MAGIC Report Summary

Project ID: 654225
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Periodic Reporting for period 2 - MAGIC (Middleware for collaborative Applications and Global virtual Communities)

Reporting period: 2016-05-01 to 2017-04-30

Summary of the context and overall objectives of the project

MAGIC aimed at promoting the sharing of applications between Research and Education Networks (NRENs) by means of:

a) Promoting the deployment of the platforms that ease the access of end users to the applications they need by providing them such as eduroam and eduGAIN,

b) Facilitating the sharing of applications run by NRENs worldwide.

c) Promoting technologies that favour the inter-operation of real time applications such as room videoconferencing (H.323) Web-Videoconferencing and Voice applications

d) To develop a set of Global Science Communities that take advantage of the technologies promoted in this project.

The project was able to carry on a worldwide effort in the promotion and deployment of key technologies to support the work of researchers, academics and students thanks to a Federated Strategy where the tasks have been performed in close collaboration by the RRENs (Regional Research and Education Networks) and more advanced partners. This model follows the work already used in the deployment of research networks around the World, where RRENs play a key role in the deployment of such infrastructures at the regional level, supporting the work of NRENs (National Research and Education Networks) at the national level.

Work performed from the beginning of the project to the end of the period covered by the report and main results achieved so far

For the promotion of the deployment of Federations of Identity connected to eduGAIN and the academic Wi-Fi roaming eduroam, we have focused our action through training of the NREN technicians and promotion of the advantages of the technologies in meetings and conferences where the NRENs meet regionally and Worldwide. We have taken advantage of the regional organisations that group NRENs in the participating World regions, namely: ASREN for the Arab Countries, CAREN for Central Asian countries, UbuntuNet Alliance for East and South Africa, CKLN for The Caribbean, TEIN for South and East Asia, GÉANT for Europe and RedCLARA for Latin America.

In order to ease the use of applications aimed at group collaboration, we have chosen Colaboratorio and SYMPA as the basic technologies for GMF (Group Management in Federations) while VOOT has been selected to carry on the integration. As a key result of this project, we have implemented a test bed where user groups built in the Colaboratorio can now use applications in the SYMPA environment as easily as authenticating as user of a user group in the Colaboratorio. This combination of technologies is a building block for applications sharing between NRENs and has the potential to allow users across the World
to take advantage of collaboration applications developed and run elsewhere without leaving its familiar environment or having to open a new account somewhere else.

The work in objective c) aimed at disseminating and training on NRENnum technology. The idea is to use a standard E.164 numbering scheme (telephone system numbering) to identify all devices and thus make dialling though all these systems alike. We developed training material in the form of on line material including video presentations to allow anyone interested in deploying NRENnum to do it in just a few minutes. We also made dissemination presentations in several meetins in Africa, Latin America and Asia and provided support for the deployment of new NRENnum domains.

The other important challenge that we faced in this project regarding the video conferencing facilities is the integration between Videoconference Rooms (H.323) and web conference systems. Commercial systems exist for this, but the academic community has strong interest in Open Source solutions. We developed an open source gateway to integrate MCONF and the H.323 systems using SIP dialling.

In order to put this technology to work with end users across the World, we fostered the development of 3 Global Science Communities (GSC) by starting from existing communities, where available, in three major scientific topics of global interest: Biodiversity, Environment and e-Health. The fourth one, Remote Instrumentation was supported following a request from the community in Mexico. The communities succeeded in attracting researcher from Africa, the Arab Countries, Europe, the Caribbean and Latin America.

The other cornerstone of the support to the user communities is the Funding and Partners Database, an application developed to facilitate access from users to funding opportunities around the World. This includes H2020 and Erasmus calls, but also opportunities from the German agencies DFG and DAAD, the US agency NSF and many others. This tool is a great attractor for users to stay and register in the Colaboratorio environment.

In order to reach the community of NRENs we have participated in the main conferences of the Regional Research and Education Networks namely: ASREN’s e-AGE, GEANT’s TNC, RedCLARA’s TICAL, Ubuntunet Alliance Conferences, CAREN Conference, WACREN conferences and IST Africa 2015 and 2017 conferences.

The dissemination tools also include the website: http://magic-project.eu where we have included video testimonials and dissemination material.

**Progress beyond the state of the art and expected potential impact (including the socio-economic impact and the wider societal implications of the project so far)**

We have conducted 7 training workshops for AAI and eduroam in Chile, Jordan, Jamaica, Lebanon, Kyrgyzstan, Tajikistan and Barbados with 112 technicians trained who work for 78 NRENs in 78 non European countries as shown in the map “MAGIC Partner Regions”.

As a result of this effort 16 new countries have joined eduroam and 7 new federations have been established while 5 more are in different status of their implementation process. The process is going in the same sense for eduGAIN. In this way, access of academic and researchers to the content and applications is becoming truly mobile across the World.

The pilot platform for group collaboration has been deployed in two NRENs in Europe and in Latin America, while the Colaboratorio platform has become operational in 10 NRENs of Asia, The Arab Countries, West and Central Africa, the Caribbean and Latin America while several other are in testing status worldwide. In these deployments the user can now use 11 applications, 8 of which were integrated or developed within the MAGIC project. A catalogue of applications was built and recommendations for NRENs and external providers to publish their applications in the catalogue and to be able to be integrated in the Colaboratorio framework was established.

In this way NRENs and RRENs will have access to an enormous set of applications being developed worldwide by other RENs,
NRENs who at the same time will have access to a larger user base and collaborations to enhance and expand their applications using the Open Source principle. As a result of this effort in the promotion of NRENnum, 9 countries have joined the NRENnum.net community from Asia, Central Asia, Europe and Latin America. Using the tools developed by the project, we organized Global Science 20 events by web conference on topics of their interest and 4 web conference based Virtual Information Days on H2020 calls. The number of researchers attending these conferences were in some cases up to 75 at the same time, proving the efficiency of the tool and its capacity to support such a large number of users. The Partners and Funding Database has increased its use from 350 monthly views of specific funding opportunities to 1352 monthly views in one year, a 4-fold increase.

Related information

![magic-partner-regions.jpg](https://cordis.europa.eu/result/rcn/192909_en.html)

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