



## **Development of Climber Location Information Sharing System in Japanese Northern Alps**

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Today, accidents in mountainous areas are increasing as climbers increase in Japan. Therefore, we will develop climber location information sharing system using 150 MHz band radio waves in order to reliably detecting the position of mountaineers when a distress accident occurs at the mountainous area and to promptly rescue. Here, the 150 MHz band radio wave is excellent in the propagation characteristics in the mountain area, and position information transmission is possible. This system consists of the mobile device carried by climbers and the device detecting the location of the mobile devices. The detecting device is installed into mountain lodge. The mobile device of climber acquires the position by the GPS satellite and stores the position information inside the device. The location information of the climber transmits a position information transmission request command from the detector device to the mobile device, and the mobile device which received the command transmits the position information of the climber to the detector device. Therefore, even in the case where the climber cannot operate, the location information can be acquired. Using this system, if the climber gets lost, it is possible to transmit an emergency signal together with the location information from the climber device and to inform the detector terminal that the climber has the trouble. Therefore the rescue team can obtain the location of the climber by using the detecting device and can rescue with rapidity. In addition, the mountain lodge, where the detecting device is set up, is connected by the radio network. We construct a mountain lodge network that gather the detected the mountaineers location information into the mountain lodge to which the Wi-Fi network. The shared location information is stored in the cloud server via Wi-Fi. Therefore, the location information of climber can be obtained from anywhere by using a device (PC, tablet, mobile phone and so on) connected to the LAN.

In this presentation we will explain the climber location information sharing system and show the results of the demonstration test of this system at around Tateyama and Murodo in Japanese northern Alps of Toyama prefecture.

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