it via satellite links.

## "Parallel generation of standard time"

The JST sub-station at Kobe is one of these distributed stations and can function as a replacement for the JST station at NICT headquarters in an emergency(Fig.3). It is equipped with essential functions necessary for generation of Japan Standard Time, including five cesium atomic clocks (CS), two hydrogen masers, and a high-precision time comparison system via satellites, and as a result, it always generates synthetic atomic time in parallel with JST station at NICT headquarters. Besides, we have set up an NTP server and an optical telephone JJY system for use in the event of the supply services at NICT going offline.

The launch of this JST sub-station at Kobe means that the generation of Japan Standard Time is now multiplexed, making it much more reliable.



Fig.1 : The Japan Standard Time system at the JST sub-station at Kobe(left: Antenna of satellite time comparison system, right: Measurement system)



Fig.2 The distributed synthesis of Japan standard Time



Fig.3 : The operation scheme of Japan Standard Time