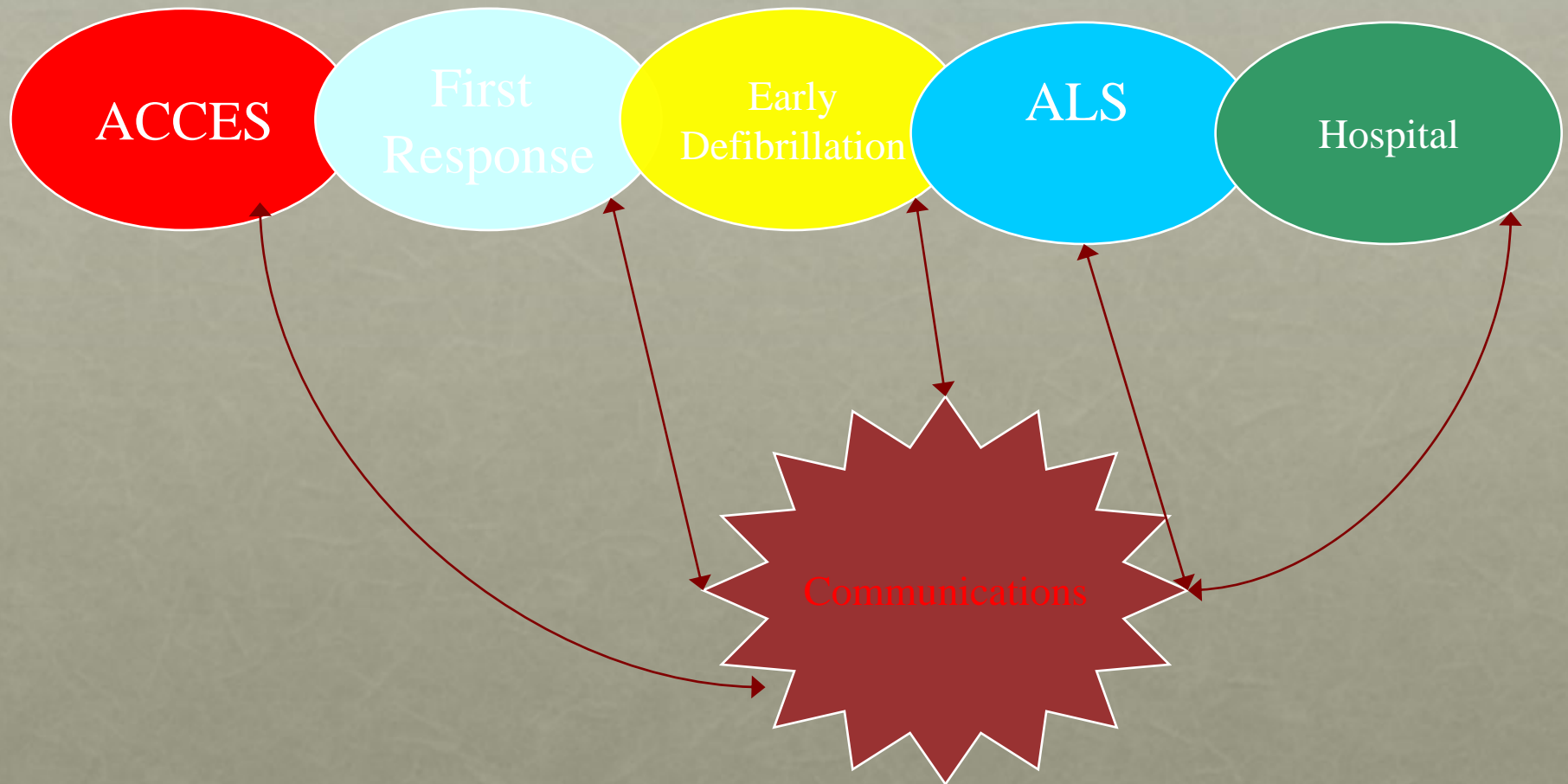


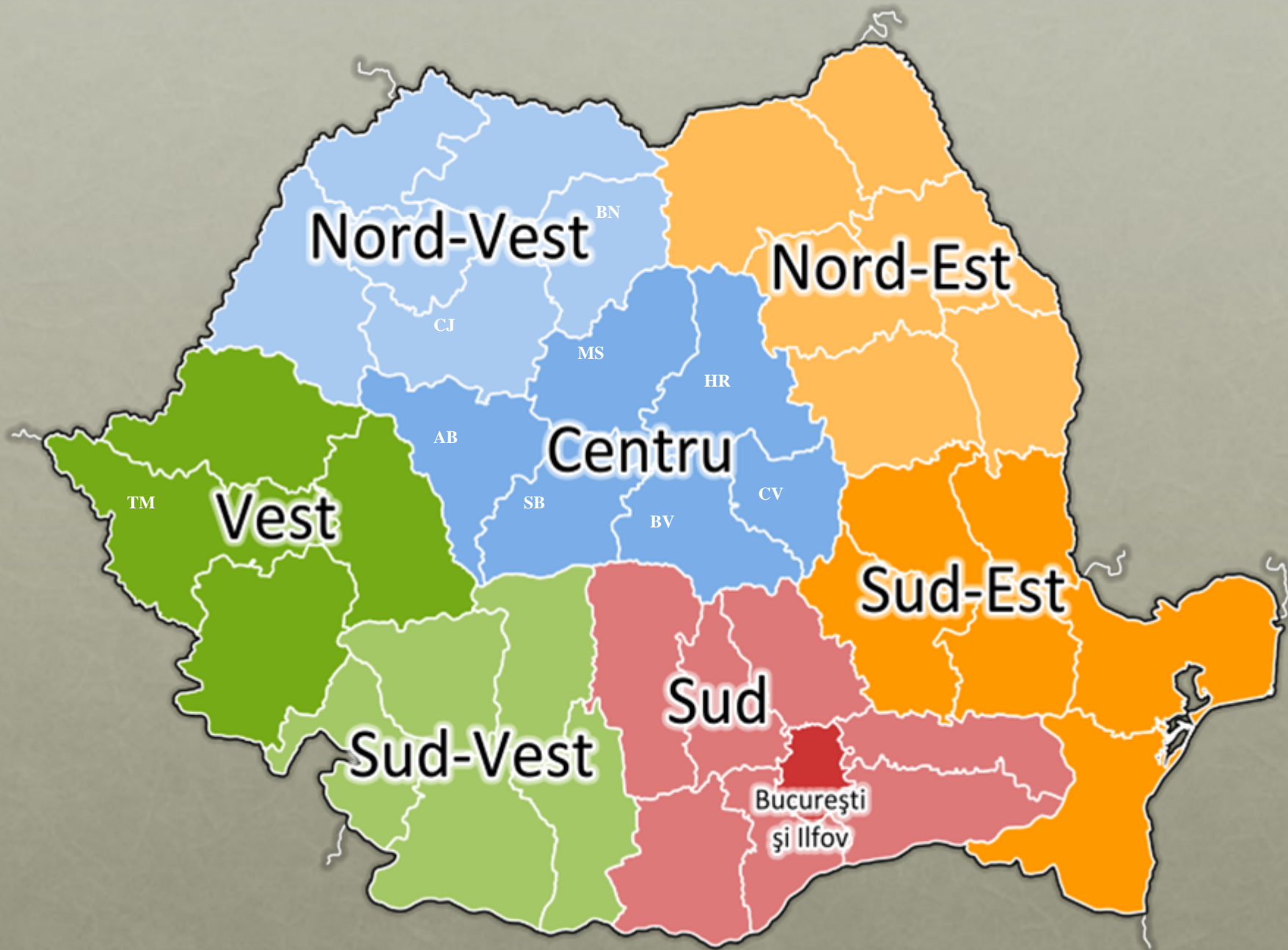
USING SPACE TECHNOLOGY IN EMERGENCY MEDICAL CARE AND DISASTER RESPONSE

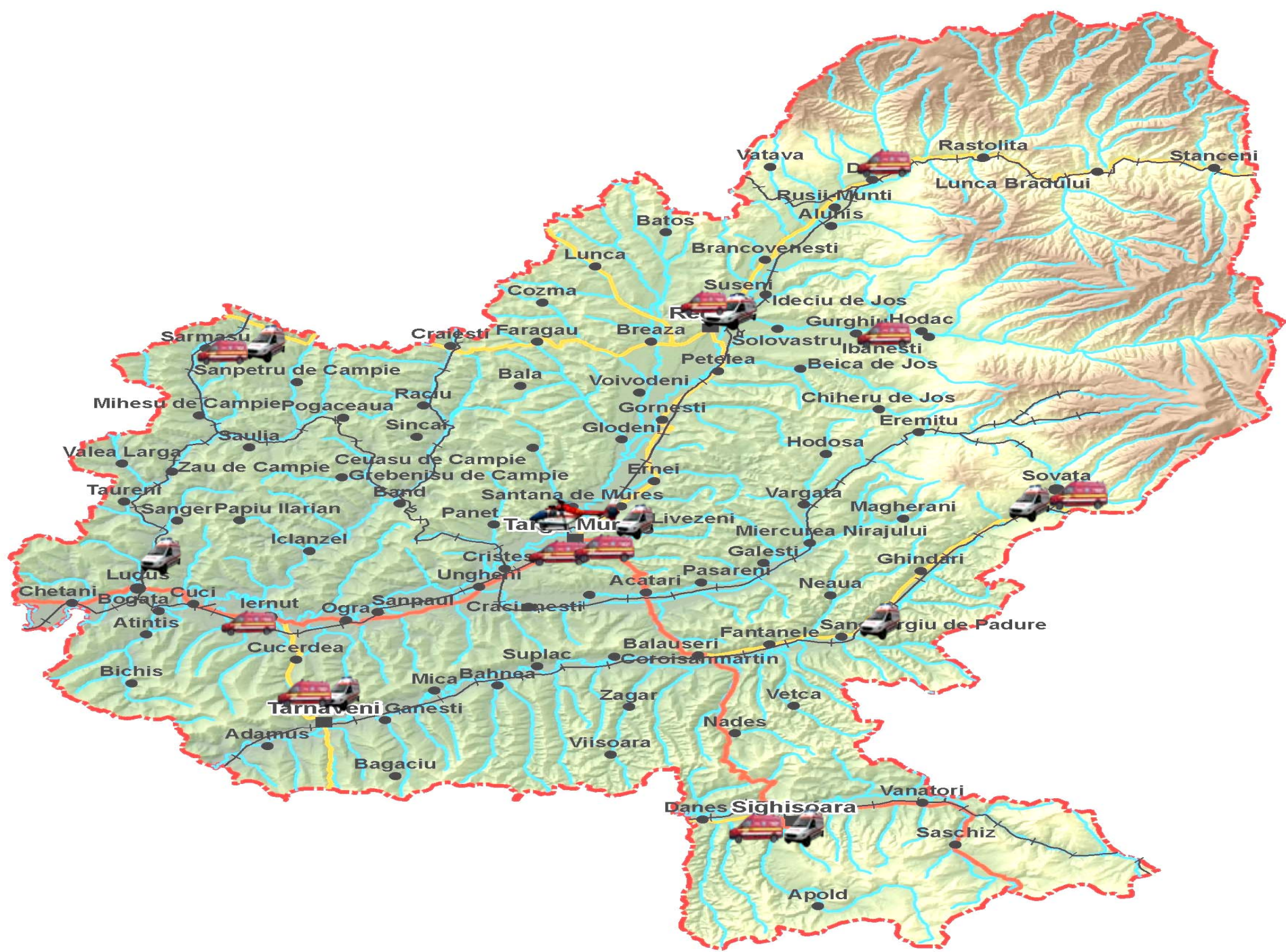
Dr. Raed Arafat
Undersecretary of State
Ministry of Health
Romania

Austria – Vienna
5 May 2011

CHAIN OF SURVIVAL For Critical Patients







INTEGRATED DISPATCH CENTER



INTEGRATED DISPATCH CENTER



INTEGRATED DISPATCH CENTER



FIRST RESPONSE



ADVANCED LIFE SUPPORT



ADVANCED LIFE SUPPORT



PREHOSPITAL



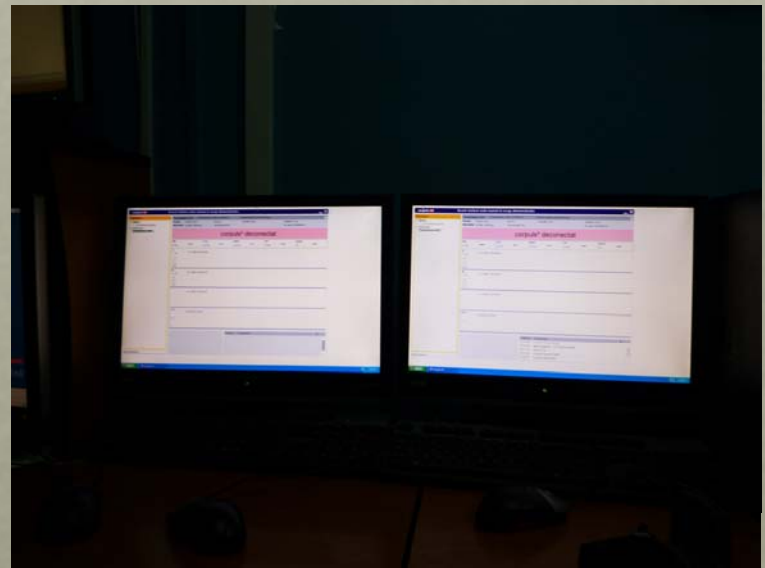
TELEMEDICINE

- Pre-hospital towards emergency departments or integrated dispatching centers (800 ambulances type with fire fighters or nurses)
 - EKG real time monitoring
 - EKG 12 lead
 - Pulse-oxymetry
 - BP
- Hospital to hospital (40 samll emergency departments towards a regional emergency department)
 - Video & audio
 - EKG real time monitoring
 - EKG 12 lead
 - Pulse-oxymetry
 - BP
 - Ultrasonography & radiology (experimental)

FIRST RESPONSE



FIRST RESPONSE

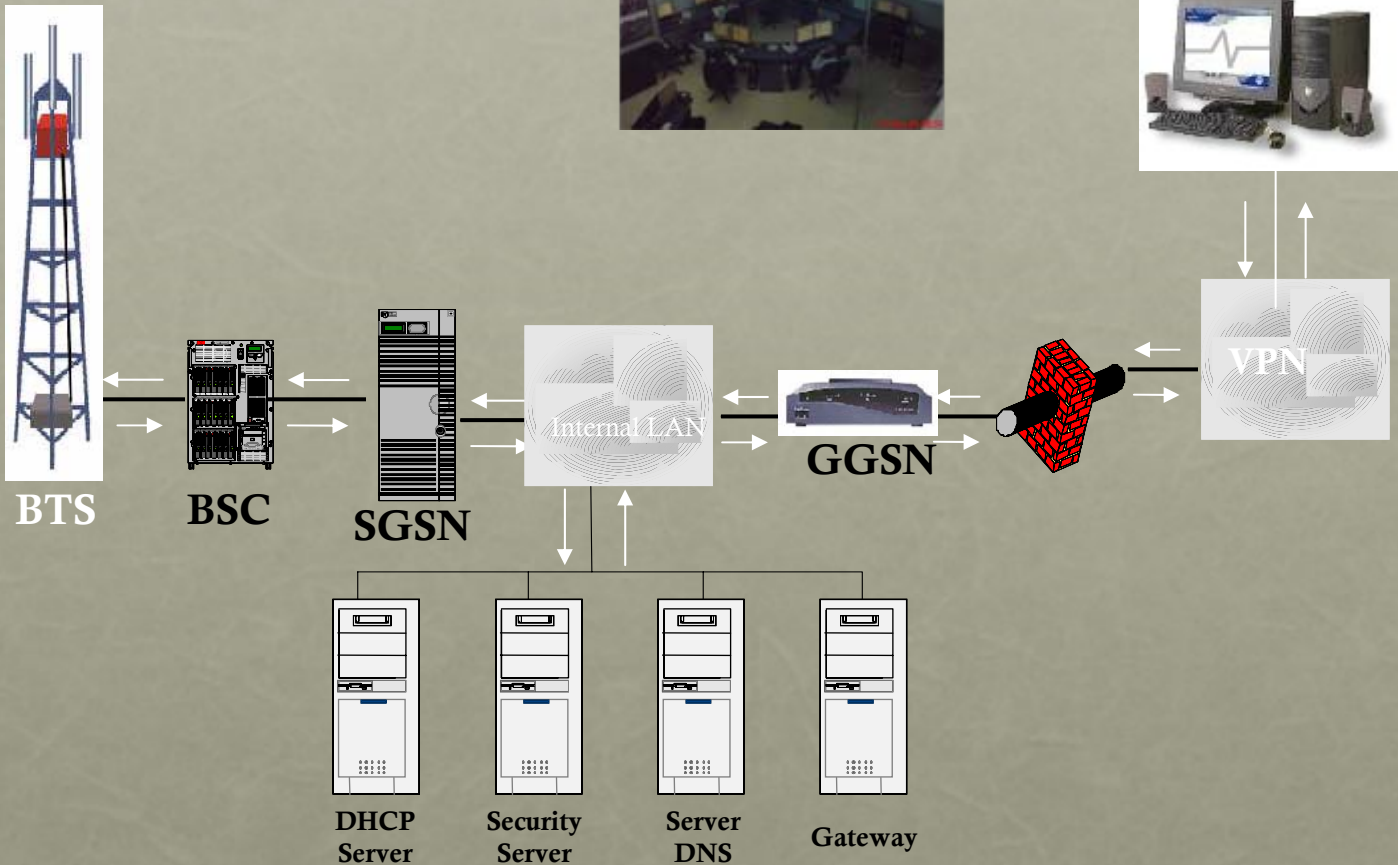


Telemedicine Solution using VPN-GPRS data transmission

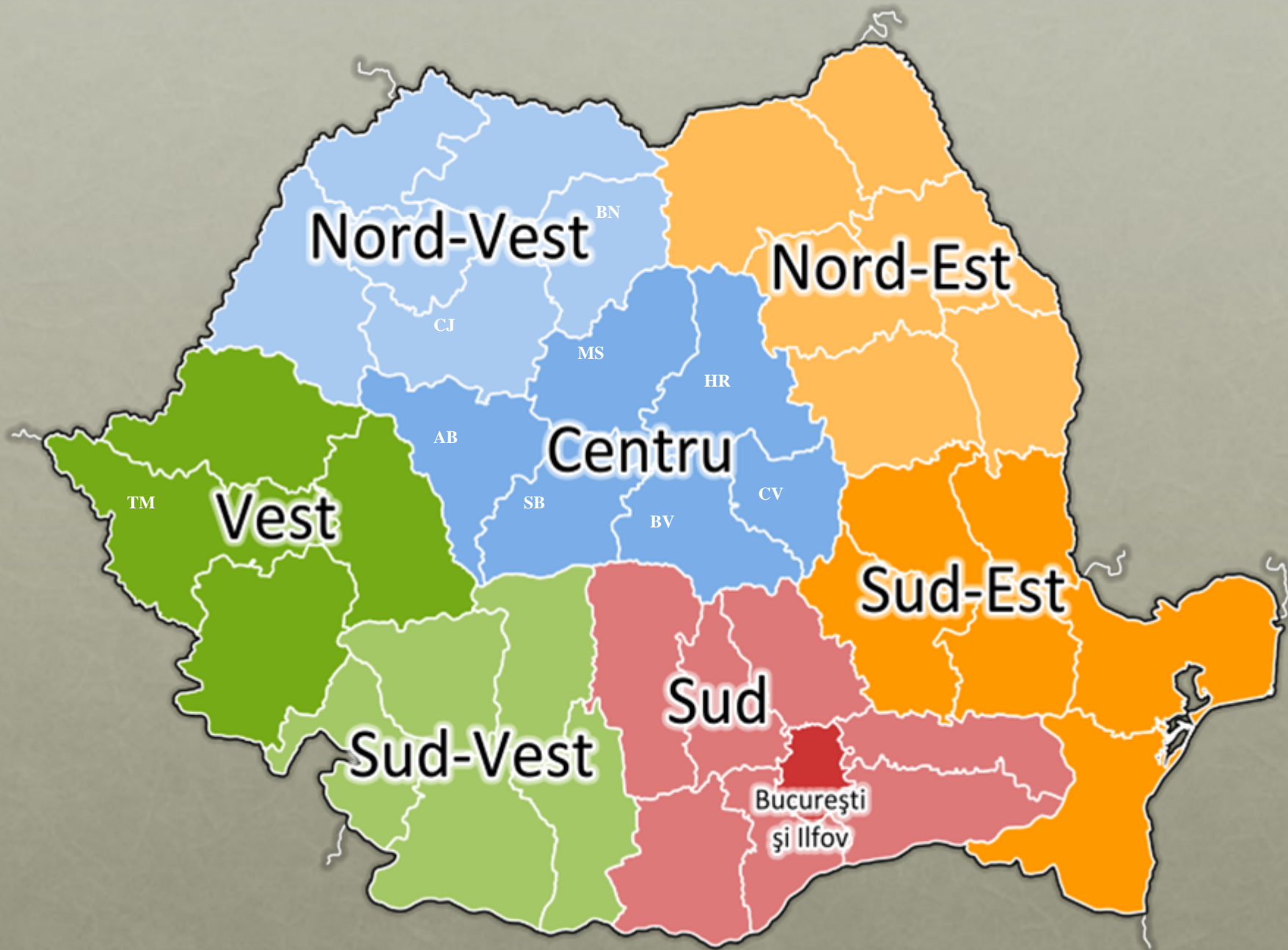


First response unit

112 Emergency call center



First response unit



REGIONAL INTER-HOSPITAL TELEMEDICINE





12.09.2009 11:34

REGIONAL INTER-HOSPITAL TELEMEDICINE





DISASTER PREPAREDNESS



DISASTER PREPAREDNESS



DISASTER PREPAREDNESS



DISASTER PREPAREDNESS



PREPARATION CATASTROPHES





POMPIERII SMURD



POMPIERII
SMURD

TRANSPORT
PERSONAL
SI VICTIME
MULTIPLE



4x4

MAGNUM

2008.12.18



DISASTER RESPONSE PREPAREDNESS





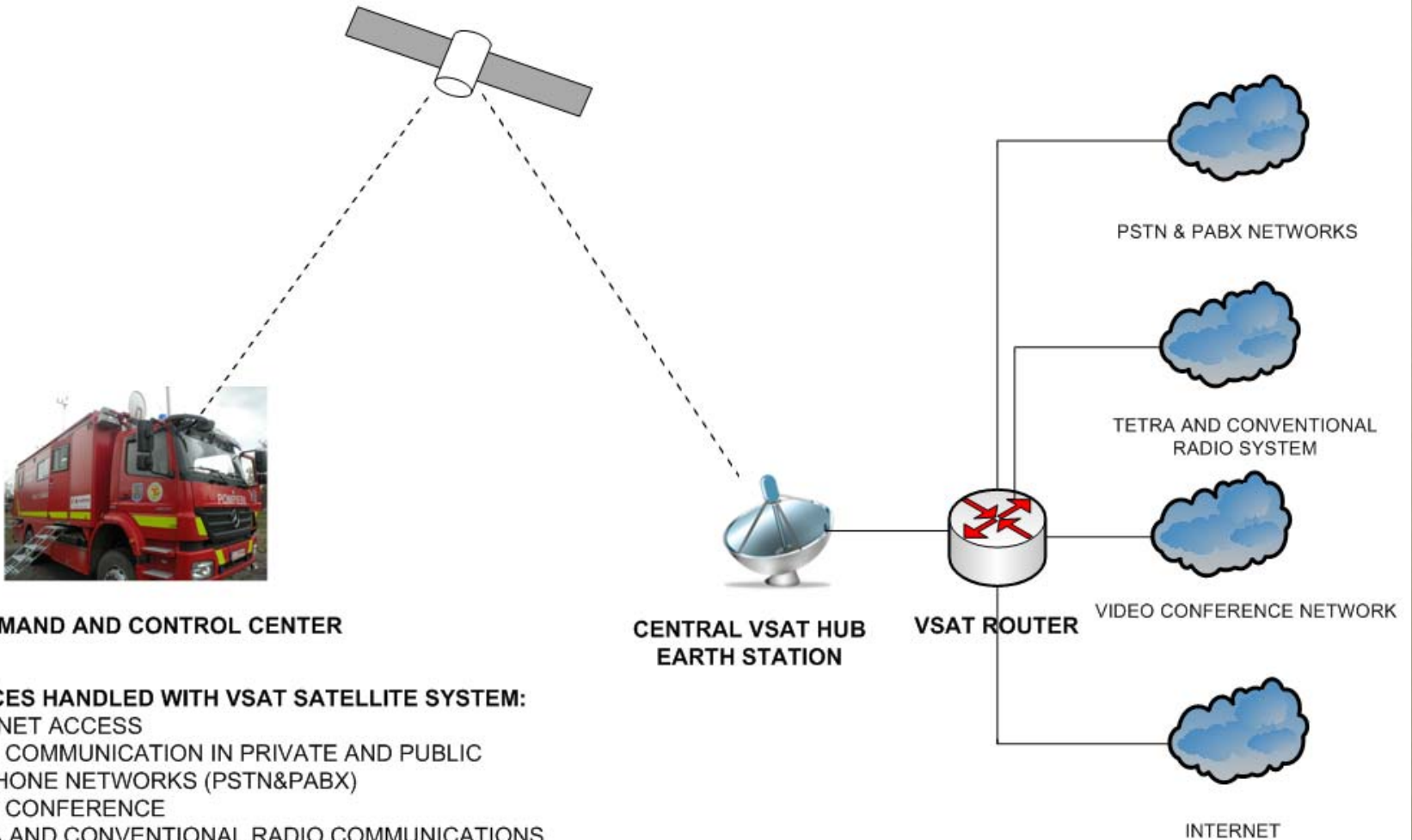
COMMAND AND CONTROL CENTER

Command and control center:

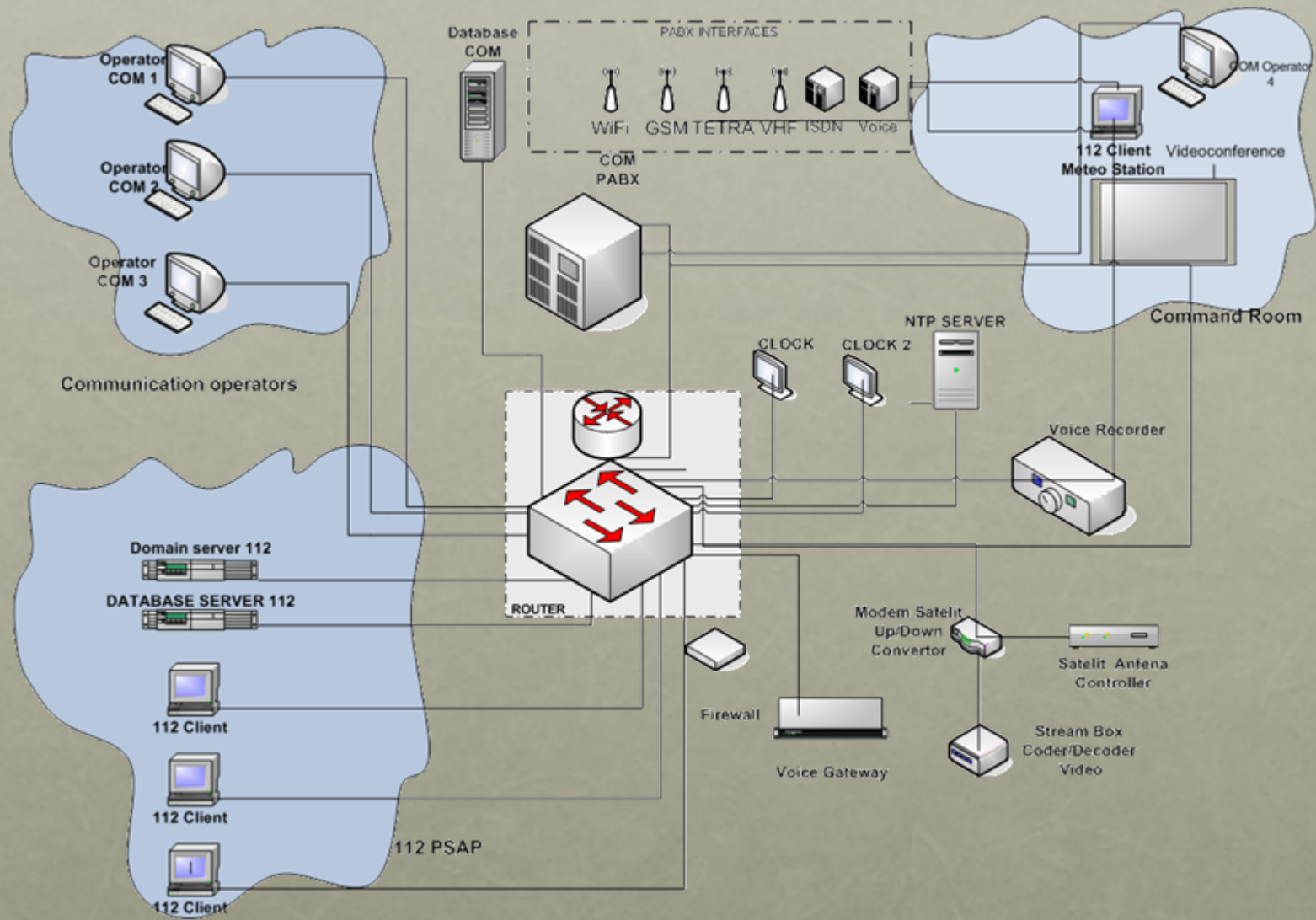
- is designed to extend the command room of The General Inspectorate for Emergency Situations near the calamity area;
- can be integrated with similar centers in order to extend the services and capacities;
- is ready to connect to any communication infrastructure;
- handles data, voice and video signals via VSAT type satellite communication system.
- supply the decision capacity for all the agencies involved;
- access all the information resources useful for the decision makers: TV, FM radio, Hazard maps, ARL (Automatic Resource Locations) maps;
- Similar with all the command and control center from UE and US.



SERVICES VIA SATELLITE SYSTEM OVERVIEW



INTERCONNECT DIAGRAM FOR COMMAND AND CONTROL CENTER



COMMAND AND CONTROL CENTER-OUTSIDE VIEW



VIEW OF COMMAND AND CONTROL CENTER

COMMAND AND CONTROL CENTER-INSIDE VIEW



COMMUNICATIONS OPERATOR ROOM

SATELLITE SYSTEM OVERVIEW

The satellite communication network is a VSAT (Very Small Aperture Terminal) communications system which support the time division multiplexing TDM and D-TDMA protocol in iDirect satellite technology. The Network consist of an earth station which acts as a Hub Central Station that is the central point of the network and the end user equipments (VSAT type) .

The VSAT network handless data, voice and video signals for end users that can communicate with another, each transmission has to go to the hub which retransmits it via satellite to the other end user's (Figure1).

SATELLITE SYSTEM OVERVIEW

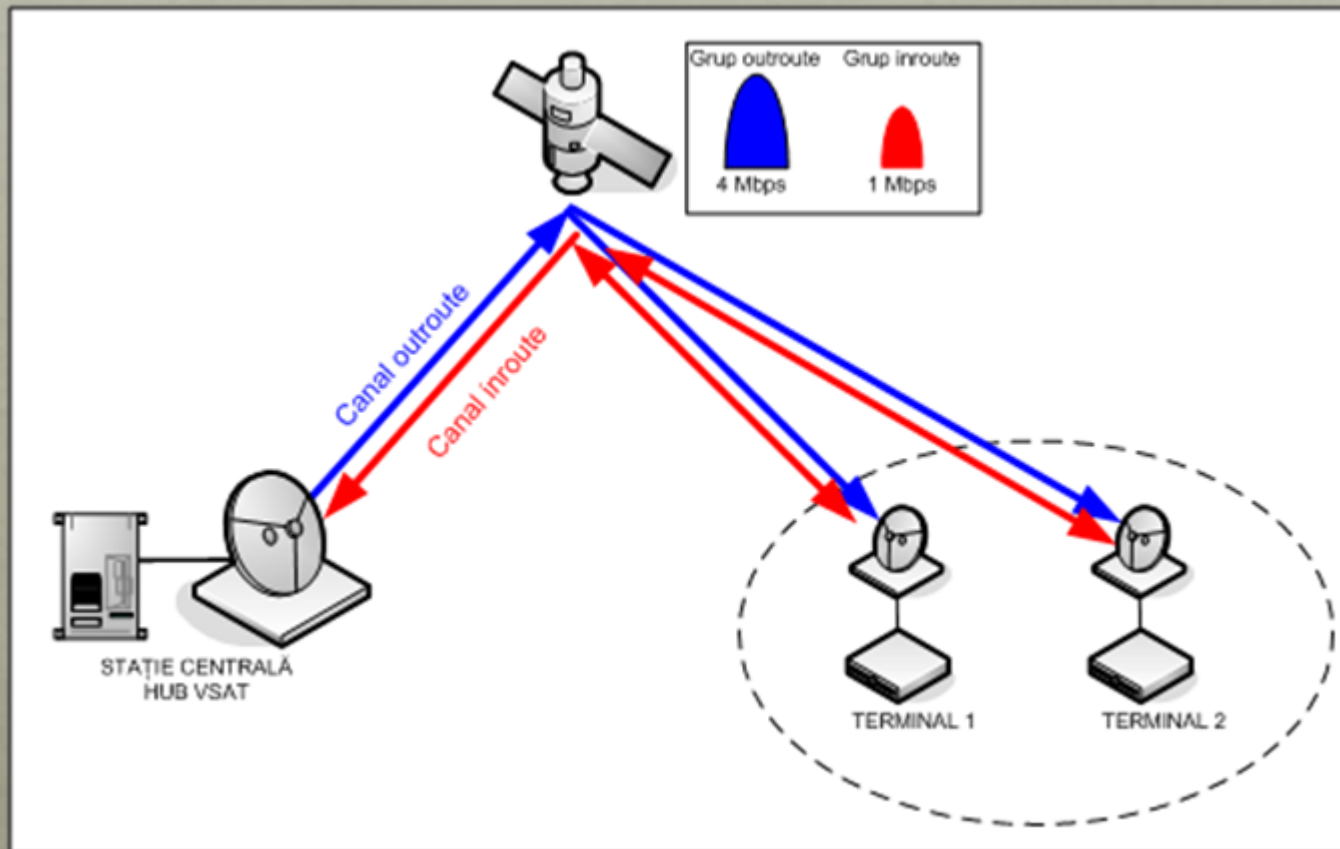


Figure 1

PREPARATION DISASTER RESPONSE

