

SAMSUNG SDS Cloud Case Study

Disaster and Safety Communications Network (Korea Safe-net)

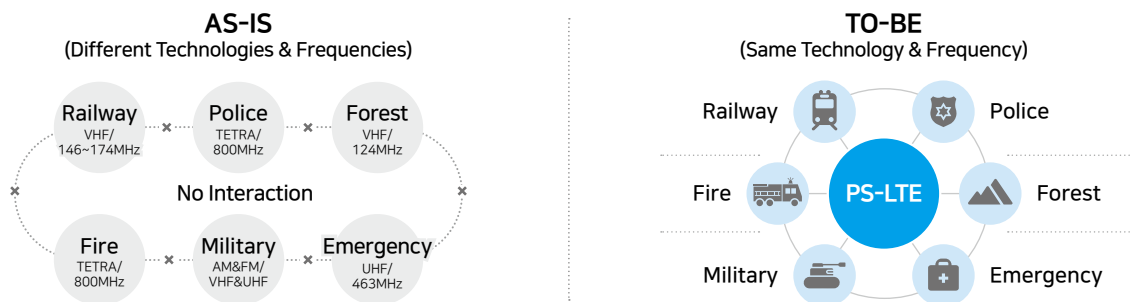
Fourth generation telecommunications infrastructure jointly used by the police, fire agency and other relevant government agencies of disaster management

Challenge

When natural disasters occur, accidents or typhoons, swift rescue and response measures to save lives within the golden hour are more crucial than anything else. Unfortunately, in a lot of disaster cases, a discrepancy in communications methods used by relevant organizations on the site, from the fire agency to the police and local governments, hindered fast sharing of information on the situation, which exacerbated the consequences.

Currently, there are many different and incompatible *land mobile radio networks* for public safety. This results in inefficient communication among agencies while being limited only to audio communications. To resolve these issues, unified nation-wide communications infrastructure was needed for integrated control jointly accessed by relevant organizations.

In this regard, PS-LTE (Public Safety-Long Term Evolution) is now being implemented. The fourth generation telecommunications technology enables sharing of photos, videos and other multimedia data among user agencies with a universal network. The network will serve the tasks of a regular communications network in normal situations, such as voice calls and data communications. If there is an emergency, however, it will add disaster management functions by offering voice calls, group calls, data communications, device-to-device calls and terminal location data services, contributing to securing the golden hour to save lives and accelerating rescue responses.



SDS Cloud Service

Communications Network Design/Deployment and Solutions

Samsung SDS offers telecommunications system installations/maintenance and a variety of network solutions based on leading technical expertise and global business experience.

- Rich experience: Established the world's first commercial 5G and nationwide LTE networks, as well as 70 telecom networks in 43 countries
- Systematic service: Provide full line-up of communications network infrastructure from wired/wireless network design to operation

※ Samsung SDS communications network solutions

- Subscriber management: UDC (subscriber mgmt.) and CSC (user group mgmt.)
- D2D solutions: ProSe (D2D comm.) and BSF (D2D authentication key generation)
- Network interlocking, control/command: Dispatcher (control/command), MCPPT Library (comm. modules) and MCP-GW (heterogeneous network interworking)

Solution

Customized solutions for disaster management communications network

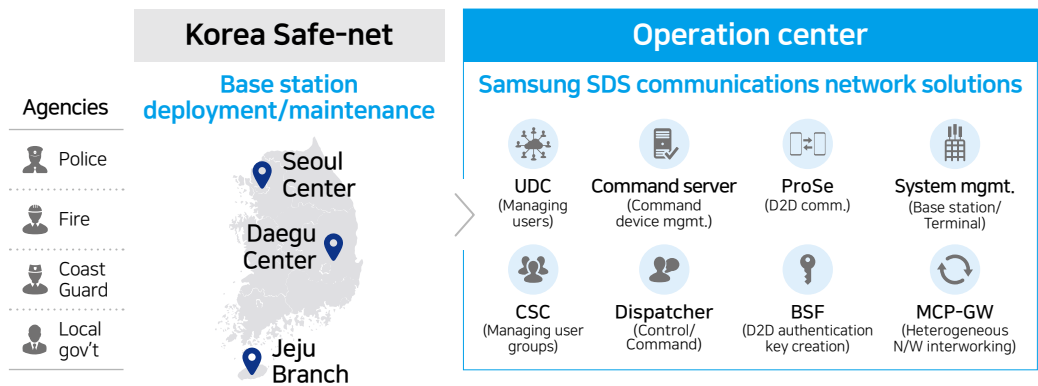
- Offer subscriber data and authentication management (UDC, CSC), D2D communications and security management (ProSe, BSF), command device control and management (Dispatcher, command servers and system management devices) and network interworking (MCP-GW) solutions
- Optimize capacity design according to number of subscribers and usage characteristics of each agency
 - *UDC: 240k, CSC: 70k, command server: 240k, command device: 100 simultaneous groups, MCP-GW: 4 channels, system management device: 240k

Operation centers and network operation

- Establish 3 centers and maintain duplex operation of major facilities
- Build a nation-level operation system and ensure reliable operation 24/7/365

Deployment/maintenance of Radio Access Network equipment

- Design networks considering region/disaster characteristics and implement telecom infra. with integrated nation-wide control
- Available across country by connecting to existing telecom base stations and commercial networks



Benefit



Fast disaster response

- Quick and accurate communication w/ sites using MCPTT* function
- Speedy service provision by optimized interworking w/ heterogeneous telecom networks

*Mission Critical Push To Talk



Systematic & integrated command

- Real-time on-site update sharing and command delivery
- Integrated remote management and control



Reliable comm. N/W

- Seamless service with redundancy support guaranteed
- Higher operation efficiency with system integration

FOR MORE INFORMATION

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