

# DECLARA

Bulletin

Year 11



RAGIE advances toward its growth

MAGIC: A collaboration project to globally connect researchers and academics

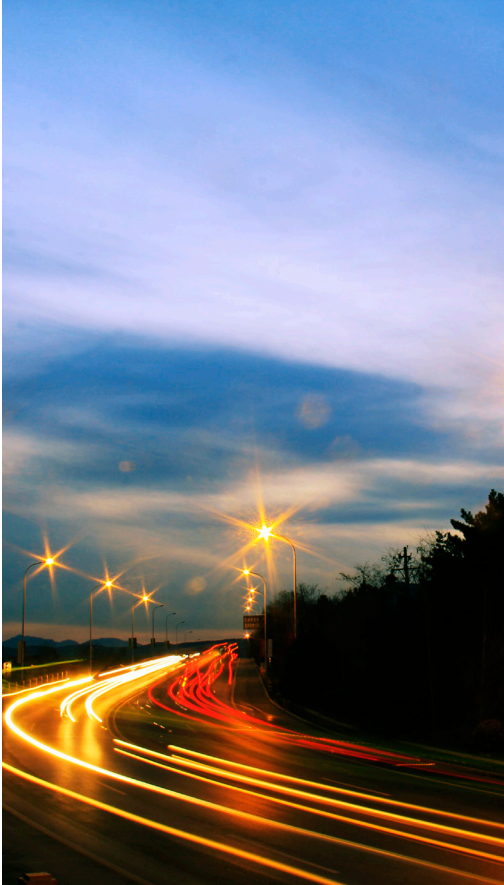
Uruguayan Post honors Ida Holz

CEDIA, achievements, challenges and commitments

After their meeting in Rio: LA Referencia, OpenAIRE and COAR renew their commitment in pro of a shared vision of a global network of repositories

n° 44

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# RedCLARA

A clear path for your data

We empower your research and developments

RedCLARA interconnects the national advanced networks in Latin America and connects them with all the networks in the world, giving Latin-American scientists, academics and researchers an infrastructure that allows them to effectively collaborate with the global scientific community.

Edition

María José López Pourailly

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## Florencio Utreras

Executive Director

RedCLARA

In December of 2014 we reported that the ELCIRA Project, implemented since 2012 with the NRENs in Europe and Latin America was approved with the highest qualifications, arousing interest in the development of shared services by the NRENs between the two continents, so that nine countries in our region joined the eduroam service of academic mobility and the deployment and implementation of identity federations associated with eduGAIN.

These achievements meant that, in September of 2014, a new project was presented to be financed by the Horizon2020: MAGIC. This project aims to continue the legacy of ELCIRA, deepening and expanding its results globally. For this, it counts on 19 members spread across five continents, including partners in West Africa (WACREN), South East Africa (UbuntuNet), Arab States (ASREN), Central Asia (CAREN), Southeast Asia (TEIN), the Caribbean (CKLN) and of course Europe (GÉANT, RENATER, NIIFI, CESNET, GRNET, SURFnet) and Latin America (CEDIA, CUDI, REUNA, RENATA, RNP and RedCLARA). The project was approved in January of 2015 and its implementation began in May of that year, receiving high qualifications. MAGIC is the only project on Information Technologies whose partner-coordinator is not European (RedCLARA), a fact that makes us proud and leads us to follow delivering our best to get results that are relevant



# Editorial

to the academic networks worldwide and to its associated research communities.

Even more than this, the approval of MAGIC and the commitment of its partners from all the continents shows that the central idea behind the project, that is to create a platform of services shared globally by the academic networks is gaining strength, and that the services will be available in the coming years, fulfilling the mandate assumed in the Strategic Plan of RedCLARA: to develop "Integrated and innovative Federated Value Added Services to the scientific, technological and innovation community."

Our participation in global activities, however, is not limited to MAGIC. We are also part of the TANDEM project, which seeks to share experiences and support the development of networks in West Africa. This project, also funded by Horizon2020 unites us to the European and African networks to support the development of an african region that recently incorporated to our community.

On the other hand, our work for the financing of a submarine cable between Europe and Latin America - work that we lead together with GARR (Italy) and had the support of the networks of Germany (DFN), Spain (RedIRIS), Portugal ( FCT), RENATER (France), GÉANT (European networks), as well as our partners in Brazil (RNP), Chile (REUNA), Colombia (RENATA) and Ecuador (CEDIA) - was crowned with a spectacular announcement by the Commission European. The EC will contribute with the sum of 26.5 million euros for the academic community to get access to this new submarine cable and contribute greatly to our goal of developing and operating "a high-quality network and unlimited bandwidth", which will be complemented with a new optical network in Latin America, a new backbone to RedCLARA, which will change our

present backbone of 10 Gbps to another of 100 Gbps, and, most importantly, building capillarity in synergy with the national networks mentioned above. A major step in the consolidation of an advanced infrastructure for our region.

The year of 2015 was also the reaffirmation of the strength of TICAL, that took 360 people to Viña de Mar, in Chile, along with 25 sponsors. Our conference has become a mandatory meeting for the community of ICT directors of the Latin American universities, a great victory for the benefit of our institutions and the development of cooperation between them.

This was a great year for the academic networks in Latin America grouped in RedCLARA. For 2016, we also expect great events through which we wish to confirm the integration of some of the countries that are not yet part of our community. We hope it will be a year to welcome many of them. We will work for it and for a Latin America which supports the integrated work of its university, research and innovation communities.



# Magic

Middleware for collaborative Applications  
and Global virtual Communities



MAGIC:

## **A collaboration project to globally connect researchers and academics**

African, Arabic, Asian, Caribbean, Latin American and European academics and researchers are now able to be part of a network of worldwide collaborators with access to collaboration tools, as well as a means to application-sharing over the next 16 months as a European Commission supported project -through Horizon 2020 programme under the e-Infrastructure line- called MAGIC lifted off in May. The Middleware for collaborative Applications and Global virtual Communities (MAGIC) Project intends to create cloud services, including various protocols and software, to enable users to access and use these services in a cloud environment (anywhere, anytime).

María José López Pourailly



Coordinated by RedCLARA, the general objective of the MAGIC Project is to establish a set of agreements for Europe and other participating World Regions, to consolidate and complete the foundations of middleware necessary for the establishment of a marketplace of services and real-time applications for international and inter-continental research groups. These services will be piloted in an NREN (national research and education network) environment and will facilitate the mobility and the work of global science communities.

The work planned under the MAGIC project includes Management, Platforms for Mobility, Cloud Provisioning and Groupware Standards, Agreements for Real-Time Collaboration, Global Science Communities, Dissemination and Training.

MAGIC is probably the first really global collaboration project in the advanced networks environment, and which simultaneously will contribute to leveling the playing field between the developing RENs (Research and Education Networks) and the more advanced global RENs. MAGIC creates a great opportunity for Regional researchers to connect with their global counterparts and communities under the same project, with the possibility of also connecting with other projects associated with the European Commission Horizon 2020 Programmes (H2020).

### MAGIC Impacts

Among the expected impacts of the project is the inclusion and the collaboration of NRENs and Regional Networks from Africa, Asia, the Caribbean, Europe and Latin America who are collaborating on the development of agreements, human capacities and establishing a network of collaborators. This will foster the deployment of basic infrastructure needed for secure, authenticated access to collaboration tools, as well as a means to application-sharing across the NREN world.

Additionally, with the extensive training carried out at regional meetings, followed up with training material on an e-learning platform, the project will create the basis for a positioning of eduoam and eduGAIN in each region involved in the project.

### MAGIC Race

MAGIC has been represented by its project partners at relevant conferences and events in the participant world regions, in the form of either a dissemination stand and/or in the form of a presentation. In fact the commitment of the project partners with MAGIC was shown even previously to the project Kick off Meeting (June 11-12, 2015, Paris, France), through their spread of MAGIC's objectives and relevant information at the following activities:

CUDI's Spring meeting 2015 - April 22, 2015, Puerto Vallarta, Mexico [[http://www.cudi.edu.mx/primavera\\_2015/programa\\_eduroam.php](http://www.cudi.edu.mx/primavera_2015/programa_eduroam.php)]

Workshop at IST Africa – 6-8 May 2015, Lilongwe, Malawi

TANDEM-SciGaia-MAGIC Meeting – 11 May 2015, Paris, France

Of course this wasn't all. After the Kick off Meeting, MAGIC has been running an exciting race to reach out the global scientific and NRENs communities in order to be efficient in fostering global collaboration and, of course, to achieve its objectives.

### TICAL2015, Viña del Mar, Chile:

From July 6 to 8 RedCLARA and the National Research and Education Network of Chile, REUNA, carried out the fifth edition of the TICAL Conference, which is targeted to the ICT directors of the Latin American Universities, and MAGIC was part of it.

With a stand in which MAGIC brochures and umbrellas were distributed among the Conference attendees, the project started to grow in the minds of Latin American ICT researchers and developers. And that wasn't all, cause MAGIC did a short video in Spanish explaining what is MAGIC, and then they asked the attendees: "Do you believe in MAGIC?" Check out their responses in MAGIC's Facebook page.



### RNP2015 Forum, Brasilia, Brazil:

The Brazilians had the opportunity to meet more closely the characteristics, scope and magnitude of the MAGIC project. The initiative led by RedCLARA was presented in a stand at the annual conference of the Brazilian National Research and Education Network (RNP), held between August 25 and 27, in Brasilia. MAGIC attracted the attention of dozens of people who were in the conference.

In the opinion of Leandro Guimarães, RNP services manager and leader of MAGIC's Work Package 2 (WP2), the promotion of the initiative in the Brazilian conference had a fundamental role in the advance of it: "We need to strengthen our role as leaders of the WP2 as well as the importance of the project not only externally, but internally. In this sense, the conversations we had at the stand allowed the partner institutions to know and further valorize the project."

"We are pleased with the development of the project, because all the involved networks are already working to advance it. This is what really means being global", stated Guimarães.

Directed to professionals and ICT providers, pro-rectors and university principals, coordinators of research projects and public





managers, the RNP Forum 2015 had the theme “Mobility” and received an audience of 879 participants, among present and virtual.

**ICT2015, Lisboa, Portugal:**

From October 20 to 22nd, the MAGIC project took part in the INCO Village exhibition of ICT2015, organised by the European Commission, together with the Fundação para a Ciência e a Tecnologia.

Within the three days activities, MAGIC had the chance to share a booth with its sister projects TANDEM and Sci-GaIA, and during the third day, a Networking session where the three initiatives that are co-funded by the EC Horizon2020 Programme under the e-Infrastructure line had the chance to go deeper into the collaboration that these infrastructures are fostering.

Within the booth, MAGIC made several social connections and distributed a big amount of branded goodies and brochures with relevant information of the project.







**CUDI 2015 Fall members meeting, Puebla, Mexico:**

Within the second day of the program (October 23, 2015) of this meeting that is carried out by the Mexican NREN every six months, in his role of MAGIC Project Director and Executive Director of RedCLARA, Florencio Utreras was invited to give a presentation referred to MAGIC. The presentation was given through videoconference and is available for downloading in the Conference Programme web-page [[http://www.cudi.edu.mx/otono\\_2015/programa.php](http://www.cudi.edu.mx/otono_2015/programa.php)] or directly through the link posted in MAGIC's website under the sub-menu Presentations located under "About".

**UbuntuNet Connect 2015, Maputo, Mozambique:**

Aiming to meet the Eastern and Southern Africa NRENs and their research communities, and to show them the benefits of actively participating in the project or getting its benefits, a delegation of the MAGIC project did participate in the UbuntuNet Connect 2015 Conference, the eighth of its kind and the one that celebrated the 10 year anniversary of one of the MAGIC project regional partners: the UbuntuNet Alliance.

The activities started in November 17th, with the first face-to-face meeting of the MAGIC Work Package 5 (WP5). Within this

meetings the members of the group defined the future course of action and structured the actions that will implement within the upcoming months.

During the evening of the same day, MAGIC WP6 leader was invited to participate in the Africa Connect2 Visibility meeting in which she was called to talk about RedCLARA and MAGIC's experience in dissemination and outreach and new collaboration possibilities in these areas were envisioned in order to promote the South-South collaboration and, more over, to enhance Africa's participation in MAGIC.

November 18th was the day of MAGIC's participation in the Sci-GalA Workshop on Open Science, by means of the presentations given by Dr. Ognjen Prnjat, Project Coordinator at GRnet, and María José López from RedCLARA (both project partners institutions). Through his presentation entitled as "VI-SEEM Concertation with International Cooperation Projects" Dr. Prnjat highlighted the synergies between the collaborations project in which his institution is involved, while MAGIC WP6 leader, through her presentation entiteled as "Collaborating to globally connect researchers and academics" went deeper into the project's benefits for the global research communities.

MAGIC and Sci-GalA, both H2020 financed projects, will look after new sinergies in order to better serve to the scientists research purposes and, of course, to enhance collaboration.



During November 18th and 19th the MAGIC project was an active participant in the reception of the UbuntuNet Connect 2015 Conference, where it distributed project's brochures and branded goodies that were very appreciated by the attendees. With a participation of above 200 participants from all the African continent, Europe, Asia-Pacific and Latin-America, MAGIC was introduced to the attendees throughout two presentations. The first one was given by Dr. Ognjen Prnjat, and it was entitled as "VI-SEEM and MAGIC projects. Virtual Research Environment for value-added services in national and regional NRENs: case studies", and the second, "A collaboration project to globally connect researchers and academics" (a summary of the paper prepared by Leandro Guimarães, WP2 leader - RNP, and María José López, WP6 leader) was gaved by MAGIC WP6 leader. Both presentations went through each project component highlighting the collaboration possibilities and the benefits that the global research community can take from MAGIC, of course, through different perspectives.



**InnovaRed, the NREN of Argentina, signed a Memorandum of Understanding (MoU) with MAGIC in order to collaborate in the promotion of user communities (in the project's Work Package 5 - WP5) and in dissemination activities (WP6).**

**It is expected that in the future InnovaRed will also work in authorisation and authentication infrastructures (AAls) and eduroam.**

**The MoU with InnovaRed was signed early in August 2015.**

For more information about MAGIC, please visit:

MAGIC Website:  
<http://magic-project.eu/>

MAGIC in Facebook:  
<http://www.facebook.com/MAGICglobalCollaboration>

MAGIC in Twitter:  
[http://twitter.com/MAGIC\\_our\\_voice](http://twitter.com/MAGIC_our_voice)



The presentations were given during Friday 19th within the International Collaboration in Research session that was chaired by Cathrin Stöver, GÉANT's International Relations and Communications Manager.

In the evening of the same day but during the Special Session on Research, that was chaired by Bonny Khunga, ZAMREN CEO, Tania Altamirano, member of MAGIC's WP5 and RedCLARA's Academic Communities Coordinator, gave a presentation about the Colaboratorio platform, that was of main interest to know by the leaders of the African NRENS.

#### **Don't forget my number!**

In July 24, 2015, the ENUM Service for Academia website - NRENum.net - recieved a new member with the following post in its home: "Welcome Ecuador (+593) to NRENum.net! RedCEDIA, the national research and education network of Ecuador, looks after the 37th country code that has been delegated to NRENum.net." This achievement of CEDIA is also an achievement of the Work Package 4 of the MAGIC Project, that seeks the establishment of agreements for real time collaboration.

What is NRENum.net? The NRENum.net Service is an end-user ENUM service run by the GÉANT Association

(formerly TERENA) and participating NRENS. The service is aimed primarily at academia.

What is ENUM? It's a technology standard used to translate telephone numbers into URL addresses (a domain name), which is a result of work of the Internet Engineering Task Force's (IETF's) Telephone Number Mapping working group. ENUM is used to build dialling infrastructure for VoIP, and Videoconference networks at global scale.

But... Was this all? Of course the answer is no! In fact only two months after NRENum.net announced the incorporation of Ecuador, during the last day of September 2015 the good news was for El Salvador (+503), in its site NRENum stated: "RAICES, the national research and education network of El Salvador, looks after the 38th country code that has been delegated to NRENum.net". Only 15 days later the MAGIC project celebrated the same achievement with CUDI, the Mexican NREN, and the good news came through an email signed by Mészáros Mihály, from NIIFI (Hungary), member of MAGIC's WP4: "Thank you very much for Your cooperation and help and time!! Country code +52 is now officially delegated to CUDI, Mexico!".

While this was happening, WP4 launched an on-line course on NRENum.net and DNS Configuration.



With its contents fully developed in English, French and Spanish, the course is opened to all those who are interested in NREnum, and mainly targeted to those NRENs that want to offer their member institutions the possibility of registering their equipments of videoconference and of voice over Ip in this global directory. If you are interested in taking this course, all you have to do is go to MAGIC's website and click in the banner placed in the home page..

### Future steps

While this report was under its writing process, MAGIC was preparing its participation in the e-AGE2015 conference (Casablanca, Morocco, December 7 and 8, 2015) and many more things! Let's check the list of what is now under preparation: training in the Arab States and the Caribbean on AAI and eduroam,

## MAGIC and Training

Mobility Federated Services and Nrenum.net

Date: July 8, 2015

Venue: Viña del Mar, Chile

Attendees: 11 participants from five Latin American countries: Chile, Costa Rica, Ecuador, Mexico and Peru.



Note from CKLN:

Workshop on Joining eduroam and Identity Federation

Date: September 8 to 10, 2015

Venue: Talal Abu-Ghazaleh University (TAGI-UNI), Amman, Jordan

Attendees: 13 participants representing five Arab countries: Morocco, Algeria, Lebanon, Palestine and Jordan.



Federated Access and eduroam workshop in the Caribbean

Date: October 7 to 9, 2015

Venue: Jamaica Tertiary Education Commission, 14 Gibraltar Camp Way, Mona Campus, University of the West Indies, Jamaica

Attendees: 16 participants from 11 institutions and three Caribbean countries (Jamaica, Grenada, Dominican Republic) and one Latin American country (Mexico).







# Uruguayan Post honors Ida Holz

In a ceremony held in the Hall of the Central House of the Uruguayan Post Office, in Montevideo, the institution released two stamps in honor of the engineer and the prof. Daniel Vidart.

Luiz Alberto Rasseli

A pioneer in the development of the Internet in Latin America, the engineer Ida Holz received a new award for her services to the Internet community in Uruguay and the continent, during a ceremony held on Oct. 21, in Montevideo.

During the occasion, the Post Office released two stamps of its "Highlighted Personalities" series, in honor of Ida Holz and the Professor Daniel Vidart. The ceremony was led by the President of the Post Office, Solange Moreira, and counted on the presence of the honorees, the rector of the University of La República, Prof. Roberto Markarian; the undersecretary of the Ministry of Social Development, Prof. Ana Olivera; the Republic's former President and current Senator José Mujica and the Senator Lucía Topolansky, among others.

In the early 70s, Ida Holz was part of a pioneering group in the study and work in informatics in Uruguay, and is considered as a pioneer of the Internet in the country. She was also a founder of the Latin American Cooperation of Advanced Networks (RedCLARA) and its President from 2011 to 2014. In 2013, she became the first Latin American woman to join the Hall of Fame of the Internet Society, an initiative that honors the people who were important for the development and strengthening of the Internet.

Read the original article and see photos of the event in <http://www.correo.com.uy/index.asp?pagVal=590&g=1,28&tipo=gral>



With the support of RNP and RedCLARA:

## Brazil becomes a member of the LHCONE network

Brazil stood out before the international scientific community with the entrance of the High Energy Experimental Physics Laboratory (Lafex), of the Brazilian Center for Physics Research (CBPF), of the Relativistic Heavy Ions Group (Griper) and of the Physics Institute of the University of São Paulo (USP) into the exclusive team of computer grids that take part in the LHCONE network.

RNP

In operation since 2011, LHCONE has been managed by the European Organization for Nuclear Research (CERN) and is a network infrastructure service conceived exclusively for the projects of the largest particle accelerator in the world, the Large Hadron Collider (LHC). In it, experiments take place, which generate such a large quantity of data that extrapolates the resources of CERN's own data center, with 100 petabytes, equivalent to 700 years of Full HD quality films. Due to that, the processing of such data is distributed among 150 computer centers spread out in 40 countries, which form the largest computer grid in the world, the WLCG (Worldwide LHC Computing Grid).

In order to ensure greater safety and priority for the data, in addition to a better network outflow and performance, LHCONE works as a network juxtaposed to the existing physical network, interconnecting several websites of institutions that house computer grids that are LHC's collaborators, by means of the academic networks. That is the case of Lafex, which in July, 2015 started to fulfill the minimum network requisites required by CERN to be a member of the exclusive network.

However, for it to happen, it was necessary to overcome certain performance issues, given that the CBPF is connected to the Brazilian academic network in an indirect manner, through the Rio metropolitan network (Rede Rio), with a band capacity that evolved until it reached the current 10 Gb/s.

Since 2010, the Research and Development department of the Brazilian National Research and Educational Network (RNP), which operates the Brazilian academic network, focused on mapping out the data transfers made by Lafex, in order to find possible flaws in the pathway between the laboratory and the national backbone, and then between the international connections and

Europe. "We used monitoring platform perfSONAR, which helped us to visualize where the issues were occurring along such path", says RNP's Experimentation Networks Manager, Alex Moura.

In addition to RNP, Rede-Rio/Faperj and teams from large international backbones of the Latin American Cooperation of Advanced Networks (RedCLARA), from Géant and from Cern contributed to the success achieved. A part of the project received funding from the Institutional Qualification Program (PCI) of the Ministry of Science, Technology and Innovation (MCTI).

Read the original article: <http://www.rnp.br/es/destaques/brasil-pasa-integrar-la-red-lhcone>



# United Nations Technology Bank recognises importance of GÉANT and research and education networks

At a ceremony in New York, the United Nations Secretary-General, Ban Ki-moon, took receipt of a proposal calling for the establishment of a Technology Bank for the world's Least Developed Countries (LDCs) - "Feasibility Study for a United Nations Technology Bank for the Least Developed Countries".

GÉANT

The study was approved by a high-level panel of 11 experts, one of whom was Dorte Olesen, a GÉANT Board of Directors member. Cathrin Stöver, GÉANT's Chief International Relations and Communications Officer, also made a substantive contribution to the feasibility study and participated in the high-level panel's final meeting held in Istanbul earlier this month in which the document was approved."



The following information is only available in English:

Read GÉANT's complete article HERE: [http://www.geant.org/News\\_and\\_Events/Pages/UN\\_Technology\\_Bank\\_recognises\\_GEANT.aspx](http://www.geant.org/News_and_Events/Pages/UN_Technology_Bank_recognises_GEANT.aspx)

Download the "Feasibility Study for a UN Technology Bank for the LDCs" HERE: [http://unohrlls.org/custom-content/](http://unohrlls.org/custom-content/uploads/2015/09/Feasibility-Study-for-a-United-Nations-Technology-Bank-for-the-Least-Developed-Countries.pdf)

[uploads/2015/09/Feasibility-Study-for-a-United-Nations-Technology-Bank-for-the-Least-Developed-Countries.pdf](http://unohrlls.org/custom-content/uploads/2015/09/Feasibility-Study-for-a-United-Nations-Technology-Bank-for-the-Least-Developed-Countries.pdf)

Download the UN Technology Bank press release, HERE: <http://unohrlls.org/custom-content/uploads/2015/09/Press-Release-22.09.15-Technology-Bank-feasible-and-desirable-for-world%E2%80%99s-poorest-nations-FINAL.pdf>



## Administrative staff of Red CEDIA 2015

Front Row (left-right): Carlos Guzman, Andrea Morales, Mónica Ordoñez, Ximena Lazo, Enrique López

Second row (left-right): Josefina Sigüencia, Ana Villalta, Catalina Palomeque

Third row (left-right): Laura Malache, Geovana Montenegro, Nataly Campoverde, Belén Galindo

Fourth row (center): Priscilla Alvarez

Fifth row (left-right): Juan Pablo Carvallo y Raul Galarza

Sixth row (left-right): Javier Crespo y Claudio Chacón

Seventh row (center): Luis Vargas







# CEDIA, achievements, challenges and commitments

"The Colaboratorio, the private cloud of CEDIA servers and the BELLA project are some of the pillars on which we will build the future development of CEDIA" – Juan Pablo Carvallo.

Priscila Alvarez, Red CEDIA

Since the beginning of its activities, on September 18, 2002, CEDIA works for the development of research in Ecuador. Being part of a complex dynamics in relation to the culture and the modus operandi of education in the country, CEDIA, the Ecuadorian National Research and Education Network, developed a set of strategies through which contributed in a transcendental way for the development of the knowledge, research and innovation society.

Currently, the advanced network package that CEDIA offers to its members has more than 30 services. Among its members we can find public and private entities, universities, polytechnics, research and technological institutes, and colleges.

In recent years CEDIA has taken another step in the mission to promote a society that longs knowledge and research, that believes in the human potential that exists in every corner of the country, committed to the development of new products, services and technology. "The Colaboratorio, the private cloud of CEDIA servers and the BELLA project are some of the pillars on which we will build the future development of CEDIA," says Juan Pablo Carvallo, CEDIA Director.

To generate synergies with the Latin American national networks is critical to take advantage of the earth's spine that will cross the territory of the countries which are members of the project, strengthening the national networks that will make local use of this optic fiber infrastructure.

## The most important Information Technologies Congress of Ecuador

Last december, CEDIA held the Ecuadorian Congress of Information and Communication Technologies – TIC EC 2015; for the third time the event proved to be an instance of integration, which generate spaces where researchers, technology managers and related actors share the knowledge which facilitates the process of establishing collaborative initiatives by forming strategic working groups.

The TIC EC is also a space in which participants can present the results of their research projects.

In 2015, the Congress included presentations of Ana Hunsinger, Vice President of Relationship with the Community, of Internet2; François Gagnon, PhD in Electrical Engineering from the Polytechnic School of Montreal; Jennifer Perez, Professor of the Polytechnic University of Madrid; Wolfram, eduroam and CSIRT workshops, and more than 24 technical and scientific exhibitions, national and international, selected by a committee of international experts. The presentations are available at <http://ticec.cedia.org.ec/>.

On the other hand and during the Congress, CEDIA promoted, for the first time, the "Red CEDIA Awards " in the categories of Research, Innovation and Participation, which were given to the person who stood out in the context of research through CEDIA



and the Ecuadorian Contest of Projects in Advanced Networks - CEPRA and the Ecuadorian Contest of Training Programs to Researchers and Members of the Advanced Network - CECIRA; to the University which makes the most use of CEDIA services, and to the person, from among the members of CEDIA, who collaborated more with the institution in the development of activities aligned to the aims of CEDIA, respectively.

**CEDIA in 2016: challenges and opportunities**

The National School of Networks (ENR) represents - for 2016 - one of the biggest challenges of CEDIA in recent years. To unify training modules on topics such as IPv6, virtualization, Linux administration, VoIP, Wolfram, among others, within a national calendar, gives the opportunity to members and non-members who are interested in the areas of technology, innovation and networks to develop more capabilities that allow them to be more competitive within your area and your profession. The ENR is developed with the support of RNP, Brazil.

CEDIA, within its process of growth and strengthening of international relations, is also representing Ecuador in the Middleware project for Collaborative Applications and Global Virtual Communities - MAGIC - of the European Commission (EC), which is part of Horizon 2020, the EC program for research and innovation.

MAGIC strengthens the eduroam mobility platforms and the federations, two services that the members of CEDIA already have access. The purpose of MAGIC is to reach, with these services, more countries of Latin America and the world. The real-time collaboration "NRENum" is the IP voice service between different networks worldwide; as part of MAGIC, CEDIA has access to all these services and sums its own services which are part of internal projects: the private cloud of servers and the CSIRT, for applications, web pages, management information systems, backup and to monitoring security incidents and attacks on infrastructure, respectively.

**important:**

Red CEDIA received the Award for Innovation in the Wolfram Technology Conference, held in October, in Chicago, United States.

CEDIA presented RRAAE, the Open Access Repositories Network of Ecuador, which gathers all the scientific articles and graduation theses of the Ecuadorian institutions that have publications, be they ministries, observatories, universities (members and non-members of CEDIA ), among others.





## RAGIE advances toward its growth

Created within the framework of the ALICE project (Latin America Interconnected With Europe), the Guatemalan national research and education network, RAGIE, in 2015 completed a decade of services in support of the development of ICT in the central american country. However, there is still much to do to fulfill old goals and plan new activities. In ICT's universe, advances do not stop and the need to move up is imperative. To better understand how RAGIE is preparing to work in the coming years and also to know the challenges of today, we talked with its new director, Marco Antonio To, and with Luis Furlan, its founder, former president and current vice president.



Luiz Alberto Rasseli

**Luis Furlan: "We continue with the same spirit we have always had about seeking for new activities"**

Recognized as one of the "fathers" of the Internet in Guatemala and Latin America, the engineer Luis Roberto Furlán Collver is not totally satisfied with the achievements of the past, but looks, now as vice president of the Guatemalan network RAGIE, to continue

developing the ICT in his country and in the region. We talked with him about the last years of RAGIE, the future challenges of the network and about the efforts to be made to overcome them

**You played important roles in the history of RAGIE and RedCLARA, and more than 10 years after the creation of the two networks, you are still working, now as vice president of the network. How do you start this new moment in your career?**



Luis Furlan

Well, it's interesting to talk about it, because I should have been thinking of my retirement (laughs). However, it will not happen now and I do not know when it will. Therefore, we will continue with the same spirit we have always had about seeking new activities and support these two projects that are well rooted within me. The last years have been especially difficult for RAGIE and we almost had to dissolve it. Luckily we managed to reverse the situation once again, but we must work hard to ensure its survival. The fact that RAGIE go straight has a large impact on RedCLARA, since this depends on all its members.

**RAGIE seeks to promote the development of the Information Society, as well as the creation of academic and education networks in Guatemala. What were the major advances made by the network in recent years with regard to this objective?**

In countries like Guatemala, research is not promoted as it could be. RAGIE took many of the activities of other members of RedCLARA and shared them with the partner institutions, with the hope that, little by little, they would develop their own institutional capacity. For me it is very clear that we have to start with primary and secondary education (K-12) to foster the interest in science, technology and innovation. Since 2014 we have a K-12 school as a member of RAGIE and we are actively looking for other schools to join the project. I have the dream of seen 100% of the colleges and schools of the country having access to these technologies. Currently, it is less than 5%. We have also actively participated in the development of the Digital Agenda in our country, recently adopted. Finally, RAGIE was one of the main promoters of the creation of the Guatemalan Chapter of the Internet Society (ISOC).

**Now, as vice president of the network, what are the main challenges of RAGIE and Guatemala in ICT? What efforts will be made to overcome them?**

The challenges are basically those described above: to get more research in the country and to facilitate the access to the ICTs, not only in schools but also for the general population (only 20% of Guatemalan population has internet access). The largest one, however, is to make RAGIE a financially self-sustaining network.

**RedCLARA has been a key player in the creation of RAGIE. What do you expect of the regional network and how can it contribute to the collaboration and the development of Latin American networks?**

Effectively, RAGIE is a national network that was born because of the ALICE project. Although the initial project has been related to infrastructure, for me RedCLARA has always been much more than that. The important thing is that it is providing means for the exchange between scientists and educators, not only between our countries and Europe, North America and other world regions, but what is even more important, between our own countries. I know that we have a tendency to interact with the great powers, but it is good to see interactions within our region. This is a huge breakthrough and if things go well, all Latin America will be strengthened.

**Can we expect the participation of Guatemala in TICAL2016?**

Although we are a small network (six member institutions), we are making all the efforts to participate in TICAL. In 2014 one of our institutions attended the event in Mexico and in 2015, two participated in Chile. We expect this number to grow in the next editions.



## Marco Antonio To: “It is very important to promote collaboration at international level”

The new academic director of the Guatemalan advanced network, RAGIE, is an old acquaintance of the ICT universe in Guatemala. Marco Antonio To was part of the first year of the network, in 2005, and received, 10 years later, the task of coordinating the development of the Central American network in the coming years. In this interview, he tells us a little about his professional experience, his involvement with the academic networks, and also discusses the challenges and expectations regarding the work he wants to develop in RAGIE, not only in the Latin American context

### **Hello, Marco Antonio! Tell us a little about yourself and your history.**

Hello! I am an electronic engineer graduated at the University Francisco Marroquín, with a postgraduate degree in Computer Networks at the same university; Master of Science in Telecommunications Management from the Oklahoma State University and a PhD. in Information Technology from the University Galileo (Guatemala), together with the University Telecom SudParis.

My experience extends over 18 years in Information and Communication Technologies, both in industry and in academia. I was founder of several careers at the University Galileo, being, one of them, the only postgraduate career in Information Security in all the country. I was a professor and lately a researcher. In addition, in the industry, I worked as Director of Technology at several multinationals in the area of infrastructure, network, servers and applications. Recently I have the responsibility to provide the necessary environment for research to be possible in the Galileo University, being director of research in technology, as well as driving the Research Laboratory in Information and Communication Technologies (RLICT) at the same university. I am also president of the IEEE Computer Society Chapter of Guatemala.

### **How did you get to know the academic networks?**

My involvement with the academic networks occurred firstly in the United States, when, studying my Masters, I used these networks. As soon as I returned to Guatemala, in 2005, knowing the RAGIE project, I became the technical contact of the University Galileo on the network. Then, I was appointed as the Coordinator of RAGIE's Technical Area, which led me into a large soaking in RAGIE connectivity with RedCLARA and among the member universities. I attended several meetings of the Technical Commission of RedCLARA (Caracas, Quito, Bogotá, San Salvador), then RAGIE was connected and did implement all the



Marco Antonio To

protocols, including some in what other networks had failed. We had enabled BGP in IPv4, IPv6, Multicast, among others, all about open source operating systems (Linux). This was well received by the international community.

### **RAGIE celebrated its 10th anniversary recently. How do you evaluate the growth of the network since its foundation, considering the objective of promoting the development of the Information Society, as well as the creation of academic and education networks in Guatemala?**

RAGIE has been an example that the universities of Guatemala can work together and in harmony to get a common purpose, that in the case of RAGIE is the development of the information society through new technologies. In the previous question I mentioned an example. Members of RAGIE had IPv6 natively deployed nine years ago. In 2015, a commercial Internet provider offered IPv6 to its customers, but the advanced network could empower people who are now able to implement such services on large scale. There are other examples, that enable advanced networks and where RAGIE could have a great impact at national level; from technical training, implementation of new services, to the collaboration in various international projects for the improvement of the Information Society in Guatemala.



**As the new director of the network, which do you believe are the main challenges of RAGIE and Guatemala in ICT? And how do you plan to overcome them?**

We'll always have many challenges, but I believe that among them is very important to promote collaboration at international level. RAGIE managed to create the "highway" to services that are available worldwide, but obviously the credit lies on researchers and academics who use the network for its research and collaboration projects. We can provide links and contact tools, but is in them the responsibility and the strenght to make this network to be exploited to the fullest. Our efforts are focused on promoting all the services that academic networks have and that are of great help for our users. Another important challenge is to get more members who can connect to the network and, finally, to get a financial support from the central government. In Guatemala, unlike other countries, the government does not contribute to the academic network and so far it has been a task of the universities (the only public and several private) to support RAGIE operational costs.

**RedCLARA has been a key player in the creation of RAGIE. What are your expectations about the regional network and how Guatemalans can contribute to the growth of the Latin American community of networks?**

We hope to keep united to the RedCLARA consortium, as it has been so far. If we remain united as a continent, we can compete globally and this will allow collaborative projects, not only among Latin American countries, but with any country in the world. RAGIE and all the networks ascribed to RedCLARA can contribute to the scientific knowledge. Our students are very talented and I think that if we give them good tools, they will offer better results



After their meetin in Rio

# LA Referencia, OpenAIRE and COAR renew their commitment in pro of a shared vision of a global network of repositories

There is growing recognition worldwide that our substantial global investments in research have much greater impact if they are widely shared and openly available to everyone. LA Referencia, OpenAIRE and COAR reaffirm their strong support for a shared vision of a global network of repositories as fundamental infrastructure for providing sustainable and open access to research outputs, ensuring that all researchers and citizens have access to the results of publicly funded research.

Luiz Alberto Rasseli

On November 25 and 26, 2015 representatives from LA Referencia, OpenAIRE and COAR met in Rio de Janeiro to discuss the adoption of common metadata guidelines for repository networks and identify areas for further collaboration. The meeting was hosted by the Oswaldo Cruz Foundation (Fiocruz), along with Ibict (Instituto Brasileiro de Informação em Ciência e Tecnologia), and is part of the Aligning Repository Networks work being lead by COAR.

OpenAIRE and LA Referencia represent two of the most advanced regional networks of open access repositories in the world. Closer collaboration between these two networks will enhance the usability and visibility of the collective content in the networks and enable the development of value added services across the two regions.

The three organizations therefore resolve to pursue their common vision through the following activities:

LA Referencie and OpenAIRE will adopt common metadata practices, based on the current OpenAIRE guidelines and the vocabularies being developed in the context of COAR, for repository networks and develop these guidelines in collaboration.

COAR, LA Referencia, and OpenAIRE will explore ways to build capacity for managing repositories and repository networks in Latin America, particularly in terms of the implementation of best practices.

Under the auspices of COAR, LA Referencia, and OpenAIRE will continue to work with other national and regional networks to promote the vision of a global repository network and investigate common services in support of open access and open science.

LA Referencia is the network of open access repositories from eight Latin American countries. It supports national open access strategies in Latin America through shared standards and a single discovery platform. LA Referencia harvests scholarly articles and theses & dissertations from national nodes, which, in turn, harvest from repositories at universities and research institutions. This initiative is based on technical and organizational agreements between public science and technology organizations (National Ministries and Science & Technology Departments) with RedCLARA.

OpenAIRE, funded by the European Commission under H2020, is the Open Access Infrastructure for Research in Europe, based on the network of open access repositories.



Foto por: Peter Illiciev (CCS/Fiocruz)

The Confederation of Open Access Repositories (COAR) is an international association with over 100 members and partners from around the world representing libraries, universities, research institutions, government funders and others. COAR brings together the repository community and major repository networks in order build capacity, align policies and practices, and act as a global voice for the repository community.

**Specific agreements:**

- The national nodes of LA Referencia will adopt the OpenAIRE Guidelines and, through LA Referencia, participate in the development of the guidelines with OpenAIRE as they evolve in the future.
- LA Referencia will develop a strategy and launch communities of practice to facilitate sharing of expertise across participating

countries and to support implementation of guidelines at local institutions.

- LA Referencia, OpenAIRE and COAR will partner to develop a blended learning course to build capacity in managing repositories in Latin America.
- LA Referencia and OpenAIRE will provide validators that will enable repositories to assess their level of compliance with the guidelines.

For more information about LA Referencia, please visit: <http://lareferencia.redclara.net/rfr/>





# Chile has the first Research and Development Center on "Internet of Things" in Latin America

Telefónica R&D Chile seeks to solve concrete problems, with significant contribution to the industry productivity challenges and the quality of life of the inhabitants of the country.

Telefónica

In 2014, Telefónica Chile created the International Centre of Excellence in Research and Development, in alliance with Corfo and the Universidad del Desarrollo. Currently, the center counts on a team of 40 people, including data scientists, Internet developers, experts in User Experience, Quality Assurance, among others. The initiative is focused on technologies and Internet solutions of Things (IoT), around three main industries: mining, agribusiness and cities.

"We strive to be recognized in Chile and in the world as an organization that develops cutting-edge technologies to solve complex, real problems, and that ultimately allows to empower people in the digital world," said Hernán Orellana, director of Telefónica R+D Chile.

For this, the center uses the vast global and local experience of Telefónica in connectivity and networks, supports its development and research process on an open platform (FIWARE®) and has a high performance team that first researches and models complex technological challenges and then design and develop vertical solutions that solve real problems of industry and inhabitants of the country (market pull), proposing new business models that allow to enable, technically and economically, its products and services.

Bearing in mind that the ultimate purpose of the Center is to generate effective impact on production systems and in the quality of the life

of people, it is possible to understand that this achievement is obtained as a result of a growing process of generating knowledge that will result in new patents and scientific publications.

A distinguishing factor of the Centre is the linking with its ecosystem, taking a coordinating and leading role that will establish an innovation pole around the Internet of Things, based on collaborative R&D center, technology companies and academic institutions.



Centro I+D Chile

## PUBLICITY REPORT

## Industry Solutions

"Mining is Chile's largest industry and it is experiencing significant cost increases, reason why it requires urgent improvements in productivity," expressed Hernán Orellana.

The higher production costs, associated with the age of the deposits, mineral extraction with lower law, the shortage of human capital and the higher labor turnovers add up to the lower metal prices on the international stock exchanges, requiring simpler processes to ensure economically viable projects in medium and long term. In this sense, the mining industry in Chile faces the challenge of maintaining its global leadership, betting on technology solutions that address the challenges that it faces.

In agriculture, the Chilean fruit exports reached record levels in markets around the world. However, the information requirements and phytosanitary regulation in these markets are also growing. For this reason, in the agricultural industry, the R&D center offers technological solutions with a focus on production, quality and sustainability.

Another important challenge is to create cities that are better to live in. To this end, the work focuses on the use of technologies "machine to machine", which allows the compilation and transmission of information to help the cities to be more secure, sustainable, efficient, convenient and interactive.

With respect to the projects related to the three industries, stands a five project folder with already begun worklines and with the first sprints finished.

In mining, the initial work has been focused on the power management for processing plants. The work is being done in partnership with the Empresa Nacional de Minería and Minera Amalia.

In agribusiness, the work is to develop an intelligent platform to increase the efficiency of the irrigation process, improve the quality of production and the forecast of frost, among other topics.

With respect to the smart cities, a collaboration agreement was signed with the Secretariat of Transport of Chile in order to work on projects that will enhance the mobility of people on public transport

## Boosting the ecosystem

Chile has the opportunity to become an R+D+i Hub (Research, Development and Innovation) in Latin America. To reach the station, it is necessary to boost the economic competitiveness, strengthen the public-private relationship, reinventing the link between academia and companies, leverage the human capital and provide new value to the world.



Hernán Orellana, Director of Telefónica R&D Chile

For this reason, it's necessary to boost the ecosystem, so that it becomes an ally around the challenges and in which its actors see concrete value in being part.

The R&D Center held a strong work of promotion and positioning at national level, achieving important agreements in different models of collaboration and business with suppliers, community developers, entrepreneurs, universities, other research centers, public and private agencies, among others.

One of the challenges of the R&D center is to make the importance of the Internet of Things to be understood in academia. For this reason, lectures were held in higher education institutions at national level and alliances were signed with several of them, among which stand out the Pontificia Universidad Católica de Valparaíso, the Universidad de Talca, Universidad Tecnológica INACAP and the Technical Training Centre Lota-Arauco. In the coming days new agreements will be signed with three other Chilean educational entities.

The purpose of these alliances is to establish mutual cooperation mechanisms to implement and develop projects in the educational field and study skills and application of technologies; conduct training, certifications and implement thematic studies related to technology and the Internet of Things.

Telefónica R&D Chile permanently organizes open workshops, seminars and lectures to the entire community, in order to publicize the work and approach it to the different parties that make up this ecosystem.

During 2015 there were over 40 activities. This number includes workshops, whose purpose was to train on the use of technology platforms development of IoT, and various specialized seminars such as the First Smart Mining Encounter; the Smart Seminar Agro and the Centered Research User Seminar, creating a meeting place for interested persons and experts in the areas.

Because of the large call, currently it is being developed the



Telefónica R&D Chile

second cycle of lectures, entitled UX 4 IoT. These meetings have the interest not only of those working in the customer experience, but also of all those who feel motivated to learn more about this topic.

Another way to boost the ecosystem is through the distinct challenges that seek to promote technological development in Chile, through an open call to designers, technology developers and manufacturers to create alliances with companies, making them feel partners of the Centre of R&D. It is currently being developed the Challenge "Conteo de Polillas Lobesia Botrana" whose goal is to call hardware developers to create a sensor that allows the remote count of moths in order to improve actions to eradicate them.

*But ... what is the Internet of Things?*

The Internet of Things (IoT) is a concept that recently gained an important place. Is understood as a network of objects interconnected through Internet that generate a lot of information from which you can model, predict events and optimize processes, among other things.

The modern concept of IoT is different from the old interpretations:

- The ubiquity. The information of the objects is available on any device connected to Internet
- Interoperability. This means that different sources of information (types of sensors) may be incorporated in order to

better understand situations or complex processes and that IoT can climb in functionality with the development of other people in a simple way.

The IoT will have a tremendous impact on the industry; the sensors (connected and intelligent mini devices) or actuators (sensors that detect and perform an action) may be incorporated in all the stages of the production processes. This will generate models to improve the efficiency and consume less raw materials and basic elements, such as water and energy. It will also predict failures and anticipate or prevent the stop of the process, avoiding the deterioration of its productive potential.

Simply put, the Internet of Things is the ability to add intelligence to objects. This intelligence can be a measurement of any kind (temperature, pressure, etc.), act as necessary to detect some condition or even feed a complex multivariate making system that will improve the quality of life of people or the efficiency of the industry.

In the opinion of the director of Telefónica R&D Chile, Hernán Orellana, "the Internet of Things is no longer just one more technology announced on the horizon. It will affect and change the competitiveness of economies around the world and therefore it is necessary to be a pioneer in the area. For the first time in history, Latin America, in general, and Chile, in particular, have the possibility to be the main characters in this new industrial revolution, not just spectators."

# Blog "In the field" conta as histórias e projetos de sucesso do mundo das TIC

Not only of cables, optical fiber and routers is made the universe of ICT.

Behind all the infrastructure of networks we can find the access to content and resources, the connection between people, the delivering of new experiences, collaboration and cultivation of interdisciplinary communities. A whole universe of stories, people and achievements.

Tell these good stories and ICT projects in the world is precisely the focus of a blog called "In the field", an initiative of the Australian advanced network AARNET. On the page, you can find reports of initiatives and programs of different academic networks in the world, including RedCLARA . The stories are divided into categories such as " Art and Culture ", "Education", "Health", "Climate Science", among others.

Meet "In the field" in : <http://www.inthefieldstories.net/>



## The Case for NRENs:

# A suitcase with the resources that every NREN should know

Over the past year, members of the Global PR network and representatives of regional networking organisations, led by Helga Spitaler, Regional Marketing Officer at DANTE, have been gathering guidance material and tools to support in particular new and emerging NRENs around the world and help them make a case for their 'raison d'être' towards their key stakeholders. This work was primarily undertaken and driven by demand from a number of regional networks where NRENs are starting up to share global experiences and best practice in setting up a sustainable organisation.

The result of a series of VCs, face-to-face meetings, wading through tons of existing material as well as brand-new contributions is a pool of resources for NRENs to tap into. This "Case for NRENs portal" is accessible at [www.casefornrens.org](http://www.casefornrens.org).

### What's inside the case?

The portal structure, directions on how to use and contribute to it are available from [http://www.casefornrens.org/How\\_to\\_use\\_this\\_portal/Pages/Home.aspx](http://www.casefornrens.org/How_to_use_this_portal/Pages/Home.aspx)

Useful best practise tools for novice NRENs, the core of this repository is an extensive Document Library ([http://www.casefornrens.org/Resources\\_and\\_Tools/Document\\_Library/Pages/Home.aspx](http://www.casefornrens.org/Resources_and_Tools/Document_Library/Pages/Home.aspx)). This is by no means exhaustive or complete - like the portal itself, this is just a starting point and needs to grow further with additional contributions to fulfil its potential and usefulness.

In the 'Contact Us' section we provide details of regional mentors to provide guidance to NRENs in loco. ([http://www.casefornrens.org/Contact\\_Us/Pages/Home.aspx#contact](http://www.casefornrens.org/Contact_Us/Pages/Home.aspx#contact)).

# AGENDA 2016

## January

11-12 | TF-MSP workshop on NREN AUPs and CPs  
Berlin, Germany  
<https://www.terena.org/activities/tf-msp/meetings/20160111/>

17-20 | PACIFIC TELECOMMUNICATIONS COUNCIL (PTC'16)  
Honolulu, Hawaii  
<https://www.ptc.org/>

18-19 | Cloud Services for File Synchronisation and Sharing  
Zurich, Switzerland  
<http://cs3.ethz.ch/>

25-29 | 41st APAN Meeting  
Manila, Philippines  
<http://www.apan.net/meetings/Manila2016/>

27-29 | PRAGMA30 (Pacific Rim Application and Grid Middleware Assembly)  
Manila, Philippines  
<http://pragma30.pragma-grid.net/dct/page/1>

30-31 | FOSDEM '16  
Brussels, Belgium  
<https://fosdem.org/2016/>

## February

15-26 | APRICOT 2016  
Auckland, New Zealand  
<https://2016.apricot.net/>

29/02-03/03 | 7th RDA Plenary (Research Data Alliance)  
Tokyo, Japan  
<https://rd-alliance.org/plenary-meetings/rda-seventh-plenary-meeting.html>

## March

01/03-30/04 | eResearch Africa 2016  
Western Cape, South Africa  
[http://www.eresearch.ac.za/home\\_er](http://www.eresearch.ac.za/home_er)

13-18 | ISGC2016 (International Symposium on Grids and Clouds)  
Taipei, Taiwan  
<http://event.twgrid.org/isgc2016/>

8-9 | GN4 Symposium 2016  
Vienna, Austria  
<https://eventr.geant.org/events/2202>

22-24 | Networkshop 44  
Manchester, England  
<https://www.jisc.ac.uk/networkshop>



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