

Position paper on the FIPPP –Modeling for the future

BACKGROUND

During the Presidential conference "The European RTD Framework Programs: from economic recovery to sustainability" in October 2009, a new Public- Private Partnership on the Future Internet (FIPPP) was launched, following a Commission Communication calling for its set-up.

The Future Internet PPP will ultimately drive the development of new Internet technologies, creating new industries and economic potentials. These will be of benefit to society as a whole, since the Future Internet will become a key infrastructure for managing and maintaining business and social interactions through a framework of Internet enabled information and services, linked to the environment and supporting ‘smart’ applications.

Of central importance to the FIPPP will be the development of generic technologies that will create a platform for the widest possible use of these ‘smart’ applications. At the heart of this will be the information network.

[1] In Europe and globally, a number of initiatives already exist to link different types of environmental data for different purposes, including efforts of the European Environment Agency (EIONET), of the WMO (IGACO), the OECD (ECOSANTE), UNECE (EMEP), Arctic Council (AMAP), the EU and European Space Agency (GMES), and the EU information system (INSPIRE). Efforts are also being made to link environmental and health information, such as the WHO ECEH indicator work, the WHO Health for All initiative, and the proposed European Integrated Environment and Health Monitoring and Response System.

All these initiatives involve heterogeneous monitoring networks, and use a range of techniques (including GIS) for data harmonization and linkage.

NILU has been involved in projects like these for a considerable time. EU funded projects such as INTARESE and [2] HEIMTSA, where the focus is on integrated health assessment, to commercial applications like [3] EIFAir and [4] AirQUIS, which aim to provide ‘smart’ services, are examples of our focus on integrating data sources and services in a way that enables us to exploit the internet beyond simply dissemination, but also as a ‘virtual toolbox’ where the right application can be made available to service a user’s needs.

In terms of a use case or scenario within our expertise area, NILU considers online modeling to be both an important and technically challenging task that would greatly benefit from the development of an open data exchange platform. That this requires an extensive Ontology goes without saying, but much of this work has already been covered in projects like

[1] <http://www.intarese.org>

[2] <http://www.heimtsa.eu>

[3] <http://www.eifair.com>

[4] <http://www.airquis.com>

[5] <http://gmes.info>

INTARESE. We foresee that the opportunity to build on existing work performed within projects like those mentioned above that will enable us to create new services that would be of potential interest to policy makers, research institutes, and most certainly commercial enterprises, where access to real time data and predictive modeling services are often limited.

As a National Environmental Institute, NILU has an abiding interest in any effort towards unifying data sources. As a heavy user of environmental information, there is a constant drive towards utilizing near real time data for predictive modeling, as well as current pollution trends.

To achieve the goals of a FIPPP, we consider it vital that there is a common data exchange format. This, coupled with access to real time data would enable the development of data processing services that could take many forms. A simple example that would tie in real time data, predictive models as well as meteorological data is an early warning system of harmful airborne substances which could be tied to simple push technology on 'smart' phones. This is just a single example of how real time data could be of direct benefit to society, when combined with the right kind of data processing and modeling. However, there are many more examples that would prove just as potentially useful.

With regards to NILU's role within the initiative, our core interests coupled with our R&D expertise would enable us to provide key insights into the creation and development of the basic building blocks that would comprise the Future Internet. Our previous experience in developing Internet base applications like EIFAir would be invaluable since it represents in micro what the FIPPP need to achieve in macro.

The fact that the magnitude of this initiative will demand a number of projects to run in parallel, requiring integration activities between them further points to the need for experienced project management and in this NILU has demonstrated exemplary skills.

FIPPP is taking steps towards creating a world where data is not only available and accessible but can be exploited in new ways for the betterment of society. In this NILU is particularly supportive, since it follows our own core ethos of informing and enabling the public, decision makers and other researchers.

[1] <http://www.intarese.org>

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