

STARS touch: A web-application for time-dependent observation data

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This paper is to present a cloud system for science, which has been developed at NICT. The NICT science cloud is an open cloud system for scientists who are going to carry out their informatics studies for their own science. The NICT science cloud is not for simple uses. Many functions are expected to the science cloud; such as data standardization, data collection and crawling, large and distributed data storage system, security and reliability, database and meta-database, data stewardship, long-term data preservation, data rescue and preservation, data mining, parallel processing, data publication and provision, semantic web, 3D and 4D visualization, out-reach and in-reach, and capacity buildings. In the present study, we discuss a Web application for time-dependent science data, which is named STARS touch. This Web application is based on a technique of asynchronous data transfer of graphic files for several types of data plots. The cloud system create a huge number of data plots with various time scale (e.g., from few minutes to few years) for each data-set. Parallel processing techniques to create such huge number of graphic data files are also discussed. We also make a live demonstration of the STARS touch to show several types of applications not only for research works but also for social data previews.

Keywords: Web application, WDS, time-dependent data, Collective intelligence, spacecraft observation, Meteorological observation