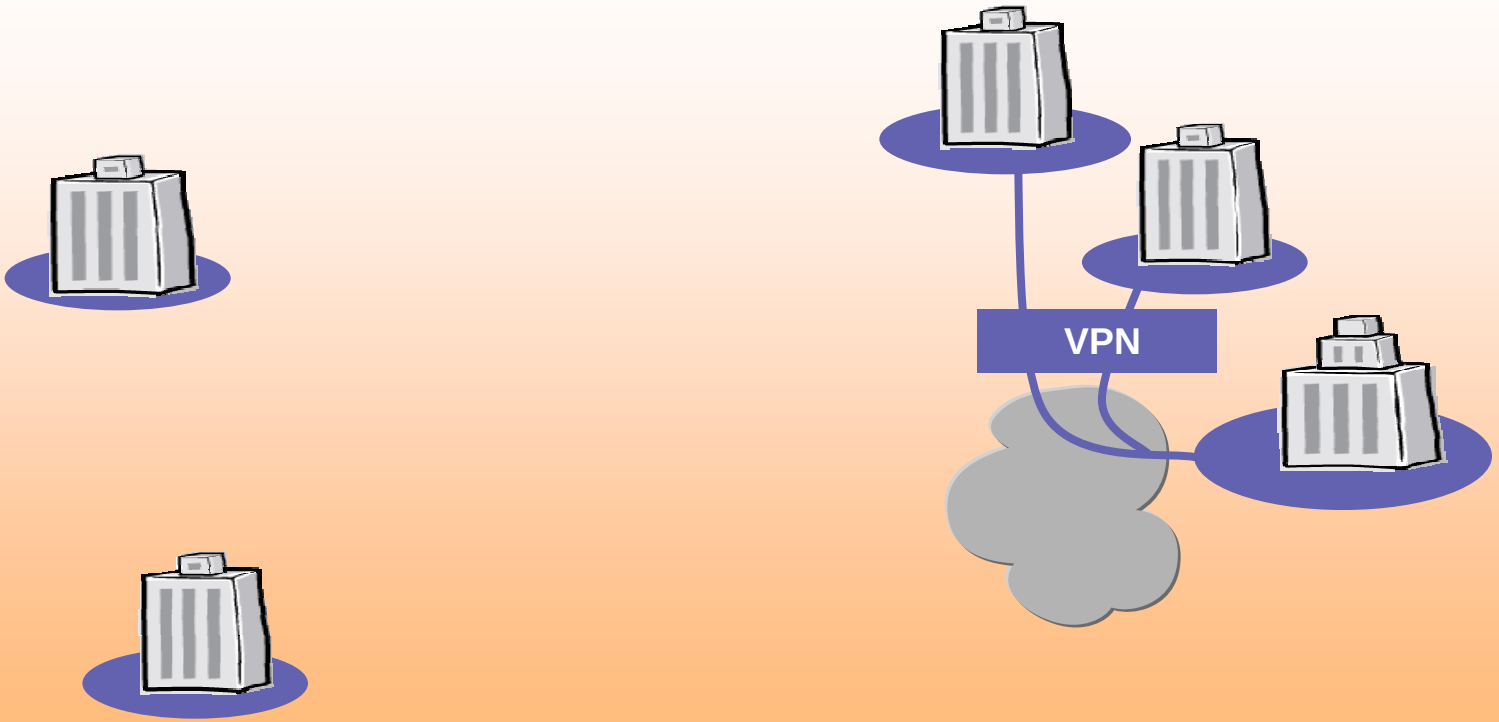
Business continuity: Restoring enterprise communication (1/2)

Integrating Remote Sites into Private Networks



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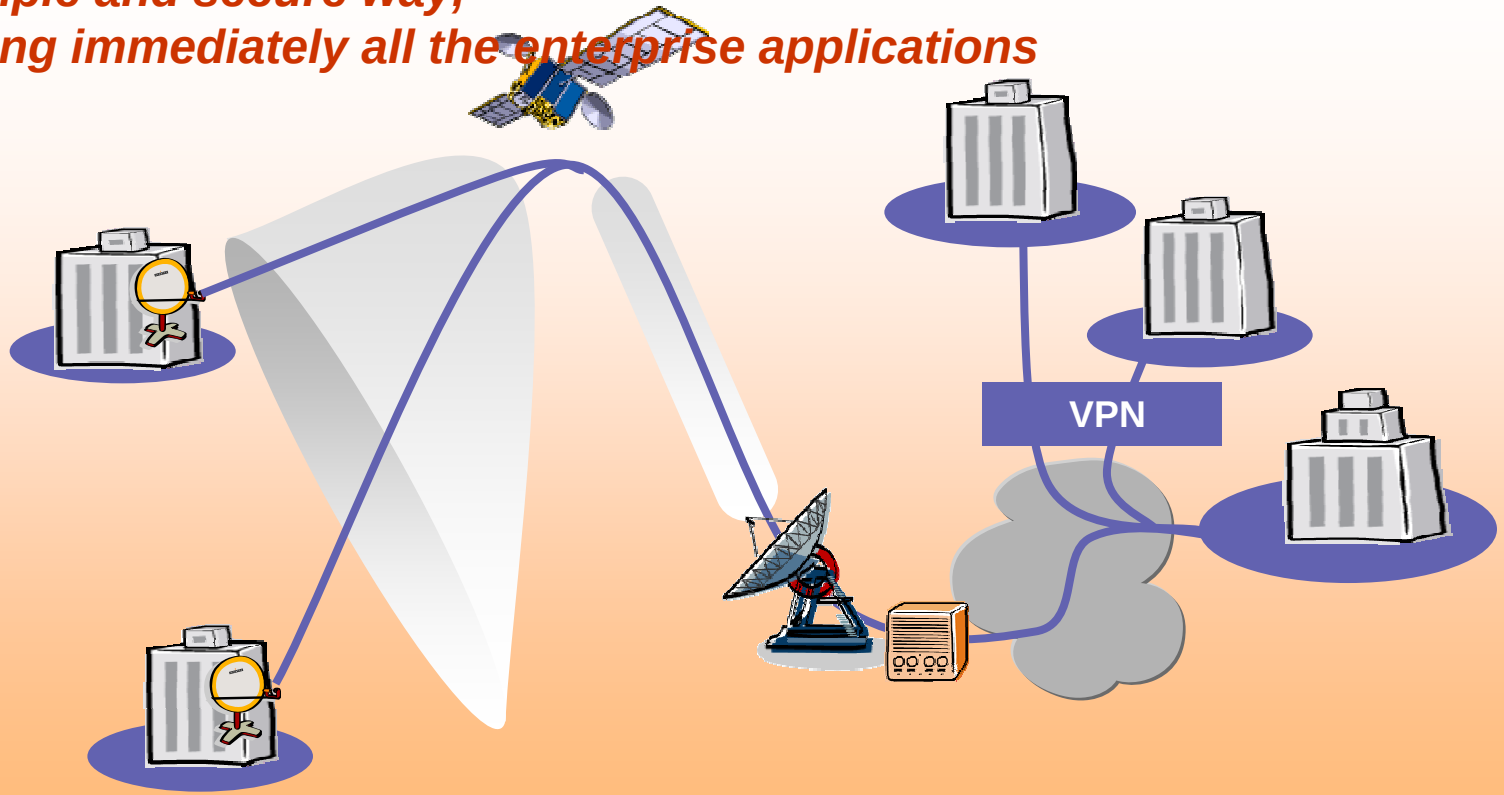
Business continuity: Restoring enterprise communication (1/2)

Integrating Remote Sites into Private Networks:

- ***In a simple and secure way,***
- ***Restoring immediately all the enterprise applications***



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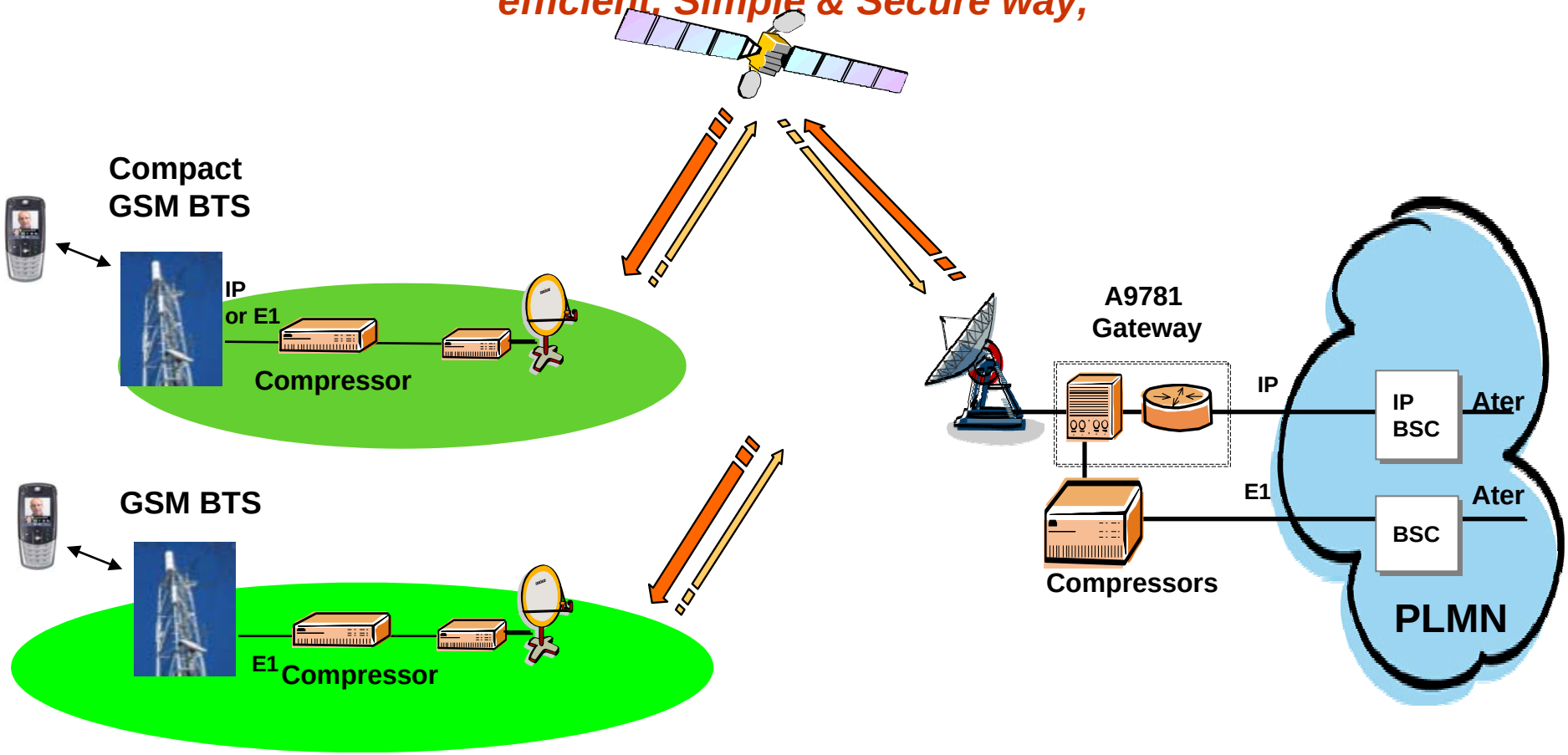
Business continuity, restoring GSM communication (2/2)

Integrating remote isolated sites to the public GSM network (BSC) in an efficient, Simple & Secure way,



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