Galileo and the IGS

J.M. Dow (1), R.E. Neilan (2), R. Weber (3), G. Gendt (4)

(1) ESA/European Space Operations Centre, Darmstadt, Germany, (b) IGS Central Bureau/NASA/JPL, Pasadena, USA, (3) Technical University, Vienna, Austria, (4) GeoForschungsZentrum Potsdam, Potsdam, Germany

Through its unique experience and expertise in handling a very large global network of sensor stations and the complex data analysis required to produce on a routine basis high accuracy, short latency products, the International GNSS Service (IGS, formerly known as the International GPS Service) has already made a significant contribution to the development of the Galileo system: those products have been and are being used extensively as a reference in the development and verification of algorithms and systems, both ground and space. Data from the IGS station network was the basis of the Galileo System Test Bed, Version 1 (GSTB-V1), and Galileo receivers are currently being deployed in a number of IGS sites for support of the GSTB-V2 Mission activities. Several IGS Analysis Centres are working together on the Galileo Geodetic Service Provider (GGSP) Prototype, aimed at defining the reference frame for the Galileo products and the approach to maintaining that frame over the 20 year lifetime of the system. Within the IGS the GNSS Working Group provides a focus for Galileo related planning, and in the current discussions on the IGS Strategic Plan for the years 2008-12, Galileo plays a significant role.

The paper will outline some significant features of the Galileo system from the point of view of the IGS, in particular related to constellation design, orbit modelling, measurement and estimation aspects, and will indicate some of the areas in which Galileo will influence IGS operations in the future and in which the IGS may be able to continue to contribute to new GNSS developments.