

Spotlight Building Information Service “Lifelines”

In 2021, the COVID-19 epidemic continued to ebb and flow in multiple localities across China, while extreme natural disasters also occurred at a higher rate. Rising to the complex array of challenges to emergency communications preparedness, China Mobile moved swiftly into action and delivered information service “lifelines” that “can be relied upon at critical times”.

Facilitating IT-Based COVID-19 Prevention and Control

In 2021, we continued to ensure smooth communications, accessible services and strong support in the fight against COVID-19. Our big data support service for COVID-19 prevention and control in China processed 15 billion requests during the year. We have built a national COVID-19 prevention and control analysis platform to facilitate COVID-19 response efforts in this new normal. We delivered service support for 767 key hospitals, 350 key CDCs (Center for Disease Control and Prevention) and 395 government departments in 27 provinces affected by COVID-19, ensuring stable and reliable operations of all base stations and dedicated networks in key areas.

» Providing IT-based support for COVID-19 prevention and control at the borders

As COVID-19 struck, our Yunnan subsidiary amplified efforts to safeguard the security of network communications and consolidate defense at the borders.

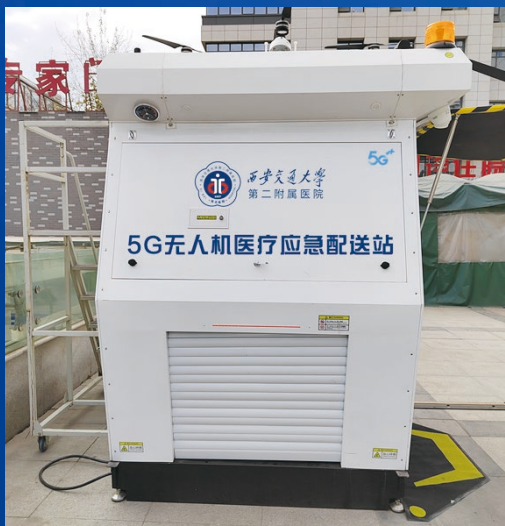
- Highlighted CDCs, designated hospitals, nucleic acid testing sites and communities under lockdown as key areas of support, putting in place 24/7 support for base stations and dedicated networks with a focus on addressing signal and coverage issues.
- Provided around-the-clock regulation and monitoring of the personnel at the borders with the sound and light alarm system, our “Base Station Sentinel” platform, and a multi-dimensional COVID-19 prevention and control system.
- Developed the innovative “Weimei Ruili” information management platform, with features such as nucleic acid testing status query and rapid identification of untested population.



China Mobile employees setting up “ViLin” telemedicine system in a quarantine ward



“Base Station Sentinel” platform offering assistance to COVID-19 prevention and control



The first test flight of China Mobile’s 5G+drone emergency delivery service was held in Northwest China at the Second Affiliated Hospital of Xi’an Jiaotong University and timely delivered life-saving medicine to patients during lockdown and traffic controls

» Helping Shaanxi fight against COVID-19 using technological means

As Shaanxi grappled with another wave of COVID-19 outbreak, our Shaanxi subsidiary promptly activated emergency response system to provide reliable support for COVID-19 prevention and control.

- Secured network services for the 2022 National Postgraduate Entrance Examination in Shaanxi Province overcoming the twin challenges of COVID-19 and snowstorm.
- Facilitated IT-based collaborative response efforts between government and companies by launching six innovative products and services, including 5G+ drone delivery, “Clairvoyant + Networked” thermal imaging temperature measurement, and Internet of Things (IoT) door magnetic alarm.
- Deployed “Rabbit” 5G nucleic acid testing makeshift vehicles, offering 25,000 test capacity per day.
- The Online Marketing Service Center rapidly deployed over 1,000 stay-at-home service agents and implemented grid-based management of employees working from home; introduced 24/7 response hotlines and chat groups for handling COVID-19-related issues and complaints; leveraged 5G video customer services and offered video-based troubleshooting for broadband failures.

Using Technological Innovation to Bolster Flood Control and Disaster Relief

As floods and other disasters frequently occurred, we leveraged precise early-warning, detailed allocation of resources, and scientific prevention and control measures to safeguard connectivity and minimize threats. In 2021, we developed a variety of innovative core technologies, including the Wing Loong large UAV-based ABS, in promptly securing mobile connectivity in disaster-affected areas. We also strengthened disaster early-warning capabilities and contributed to disaster prevention and relief with the 5G+BeiDou high-precision positioning system. Leveraging 5G messaging capabilities, we helped the government and public service departments deliver 80 million 5G multimedia message warnings on weather emergency. The intelligent, interactive and direct-to-customer approach effectively supported and enhanced disaster prevention and relief.



Wing Loong ABS provided communications support in disaster-affected areas

» China Mobile's "5G Networked Drone Emergency Communications System" assists in flood prevention and relief in Henan

A historic rainfall flooded Henan Province on July 20, 2021, badly damaging optical fiber cables and base stations, resulting in a wide-scale breakdown of communications. Our Henan subsidiary responded promptly by dispatching the Regular Drone Emergency Rescue Team from our Chengdu Industrial Research Institute to the disaster-affected area. We provided around-the-clock and wide-area emergency communications support and rapidly restored signals in designated areas through our independently-developed "Aerospace Emergency Communications System" with our 4G/5G communications technology and large fixed-wing UAVs that carried our airborne wireless base stations. During the flood, we delivered stable mobile signal to an area of over 50 square kilometers, connecting a total of 3,572 users.

» China Mobile's 5G+BeiDou high-precision positioning system helps prevent and mitigate geological disasters

China Mobile launched the world's largest 5G+BeiDou high-precision positioning system to facilitate digital-intelligent transformation and development in disaster prevention and relief. The system offered a wide array of features under the three major service modules — deformation monitoring, monitoring and early-warning, and big data.

- **Deformation monitoring data service platform:** Enabled retrieval of positioning data for various types of hazards at centimeter-level (dynamic) or millimeter-level (static) precision, offered systematic evaluation of slope deformation and provided data backup for the management of potentially hazardous slopes, and facilitated informed and scientific decision-making for disaster prevention and relief.
- **Monitoring and early warning services:** Enabled advance disaster prevention by using China Mobile's 5G IoT for status monitoring and data tracking, and issuing early-warnings upon detection of minute changes of coordinates.
- **Big data analysis:** Conducted accurate statistical analysis of general information and spatial geographic information, in combination with population information recorded by base stations, in areas at risk of geological disasters, directed early-warnings to specific populations and enabled effective early-warning of disasters.

Since its launch, the 5G+BeiDou high-precision positioning system had been applied to more than 10 nationwide disaster prevention and relief efforts, issuing around 10,000 early-warnings, protecting the safety of over one million residents and preventing economic losses amounting to hundreds of millions of RMB.



5G+BeiDou high-precision positioning system

Confronting challenges to our capacity for emergency communications support, we delivered on the mission of guaranteeing the information service "lifeline" and maintained the continuity of communications services through a sound support mechanism, end-to-end process management and innovative technologies. Moving forward, we will continue to strengthen our capacity for emergency communications support under extreme circumstances to live up to our responsibility in times of need and crisis.