

ELLA - Europe Link with Latin America - is a feasibility study of the integration of Latin America (LA) and Europe (EU) by means of a transatlantic submarine cable. ELLA seeks to examine the feasibility of improving current network connectivity between EU and LA by the creation of a new direct submarine link across the Atlantic Ocean. That is precisely the subject of this conversation that we held with Fernando Liello, the leader of the study.



The lack of competition amongst providers has made extremely expensive the communications between EU and LA. ELLA's objective is to promote greater competition amongst those providers in order to reduce the connections cost and achieve the creation of a new direct submarine link between EU and Latin America. After almost a year with ELLA running, how has been developed that approach with the providers and what has been the results?

The providers (at least a large number of them) are extremely interested in the project.

There is a wide recognition that the idea of deploying a new cable between LA and EU is technically feasible and economically attractive. If there is a problem, is that there are a number of different initiatives in competition.

Would you say that competition between them has been fostered by ELLA or do ELLA face a different scenario than the one expected when the proposal was presented to the FP7?

More than fostering direct competition, ELLA is making plainly visible that the paradigm of the

“closed consortia”, that has dominated the transatlantic communication scenario, has reached its limits. More and more providers are attracted by the idea of “open access” to transatlantic facilities. In this respect I would say that ELLA has already helped to make a big step forward towards open competition in the LA to EU connectivity services.

If the importance of communications between EU and LA is so big, why would you say the Industry did not take care of it? Why didn't the providers see the market and business opportunity in this connection? Is it because the cost of its implementation seems to be much higher than the investment return?

In a market in which the prices charged to the customers are so big compared to the actual costs, and in which the infrastructures are owned by consortia in which every provider has his share, there is little incentive to make investments. The situation is changing because there are providers who have been kept at the margin of the business who would like to have a larger share of the market, and can have it only favouring the creation of new infrastructures managed with different principles.

You have been involved in the development of RedCLARA and its connection (the connection of Latin America) to GÉANT (EU) from the very beginning or even before. In 2004 it was established the first connection; early this year the 622Mbps link was doubled and in a short time the link will be changed to one of 2.5Gb. This improved capacity should serve to increase research development between EU and Latin America. Given that scenario and from the R&D perspective, why do we need that new submarine cable? For example, given your experience in the EVALSO project, would you say that European and Latin-American astronomers need that cable? Who else needs that cable within the R&D community?

Taking into account the rate of growth of the RedCLARA infrastructure, the foreseeable capacity commercially available to connect EU and LA will be always a bottleneck. Moreover to assume that all the research connectivity were through USA is strategically and technically a huge mistake.

A new cable is a unique opportunity for the research community to make at the intercontinental level what has proved to be a winner at the national and continental level: to be the owner (or at least to have direct access to) the basic communication infrastructure, the fibre.

In the same cord of the previous question and given your knowledge of European NRENs and R&D community: Does EU needs a better connection to Latin America, why?

EU, or at least a fraction of it, has not yet fully realized that a single centred global research network cannot last for long: it has to become multi centred. The collaboration between EU and LA is developing at an extremely high pace. Beyond this the cultural and social heritage that links the European Latin countries with LA demand stronger bounds at the technical level.

In this framework a seamless integration of the services provided respectively by GÉANT and RedCLARA could be considered as a natural development of both infrastructures: this requires the removal of the bottleneck of the data flow between LA and EU, that cannot be achieved simply upgrading the connectivity between LA and North America.

From a political point of view, why should Latin-American governments support RedCLARA and the European Commission continue supporting the advanced Latin-American network development?

It has been historically demonstrated, both in North America and in EU, that research networks are not a COST for the society, but an INVESTMENT, and a very good one. Research to be competitive requires communication, and cooperative research is the paradigm of our times. Latin-American research community, up to now, has get less than its fair share in this. This is not because of the researchers in LA are less innovative or because researchers in other continents are better prepared. It is because mobility costs are a huge barrier: research networks are a way (and comparatively a cheap one) to overcome this handicap.

Which would be the social impact of the establishment of a new submarine cable to connect LA and EU?

It is a fact that a large fraction of the world data are produced in EU; and it is even more true if we take into account all kind of data, not only the scientific and technical ones. Despite the fact that this situation is rapidly changing, it must be recognized that for some time to come the cost of access to data from LA will largely depend on intercontinental infrastructure costs. Today the cost for a given capacity between LA and North America or EU with respect to the same capacity between EU and North America is larger by a factor much bigger than 10. To reduce this factor will have a direct impact on the cost of the services to the Internet users at large, that in due time will also reach the final user.

In its proposal ELLA refers to the benefits that a new submarine optical infrastructure between EU and LA could take to the West African cost countries. Could you please explain those benefits?

The point is purely geographical: there are about 7000 km from Brazil to the Peninsula Iberica and about 4000 km from Brazil to Angola. Both, Islas Canarias and Cape Verde lay exactly on the paths of this future cables. A coordinated effort would lead to: lower infrastructure costs, the availability of direct paths at no extra cost, and lower maintenance costs.

From your perspective and given the current results of ELLA, do you think that that new submarine cable between EU and LA is going to be established?

Definitely yes.

Would you dare to give an estimate date for that?

In order to be attractive for the commercial providers, the new cable should be ready for service before 2014 (football world cup in Brazil) or at latest 2016 (Olympic Games in Brazil). This is technically feasible. The real difficulty is the fund raising. We are working on this .

Please, complete the following sentences:

LA needs the new submarine connection to EU because it cannot rely only on connectivity to North America for its development.

EU could win a more robust and balanced worldwide communication infrastructure **thanks to the establishment of a new submarine cable that unites the continent with Latin America.**

The private market should invest in the creation of a new submarine cable between EU and LA because it is a very good investment with a very attractive Investment Return Time.

R&D will make a huge step forward toward the service integration of GEANT and RedCLARA **thanks to the new cable.**

Without the establishment of the connection that ELLA is promoting we will remain in XX century instead of moving to XXI.