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Description of ITRF construction using UML notation

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International Terrestrial Reference Frame (ITRF), as a practical realization of the International Terrestrial Reference System (ITRS), is based on long-term observations of four techniques: Global Navigation Satellite System (GNSS), Satellite Laser Ranging (SLR), DORIS. As a consequence contribution to ITRF of each of the mentioned techniques is different (e.g. origin of ITRF2008 was determined basing on SLR, scale using SLR and VLBI, and orientation was the result of all four techniques). ITRF is updated regularly with the most recent versions being ITRF97, ITRF2000, ITRF2005, ITRF2008. ITRF2008 is based on reprocessed solutions (time series of station positions and Earth Orientation Parameters) of all four techniques.

The paper presents procedure of determining ITRF2008 using UML (Unified Modeling Language) - one of the graphical notations commonly used for information modeling. Concepts are represented as classes with their names, attributes, and different kinds of links between them. The main purpose of this paper is a comprehensive description of relationships between basic terms related to ITRF.