ECM PLUS™
Earthquake Crisis Management 2.1

www.aratos.gr
Aratos Technologies S.A. through the integrated system ECM-PLUS provides an effective solution for telecommunication in emergency.

Features of ECM-PLUS:
• Integration of Satellite Communications and Terrestrial Communication Networks
• Fast and reliable Deployment of the telecommunication network in incident
• Robust Communication Link to the Command and Control
• Easy to be used by non-experts
Earthquake Crisis Management System (ECM-PLUS)™

- ECM-PLUS™ is a patent-awarded¹ integrated solution designed to deliver real-time communication support to remote areas in case of emergency.
- Furthermore, it includes additional features to support Crisis Management Events.

¹ Patent Awarded for ECM-PLUS by the National Industrial Property Organization (OBI), Patent pending from the European Patent Office
What exactly is ECM-PLUS™?

- Easy and fast deployment of independent telecommunication network in affected areas, using satellite telecommunications
- Smart Devices for immediate reporting from the rescue team members
- Monitoring and Positioning Service
- Web and GIS graphical user interface environment
- Deployment possible at urban and rural areas
- Action in pre-crisis, crisis and post-crisis
Product Characteristics

• **Text Communication** between the Hand Held Devices and the Command Headquarters

• **Voice Communication** among the rescuers and the coordinators

• **Image and Video reception** from the incident side

• **GIS application** which depicts real-time data (dangerous points, the positions of the rescue team, current weather phenomena, the reports etc.)

• **Seismometer data reception** in real time

• **Path Selection Algorithms** during earthquake
Architecture of ECM-PLUS System
Main Benefits

• Fast deployment of wireless network in the disaster area
• Communication with the operational centre and transmission of critical data
• Document chats, messages and responses online
• Multimedia and voice communication
• Social Software Support in Crisis Management
• Alternative satellite communications backup solution
Major Technical Features

Incident Side Deployment

ISMT Terminal:

- Broadband Communication Network
  - Up to 2MBps Inbound
  - Up to 5 MBps Outbound

- IP Network Management and Services

- Simultaneous, automatic bandwidth allocation for services
  - Video In
  - Voice Headset
  - Telephone
  - LANs
  - Mobile Devices Support (HUT)
Major Technical Features

Incident Side Deployment

ISMT Terminal:

- Flexible Star/mesh or combination network topology
- Low Power Consumption
- Enhanced Antenna
- Automatically deployed antenna for vehicles
- Ruggedized telephone
- Seismometer data reception in real time
- Enhanced Tactical Computer
- Inmarsat BGAN backup solution
Major Technical Features

Hand Held Terminals - Rugged Terminals:

• 5 in touch screen
• 3G HSUPA (7.2/5.76) dual band (850/1900) and 2G GSM quad band (850/900/1800/1900)
• Connectivity includes Wi-Fi, Bluetooth, WAP, JAVA, GPS and USB port
• SMS and MMS messaging plus push e-mail
• Predictive text input
• 2300 mAh Li-Po battery
Major Technical Features

Operational Centre:

- Monitoring of rescuers GIS Software
- Path Selection Algorithms during earthquake provision
- Social Software Support in Crisis Management
- EO data provision and processing software
- Post Crisis Mapping using EO Data
Command & Control Vehicle (CCV)

ISMT, OCT and Fixed Satellite communications equipment are integrated in CCV.

**Vehicle Make:** Mercedes

**Vehicle Model:** Sprinter 515CDI extra long wheel base super high roof 4x2 panel van LHD
ECM-PLUS Advantages

- Real time communication and information sharing upon multiple levels and among multiple peers, to be used in various natural disasters (earthquakes, fires, floods, landslides, tsunamis, etc.) which always require fast and reliable communications.

- Information sharing and levels of interaction have been carefully configured in order to meet Civil Protection specifications and scenarios of disaster management (Pre-Crisis, Crisis, Post-Crisis).

- State-of-the-art technologies (smart portable devices, QoS, GIS applications, SATCOM) are integrated into a complete solution to support both in site and off site disaster management.
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