Why choosing the Virtual Observatory in Geodesy and Earth's Sciences?

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This poster presents the context of the astronomical Virtual Observatory (VO), an ambitious international proposal to provide uniform, convenient access to disparate, geographically dispersed archives of astronomical data from software which runs on the computer on the astronomer's desktop. The VO could be of interest for the geodetic community: we present here some of our efforts in this direction that we have recently achieved.

Astronomers using that Virtual Observatory are now organized within an international association called the International Virtual Observatory Alliance (IVOA). As noted on the IVOA website (http://www.ivoa.net/), IVOA was formed in June 2002 with a mission to "facilitate the international coordination and collaboration necessary for the development and deployment of the tools, systems and organizational structures necessary to enable the international utilization of astronomical archives as an integrated and interoperating virtual observatory."

The "Groupe de Recherche de Géodésie Spatiale (GRGS)" now routinely delivers geodetic products to most of the space geodetic services of the International Association of Geodesy (IAG): IERS, IGS, ILRS, IVS, and IDS. Some of these products are now natively built and archived following the data format recommended by IVOA, the VO-Table format. We present this format, which is based on the XML format, and we list the reasons why we chose to use it. We also enumerate the list of geodetic products actually published with this format, with the associated available Webservices, and we show how easy it is to compare time series obtained by various analysis centers. We finally give as well an example of such a comparison.