

다시, 대한민국!
새로운 국민의 나라



Central Radio
Management Service



Safe, Convenient Radio, Broadcasting and Communication Together with the Central Radio Management Service

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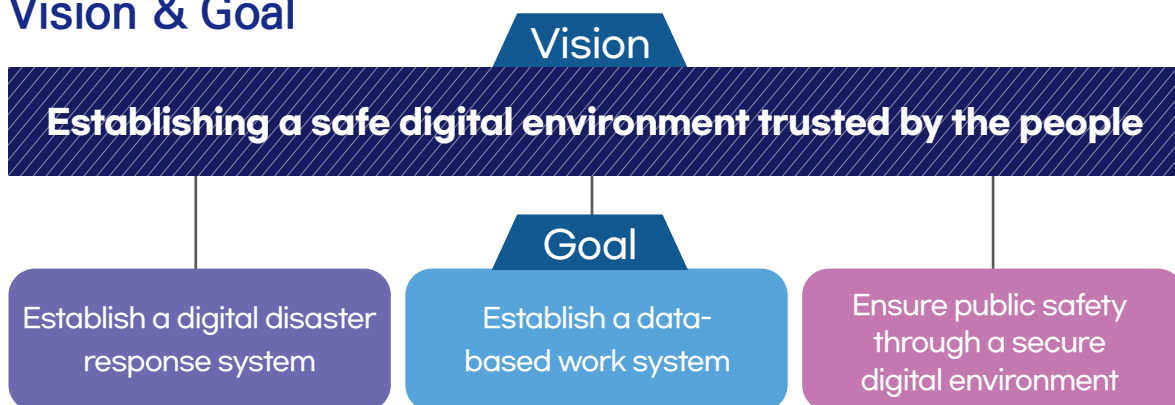
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Vision & Goal

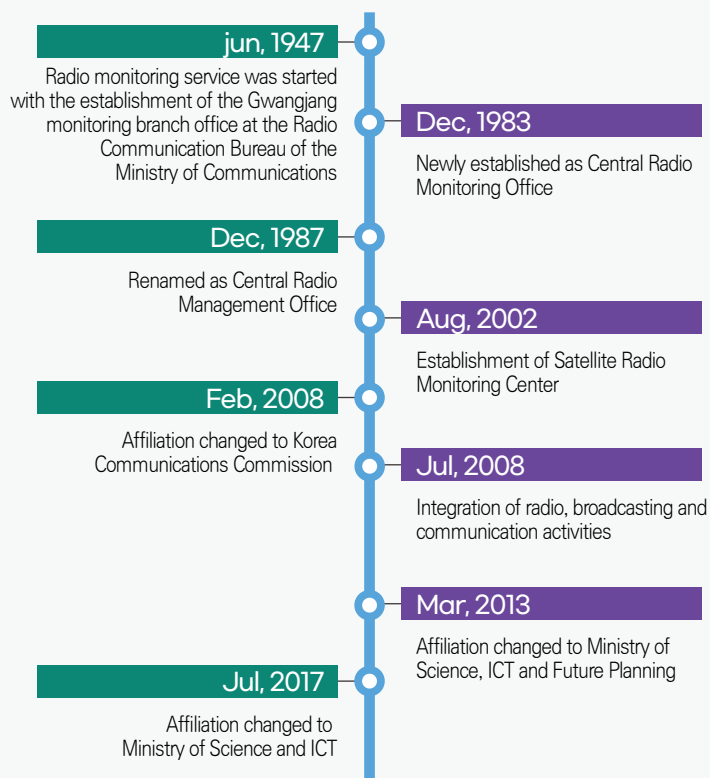


Strategic Task



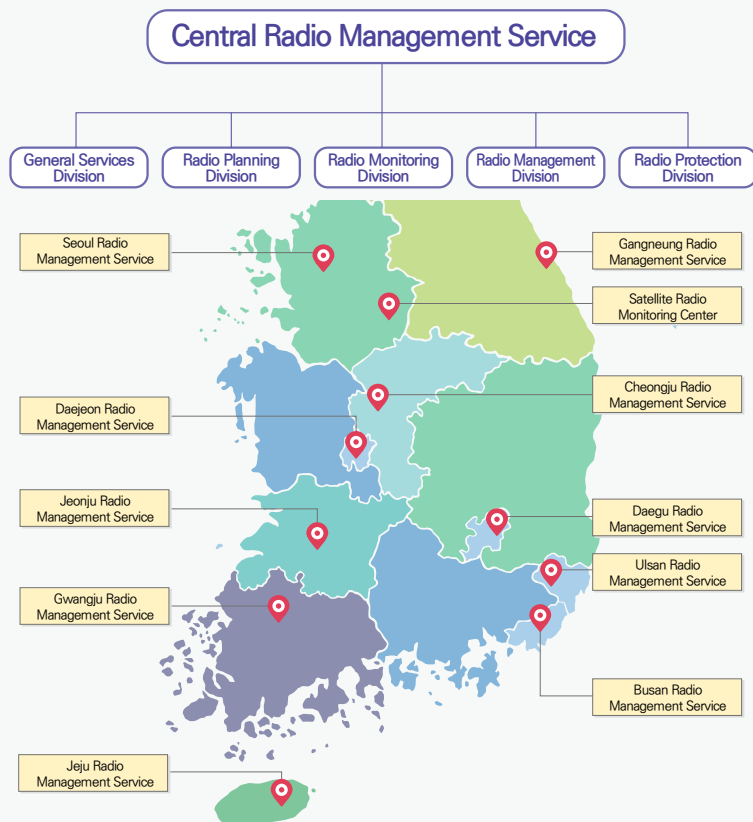
History

Full-scale radio management began with the Gwangjang monitoring branch office at the Radio Communication Bureau of the Ministry of Communication in 1947. In 2008, CRMS expanded its services to include broadcasting and communication, and became the comprehensive broadcasting and communication management agency of Korea.



Organization

The Central Radio Management Service, headquartered in Seoul, manages Korea's radio environment in real time through a network that includes the Satellite Radio Monitoring Center and 10 Regional Radio Management Services across the country



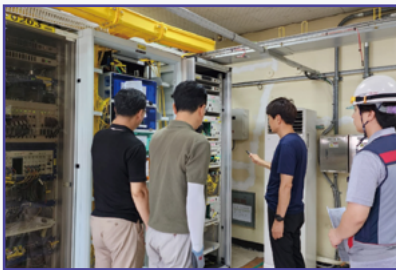
1 Crisis response management for radio and communication disasters in national security and public safety

Radio monitoring and comprehensive radio control

- CRMS detects and removes illegal propagation and confusion that disturb the radio network to establish order in radio services and create a safe and convenient radio environment.
- The Radio Monitoring Center monitors radio management systems installed a nationwide 24/7 basis to respond quickly to various situations, such as removing interferences from important communication networks.



Safety inspection of broadcasting and communication facilities, and conformity assessment of technology standards



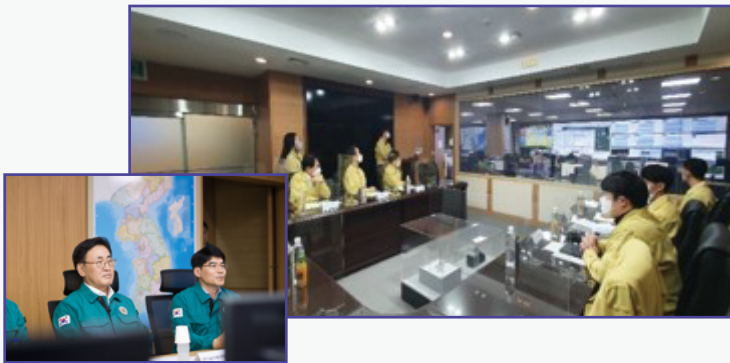
- CRMS prevents communication disasters by performing safety inspections on important communication facilities, and supports rapid recovery in the event of disasters.
- CRMS establishes and maintains a stable environment to provide reliable communication services through investigating conformities with the prescribed technical standards for facilities installed and operated by broadcasting communication businesses.



Response to GPS interference and protection of critical communication networks

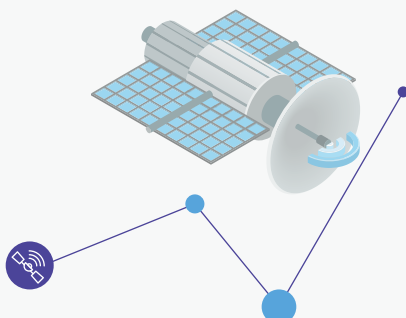


- CRMS endeavors to minimize social disruption and prevent damage by promptly detecting and disseminating information about radio interferences in GPS, marine/aviation, broadcasting, communication and satellites.
- In order to respond promptly to critical communication jamming that can occur at any time, CRMS operates the Disaster Jamming Investigation Team.



Protection of domestic satellite systems and monitoring of domestic /foreign satellite systems

- Satellite Radio Monitoring Center, the world's 5th satellite monitoring facility, receives signals from domestic and foreign satellites between 55° east longitude and 160° west longitude to monitor compliance with ITU regulations and registration specifications.
- CRMS protects domestic satellite services from harmful interference radio through accurate and quick detection of interference radio sources, such as illegal and jamming signals.
- CRMS also contributes to the development of the satellite industry by acquiring new satellite orbits and frequencies, and by accumulating satellite-related technologies.



2 Strengthening the security and information protection capabilities of information communication systems

Management of the Chief Information Security Officer (CISO) Reporting System

- In order to manage information safely and ensure the security of information communication service providers, CRMS operates and strengthens the Chief Information Security Officer Reporting System and supports its management.

What is the Chief Information Security Officer (CISO)?

- The Chief Information Security Officer (CISO) is the staff in charge of information security affairs within a company ranging from data security and safe information management in information and communication systems.
- The goal of designating and managing an executive level CISO in a company is to establish a long-term systematic security policy, to promote the awareness of information protection and security, and to strengthen the ability to respond to data breaches.

※ In case of companies with restrictions on concurrent positions shall designate a "director" level CISO



Information Security Competency Training for CISOs

- Regional Radio Management Service offices hold briefing sessions and provide information security training to strengthen the capabilities of security personnel designated and reported by the Chief Information Security Officers (CISO) of various companies.

Management of the Regional Information Security Council

- To resolve regional information security vulnerable spots, CRMS established a council, consisting of private, public and academic experts, to provide on-site information security support, including training, vulnerability checks, and consulting and public relation activities for local small and medium-sized businesses, vulnerable facilities and Chief Information Security Officers(CISO).



3 Protection of rights and interests of broadcasting and communication service users

Management and supervision of compliance with broadcast programming ratio

- CRMS investigates whether broadcasters comply with the regulations on broadcasting programming ratio in order to protect the rights and interests of broadcast service users and maintain order in the broadcast market.

Investigation of compliance with TV broadcasting program standard volume

- CRMS manages the compliance with broadcasting volume standards to resolve viewer inconveniences caused by the volume imbalance of broadcast programs and ensure viewers' satisfaction with broadcast volume services.

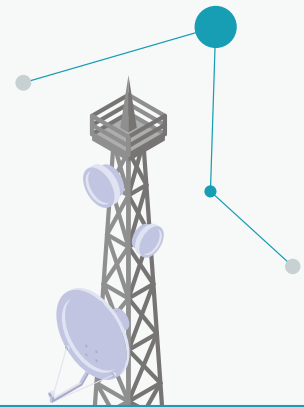


Investigation of TV broadcasting interference

- CRMS conducts on-site investigation to identify the causes of TV viewing interference for local residents, which may be due to new apartments and high-rise buildings.

Inspection of compliance with false phone number display regulations

- CRMS prevents economic damage through surveying telecommunications service providers to verify whether the service providers are practicing duties related to regulations on false phone number displays and phone number suspensions.



4 Establishment of a safe radio environment

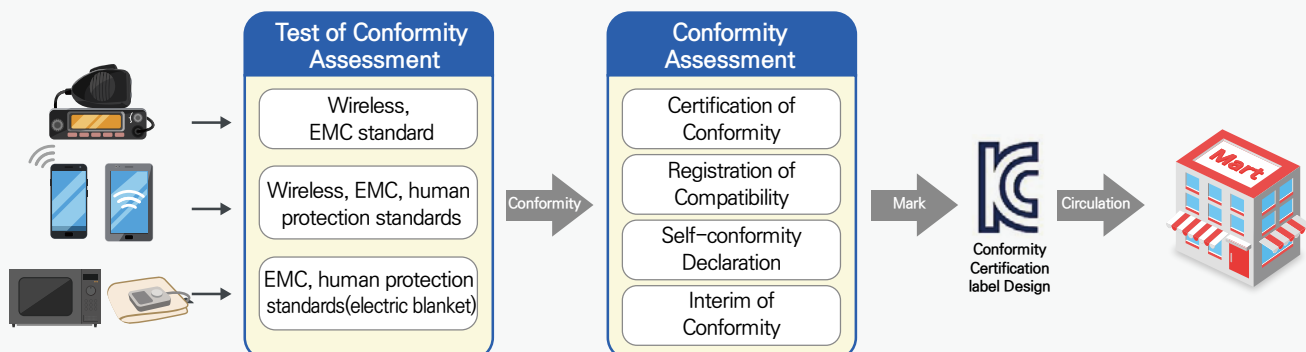
Processing radio interference and investigating and cracking down on illegal radio stations

- CRMS promptly resolves issues related to radio facilities, including radio stations and TV, through identifying the causes such as interferences induced by high-voltage transmission lines and other electrical facilities or electromagnetic interferences.
- CRMS conducts investigations and crackdowns on radio stations opened or operated without authorization or approval to establish a healthy, sound radio environment.



Investigation and cracking down on illegal broadcasting and communication equipment

- CRMS conducts investigations and crackdowns on illegal broadcasting and communication equipment that have been manufactured, imported or sold without conformity assessment to prevent harm to consumers and domestic industries.



Investigation and cracking down on illegal interception facilities and registration of detection businesses

- CRMS conducts investigations and crackdowns on unauthorized and illegal interception facilities, and registers and manages illegal interception facilities to protect the privacy of the people.



▲ Wireless camera



▲ Conversation eavesdropper



▲ Wiretapping equipment

Authorization and reporting for the manufacturing or importing of radio jamming devices

- CRMS authorizes and reports radio jamming devices allowed as means of neutralization to protect critical national facilities and respond to public safety threats, such as drones and explosives.



5 Provision of administrative services for radio and broadcasting communications



Registration and management of telecommunication business operators and activation of the communication facility provision system

- CRMS applies a strict process to review registration requirements for telecommunication service providers, operates a follow-up management system to prevent damage to telecommunication service users, and implements a system to create an efficient and reasonable communication facility provision environment.



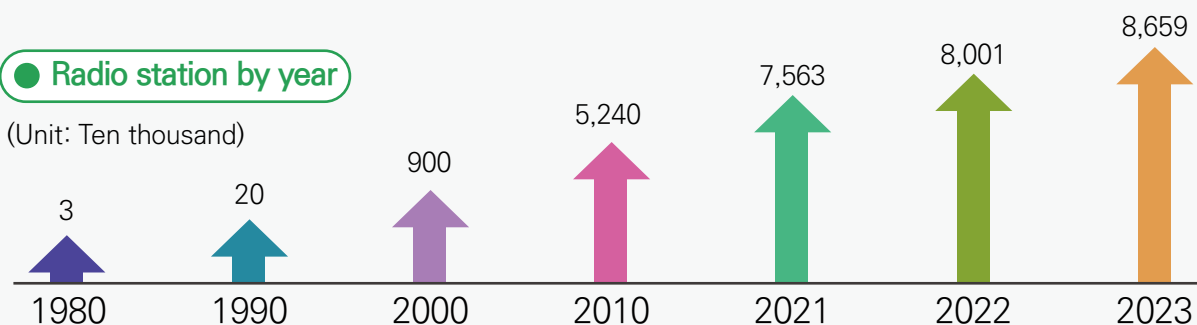
Authorization and inspection of radio stations



- CRMS provides comprehensive civil services, including authorization and registration of radio stations, to ensure convenient radio station usage free of jamming and enhance the efficiency of radio management.
- Professional inspectors conduct inspections to manage the radio quality of radio stations operated by critical national institutions.

Radio station by year

(Unit: Ten thousand)





Inspection of broadcasting stations



- CRMS inspects broadcasting stations to ensure they comply with technical standards for universal public services, radio (AM·FM), television (DTV·UHDTV) and DMB broadcasting.



Radio environment measurement services

- At the request of civil petitioners (public institutions, companies, individuals, etc.) who do not have radio measurement equipment, CRMS measures the intensity of electromagnetic waves emitted by radio stations to check whether they meet the electromagnetic wave protection standards, or conducts surveys on the radio environment, such as radio intensity and noise level, existing in a specific location.



Authorization and inspection of non-profit corporations in the information and communication broadcasting sector

- CRMS authorize the establishment of non-profit corporations in the field of information and communications, and guides and supervises their corporate affairs, including assessments on whether the corporation conducts proper business to fulfill its goals.



6 International exchanges, cooperation and technical support

Hosting of a global spectrum management forum



- CRMS strives to build the foundation for domestic companies to enter the global market by enhancing Korea's international status in the field of radio management and strengthening exchanges and cooperation with overseas radio management organizations.



Overseas dispatch of expert instructors for radio management training



Status of CRMS Spectrum Management MOU(16countries)

Thailand	Mongolia	Ukraine	Uganda
Vietnam	Kyrgyzstan	Rwanda	Bangladesh
Indonesia	Cambodia	Bolivia	Qatar
Laos	Philippines	Argentina	United Arab Emirates

- CRMS is promoting international cooperation and expanding overseas recognition in radio management by making contributions in strengthening radio wave management capabilities in developing countries using radio management instructors with radio monitoring and communication processing know-how.



International activities for standardization of radio management



ITU activities of international organizations



- CRMS actively participates in activities to enhance and revise international standards of the International Telecommunications Union (ITU) to establish Korea's radio sovereignty and to standardize radio surveillance technology.



Technical support for radio communication

- Regional Radio Management Service offices and Satellite Radio Monitoring Centers nationwide support the development of the radio industry as well as science and engineering fields by providing radio measurement equipment and career experience opportunities for students pursuing radio and electronic communication majors.



Provision of satellite radio measurement information

- Satellite Radio Monitoring Center provides customized satellite radio measurement information to strengthen satellite technologies and establish satellite-related policies, which will become an important resource for Korea in the future.
- Satellite radio measurement information is used to register satellite communication networks in Korea, conduct research related to basic satellite technology and check the reception of operating satellites.



Radio Management Systems

Main radio management systems

CRMS utilizes fixed radio management systems and mobile radio management system that can simultaneously perform radio measurement and radio direction detection in one system, and CRMS utilizes a radio management information system and remote control system for effective radio resource management and clean radio environment.

Fixed radio management system and mobile radio management system

- Measuring radio spectrum
- Detecting unauthorized radio signals
- Measuring characteristics of radio signal
- Conducting survey on radio frequency usage
- Monitoring on the frequency band of GNSS
- Detecting radio direction
- Masking techniques for radio measurement, weak signal sensing and cumulative spectrum measurement



Fixed radio management system



Mobile radio management system

Information system and control system

- Collecting radio management data
- Controlling fixed and mobile radio measurement systems nationwide

Satellite radio monitoring systems

CRMS utilizes geostationary satellite monitoring system(2002), non-geostationary satellite monitoring system(2016), satellite radio interferer search system(2018) and mobile satellite monitoring system(2021) to conduct satellite radio monitoring activities covering wider ranges.

- Managing satellite radio signals and overseeing their movements
- Identifying and eliminating causes of radio interference
- Investigating conditions to receive signals from overseas satellites by region
- Investigating satellite related surrounding conditions of radio stations to receive signals

Geostationary satellite monitoring system

- Composition: 2 antennas with a diameter of 13m, 2 monitoring systems, 1 set of software and database

Non-geostationary satellite monitoring system

- Composition: 1 omni-directional antenna, 1 antenna with a diameter of 4.6m, 2 antennas with a diameter of 11m, 4 monitoring system, 1 set of software and database

Mobile satellite monitoring system

- Composition: a satellite radio monitoring vehicle with 1 foldable parabolic antenna with a diameter of 2.4m, and a ground interference monitoring vehicle

Satellite radio interferer Search System

- Composition: interference source detection receiver, frequency down converter, interference source analyzer, S/W

A circular graphic composed of concentric arcs in shades of blue and purple. Three small circular icons are placed around the circle: a globe at the top left, a group of people at the top right, and a radio tower at the bottom right.

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