



The Clue to Minimizing the Developer-User Divide by Good Practice in Earth and Space Science Informatics

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Earth and Space Science research, as well as many other disciplines, can nowadays benefit from advanced data handling techniques and tools capable to significantly relieve the scientist of the burden of data search, retrieval, visualization and manipulation, and to exploit the data information content.

Some typical examples are Virtual Observatories (VO) specific to a variety of sub-disciplines but anyway interlinked, a feature intrinsic to the VO architecture, Virtual Globes as advanced 3D selection and visualization interfaces to distributed data repositories, and the Global Earth Observation System of Systems.

These information systems are proving also effective in education and outreach activities as they are usable via web interfaces to give access to, to display and to download nonhomogeneous datasets in order to raise the awareness of the students and the public on the relevant disciplines.

Despite of that, all of this effective machineries are still poorly used both by the scientific community and by the community active in education and outreach.

All such infrastructures are designed and developed according to the state-of-the-art information and computer engineering techniques and are provided with top features such as ontology- and semantics-based data management, and advanced unified web-based interfaces.

Anyway, a careful analysis of the issue mentioned above indicates a key aspect that play a major role, i.e., the inadequate interaction with the users' communities during the design, the development, the deployment and the test phases. Even the best technical tool can appear inadequate to the final user when it does not meet the user's requirements in terms of achievable goals and use friendliness.

In this work, we consider the user-side features to be taken into account for the optimum exploitation of an information system in the framework of the interaction among the design engineers and the target communities towards the setting of a good practice for minimizing the developer-user divide.