

Remote frequency calibration experiments between NMIJ and foreign site

Toward to establish a convenient calibration system

National Metrology Institute of Japan (NMIJ) of AIST and Yokogawa Electric Corporation have successfully performed a remote frequency calibration experiment between NMIJ in Tsukuba Japan and Yokogawa Electric China in Suzhou, China.

The experiment shows that a remote frequency calibration system will be established in near future. The system will provide quick calibration services to Japanese & other companies in foreign countries.

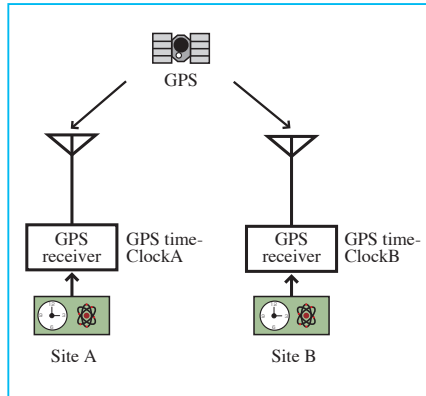


Figure 1: Principle of GPS Common-view time transfer method.

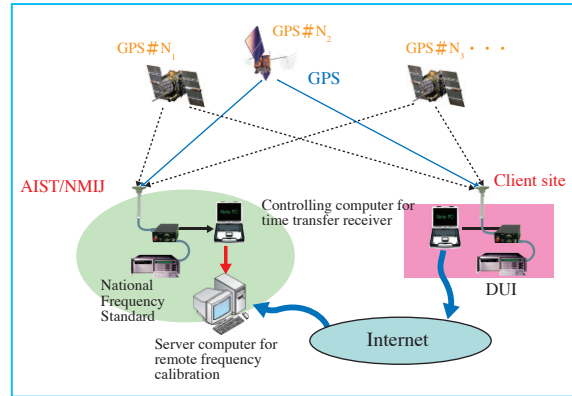


Figure 2: Basic architecture of remote frequency calibration system.

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Development of a remote calibration technique for radioactivity measurement equipments

The new calibration technique has been developed, with which measurement equipments in remote place can be calibrated through an internet system. Traceability will be maintained by this new technology named as “e-trace”. The experiment was carried out between NMIJ (National Metrology Institute of Japan) and JRIA (Japan Radioisotope Association). An ionization chamber at JRIA was calibrated remotely from NMIJ. It was confirmed that the equipment for radioactivity measurement was calibrated remotely by the e-trace technique.

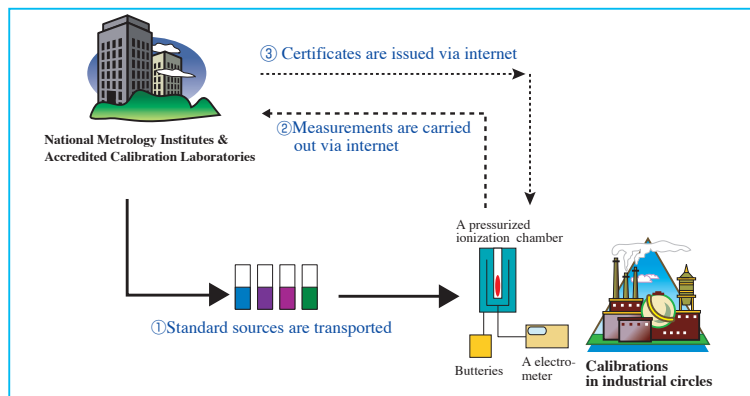


Figure: The remote calibration scheme of radioactivity. Standard sources those are calibrated by national metrology institutes or accredited calibration laboratories are sent to customers. Measurement and calibration are carried out via the internet. The calibration certificates are issued via the internet.

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