

# GLOBAL INFORMATION SOCIETY WATCH 2018

## *Community Networks*



ASSOCIATION FOR PROGRESSIVE COMMUNICATIONS (APC)  
AND INTERNATIONAL DEVELOPMENT RESEARCH CENTRE (IDRC)

# Global Information Society Watch

## 2018



**IDRC | CRDI**

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*This edition of GISWatch came into being alongside a brand new baby boy. Welcome to the world, Ronan Diga!*

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# ARGENTINA

## CONVERGENCES: ALTERMUNDI'S EXPERIENCES AND CHALLENGES



### Asociación Civil AlterMundi and Red Comunitaria QuintanaLibre

Jésica Giudice

<https://altermundi.net>, <https://librerouter.org>

### The real and the ideal

Access to information and communication is a right for all human beings, and it is the state that must guarantee our rights. In some cases, the state fulfils the role of providing access to information and to means of communication directly; sometimes it is met through the work of different social actors; and sometimes it is not fulfilled at all, and it is the people who end up resolving their basic needs and, therefore, enabling their rights.

José de la Quintana is a small town of some 2,000 people in the mountains of the province of Córdoba, Argentina, which does not have a local government, and the regional government does not participate actively in the community life. The neighbours and the organisations of the town have had to meet more than one need on their own – for example, organising festivals, repairing the streets, cleaning up the riversides, creating and maintaining the cemetery and a cultural centre, and much more.

The town has families that have lived there for generations, as well as “newcomers” to the community, those who return periodically to their rural holiday houses, and also some seasonal tourists. There is a school for each level of education: kindergarten, elementary and secondary school. There is no dominant type of work in the town, no factories, no companies. Many of the inhabitants work in the nearby cities (15 to 30 km away) or in the provincial capital (some 60 km away), which is also the second largest city in the country. Currently, two wireless internet service providers (ISPs) offer their services there, and their offices are based in towns more than 20 km away. To provide internet access in a way that everyone would like, with the stability that everyone would like, and at a price that everyone can afford, seems a utopia.

### QuintanaLibre: A network seedbed

In 2011 a group of neighbours decided to start a small network to share the internet link one of them had. QuintanaLibre was conceived.

That is how it started, but the idea quickly proved too small and more neighbours wanted to join. For this there were two strong drawbacks: the narrowness of the bandwidth and the maintenance of the local network.

In order to have more bandwidth than the initial 512 Kbps, we spoke with the two ISPs in the area. We hoped to arrange a discounted collective purchasing agreement with one of them in exchange for reducing requests for technical assistance, but this proposal did not succeed. We ended up upgrading to a 2 Mbps connection, which was the best one available.

However, a barrier became apparent when we wanted to combine our community project perspective with that of a commercial enterprise. Although it seemed (and still seems to us) that both approaches are absolutely compatible, and that they even empower each other, the ISPs did not want to take the risk, or begin the journey of discussing ways of collaborating with our network. We also believe that they thought our project could not prosper and survive over time: it was, at best, a nuisance.

In parallel, we thought it was necessary to design a network model in which local people could take care of its maintenance. The logic was: all the nodes should be the same, so that their maintenance would be similar; we all get together and learn how the node is maintained, and those who have difficulties can ask a neighbour who has already learned by fixing their own node. This is how we distribute the maintenance load.

Following this path, we called friends with technical experience in networks, who helped us define the technical aspects of mesh networks for small, digitally excluded populations like ours. Then we dealt with the obstacle of deploying a point-to-point link to the nearest city in the absence of a cooperation agreement with the ISPs.

### The first network of community networks in the country

There were a number of things we still had to do before we were in the position to set up a mesh network that we could rely on. We defined a hardware reference (routers, antennas, casing, etc.) and developed our first mesh firmware, which greatly simplified mesh deployment.

These first steps were decisive for the expansion of our network and for connecting to the other community networks that were emerging in the region: AnisacateLibre, LaSerranitaLibre, LaBolsaLibre and NonoLibre. The first network of community networks in Argentina!

These networks all took QuintanaLibre as a reference point to get started. However, each community organises and manages its network in different ways. Only AnisacateLibre was initiated by a person with a technical background; the rest of the communities gathered their courage, organised and informed themselves and consulted with us when they had problems. They learned more and more from their own experiences, and two or three members in each village ended up going deep into the technical side of the network.

Today we are in contact, we are friends, and sometimes they ask for help; but we also help each other and work together in improving the backbone network that interconnects us. This organic growth allowed us to form a community, despite the distance and the fact that we are from different localities.

This union also strengthens us internally and externally. It is easier to advance when there are more of us; the impact in the region is greater and we can share the achievements of each network.

However, this growth brought with it the need for more bandwidth. We managed to solve it, first with a residential connection managed by AnisacateLibre and then through an agreement with Silica Networks,<sup>1</sup> which donated a symmetrical 20 Mbps connection for a two-year period. Then we signed another agreement with the National University of Córdoba<sup>2</sup> to take advantage of its idle bandwidth.

Currently, QuintanaLibre has more than 60 interconnected nodes that cover the territory of the village and San Isidro, the neighbouring community. This network also includes the secondary school and the cultural centre and offers coverage in public spaces, some streets and two important bus stops. The rest of the networks have between 15 and 25 nodes, but all of them are also planning a major expansion at this time.

## Building our own router

For AlterMundi, the spread of this idea and the collective enthusiasm gave rise to a project to create our own hardware. Despite all the difficulties and the complexity of the process, we managed to design and produce the LibreRouter.

By developing our own hardware and software (the first of many developments!), we no longer have to deal with the endless caprices of the market, nor reverse-engineering to enable the disabled functions of commercial hardware, nor the constant need to adapt free software.

Now we decide how our most important hardware is constituted and how the systems and applications that control and assist it are developed. In short, we have increased the technological sovereignty that community networks can offer.

During this process, what stands out above all is the will and tenacity of the network members who sustain and give meaning to all of this effort.

## In all this, what about the state?

At the time of writing, the National Communications Agency (ENACOM)<sup>3</sup> published its first regulation on community networks.<sup>4</sup> This is the first time that community networks have been defined by the state. For now, this resolution enables us to request a licence for non-profit operators, exempt from payment of fees. It also affirms the importance of supporting and promoting community networks.

Although this is a great step forward, it also poses new challenges and makes obstacles more visible in pursuit of the realisation of a more complete regulatory framework that understands, recognises and favours the emergence and development of community networks.

On the part of ENACOM, it is important that it recognises an error in its drafted definition of community networks. The initial idea of the state was to limit the scope of regulation to networks located in localities of no more than 5,000 inhabitants. However, this limitation was included as part of the definition of what a community network is, leaving several pre-existing community networks out of the concept. One of the challenges that this error reveals is the need to agree on a shared definition of what is (and is not) a community network, which serves as the basis for any other field. Developing such a shared definition is already work that is being done at the Latin American Summit of Community Networks<sup>5</sup> and it is expected that the definition will be periodically reviewed.

Soon we will test the licence application process for non-profit operators. We will also request resources from the Universal Service Fund when a

1 <https://www.silicanetworks.com>

2 <https://www.unc.edu.ar>

3 <https://www.enacom.gob.ar/>

4 Resolución 4958/2018. <https://www.boletinoficial.gob.ar/#!DetalleNorma/190061/20180817>

5 [cnsig.info/cumbre/lac/2018/08/30/Cumbre-Latinoamericana.html](https://cnsig.info/cumbre/lac/2018/08/30/Cumbre-Latinoamericana.html)

new call is opened. This fund is nourished by a small proportion of the profits of the large telecommunications companies, and is reserved for solutions in neglected areas such as ours. The method of allocating these funds, through the Non-Refundable Contributions (ANR), must be adapted so that community networks can participate.

This first regulation is a small step forward, but is not comprehensive of the universe of situations that need to be regulated to protect community networks. It is necessary to complement the regulation, for example, covering issues such as the use of spectrum, access to infrastructure, free peering agreements, hardware homologation for our devices – starting with the LibreRouter – and other aspects mentioned in the International Telecommunication Union’s Recommendation ITU-D 19,<sup>6</sup> cited in the considerations of the regulation.

It will be a long process until the state and other actors recognise and capitalise on the efforts of community networks and consider us allies in the task of connecting the disadvantaged regions of Argentina.

In general, there is an incompatibility between the organic structures that have developed in these disconnected communities, and the mechanisms that the state uses to try to reach them. One of the most frequent reasons for the failure of these initiatives is the lack of anchoring in the community, which also results in solutions that its inhabitants cannot understand, adopt and sustain over time.

Community networks evolve in these different aspects at the same time. The coordination, the design, the technology, the hardware, the software, the policies, the management, the maintenance... everything progresses in the way and at the rhythm of each community. This characteristic makes the technological and human network more resilient.

In summary, we want to work for community networks to cease to exist in a legal gray area that makes it difficult for new initiatives, projects and businesses to rise locally.

### **Sustainability of the right to information and communication, a collective responsibility**

The most important aspect of sustainability is not whether or not a community network can generate revenue, or how it can survive through contributions

from the community. The most important aspect is that the complex structure that guarantees the right to information and communication must be sustainable. By directly contributing to the materialisation of a non-negotiable right, we deserve to be integrated as part of this structure.

From a socioeconomic perspective, community networks should be considered a sustainable option because they save the state expenses needed to guarantee a right that the state is clearly unable to fulfil.

The collective work of these networks resolves moral debts that the state has with rural communities and other vulnerable and excluded areas.

### **Action steps: Collaborating, assisting, consulting and helping each other**

AlterMundi and community networks in Argentina have some specific proposals to make:

- Allow us access to resources from the Universal Service Fund.
- Consider the use of LibreRouter in state connectivity projects.
- Enable community networks to have free transit through the Federal Fibre Optic Network (REFE-FO)<sup>7</sup> and other state infrastructures.
- Prioritise localities with community networks when the national or provincial government designs projects and developments.
- Encourage direct communication between the state and the managers of the community networks in a way that enables mutual recognition.
- Develop laws and regulations for community networks in consultation with representatives of community networks.
- Reduce administrative expenses through, for example, doing away with stamp duties and other red tape that burdens community networks.
- Reduce the financial reporting responsibilities for community networks.
- Facilitate access to credit and financing for community networks.
- Promote collaborative projects between the state and community networks.

6 Recommendation ITU-D 19: Telecommunication for rural and remote areas. <https://www.itu.int/rec/D-REC-D.19-201003-1>

7 <https://www.argentina.gob.ar/modernizacion/comunicaciones/planfederaldeinternet>

# Community Networks

THE 43 COUNTRY REPORTS included in this year's Global Information Society Watch (GISWatch) capture the different experiences and approaches in setting up community networks across the globe. They show that key ideas, such as participatory governance systems, community ownership and skills transfer, as well as the "do-it-yourself" spirit that drives community networks in many different contexts, are characteristics that lend them a shared purpose and approach.

The country reports are framed by eight thematic reports that deal with critical issues such as the regulatory framework necessary to support community networks, sustainability, local content, feminist infrastructure and community networks, and the importance of being aware of "community stories" and the power structures embedded in those stories.

GLOBAL INFORMATION SOCIETY WATCH

2018 Report

[www.GISWatch.org](http://www.GISWatch.org)



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