DeCLARA

Special Edition: Innovation

The call for papers for TICAL2014 is now open

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Editorial

Mauro Bernardes

Head of the Technology Division of the Electronic Computer Center (ECC), University of São Paulo (Brazil). Member of TICAL2014's Program Committee.

Do more with less resources! An old demand increasingly heard in Latin America. But, after all, is it possible to improve the quality of education and research, of services or products offered, without significantly increasing the budget? For many managers and scholars this is only possible through the use of opportunities arising from INNOVATION and the consequent minimization of the inherent risks in our use of these opportunities.

There are different ways to define innovation. Many people think that innovation is any novelty displayed by the productive sector through research or investment, increasing the production process efficiency which leads to a new or improved product. From this perspective, those who innovate are in an advantageous position compared to others.

In academia, not innovate also means stop responding to the expectations of a society that increasingly demands the generation of new innovative talents, the anticipation of fundamental knowledge for innovation in diverse areas and the transfer to companies. For companies, being less innovative means, for instance: being less competitive, having less visibility, stop accessing new markets or losing the opportunity to increase their profit margins.

Innovation requires interaction. To innovate in a lonely fashion it is much more difficult, if not impossible. Then it is perceived that Information Technology must increasingly act as a springboard for greater synergy between a set of institutions that make up a system of innovation, such as: universities, research centers, development agencies, investors, governments and businesses with customers, suppliers, partners and the community.

Given this scenario, this edition of DeCLARA newsletter comes at a very opportune time. A moment in which is perceived a great request for the exchange of innovation-related experiencies coming from different sectors of Latin America and, at the same time, when the call for TICAL2014 Conference has been launched (http://tical2014.redclara.net).

After the great success of previous versions, the TICAL conference has established itself as a space for exchanging innovative ideas among ICT managers of Latin American universities, which in 2014 will be organized around five distinct areas: ICT Solutions for Education and Research, ICT Management Solutions, Government and Administration of ICT, Infrastructure, and Information Security.

Do not miss in this edition of DeCLARA the experience shared by leading specialists in academic management of critical aspects of the innovation process. Be inspired by these experiences, continue to innovate and be prepared to share your experiences in TICAL2014 in Cancun, Mexico, from 26 to 28 May 2014. The deadline to submit your works closes on March 7, 2014.

While we are preparing for TICAL2014, I wish you a good reading!

Prepare your luggage for next May... Destination: Cancun!:

The call for papers for TICAL2014 is now open

The Fourth Conference of Information and Communication Technology Directors from Higher Education Institutions, to be held between 26 and 28 of May 2014 in the Cancun Center (Cancun, Mexico), calls all ICT leaders of Latin American universities to send their works for contest until March 7th, 2014 to tical@redclara.net.

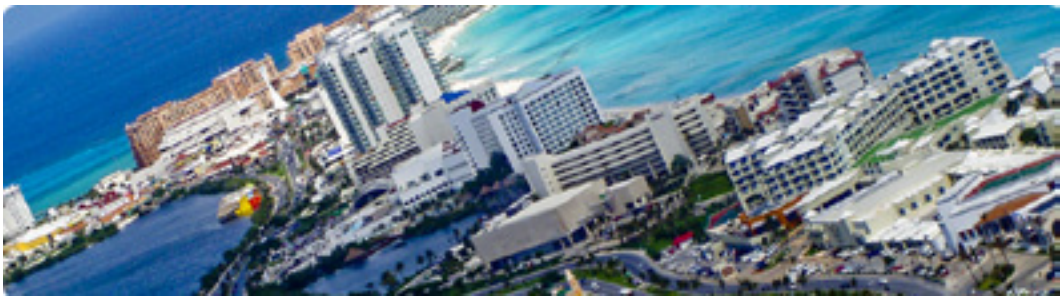
In order to enhance the work and the role of the Information and Communication Technologies (ICT) Directors from universities of the region, since early 2011 the Information and Communication Technology Directors Network of Latin American universities has built a collaborative space that seeks to contribute to the continuous improvement of its institutions.

The TICAL Conference is the place where the community come together, which is feed primarily with the experiences, knowledge and initiatives presented by universities, providing significant and unprecedented solutions around ICT topics for higher education institutions in all the areas of the university labor.

Suggested Topics

ICT Solutions for Teaching and Research:

Possible topics include: Scientific visualization, Tools for simulation, Tools for collaboration, Virtual computing laboratories, Management and distribution of specialized software, ICT solutions for MOOC (Massive Open Online Courses) implementation; HPC (High



Performance Computing) solutions development, Classroom technology, Knowledge management (repositories, digital magazines, etc.), Integral video conferencing solutions, Institutional social networks.

ICT Solutions for Management:

Possible topics include: Collaborative work solutions, Project management solutions, Solutions that enable process integration, Business intelligence solutions*, Support for accreditation process, Documental management and digitization, Management solutions based in cloud, Management solutions to be accessed from mobile devices, and Solutions based on third party services.

*While the term "business" is not entirely pertinent in most institutions of higher education, this term is used because that is how certain solutions are known. In this context the term "business" must be related to the main objectives of the universities, and not to a concept focused on profit.

ICT Governance and Management:

Possible topics include: ICT area and HR organizational structure, Policies and good practices in talent acquisition and retention, Budget and cost and service management, ICT strategy definition, Project management, Innovation management, Adaptability to environment, ICT knowledge management, Process management, Metrics, Data center management, IT ecological sustainability management (Green IT).

Infrastructure:

Possible topics include: Network engineering and management to support BYOD**, Wireless networks (internal and external WiFi solutions), PKI infrastructure, Identity solutions (single sing-on and mobility), Storage solutions, Data center, Public and/or private clouds** integrated to infrastructure, VOIP solutions, IPv6 implementation, High performance computing (HPC), and Ecological sustainability in IT acquiring (Green IT).

**The concepts of "Cloud", "BYOD" and mobile devices are issues related to infrastructure, if the describe material is a solution related to the previous topics it should be mention and should be clearly stated the importance of the theme for the Conference.

Information Security:

Possible topics include: Solutions to restrict access, International standards implementation, Security in the data management, Legal aspects in the delivery of University services, Privacy protection, Service quality and providers security management; Cloud services security, Relevant aspects to consider when incorporating social networking, Planning and safety management, Protection of intellectual property of digitized information.

Important:

It is expected that the presented works in each suggested topic are related to ICT and how its use or incorporation contributes to resolve the

problems that universities in the region are facing, particularly considering the following concepts:

- Experiencies: the papers should be mainly focus on the experiences; TICAL is a space to share successes and failures among peers. No merely scientific or academic papers are intended.
- Projects or services: works should describe implemented services or executed projects.
- ICT area: TICAL gathers universities ICT managers. That is why it is intended that the papers are relevant for them.

Important dates:

March 7th, 2014: Deadline for papers submission

April 8th, 2014: Notification of selected authors

May 26 to 28 2014: TICAL2014 Conference - Cancun Center, Cancun, Mexico

Special Edition: Innovation

In January 2013, RedCLARA launched i + CLARA, a human and technological platform devoted to promote the linkage between university and business (also meaning science and companies), particularly among the institutions that are part of the research and education networks connected to RedCLARA and the Latin-American companies, aiming both at linking university and enterprise and training. Within this scenario a series of interviews dedicated to analyze innovation in the region and the need of establishing this connection between the academia and the industry have been published in i + CLARA website, and here we invite you to check out those converstions.

Visit i + CLARA (only in Spanish): http://innovacion.redclara.net/.

Tom Hockaday, Managing Director of Isis Innovation Ltd:

Latin America must follow its own path to innovation

Tom Hockaday became Managing Director of Isis Innovation Ltd in 2006, having joined Isis in 2000. Owned by Oxford University, Isis is known at an international level as a pioneer initiative in the linkage of academia and industry and it has proof its success in this field. Abouut that success and of Isis experience we talked with Tom in this interview that give us some hints regarding how to foster innovation at huge and tiny levels.

María José López Pourailly

Why is innovation so important today?

I like this definition of innovation: 'the successful exploitation of new ideas'. I remember seeing this definition from a UK government department about 20 years ago; it is short and memorable. Innovation is not invention; invention is having the new ideas in the first place.

Innovation is always important, it always has been, it always will be, it is human nature. As a collection of societies around the world we are constantly creating new challenges for ourselves which can be overcome with the successful exploitation of new ideas. In many cases these new ideas do not involve new technology, but of course in many other new technologies are part of the answer.

Technology innovation helps address challenges in communications, in healthcare, in entertainment. It also plays an important role in creating sustainable economic growth in regions and countries. Each economy is involved in using all resources at their disposal to develop successfully.

How did the University of Oxford realize about the importance of establishing a technology transfer business, such Isis, 13 years ago? Which

was the input behind the decision of creating Isis?

Isis Innovation was set up in 1988 – 25 years ago. Isis Innovation was established by the University "to ensure that the results of research, having been adequately protected by way of patents, bring reward to the University and the inventors". Since then Isis has filed 1500 new patent applications on Oxford inventions, concluded 750 technology licence agreements with industry around the world and helped establish 80 new Oxford technology companies. This has raised an estimated £500m in investment finance.

Isis was formed at a time when there were no established models of how to successfully commercialise university IP. We are incredibly proud to have been a trailblazer in this area, bringing the benefits of new technologies to society, contributing to the economy in raising investment and creating jobs, and playing a key role in establishing relationships between the University, industry, and investors.

Why is important the relationship between university and business?

The University of Oxford, like all universities, thrives when it engages with society. Academic freedom to generate and develop new thinking drives progress, and tangible benefits from research are made accessible through commercialisation. Isis has been at the heart of this activity for Oxford for 25 years and its contribution to the University is highly valued and appreciated.

Universities have new ideas, business wants new ideas. Universities exist for a certain set of reasons (teaching, research) which are different to the equally valid reasons why business exist (to increase shareholder value). Both play an important role in society; but they are different.

Most countries want to develop their knowledge-based economies. Some of the knowledge is in the universities. How do you get out into business? The answer in part is with successful technology transfer activities.

Which would you identify as the steps that must be given/achieve in order to produce or promote this link between university and business/ enterprise?

On the University side, we need leadership from the top, proclaiming that engagement with industry is a good thing; we need stories that we can tell about the successful interactions with industry, that bring benefits back to the people inside the University, as well as outside. Then we need resources to invest in

On the business side, we need senior managers that are open to open innovation, bringing in new ideas to their business from outside. We need investors who are willing to make long term investments into early stage technology companies.

On government side, we need a range of policies that people understand, that do not always change which promote interactions. For example in the UK we have the R&D Tax credit scheme, the Enterprise Investment Scheme for investors, and the new Patent Box.

Not-for-profits, charities, foundations also have a role to play. In some countries (Spain for example), foundations established with endowment money from successful businesses are playing a growing role in developing technologies closer to market and promoting a vibrant innovation system in their regions.

Which would you identify has been the key for the success of Isis?

Our role is to help transfer research outputs from Oxford University to industry so that they receive investment and are developed into better products and services for people.

The key factor for us has been recognizing the essential role of the researcher/scientist/inventor as being at the start and heart of the process. Our

approach is to "helps researchers who want help to commercialise the results of their research". We focus our activities on providing support and expertise to researchers to encourage them to engage in technology transfer.

We also run Oxford University Consulting which helps connect the expertise of Oxford University academics with clients from industry and other parts of society.

In recent years we have taken our experience from Oxford and developed Isis Enterprise as a technology transfer and innovation management consultancy. We are now able to help clients around the world develop their innovation systems.

What path should Latin America follow in order to consolidate itself as a competitive region?

Its own path!

The Global Innovation Index 2013 recently published by WIPO describes this well: "The GII explores how innovation has benefitted from 'local specifics' in different parts of the world. One key message is that too many innovation strategies have been focused on trying to replicate previous successes elsewhere, like Silicon Valley in California. However, fostering local innovation requires strategies that should be deeply rooted in local comparative advantages, history and culture. They should be combined with a global approach to reach out to foreign markets, and attract overseas talent."

The message I take from this is that any region, on whatever scale, should look at its characteristics, its strengths, weaknesses, areas of comparative advantage, and develop a well-focused plan. Modern democracies find this difficult because the people do not like to be directed by the government.

In Isis we help do this by assessing the health of an innovation ecosystem (in terms of research and technology innovation) against a range of elements in the research base (universities, research institutes, hospitals), industry and finance (open companies, investors), and government policies and schemes (grants and tax breaks).

Prof. Dr. Jorge Luis Nicolas Audy. PUCRS:

"Innovation must be based on a high quality education"

El valor que la Pontifícia Universidade do Rio Grande do Sul (Brasil) otorga a la innovación es central; sobre éste y su visión del proceso de innovación, desarrollo y la vinculación universidad-empresa, se estructuró la presente entrevista con el Pro-Rector de Investigación, Innovación y Desarrollo, Prof. Dr. Jorge Luis Nicolas Audy.

María José López Pourailly

Why is innovation so important today?

I understand that the focus of UNESCO on this is very clear, by indicating that Education and Innovation are determining factors of the development of its member countries. In this sense, innovation can bring new opportunities for employment and of income generation for the countries, keeping education as the basis of this process of transformation of the knowledge society in which we live.

Why innovation is a mandatory task for countries?

I see no possibility of a process of sustainable development in the twenty-first century countries that do not use innovation as a platform for transformation towards building a knowledge society, that would be attentive to environmental issues and quality of life of their population. Several studies point to the emergence of innovation as one of the pillars of the XXI century new society. In this sense, national states must understand innovation as a strategy for the development of their nations.

Which are the critical aspects of innovation?

Innovation must be based on a high quality education at all levels, from primary school to

the upper level, giving equal conditions to people to have access to knowledge and to those opportunities given by today's society. This issue of equity and access to quality education I think is the most important in building a society where innovation will make the difference in the pursuit of a better quality life and in greater harmony with the environment.

Innovation systems started at statement and policies level in Latin America for quite some time, however there is not much progress, why has this happened?

I think that Latin America, and particularly our universities, took too much time to understand the process of change from the revolution of techno- science in the 70s. Countries like the U.S. and Canada began this movement in the innovation area shortly after the war (World War II), in the 50s, in Europe the movement had its beginnings in England in the 60s, 70s in Germany, and the rest of Europe and Asia followed them from the 80s. In Latin America this movement in the area of innovation became real only in the early 2000s. We are late in this process, but we exceeded an important milestone, the one of the awareness; what we need now is more speed and objectivity to make the necessary changes. This is true for both our countries - the development of national strategies in the field of innovation - and for our companies and research and education institutions, which become central players in this process of development in the XXI century.

Why it is so important the linkage between academia and industry?

The role of universities and research centers is central to the innovation process, making it one of the most important assets for innovation to occur systemically in a modern society. In this regard, the interaction between University and Industry is very important, so that the knowledge created in the University is effectively transferred to the society, by means of business activities, adding extra value to knowledge, resulting in new growth opportunities, job creation and revenues, creating a virtuous cycle of knowledge, innovation and development generation. However, I insist that the approach seems more correct is the one proposed by Sabato (the Sabato Triangle) or the one of Etzkovitz (the Triple Helix Theory), where the interaction that is underlying in the development of the knowledge society involves University, Business, Governments, and not only to University and Industry as your question points. The role of local and national governments is very important in the articulation among the society stakeholders and the development of public policies that lead to innovation in all spheres of society.

Which are the links that must be joined to produce this linkage?

To have a systemic effect that really makes the difference in terms of society development, there must be well-designed policies, both at national and local levels, as well as businesses and centers of knowledge generation, positioning innovation as a development strategy at an institutional and business level, both domestically and within the region. A cultural change in the different actors is needed, so that they understand the importance of innovation for the sustainable development of the Knowledge Society .

How does PUCRS promotes the link between scientific production and market opportunities?

In the past 10 years PUCRS has developed a series of policies and institutional mechanisms to promote innovation, the base has been the creation of the Inovapuc Network, which brings together a range of actors and projects to stimulate and encourage innovation. The Science and Technology Park (TECNOPUC), the Business Incubator RAIAR, the Innovation Center, the Entrepreneur Nucleous, and the IDEIA Institute are part of the Network. At the end of the past year, consolidating the movement that began in PUCRS in 2001, it was created a specific Pro - Rector for this area, the one for

Research, Innovation and Development, and it was established with the aim of accelerating and expanding the role of the University either in the fields of education, research, in building a more aligned society in partnership with the times in which we live, where education , research and innovation are essential to the development of a sustainable knowledge society and to improve the life quality for its people.

Which way should Latin America follow if it wants to be consolidated as a competitive region?

I think that in Latin America we must accelerate this process of cultural change and of understanding of the importance of education and innovation in the sustainable development of our countries. The role of knowledge and research, the importance of innovation as a way to transfer the knowledge generated for society and quality education for all as the basis of this process should guide public policies of our countries, with views to an effective integration of Latin America in global scenario in a society and an economy increasingly based on knowledge.

Jorge Yutronic:

"If a country does not innovate, it cannot meet the expectations and needs of its people"

Expert in innovation and university management, to the credits of the Chilean Jorge Yutronic Fernández we must add relevant memberships in the National Academy of Engineering in Chile and Governing Board of the International Center for Science, Technology and Innovation (Kuala Lumpur, Malaysia); highlighted as outstanding engineer by the IEEE (Institute of Electronic and Electrical Engineers, USA) and the AIE (Electronic Industries Association of Chile), in this interview he refers to the central importance of innovation for Latin American countries and the relationship between university and industry.

María José López Pourailly

Why is innovation so important today?

Innovation creates value for people and society. Without innovation we would not have electricity or antibiotics, or telecommunications systems or means of preserving food or movies or many other advances. Innovation is a human expression that can be verified since prehistoric times in all cultures. Innovation emerges as a means to address the challenges of the environment and is based on both the creativity of people and as their entrepreneurial initiative.

Today innovation is more important than ever because people want a better world while there are alive. A century ago, people were satisfied with the changes that will benefit their children. Now that expectation is not enough, people want more welfare as soon as possible.

But the importance lies not only on expectations of higher welfare but also in those of occupation. Innovation creates new jobs, most of them

attractive to people. The industries that innovate are the major sources of new jobs.

In short, innovation is very important in our times because it meets expectations of welfare and labor pool of people. As increasing educational levels of the population, the greater is this tendency.

Why innovation is a must in countries?

It has already been said above. Innovation is key to society and, indeed, for countries. If a country does not innovate, it cannot meet the expectations and needs of its people.

Innovation can arise within a country or abroad. A country that aspires to be prosperous must learn to balance the two sources of innovation. A deficit of own innovation implies excessive dependence on others, a lack of external innovation flow involves delays in some areas.

Thus, innovation is key to a country. And so is the management of innovation.

What are the critical aspects of innovation?

The critical aspects of innovation are generating innovations and taking them on people, institutions and society. Both aspects are a critical copula. If any of them is missing there is no value creation, particularly on welfare.

There are regions that have shown to be more suitable for the generation of innovations, which originates mainly in their concentrations of advanced human capital. Other regions are very suitable for the adoption of innovations, usually originated in open and empathetic cultures. Globally there are still few regions that are simultaneously highly originators of innovations and adopter. For example, California and New York are among them.

These same critical aspects of generation and adoption are verified to level of institutions and companies.

Innovation systems began to level statement and policies in Latin America for quite some time, however no progress, why is this?

Innovation has advanced in some parts of Latin America, but very heterogeneous among countries. For example, Brazil has shown innovation worldwide in areas as diverse as bio-fuel ethanol, aerospace industry and deep oil exploration (pre-salt).

However these cases and others in Chile, Mexico and in some other countries, is truth that innovations in Latin America have not been produced at the same level of expectations and statements made by governments through their national innovation systems. This relative delay have known causes, among which we must highlight the insufficiency of advanced human capital, the conditions in some countries that discourage innovation, insufficient linkage of the universities with their environment, the poor research and development activity in fertile areas for innovation in particular within the companies, insufficient investment in innovation, research and development. In short, the national innovation systems have not had sufficient range to meet the challenge.

To this chart we have to add the renewed importance acquired in the last 10 years to production around natural resources, mainly due to the significant increase in the demand that comes from the Asian countries. This has caused that most of both domestic and foreign investment is done in this kind of ventures with the consequent effect on attraction of professionals to companies devoted to explote those natural resources.

In short, to advance steadily in innovation in Latin America requires deeper policies and bolder investments that account for the facts mentioned above.

Why is important linking university and enterprise?

Linking university and enterprise is very important because through that linkage many initiatives of change around new knowledge that will set the trend in creating value in society can be incubated.

Indeed, the link with business and society makes it possible for the university to anticipate the understanding of the knowledge that will be critical in creating value and welfare. With this understanding you can better target the training of professionals R&D, technology transfer and extension. With this the chances of generating both incremental and radical innovations increases and also increases the adoption of innovations in society.

However, if the link is weak or belated, the effects are minor. This is what we can observe, in general, in Latin American universities. Not that the relationship does not exist, but it is scarce and mainly reactive.

What are the links to be joined to produce this linkage?

The links to produce a highly effective linkage between universities and enterprises are basically three: the institutional will to give enough importance to this function, the effective allocation of capacity for implementation, demonstrating important benefits that come from this function. When these three links pivotally deployed in a number of cases, contagion and momentum will occur as has happened elsewhere.

The institutional will must be strongly expressed in the universities, in their strategic plans, priorities of its governing bodies and in the interests of authorities and academics. Some universities in the region have already begun these changes, but they are still far from Australian universities that have made reforms in this area over the last 30 years. At the enterprise level, this will, shall be expressed as the demand for knowledge and technologies they need to stay competitive. What happens in the global society is that firms in a country have direct access to technology companies, universities and I+D centers anywhere in the world. This causes local universities not entitled to claim or interest of companies with real intensity because they are working with more proactive institutions and countries in this regard. This poses a significant challenge to local universities: they must take their position on a global stage.

The link of the suitable capacities and skills for linkage with business, means that the academics must be prepared for this purpose, effective R&D and innovation capabilities, relevant laboratories and, according to state of the art, competent professionals for management and appropriate financing systems.

The results of the linkage will be traduced into products and ventures that society will really value, identifying with them and recommending them.

In several Latin American universities is possible to observe these three links. But they are not specified tightly enough, neither are they all concurrently present. Public policies can ultimately help to clear this situation.

Which way should Latin America follow if it wants to consolidate as a competitive region?

Latin America is competitive in some areas. For example, Chile's copper industry is globally competitive, music production including from referrals of Cuban son to tango, it is also internationally competitive. Latin America has several clusters that are competitive. What happens is that Latin American countries, each as a whole, are not competitive enough to meet the needs and expectations of their people. In progress towards achieving sufficient competitiveness, countries must address three fundamental and related challenges including: increasing the volume and quality of innovations to

achieve more wealth and wellbeing; significantly increase internal equity to achieve adequate levels of participation and access all levels of life of individuals, more and better education throughout the life cycle of individuals.

These challenges are relevant and difficult, but affordable. Once they are assumed in the countries of the region, and competitiveness and also cooperation are showing off systematically their fruits, then you can consider the challenge of consolidation. There is much work to be done before that happens. This is the task of our time.

Enrique Peláez, Ph.D.:

"Innovation must be based on high quality education"

Presentation card: Enrique Peláez , Ph.D., is professor of the Faculty of Electrical and Computer Engineering, Director of the Center for Research on Information Technologies of ESPOL (Escuela Superior Politecnica del Litoral , Ecuador) and coordinator of the Park of Knowledge PARCON - ESPOL. With the ownwer of these credentials we had a dialogue on innovation that though it had several critics it shows the potential that Latin America has.

María José López Pourailly

Why is innovation so important today?

The development of new information technologies, that facilitate the ubiquitous and immediate access to knowledge, is causing a growing demand for qualified people with skills that enable them to recover, analyze and transform that knowledge into new products, services or processes. That is, innovate to distinguish your service/product from the wide range of services and global competition, so to stay in this global game of supply and demand, and generate wealth and welfare.

All these changes are also creating new ways of working and new economic scenarios where the key to create jobs and improving the offer is based on innovative ideas applied to new products, processes, services or business models; this is an economy where risk, uncertainty and constant change go from being an exception to be a reality.

Therefore innovation is important in this new scenario. Productivity and growth are based on the ability to transform the knowledge in order to improve products, services and processes.

Why is innovation mandatory for all countries?

Monitoring reports in the region show that innovation has directly contributed to the

economic growth of countries, there are increases in productivity that are causing positive indirect effects induced by innovative companies, with improvements in exports and increases in the job offers.

Innovation creates demand for new jobs, possibly better paid. The transformation of innovative products and services to meet the demands of an increasingly digital society is changing the dynamics of the labor market, creating a demand for new types of jobs.

An interesting aspect to highlight is that investments in innovation have been essential in the long-term economic growth; and those countries with better rates of investment in research and development recorded higher growth rates.

Innovation has become a key pillar of the sustained growth of the economies in this era of knowledge, therefore it is an unavoidable task for all countries the promotion of these processes, fostering research and training of human talent and the effective management of innovation.

Innovation should be a transversal development strategy for all nations, and thus promote improvements in the supply to their communities of products, services and processes. Although innovation is by nature a risky business, the new knowledge economy demands major innovative efforts to enable the countries to remain competitive, and to meet the expectations and needs of their citizens, even more if innovations are external to a country, which means its dependence on others.

Which are the critical aspects of innovation?

Innovation starts with people, so in my opinion the most critical aspect of innovation is education. The construction of an innovative society that seeks a better quality of life for its citizens, and in harmony with the environment, depends on the level of education of its citizens. Innovation must be based on a high quality education, from basic to superior levels, promoting equal conditions of access to knowledge and to the development opportunities that this new society based on knowledge, offers .

There are various aspects and dimensions that fosters generation and adoption of innovation:

- Qualified and of quality human talent. In recent years, due to the rapid advancement of ICT, companies are facing difficulties in generating or adopting technological innovations, due to the lack of skilled professionals in information technologies.
- Innovative will and attitude in companies, institutions and citizens.
- Venture capital and resources and effective access to information for innovation at lower costs, with sufficient investment in both tangible and intangible assets.
- Mechanisms for protecting innovations.
- Collaboration between researchers, universities and industry to promote agglomeration and other ways of collaboration between companies and organizations related to innovation processes.
- Simple management and promotion of innovation procedures.
- Scientific and technological culture and innovative spirit in citizens and companies, which is achieved through education.
- Development of knowledge parks, incubation of innovative companies and technology centers to carry out activities that promote and foster innovation.

Innovation systems started at statement and policies level in Latin America for quite some time, however there is not much progress, why has this happened?

A critical component of innovation is education and development of human talent. This aspect of innovation has not kept pace with the statements and political commitments, nor have

occurred in the dimension that triggers innovation processes, as indicated in the previous question. It is well known the importance of the inclusion of policies that facilitate innovation processes in the strategies of governments, and there is awareness about the need of accelerating the necessary changes in education processes, and the availability of capital for risk investment but there are not enough actions that help to overcome the insufficiency of advanced human talent, including operational actions in regulations that encourage innovation, promote effective linkages between universities and the business sector, and promote the development of the little activity in research and development in the companies, as well as insufficient investment to foster research in universities.

There are examples such as Brazil, Chile and others in Latin America that have advanced, and unevenly, but it is still expected that they meet expectations and the statements made by their governments and the results of the strategies implemented by their national innovation systems.

One dimension in innovative activity measuring in the countries includes indicators on investment in research and development, patents and scientific publications, and in all these indicators, Latin America still gets poor results compared to Europe, North America and the emerging economies such as Asia.

Although each time an innovation occurs there's usually an adoption or the creation of a service, a process or a new product protected by patent or copyright registration, political and business leaders are still debating how to encourage the adoption of production risk in order to make companies and institutions choose improvements through innovation, with a view to more demanding and selective markets, resulting in better economic performance for companies and their countries.

Today Latin America is percieved as a region of new opportunities, foreign investment is considered safer compared to the troubled European economies and other investment destinations that were traditionally more desirable.

Why it is so important the linkage between academia and industry?

In the innovation processes the role of the universities is fundamental. As I indicated before, one of the most critical components of innovation is education and the development of human resources, so that the relationship between university and the business sector, and certainly with the government, is the foundation that holds innovation. This relation can guide the training of professionals proactively to address market's demand, with global vision based on new knowledge and adding value with research that seeks to solve local problems and that meets government strategies to support the development of productive matrices. This ratio would increase the need to innovate products , processes, services and it would contribute to adopt them in a more effective way.

Which are the links that must be joined to produce this linkage?

For the effectiveness of the linkage between university and enterprise the commitment of the participating institutions it is essential. Experience has shown us that the convenants and the cooperation agreements produce results when "Champions" arise: those who promote concrete and proactive linkage. In universities these specific actions are effective when there is institutional will for bonding in the strategic plans and in the annual operating plans, with expected measurable and verifiable results. In business, often linking with research centers and universities is a matter of survival, they need to stay competitive to survive, therefore, they require knowledge and technology developments. This linkage is often not possible with the universities of our countries, either because of the lack of technical expertise, or because the companies do not rely on national developments.

The State's role is also critical in this demand for knowledge and development of technologies, which should promote and participate in bonding throughout the infrastructure development, or by funding the development of advanced human talent, and also demanding innovative products and services.

How does ESPOL promotes the linkage between scientific production and market opportunities?

Through various mechanisms, ESPOL promotes linking with industry and seeks to contribute to the national goods and services productive array. One of the most significant mechanisms is the PARCON Knowledge Park, which has the following purposes:

- Promote SMEs with a technological base and of friendly nature.
- Increase productivity of existing firms.
- Strengthening the National Science, Technology and Innovation System.
- Promote a culture of innovation.
- Diversify the regional and local economy.
- Improve the quality of the academic activities of universities and polytechnic schools of Ecuador.
- Incorporate highly qualified professionals to the companies.
- Reduce the brain drain.
- Position in the national and international market the Ecuadorian products through certifications or seals of approval (national brand).

PARCON is a kind of technological park focused on 6 areas: Information Technologies, Biotechnology, Nanotechnology, Water and Environment, Alternative Energy, and Embedded Systems. As part of this strategy, research centers have mechanisms to protect intellectual property and marketing options for the knowledge produced in their centers, through public technological, spinoffs , or startups enterprises, or incubating business ideas with the support and investment from companies interested in the development of a proprietary technology or product innovation, or interested in making investments in the industrialization of developments that are ready to go into the market. The support strategy includes licensing options that are being promoted within the companies that are in the park.

Another mechanism that is developing ESPOL is the creation of a Special Economic Development Zone - ZEDE, of technological and industrial development kind, available at the Gustavo Galindo Campus, that is also located at PARCON .

ZEDE in accordance with the Production Code and its regulations, includes the creation of an enabling business environment through multiple financial incentives for investment and the establishment of small and large companies in the secondary and tertiary sectors of the economy.

Why and how arises INVENTIO - ESPOL?

Inventio - ESPOL is a public corporation that belongs to the university. It was founded with the intention of completing one of the developing ways proposed on the creation of PARCON: serving for the commercialization of research results, and allowing to support the efforts of the research centers. It is a concrete way of linking the university with industry and the State, which seeks to promote the economic growth of the participants.

This proposal also seeks to create a culture of marketing and multidisciplinary collaboration at the university through entrepreneurship and licensing of new inventions, the creation of trading knowledge inside ESPOL, creating links with industry, and the flow of two learning ways between industry and the University.

It was born as an answer to the need of focusing the research centers and their researchers in their core research activities instead of leting them deal with the trading processes, as well as the

consolidation of a monetization process for each project with commercial potential.

What has been the experience of INVENTIO - ESPOL in its mission to create links between academia, industry and State to develop collaborative initiatives?

The initiative is relatively recent, it is still consolidating, but its in a fast pace. The company works with a portfolio of products generated in some of the research centers, many of these products have been rated with high marketing potential and high demand.

Other institutions of the public sector are also demanding products and services, this has enabled the development of ideas and the joint investments in infrastructure to support the researchers activities.

Inventio enabled multidisciplinary collaboration not only within the university but also with industry and the public sector, it has become a stepping stone for a trading strategy. A specific objective of this relationship is addressing resources strategically to improve the quality of research and the investments in projects of future impact. This has been part of the strategy to establish a reputation through mutual leverage that builds trust within the industry to invest in projects of mutual interest.

The ability of the research centers to collaborate and share resources in the business world is essential, and therefore Inventio has allow to identify potential allies through chambers of commerce, other incubators, other universities and research centers, and other technology transfer and regional trading offices.

Which way should Latin America follow if it wants to be consolidated as a competitive region?

The region needs to improve the quality and quantity of its professionals; human talent is critical in the innovation process, that requires investment and it is definitely the best investment that States can make. To improve professional quality throughout improvements in the quality of education at all levels. To ease the mobility of professionals and the joint development of research projects, and to enhance scientific publications.

Improving and developing their infrastructures, not only technological –which is basic in the global markets competition-, but also their research, innovation, and management services in their respective spheres.

Latin America should seek to consolidate as a common and more integrated market to meet the extra and supra regional negotiation processes.

Carlos Isaac:

"If there is no special concern for the issue of innovation, there is a risk that education goes numb"

Carlos Isaac is DuocUC Academic Vice Chancellor and panelist at the International Seminar on Innovation in Higher Education, "idehaz, from idea to action", activity organized by DuocUc which took place on 24 and 25 September in Santiago, Chile. Of course, we talked about innovation with him.

Tania Altamirano

What is the aim of idehaz?

First of all, this is the year of innovation, therefore it has been a year with a special emphasis on this issue, but we wanted to give it a particular focus which has to do, in this case, with higher education. As it was said in the opening session of the Seminar, and as the exhibitors said, today higher education is subject to a number of forces of various kinds - expressions, technological development- that somehow also require higher education to update and take the topic of innovation further.

What is the importance of innovation?

Education in general is an industry that has grown considerably, it has been successful in those terms and its results are of long term. The decisions you make now, could have an impact in many years, and if there is no special concern for the issue of innovation the risk is that education goes numbing, gentrified and that the changes

required will not be made, therefore innovation must serve as a way to work within institutions of higher education to prepare for what lies ahead.

Clearly the issue of education in the world and particularly in Chile is changing, higher education and the population are growing, education is required for the whole life, so it is requiered greater flexibility in education. What we have today and we know from many years ago as higher education is a system for students leaving secondary education, accessing to higher education and then going out, already graduated, in order to work for forty years; this is changing and it the focus is in a more flexible system for all kind of people (adults, workers and students at the same time). Therefore a more flexible and open system is required, especially in curricular and methodological terms, and therefore the great need is to innovate.

As part of the actions the DuocUC develops, what actions or projects are underway in terms of innovation?

We have three large publics, the main are obviously our own students and graduates, whom we offer, through our courses, a platform to innovate. We are also facing the issue of entrepreneurship, with students that has no special orientation and focus towards entrepreneurship in order to help them to innovate, and to develop businesses and self-employment.

Another important focus is technology transfer to companies, links with industry, where also, with the participation of students and teachers, joint projects are developed, projects with real business needs and in which students participate and solve technological and logistic management problems, similar to what we saw recently at the launch of Design Factory (which is now also been installed at Duoc), where companies work with teachers and students to develop real problems, and where there is also an innovative methodology.

Have you had any results?

We are just starting with the Design Factory but we have a technology information transfer center in which we have products that have been running especially in mobile, video game and logistic systems. What makes this important is the methodological innovation. This is no longer a collective class, but a more participatory and of prototype creation class, a class through which students acquire other skills of teamwork with students of other careers and that dynamic is very enriching for their training process.

And there is a third axis which is about everyone working in Duoc, more than 5000 people, and therefore a scheme in which everyone can contribute with new ideas. A student may have a new idea for improving something we've been doing for a long time and where he/she sees an opportunity for improvement, something that can be done more efficiently or something we were not doing. Then ideas competitions are structured, with certain guidelines to lead them,to avoid a completely disorder, because the important thing is to transform that the ideas into concrete projects that can be implemented. Therefore we face innovation in a broad sense; directly with student entrepreneurship through the methodology and the technology transference and, finally, we open it to the entire educational community so everyone can contribute.

Every strategy needs support and funding, how do you manage ideahaz in that regard?

When we work with companies, the equipment often belongs to them and is incorporated within the curricular structure of Duoc. For those working in the Duoc we often assign a base budget where contestable funds are generated, and people can apply to them, and if they succeed in al the stages of selection, prototyping and evaluation with interdisciplinary committees of the institution, they are eligible for funds to develop their projects.

How long have you been working in the field of innovation?

On the subject of student quite a lot of time; on technology transference, around a couple of years, and with the partners, we started in 2012.

What do you think are the critical issues in the field of innovation?

I would say the main thing is to install innovation in the culture of the organization, that everyone feels part of it. That there's not a department of innovation, but it's all part of innovation and that everyone dares to participate. People think that the theme of innovation is very sophisticated and technological, they say "I don't have any idea" and sometimes innovation is in simple things that do not require budget, but offer a very creative solution that allows a big change. There is a very important issue with the structures, with the people daring to innovate, and to leave that spirit installed on the organizational culture.

What do you think is the next step in the institutions of higher education for innovation to be installed permanently?

I feel that we have short time in this. The theme of innovation is like a fashion, we all talk about it, and no one could say is not innovative or that is not innovating. Marks are generated in all institutions about this issue, but many times they last a short time, there's not much experience, at least in Chile, accumulated in higher education on the subject of innovation; but in scientific innovation there is some experience, obviously the academics and the largest universities that are investigating, have always been innovating, but in open innovation. has There has not been much development in service process innovation, curricular innovation or methodology, and I think we are just starting. I believe that we have spent a long time just doing more of the same thing.

Jorge Mesa:

"This is an issue of culture, we must start to teach what innovation is"

Colombian, Business Manager of the EAFIT University (School of Management, Finance and Technology Institute), specialist in Finance with an MBA, Jorge Mesa participated in the "Higher Education and its Relation to Industry" panel session developed during the International Seminar on Innovation in Higher Education, ideahaz, from idea to action, that was organized by Duoc UC, and held on September 24 and 25 in Santiago, Chile.

Tania Altamirano

What do you think is the importance of innovation?

Innovation starts to be an issue in 1990, when it starts a wave of economic openings for the countries and the companies start to be subjected to what comes from outside the countries where they are based. International companies try to buy the local ones; people starts to compete and there is where innovation is crucial. If what I need is that someone from outside sees me well, I have to be an innovator company. That will mean that the value of my company is going to be much higher and they will buy me for much value, because who comes from outside looks for these two options: purchase the worst of a region to improve it, or buy the best. For example, the Santander bank in Colombia bought the worst bank; other company, the Bilbao Vizcaya, bought the best bank, and that makes the advantage of the second company. Innovation there is a crucial element. In order to survive against all the internal and external competition, companies have to innovate.

Is it possible to merge as an issue universities and companies so they can converge into entrepreneuring and innovating?

When companies want to innovate, they have many problems. The idea is that they bring these problems to the university. The university will say that it can work a solution but in the long term -research topics appear-, and the company leader will say that the solution is needed inmediatly and that in order to get it it will help the university with entrepreneurs and creative staff. The other option is the one of medium term, the company will look after the creation of a new spin up with the university as accelerator; the third alternative is going a R&D issue, which takes more time, here is when the government starts to give its support.

So, is it possible to talk about concrete results and examples of a good innovation work as a result of the linkage between companies with education institutions?

That's a very interesting alternative if we want things to happen in our society. In Colombia the State said "I need that companies join with universities and I will establish the terms for that union. How? Here I have these 20 million dollars, you can access 700 thousand dollars projects, but to be able to access the fund a university has to come with a company". That forced us to join. Then it said that for those projects at least 3 universities should join together, so we join again; the money made us get together. Who puts money marks the conditions.

These are the government strategies to make it work.

Entrepreneurs can do it by starting to give a series of exemptions: if they start up a company, they don't have to pay these taxes; they can speed up the process of registering with the chambers of commerce and creating a series of spaces. The State, companies and universities have always existed but they have join in different ways. Now, what happens?: economic openness and competitiveness removed the borders and makes those three actors mandatory. Before their union was not so indispensable, because it was a topic of individualism. If you see the entrepreneur Henry Ford, he did all by himself and he did not need more, but right now, you cannot do that because the new technologies, that before needed 50 years to penetrate the market, right now only need 5 years to do the same. These processes makes us to speed up connections, so the networking is much more important today than many years ago.

Which do you recognize as critical points for innovation to be more fluid?

The topic of innovation is not incorporated as such in universities. Is there a program to teach innovation management in some university?, have you seen a program that contains innovation management in it? We have to broaden the basis because this is a cultural issue, we have to start teaching innovation. Today many employers by innovation understand product innovation and that is false. We have to work innovation from three major fronts: culture, project management, and knowledge management.

How is the experience in Colombia?

It depends on the region. It is not the same to talk about innovation in Medellín that for example in Cucuta or in Bucaramanga. Today we are making that in Colombia, at least in some cities, people starts talking about innovation from the ecosystem, I mean from the set of actors that could generate innovative events, those who stands either because of their processes, products, or by their market management.

In Argentina the free access to scientific information it is now a law

November 13: Argentina 's Senate unanimously approved the law that obliges scientific institutions of the country to facilitate open access to research results. Thus Argentina becomes the second country of the region that raises a national legislation in favour of open access; the first one was Peru in 2012.

María José López Pourailly

The law that was approved by the Argentinean Senate states that the institutions of the National Science and Technology System that receive funding from the National State should create institutional digital repositories with open and free access to the scientific and technological outputs of those researches conducted with the contribution of Argentinean public funds. The Law also establishes the mandate of publishing the primary research data after five yearsof its harvesting in order to allow its free utilization by other researchers.

Alejandro Ceccatto, Secretary of Scientific and Technological Articulation of the Ministry of Science, Technology and Innovation, said: "The enactment of the law is a response to the monopoly position of big international publishers that concentrate the publication of scientific research." According Ceccatto "the aim is to make accessible the scientific production financed by the society. If the Federal Government is funding a research it is unacceptable that society cannot access to that knowledge once the results are delivered."

LA Referencia

In November 29, 2012, Latin America established one of the key milestones on its road to the democratization of access to knowledge, with the signing of the agreement for the construction of the Latin-American Federated Network of Repositories of Scientific Documentation: LA Referencia.

Fostered by RedCLARA and with the participation of Argentina, Brazil, Chile, Colombia, Ecuador, El Salvador, Mexico, Peru and Venezuela, LA Referencia works to facilitate equitable access and give visibility to the scientific production in the institutions of higher education and scientific research in Latin America and the Caribbean.

LA Referencia supports scientific and technological development as a regional public good, establishing agreements and policies regarding storage, federated access and retrieval of collections of scientific literature in Latin America and the Caribbean. LA Referencia works, among others, in defining standards for interoperability, the use of tools for recording documents, security, and quality preservation, and copyright, using as a framework the promotion of the principles of Open Access described in the Berlin Declaration .

For more information please visit LA Referencia: http://lareferencia.info/

ELCIRA participates in outstanding international events

During the second half of 2013 members of the Project had the opportunity to disseminate the objectives of ELCIRA, its activities and services in three recognized events: first, in the warm Campeche, in the Fall Meeting of the Mexican network CUDI and the AMERICAS Conference, and then, in the gelid Vilnius, as part of the ICT2013 International Conference.

Tania Altamirano L.

ELCIRA in Campeche

On October 2 to 4, 2013 the Campeche Convention Center of Campeche, Mexico was the venue of two events: the twenty-eighth semi-annual meeting of the University Corporation for the Development of Internet - Corporación Universitaria para el Desarrollo de Internet, CUDI-, and AMERICAS EU-LAC ICT & e-Infrastructures Conference for R&D Cooperation.

In both activities, the ELCIRA Project participated with an informative booth in which María José López Pourailly, Work Package 7 (Dissemination) and Carlos Gonzales Palacios, Work Package 5 (Extending and Strengthening the Collaboration Platform), provided information to the participants and had meetings with local stakeholders.

According to the website of the Conference, co-organized by the Autonomous University of Campeche, the Fall Meeting of CUDI was attended by 390 people from 104 educational and research institutions and companies interested in promoting projects using the National Research and Education Network (NREN) of Mexico.

ELCIRA in Vilnius

On November 6th to 8th 2013 Tania Altamirano and María José López Pourailly representatives of the Work Package 7 of the Project (Dissemination) flew to Vilnius, Lithuania to set up an informative booth to share information and present the objectives and activities so far developed by ELCIRA.

The ICT2013 Conference chose the exhibition participants through an open call released on June 2013 which received more than 270 proposals. As a result, 185 projects were selected to showcase the latest findings in advanced research, technologies, new systems, innovation in services and business and ICT products just coming to market. The ELCIRA project was one of them.

During the three days of activities, the stand of ELCIRA was part of the International Village dome and in it were distributed about 1000 brochures, 100 USB memories, 1000 laser points and highlighters pens, and 600 highlighters markers, all including information about the Project. The dome hosted also the booth of GÉANT, (the pan-European research and education network that interconnects Europe's National Research and Education Networks, NRENs). For the attendees GÉANT prepared a trail treasure with easy questions, one of them about ELCIRA. When someone completed the quiz won as a prize a rubik cube. Students, researchers and all visitors where very enthusiastic with the activity and had a great time discovering the answers.

Among the Latin American participants present in ICT2013 were 10 members from the national network of Colombia, RENATA including its Executive Director, Lucas Giraldo, the Technical Manager, Diego Alberto Rincón Yáñez

and the Communication and Public Relationship Manager, Camilo Jaimes Ocaziónez.

About ICT2013

The ICT2013 event was organised by the European Commission in partnership with the Lithuanian Presidency of the Council of the EU, and the official sponsors of the Presidency. According to the event website ICT2013 received 5315 participants from all over the world.

Suggested links:

- CUDI's Fall Meeting:
http://www.cudi.edu.mx/otono_2013/
- AMERICAS Conference:
http://www.americasportal.eu/
- ICT2013:
http://ec.europa.eu/digital-agenda/en/ict-2013

Federated Community COFRe will expand its range of services through the eduGAIN confederation

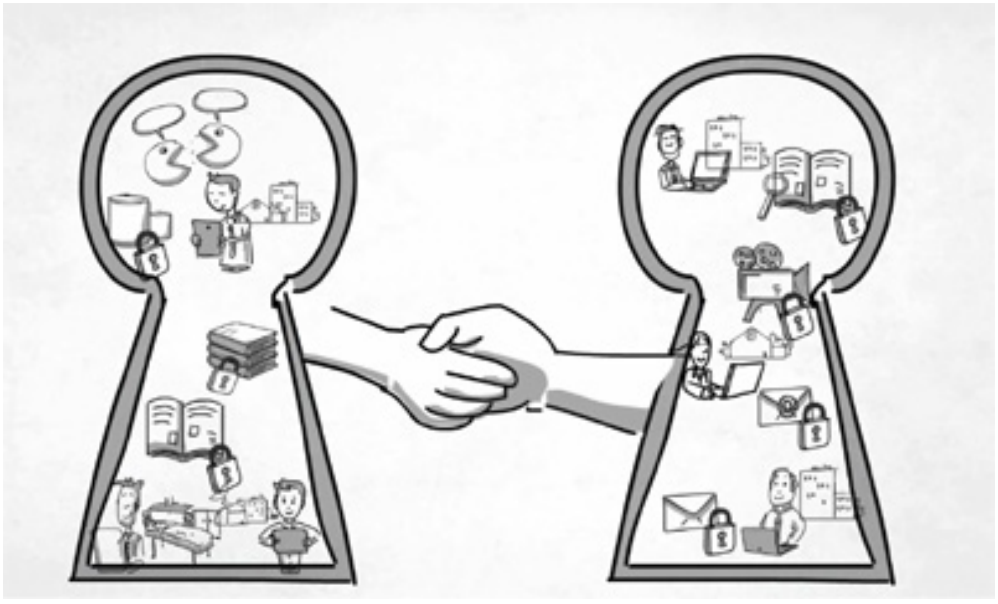
Through its incorporation to the global service eduGAIN, the Federated Community of REUNA will access to new content and resources oriented to scientific and research issues.

REUNA Communications

Reliable exchange of information and access to new services provided by other federated communities are the benefits arising from the recent addition of COFRe, the Federated Network of the national network of Chile (REUNA) to the eduGAIN confederation.

Thanks to this agreement the higher education institutions members of COFRe can act as identity providers, being REUNA responsible for maintaining the central repository with the data of the federation members. Therefore, from anywhere in the world, researchers and graduate students, members of the Chilean federation, will get easy access to new digital services from other federations, using the same institutional account (username and password) as unique validation information.

Some of the free services that are available through eduGAIN include those related to knowledge bases, repositories of clinical cases, computing resources, high performance computing and the large file transfer.



With the incorporation of COFRe to eduGAIN Chile becomes the second country in Latin America and the third in America to join this initiative. Canada was the first country in America to be parte of this world service follow by Brazil in 2012, represented by the Federated Academic Community (CAFe). It is important to mention that the ELCIRA Project, which aims to encourage the creation of federations in Latin America, supported the incorporation of COFRe to eduGAIN.

eduGAIN is a service of GÉANT, the pan-European

research network, which gathers in a secure system federations for the identity management from over 20 countries, enabling the secure exchange of identity data between European academic and research institutions.

In the global context, there are four federations in America: CAF (Canada), InCommon (USA), CAFe (Brazil) and COFRe (Chile), while in Europe are in operation 25 federations, including UK Federation (United Kingdom), SIR (Spain) and SWITCHaai (Switzerland). In the list of candidates to join the eduGAIN confederation are 3 countries: United States, New Zealand and Ireland.

COFRe

The Federated Community of REUNA (cofre.reuna.cl) is a platform available for Chilean academic and research institutions that aims to facilitate the management of the access of theirs internal users, to resources offered via web. This management of the access is known under the concept of federation.

Through this platform both users and institutions that offer services are part of a network of trust, in which user authentication is ensured and the access to resources is enabled by a unique identity.

If you want that your institution become part of COFRe please write to:

servicios@reuna.cl

More information:

COFRe: http://cofre.reuna.cl

eduGAIN: http://www.geant.net/service/eduGAIN/Pages/home.aspx

For a complete map of countries and federations members of eduGAIN enter to:

http://www.geant.net/service/eduGAIN/Pages/home.aspx

Through an illustrative and descriptive video you can learn how to benefit from using eduGAIN interfederación. See the video at:

http://www.geant.net/service/eduGAIN/Pages/home.aspx

Related articles:

COFRe: Channel of easy access to digital resources (Page 9) http://www.reuna.cl/documentos/redenaccion/Red_en_Accion_2013_09.pdf

Agenda 2014

JANUARY

20-24 | 37th APAN Meeting
Bandung, Indonesia
http://www.apan.net/meetings/Bandung2014/

FEBRUARY

10-13 | PRACE Winter School
Tel Aviv, Israel
http://events.prace-ri.eu/conferenceDisplay.py?confId=176

24-25 | Cloudscape VI
Brussels, Belgium
http://www.cloudscapeseries.eu/Pages/Home.aspx

MARCH

2-7 | 89th IETF Meeting
London, United Kingdom
http://www.ietf.org/meeting/upcoming.html