The IGS in a Multi–GNSS World

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SUMMARY

The International GNSS Service (IGS) is a volunteer organisation of more than 200 individual institutions that maintains a global network of GPS and GLONASS monitoring stations and a long-term tracking data archive as well as products derived from the analysis of these measurements. In 2014 the IGS celebrates 20 years since it was officially established by the International Association of Geodesy. The IGS analyses also make critical contributions to the definition of the International Terrestrial Reference Frame (ITRF), and its products permit users to connect directly to the ITRF. With the advent of modernised GPS signals and the rise of numerous new GNSS such as BeiDou, Galileo, QZSS and IRNSS as well as new augmentation systems, the IGS is committed to evolving to a true multi-GNSS service. To pave the way for a future provision of high-quality data and products for all GNSS constellations, the IGS has initiated the Multi-GNSS Experiment (http://igs.org/mgex). MGEX has fostered the build-up of a dedicated global multi-GNSS receiver network, initial satellite orbit and clock estimation, in-depth characterisation of signals and receivers, and development of data formats and protocols. Another IGS initiative that will have an impact on multi-GNSS activities is the launch on 1 April 2013 of the Real-Time Service (RTS) (http://rts.igs.org). Currently only GPS satellite and clock information are routinely generated, but a test service for GLONASS products also exists. MGEX will encourage the RTS to ultimately support multi-GNSS Precise Point Positioning as well as play a role in GNSS Monitoring and Assessment. This paper will provide a status on routine IGS operations as well as new initiatives.