OSDC/PIRE research proposals

The System and Network Engineering (SNE) research group at the University of Amsterdam is one of the international members of the PIRE project. We are very active and well known for our research on smart e-Infrastructures; network and computing performance, sustainability and security all play an important role in these complex environments and are at the center of our scientific focus.

More information on the group's activities can be found at http://sne.science.uva.nl/ and in the homepages of dr. Paola Grosso (http://staff.science.uva.nl/~grosso/) and prof. Cees de Laat (http://staff.science.uva.nl/~delaat/).

Here follows a research proposals to be performed at the University of Amsterdam during a period of 6 weeks in the late spring of 2013. The work is suitable for two students working on different aspects; the suitable candidates are graduate students in Computer Science or Computer Engineering.

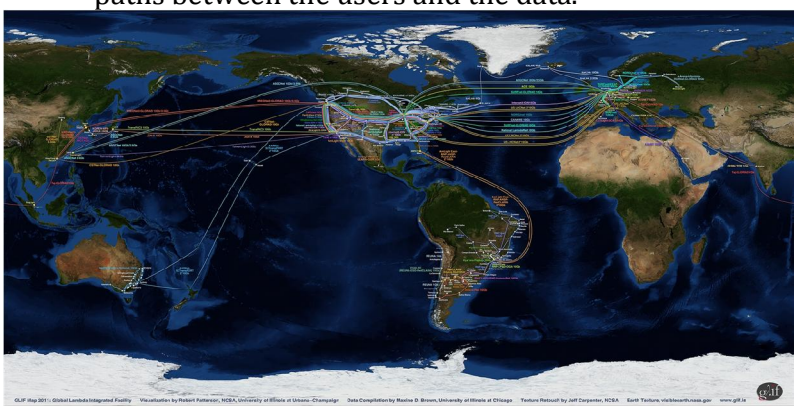
Phonebook for data

How can we make finding and retrieving OSDC data as easy as placing a phone call?

The goal of this research it to answer this question and concretely to develop a *phonebook* for the OSDC data. The student(s) will create an application (i.e. the phonebook) that allows to locate and retrieve OSDC datasets dynamically by using the most advanced high-speed and optical networks available in the research and academic community.

The main functionalities of this system will be:

- display the available OSDC datasets and their location;
- allow dynamic access to these data via the network connections available via the Lambda Integrated Facility (GLIF: http://www.glif.is).
- use the NSI protocol developed within the OpenGrid Forum to create the paths between the users and the data.



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To achieve the above the students will need to familiarize with the state-of-the-art protocols in optical control planes (such as the the NSI protocol); they will need to understand the various Quality of Service aspects involved in creating dedicated network paths between locations and how these need to be integrated in the data searching mechanisms.

The students will evaluate the scalability and performance of this approach comparing with other data retrieval approaches used in OSDC.

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