ANALYSIS DOCUMENT

Community Networks and

the Roberto Arias Program

A public policy in motion

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INCIDENCE DOCUMENT

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Ensuring access to the internet and conceiving it as a right are two political intentions that in Argentina already have some concrete milestones, ranging from declarations that institutionalize this right, to actions that guarantee the availability of technology and develop the necessary legal and regulatory frameworks, as well as experiences that promote its social appropriation by people and communities that use it.

The State, as a regulator from different areas, along with different actors such as companies, SMEs, cooperatives, and civil society organizations that develop connectivity projects for territories that do not access or do so precariously, participate in this situation. On that path, and with those objectives, "community networks have been developing a strategic advocacy articulation to be recognized in the internet ecosystem in our country," emphasized AlterMundi, a leading organization of the movement.

The Roberto Arias Program is the most recent milestone on this path. Created and promoted by the National Communications Entity (ENACOM), the Program added concrete contributions from the communities that developed these experiences, still in the process of improving it and adapting it to the reality of communities and their territories.

In this article, we will contextualize the emergence and development of the movement that drives community networks and its influence on achieving legal and public policy frameworks
that guarantee access and sustainability of technology. We will also review the conditions and
needs of communities to access these policies, as well as the resources and knowledge necessary to sustain access to technology and connectivity.

Internet as a human right and essential service

The conception of the internet as a human right, understood as a condition of access to other rights, is a definition that in recent years has been spreading in different initiatives, and the COVID-19 pandemic amplified it and made it even more evident. International, regional organizations, and governments had already been explicitly defining this in documents, decrees, declarations. In this line, the United Nations declared the internet as a human right in 2011. In another more specific declaration in 2016, they defined access as a right for the entire population because other fundamental rights depend on it. Alongside, other initiatives such as the Coalition for Internet Rights and Principles also promoted these claims.[1]

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[1] https://issuu.com/lif.digital/docs/carta_irpc

These initiatives that have been succeeding operated in terms of superstructure, making the demand for the right to access more visible. At the same time, in this journey, these demands have been translated into more concrete and structural actions that have driven access to communications. For example, initiatives that declared internet as an essential service, in the case of Argentina legacy of the pandemic, when in August 2020 the national government presented Decree 690.[2] incorporating the definition of "TIC services and access to telecommunications networks" into the Law on Information and Communications Technologies as "essential and strategic public services in competition" promising that "the application authority will guarantee its effective availability".

In 1995, Argentina joined the world of broadband internet with the arrival of UNISUR, the first underwater cable to enter the country through Las Toninas, a small coastal town in the province of Buenos Aires. In 1997, Decree 554/97[3] declared access to the internet to be of national interest. This decree was enacted by the same neoliberal government that privatized the national telecommunications company in 1990, initiating the liberalization of the telecommunications market. It was a complex process in definitions and regulations not only regarding how to provide telecommunications services, since then left to “the invisible hand of the market” but also how to guarantee the universality of that access to all the population, taking into account that there are geographies and places that are not profitable and therefore postponed by private companies to take their services to those territories.

At that time, debates began regarding Universal Service - the intention of guaranteeing access to communication services for all the population - and the mechanisms to be implemented to finance it, which already showed conflicts in play between interests, needs and rights. Options such as taxing companies' profits to finance that universal service or asking for a contribution from beneficiaries for the extension of telecommunications networks were then discussed.

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[2] Decree 690/2020. http://servicios.infoleg.gob.ar/infolegInternet/anexos/340000-344999/341372/norma.htm

[3] http://mepriv.mecon.gov.ar/Normas/554-97.htm

[4] http://servicios.infoleg.gob.ar/infolegInternet/anexos/235000-239999/239771/norma.htm

[5] http://servicios.infoleg.gob.ar/infolegInternet/anexos/155000-159999/158649/norma.htm

The implementation and regulation of Universal Service was requested for a long time. It was only in 2014, with Law 27.078[4], also called Argentina Digital, that a Trust Fund was regulated with contributions from an index of the profits of service providers, its application authority was defined and also the possible destinations of the fund. However, that law, together with Law 26.522[5] on Audiovisual Communication Services, both of which had been achieved through extensive debates and legitimization by the different actors involved - were the first to be annulled by decree by the again neoliberal government that assumed the presidency at the end of 2015, who through the Decree of Necessity and Urgency (DNU) 267/2015[6], repealed much of the legal framework that had been established regarding TIC, which regulated the benefits, named rights and affected the interests of the owners of concentrated media communication, strategic allies of said government.

Meanwhile... in the neighborhoods and in the mountains

Experiences of community networks were emerging

The work to guarantee access to the necessary resources to exercise communication was also making its way from the territories. Different social and popular struggles had already included the right to communication in their objectives and projects. Community radios are a clear example of this in Argentina and the region, struggling for years with legislation that for a long time kept them illegal, according to the definitions of the Radio Broadcasting Law of the dictatorship that did not allow their existence. Community radios fought this battle, along with many other actors such as unions, universities, and organizations of diverse focuses: women, indigenous peoples, childhood, culture, environment, food sovereignty, ecology, rural areas, and education, which joined the debate. From there emerged the Coalition for Community Broadcasting, which gave rise to the 21 basic points of the mentioned Audiovisual Communication Services Law, and which in turn promoted the Argentine Digital Law to advance in these debates and regulations in the field of the internet.

This law was debated and enacted within the framework of the already started Argentina Conectada[7] plan, which originated in 2010 and promoted the expansion of connectivity through its Optical Fiber Federal Network, which later was redefined in the Connectivity Program[8] of 2016, and which concretized the arrival of connectivity to many towns that did not have local operators to deploy the so-called "last mile" or "first mile" network, as proposed by AlterMundi.[9] It is here, at this point, where the

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[6] http://servicios.infoleg.gob.ar/infolegInternet/anexos/255000-259999/257461/norma.htm

[7] http://servicios.infoleg.gob.ar/infolegInternet/anexos/170000-174999/174110/norma.htm

[8] https://www.argentina.gob.ar/jefatura/innovacion-publica/gestion-administrativa/programas-y-proyectos/bid-ar-l1333/marco-institucional-y-normativo

[9] https://altermundi.net/2014/11/08/ley-argentina-digital-la-perspectiva-de-altermundi/

community networks movement proposes to concretely provide the connectivity of this last or first mile from the node point offered by the State, for the community that requires it, from its sovereign, self-managed, sustainable and suitable proposal for the community.

Community Access to the Internet

Community access to the internet is for many territories the only possibility of having this resource. For others, the possibility of negotiating this connection in terms of rights and exchange with a logic different from that of merchandise.

There are numerous precedents of experiences in which communities manage their connection strategies, such as *community access telecenters*, in different regions, especially urban, in which there was already a connection to socialize. This was later expanded with the emergence and expansion of wireless technology, which also had experiences that socialized this resource for communities that did not have access to the internet.[10] A reference experience in the region was the TRICALCAR project (Weaving Wireless Networks for Latin America and the Caribbean), Coordinated by APC, which offered training in the deployment of wireless networks, with an experience in Argentina in 2007, in a Qom community in the outskirts of the city of Rosario.[11]

"Also around 2001, the Free (Internet) Networks movement was born in the world, and particularly in some cities of our country, which at that time began to take the first steps towards building a connectivity alternative not based on the interests of large corporations, but on peer collaboration," Fabricio Puzio and Nicolás Echaniz historicize in the recent book published by Nic.ar about the 35 years of the Internet in Argentina. The transition of this initiative from the city to rural areas and small populations gave birth to AlterMundi, which carried out open technological development projects "with a community vision for the deployment of networks that allowed the self-provision of telecommunications services to communities without any previous training in the subject."

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[10] From telecenters to community networks in APC News. https://www.apc.org/es/news/un-camino-por-el-acceso-de-las-comunidades-de-los-telecentros-las-redes-comunitarias

[11] Lazcano, F. (2020) The Tricalcar experience. https://www.youtube.com/watch?v=7kYQNeoCoHg

[12] Echaniz, N. and Puzio, F. (2022) Land, Housing, Work and Connectivity. Community Internet networks in contexts of popular contexts of popular organization in Argentina in Internet. 35 years of the creation of the .ar domain, page 157. Available at https://argentinaeninternet.ar/wp-content/uploads/2022/09/ArgentinaEnInternet-35anos-ar.pdf

[13] AlterMundi. Our little piece of the Internet https://altermundi.net/documentacion/redes-libres-comunitarias-y-descentralizadas/

[14] Roveri, F. (24 May 2018) A path for community access: from telecenters to community networks.
APC. Available at https://www.apc.org/es/news/un-camino-por-el-acceso-de-las-comunidades-de-los-telecentros-las-redes-comunitarias

These networks use a mesh topology that allows the development of decentralized networks. "In these mesh networks each wireless node (router and antenna) is connected to one or several neighboring nodes. Thus, when one of the nodes stops working for some reason, the active nodes will automatically look for a new possible path for the data to reach the indicated destination. That is why mesh networks are decentralized and distributed networks. The network grows node by node, progressively extending and dosing the deployment and maintenance costs."

Initiatives such as mesh networks, oppose to commercial networks a shared model with autonomy in technological and political decisions. "Free networks allow us to connect from end to end on equal terms, publish and access services in a symmetrical way, and promote interaction between inhabitants of each geographic region. But above all, in a free network, sharing is not only allowed but represents its very essence. Each member, instead of being the endpoint, is a new opportunity to extend the reach of the network and its benefits," pointed out Nicolás Echaniz a few years ago. Alongside this model, which outlined a different way of connecting to the network, experiences expanded throughout the region. A central definition of this model was to question the expression "accessing" the internet by "co-creating the internet".

Access implies the user's perspective, who accesses a service or content that they do not produce, do not own, and do so in a consumer relationship. There is another perspective: to build from the ground up the infrastructures and technologies that communities need to satisfy their needs to communicate, exchange culture, connect without being controlled. The right to access the internet becomes the right to co-create the internet. There is a physical dimension (infrastructure), a logical dimension (protocols, standards, software), and a cultural dimension (contents, messages). What is important for those of us who intend to intervene in this dispute is to understand that in all three dimensions, there are strategies, practices, and technologies that enable or disable certain uses, freedoms, and capabilities.

This was the path that some organizations began to take, including AlterMundi, which began to develop experiences in the province of Córdoba. A path that gained depth in other journeys such as the design of the hardware and software necessary to sustain these networks. This is how the Libre Router, [15] a hardware developed by AlterMundi, to support mesh networks and easy installation, and the Libre Mesh, the Lime App, a configuration platform developed to make this process more accessible, and more recently the design of antennas for wireless connections were born. All of this was also accompanied by the development of participatory working and learning methodologies to construct the knowledge necessary to sustain these projects communally.

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[15] Free Router. https://librerouter.org/es/
[16] AC Networks (2021) Technological autonomy as a constellation. Available at https://www.redesac.org.mx/_files/ugd/68af39_ef82b4d8a6a445918217a42d8a1028a6.pdf
[17] ITU. Training Program for Technical Promoters in Indigenous Communities for Generation,
Development and Maintenance of Communication and Broadcasting Network Technologies.
Https://Www.Itu.Int/En/Itu-D/Digital-Inclusion/Indigenous-Peoples/Pages/Promotores-Tecnicos.aspx.

The institutionalization of Community Networks

Community networks began to spread as a connectivity solution and also as an autonomous access proposal with other potential for territories. Organizations that had been developing community connectivity projects coincided in different meeting spaces with other experiences in Latin American countries such as Brazil, Colombia, Mexico and also from around the world, with experiences in Catalonia, South Africa, Kenya, or India.

Many of these meeting spaces were instances of socialization of experiences and training for communities, such as the camps or community rooftops held in Mexico, by the organizations Redes AC and Rhizomatica, or the meetings and seedbeds coordinated by Altermundi in the mountains of the province of Córdoba. Some of these experiences are recounted in the book "Technological Autonomy as a Constellation of Experiences"[16]. Later, other more formalized training instances were also added, such as the Training Program of the International Telecommunication Union (ITU) for promoters of community networks[17] or the Diploma in Social Appropriation of Technologies for Communication at the National University of Buenos Aires in Argentina.

"In these spaces, strategies and resources were shared on how to address issues related to access, spectrum access in the Rizomática experience in Mexico, achieving regulation for indigenous communities to access cell phone licenses, or in Argentina, achieving regulation that includes connectivity being offered by community networks. These spaces also promoted the development of experiences such as Libre Router, software, and work methodologies.

Locally, these experiences began to coincide in appealing to regulatory authorities. In 2014, community networks added their voices to the debates of the Argentine Digital Law with strategic proposals, such as regulating exchange points to mitigate abusive prices of dominant global operators, symmetrically equalizing the action of consuming with providing content, strengthening the ends of networks as central places of network implementation, and recognizing community experiences, among other points.[18] In this sense, they managed to have community networks mentioned in the preliminary version of the law text. Although non-profit networks were already considered in Resolution 1246/98 of the Secretary of communications at the time, it was the 2014 Law that began to name them as "so-called community networks."[10]

As we mentioned before, in 2015, the newly appointed neoliberal government of Mauricio Macri took the repeal of the Audiovisual Communication Services Law and the Argentine Digital Law as one of its first measures by decree. The advocacy strategy of community networks changed during this period. "The lobby started internationally during that period because we understood that the government at that time, the Macri administration, was more likely to listen to us if we talked to

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[18] Echaniz, N. (8 November 2014) Argentina Digital Law, the perspective of AlterMundi. Available at. https://altermundi.net/2014/11/08/ley-argentina-digital-la-perspectiva-de-altermundi/

[19] Law 27.078 Argentina Digital (2014). http://servicios.infoleg.gob.ar/infolegInternet/anexos/235000-239999/239771/norma.htm

them about community networks in Geneva, at the United Nations, rather than telling them here. And it worked," shared AlterMundi at a Conversatorio in the city of Cordoba.[20]

At the Latin American and Caribbean Internet Governance Forum held in Buenos Aires in 2018, the present authority of ENACOM Argentina was challenged by community network leaders regarding the lack of application of the Trust Fund. Among them was the voice of Mariela Baladrón, an academic committed to some network experiences, who also accompanied other support instances for the development of networks, from tasks in ENACOM management, from academic approach of experiences and in the development of the Social Approval Diploma of Technologies from the National University of Buenos Aires.

The final and very important step in the recognition of community networks was the creation in 2018, through Resolution 4958 of ENACOM, of the VARC License for Value-Added Service - Internet Access, Community Network Owners." This license recognizes community networks as non-profit providers. In its Article 2, the resolution defines them as "those composed of infrastructure

Managed by their own users or by non-profit entities that group them, allowing and promoting their expansion through the incorporation of new users or connecting with neighboring Community Networks, in populations of no more than five thousand (5,000) inhabitants." The resolution also states that the license application is exempt from the fee paid by commercial[21] licenses.

A central event in this journey was the formation of the **Argentine Community Networks Summit** (CARC) in October 2019 during a camp in La Serranita, Cordoba, with participation from other community networks accompanied by AlterMundi, the Atalaya Sur group with experiences in Villa 20 in Buenos Aires and Jujuy, the Mesa de Comunicación Popular de Salta y Jujuy, la Red Vueltas de Santa Fe, academic teams from UBA and UNC and other popular communication groups. The CARC resulted from the Latin American Community Networks Summit that held its meeting in Argentina in 2018. The CARC defined at its origin a document[22] with a series of institutional demands to promote. This event prompted the initiation of various normalization procedures for networks in different provinces of the country and the City of Buenos Aires. This time coincided in the country with the return of a progressive government that reopened dialogue with social actors to resume the agenda of expanding rights.

In December 2019, a meeting was held by the new authorities of ENACOM, which in this new administration included officials from social organizations with territorial work in the field of communication and had created a special area to dialogue with the community sector, which was one of the points demanded by the CARC. Thus the

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[20] Rurality, food sovereignty and connectivity(2022) https://youtu.be/6KD_f7DIzFE

[21] Baladrón, M. (October 2021) "Universal Service Funds for urban and rural community networks. The
Barrios Populares and Roberto Arias programs in Argentina" in regional scenario of capitalist offensive and popular rebellions.
popular rebellions. Institute of Latin American and Caribbean Studies. School of Social Sciences. UBA.
http://iealc.sociales.uba.ar/wp-content/uploads/sites/57/2022/04/JORNADAS-IEALC-2021.pdf

[22] https://carc.libre.org.ar/

Sub directorate of Special Projects of ENACOM was born, which later promoted two programs focused specifically on community networks: Barrios Populares and later the more specific Roberto Arias.

The momentum of the CARC, the opening of the new government, and the convergence of various social and popular actors who had been coinciding in articulations such as the Integral Development Plan[23], which addressed popular demands and proposals from different fields and added communication and access among these demands as a right, were added. From this convergence of wills, in early 2020, a face-to-face meeting was held in Buenos Aires with organizations and officials from the new management of telecommunications-related agencies, cooperativism, and family farming. It was proposed to form a working group articulated between the different state areas to advance the identified demands.

Essential Internet. During and after the pandemic...

Just a few months after the new government took office, the COVID pandemic devastated the entire planet, and among the numerous measures that the national government took to confront the pandemic, on August 21, 2020, it presented Decree 690,[24] which incorporates "ICT services and access to telecommunications networks" into the Law of Information and Communication Technologies as "essential and strategic public services in competition." ENACOM, the enforcement authority for the law and decree, approved the regulation in December of the same year, establishing a Universal and Mandatory Basic Provision (PBU) for each of the services, setting minimum services and costs for each service, prohibiting rate increases, and other policies. However, in June 2021, the judiciary repealed the decree at the request of economic groups that monopolize the internet, mobile phone, and pay TV markets, arguing that the authorized rate increases cause "irreparable damage to the economy of the companies,"[25] once again highlighting the influential power of the concentrated private sector. Medium-sized companies also pointed out problems related to the price restrictions proposed by the Decree, a source of conflict to be reviewed."

Public policies for community access

Before the pandemic, in several of our territories, both urban and rural, we sensed the violation of a new right: connectivity. Later, the dialogue between some social organizations and AlterMundi led us to fight together for connectivity in popular neighborhoods and rural territories," comments Fabricio Puzio in the Conversatorio in Córdoba.[26]

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[23] https://plandesarrollohumanointegral.com.ar/plan-desarrollo.pdf
[24] Decree 690/2020. http://servicios.infoleg.gob.ar/infolegInternet/anexos/340000-344999/341372/norma.htm
[25] Moreno, A. (Aug 14th. 2021). "Argentina in dispute over essential services", Radiográfica. https://radiografica.org.ar/2021/08/14/argentina-en-disputa-por-servicios-esenciales-2/

[26]Rurality, food sovereignty and connectivity (2022) https://youtu.be/6KD_f7DIzFE "After the pandemic, what we initially perceived as a 'violation' we now defend as an inalienable right: school, medical appointments, and banking transactions depend on access to the Internet. On the other hand, many social organizations were able to understand the causes of what we suffered in our territories: the large telecommunications corporations, which prioritize profit over connectivity, prefer to pay fines. The right to connectivity is not a concern of the operators but a priority of the communities."
The emergence of the Argentina Summit of Community Networks (CARC) as a social actor was essential for the State to recognize this violation through the Sub-Directorate of Special Projects of ENACOM, with its two programs: Barrios Populares and Roberto Arias," Fabricio and Nico Echaniz point out in the book "35 years and the Internet." "The right to connectivity is not a concern of the operators but a priority of the communities."

The Connectivity Program for Popular Neighborhoods ,[27]was created in June 2020 with the aim of promoting access to networks for residents of neighborhoods and settlements registered in the National Registry of Popular Neighborhoods in the Process of Urban Integration (RENAP), a registry that since 2017 has articulated numerous public policies and now adds connectivity to its focus. This Program calls for both commercial and community projects.

These neighborhoods were not considered in the previous programs of the Universal Service Fund because they exceeded the limit that was provided regarding the number of inhabitants. It was also the first program to accept providers with a VARC License and took some of the CARC's demands, including the financing of 100% of the projects. Previous calls only covered up to 80% of the investment, implying a availability of funds that organizations usually do not have. The program also allows covering other items that were not previously considered: professional fees and project management expenses; labor and equipment of up to 30% of the final users of the project (routers, modems, wiring, etc.), without transferring the cost to the beneficiaries. It also includes the bonus of the first 6 months of wholesale transport, once the network is in service. The Program asks for the payment of a percentage of the project by the provider organizations, as a guarantee, which becomes a limiting difficulty.

The progress and continuity of this dialogue to address the needs of community networks continued its course towards the formation of another program, closer to the reality of the networks: the **Roberto Arias Program**[28] presented in June 2021 was aimed at addressing the connectivity needs of rural communities and Indigenous Peoples, in articulation with other public policies, promoting self-management of community networks. The program was named in homage to a social and popular militant from the south of the country, who worked for numerous causes in his community, such as the recognition of native peoples, access to land and developed an intercultural village project in which he also addressed the right to communication. Roberto Arias passed away in 2019.[29]

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[27] ENACOM. Popular Neighborhoods Program. https://enacom.gob.ar/programa-barrios-populares_p4615#contenedorSite
[28]ENACOM. Roberto Arias Program. https://enacom.gob.ar/redes-comunitarias-roberto-arias_p5049
[29]Grabois, J. (26 May 2019) Semblanza de Roberto Arias, weichafe del pueblo pobre. Infobae. Available at https://www.infobae.com/opinion/2019/05/26/semblanza-de-roberto-arias-weichafe-del-pueblo-pobre-2/

ENACOM has enabled Non-Repayable Contributions (ANR) for these two programs, with resources from the Universal Service Trust Fund that, if approved, will finance the Roberto Arias projects 100%. The programs also solve a connectivity problem that was supposed to be addressed by the fund but was not fulfilled. "The Roberto Arias program is the first to allocate Universal Service Funds exclusively for non-profit community operators. This program not only allows financing for equipment and network usage but also for labor, bandwidth and training that facilitates community access. It sets a precedent that is being observed internationally. The Dynamic Coalition on Community Connectivity of the United Nations Internet Governance Forum has already published an article on this important program in its 2021 annual report," Puzio and Echaniz state in the book about the 35 years of the internet.[30]

The Roberto Arias program introduces important changes that had not been considered in any other program until now:
- The possibility of financing the necessary equipment for the connection of end-users (router, modems, cabling, etc.) to the deployed infrastructure, without transferring the cost of installation of the service, as they are non-profit providers. In the case of the Barrios Populares program, this possibility only reaches 30% of end-users.
- Among the types of technologies (wired, wireless, or mixed networks), the deployment of community networks "with mesh wireless topology (called "mesh" networks implemented with open-source wireless routers)" is recognized. This point is fundamental for the recognition of Libre Router, already approved in Argentina and used by many community networks in the country.
- The program mentions the possibility that the application authority authorizes other technical specificities, as justified by difficulties in the territories or by the community nature of the projects.
- Professional services - It can be incorporated as an item to render professional services - an engineer, accountant, etc. - in the project (if approved) and those corresponding to its management and rendering, since in most cases organizations do not have the resources to face these additional expenses to comply with administrative requirements. While this point is also included in the Popular Neighborhoods Program, its high cost could be attributed to these services
- The requirements for guarantees (both advance and compliance) are eliminated, which presents an important difference for the viability of the projects. Finally, each VARC licensee can submit up to 2 projects under this program.

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[30] https://comconnectivity.org/community-networks-towards-sustainable-funding-models/

Social appropriation of technologies

Creating bridges, routers, software and antennas

> "This intersection between territorial social organizations, grassroots movements, and the community network movement creates a new actor in the telecommunications scene. Just as organized rural communities fight for food sovereignty and land access, these same families are now fighting for their right to participate in public debate, to be part of the internet, and to co-create it in their territories. These families are often forced to pay exorbitant prepaid plans for poor services, sometimes having to leave their homes to find a signal, and sometimes having to share a single device for their children's homework... Today, they decide to climb onto their roofs, link their homes, and build their own little piece of the internet, no longer as second-class digital citizens. And today in Argentina, they can do so with the support of the State through ENACOM's programs for community networks."[31]

Availability and access to ICTs is the starting point for appropriation, since it is the effective possibility of taking material and symbolic contact with the technological object. Paula Morales, in the Diploma in Social Appropriation of Technologies, organized by the Faculty of Social Sciences of the University of Buenos Aires with participation from the Ministry of Social Development[32], said this. However, for appropriation to take place, it is necessary to know these devices not only in terms of functionality, but also to be able to identify their potential and limitations. "Appropriating technologies is making them ours, being autonomous in their use, being sovereign, not relying on restrictions imposed by logic that does not respond to our needs" The Diploma pointed out in another of its modules. This space, which was initiated during the pandemic but had been brewing before then, was a training space that reflects the end point of the path of work for democratizing access and building resources to guarantee access to communities, and also to promote an appropriation that invites creation, formatting, adaptation and appropriation. It can also be the beginning of a new path of community experiences, including training, deployment, management and sustainability of their own technologies. The Diploma dedicated a module to community networks, with special emphasis on the Roberto Arias Program.

The field of communications is a contested terrain, in which not only the visibility of all the players is put into play, but also the management, distribution and access to all the resources necessary to carry them out. This is especially tense when it comes to discrete resources, whether these are licenses to access a portion of the spectrum, economic resources defined by a public budget, the quality of the available connectivity but also the appropriate equipment, skills, knowledge, and forms of organization.

In this field, community networks have had to make their way, and first of all they manage to be recognized, then heard and finally taken into account in each decision taken to manage those resources. From how to plan a public policy, how to define and conceive a law or regulation, to how to access a subsidy, with what requirements, with what definitions, asking what data a form.

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[31] Ramos, A. (comp) (2022) De Fabricio 35 years of the Internet

[32] Primer 8 of the Diploma in Social Appropriation of Technologies. Faculty of Social Sciences. UBA (2021)

Continue knitting...

On this path that already adds its own experiences, teams and programs, specific licenses, state recognition, public policies, the network movement continues to weave strategies to expand experiences, with more appropriate tools and better conditions to achieve self-managed connectivity.

In that line, the agreement reached with Arsat, [33] the state telecommunications company that provides data transmission, telephone and television services, and is in charge of the deployment of fiber optics, was concretized in October 2022. The creation of the first Arsat exchange point with a community network, in the experience of Los Molinos of the organization Trabajadores Unidos por la Tierra, member of the UTR (Union of Rural Workers) in the Paravachasca valley and from there on , the possibility of feeding other community networks was inaugurated.[34] Los Molinos network also brings connectivity to the Libertad Refuge, a space that houses agricultural, technological and educational projects and that is expected to be the manufacturing plant for the Libre Routers in Argentina in the near future, thus replacing their import with local production.

The weaving of these networks also involved strengthening ties with organizations of the popular economy, the indigenous movement, articulation with universities, especially in Córdoba and the city of Buenos Aires. With ENACOM, especially with the Special Projects area; Also with legislators who support and promote projects such as the recent declaration of national interest of the Roberto Arias Program made by the Chamber of Deputies, proposed by the national deputy Pablo Carro of the Frente de Todos party, who is marking commitment to the democratization of communication and access to technology.

“The Roberto Arias was built in dialogue with the organizations of the sector, listening to the technologies that are most suitable for their projects, such as free technologies. It is important to have referent figures in the legislative chambers, because they generate political volume that help to achieve better levels of incidence” said Natalia Vineli of ENACON on the occasion of the declaration of national interest.[35] Deputy Carro said in turn that “companies compete with each other in places where there are already services, and they do not do so where they have a legal obligation to do so, in territories where only the cooperative, community and few SMEs sectors assume it. And that not only in places where it is difficult to reach with fiber optics, but also in large cities where, due to security or delays in payment, or deterioration of the equipment, these companies are not interested in working. It is important to recognize the work of the community sector, through the recognition of this Program.

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[33] https://www.arsat.com.ar
[34] https://www.facebook.com/altermundi.net/posts/pfbid0TMM6sUy4zNBMHYHZzVo31puf19km1WNJ5hcUpkTLbvtURXebyZfxJmD9TiiqxVsYl
[35] https://www.youtube.com/watch?v=R8Sa4gxdtIc

The Semillero as public policy

The Roberto Arias Program, the first one exclusively dedicated to community experiences, contemplates the accompaniment of the community throughout the process of establishing the network, even the cost of connectivity for a period of 6 months "until the network is firmly established and its sustainability is guaranteed from the economic and organizational aspect".

The Roberto Arias is a demand-based public policy that allocates funds to those who apply to use them. Despite being a policy designed for communities, the program presents several technical complexities, and requires a certain level of organization to carry it out and sustain it. This highlights the need to accompany communities in the process of accessing public policy. Just as the appropriation of technologies is a requirement to achieve the project's goal, the appropriation of public policy is a requirement for it to be concrete. Therefore, public policy must also foresee the technological training involved and the organizational capacity required.

Focusing on the same reality, ENACOM developed, in addition to Barrio Populares and Roberto Arias, the "Integral TIC Cabinets" program, which proposes to bring technology, in particular internet networks with the community model, to places where there is no capacity for organization and appropriation of technologies to sustain and deploy a community network. “There are places where there is capacity for organization and maintenance of a network and there are others that do not. We must think of a battery of policies to cover all these situations," said Natalia Vinelli.

During 2022, AlterMundi managed to bring together a series of grassroots organizations, many of which were gathered in territorial social organizations and movements, who, from different community experiences, joined a training proposal for the deployment of community networks: the Community Networks Seedbed. This proposal was achieved within the framework of the ANERA project - Embracing Roberto Arias - with the support of the Association for the Progress of Communications and the 48% organization, and with the accompaniment of Nodo TAU.

The Seedbed consisted of weekly virtual training sessions on the definition and different conceptions that characterize community networks, detailed knowledge of the technology and the different steps necessary to carry out the planning and deployment of a network, license management, and application to the Roberto Arias program.

The Seedbed made it possible to bring these skills closer to communities that decided to take on the challenge of connectivity, appropriating these tools to achieve it. And to advance in network deployment projects with a presentation for support from the Roberto Arias program.

Aspects to improve

From the proliferation of these experiences, an evaluation of the Roberto Arias proposal can be carried out and improvements that could be made to address certain commercial logics that it retains and do not contemplate the reality of organizations. From the community network movement, they continue to point out some of these aspects, including some conditions mentioned in the program's specifications that would be important to review.

One of them is the condition that the population in which the network is deployed has less than 5000 inhabitants, "the whim of 5000 people" as they call it. In the recent Discussion mentioned above on Connectivity and Rurality, Nicolás Echaniz revealed the origin of the 5000.[36] "It is a number defined by the GSMA - an organization related to the implementation of mobile phone systems - and is related to the profitability of the service. For an installation to be profitable, it must have more than 5000 inhabitants."

That's where that number that restricts us was taken from." From AlterMundi, they point out that this would not be a relevant criterion as a requirement to consider focusing on community network projects. "There is no other argument that supports that number. There is really no restriction there, if an indigenous community can apply in the middle of the city, for example. It is understood that the state has that priority to connect the disconnected, but community networks are also those that bet on another worldview, and that requirement should not be a limitation. That arbitrary definition has de facto power, it is there and was proposed in the VARC license specifications. Sometimes things remain due to conflicting interests. And sometimes just out of ignorance," analyzes Echaniz.

In the same line, another criticism of the current version of Roberto Arias comes from the forms that are requested, which also carry traces of calls for commercial projects. To advance in this evaluation, they ask: "How are the data requested? Are they designed from the perspective of community networks? What are the means enabled to submit requests? Restricting to digital, virtual format, does it facilitate or hinder? Would it be positive to open up possible forms of presentation, by hand, in-person, in text format, not restricting the form to a PDF that is difficult to manipulate? Would these forms be more inclusive?"

"The technical folder is still not well adapted to community projects," AlterMundi points out. "It retains many traces of a technical folder for a commercial project. There is a need for greater closeness with community networks to define what makes sense and what should not be asked, to inquire. We celebrate the existence of a license for community networks, as it is one of only two licenses in the world specifically for community networks. The other is Kenya, which offers a license but it is paid. And we also have the first two financing initiatives in the world - Barrios Populares and then Roberto Arias, which greatly reduced the difficulties, but is still a born project with commercial precedents. There is still a need to translate the reality of community networks into their documents."

[36] Discussion on Rurality, food sovereignty and connectivity. https://www.youtube.com/watch?v=6KD_f7DIzFE

Another aspect that needs to be addressed as a necessary condition to guarantee the development, deployment, and sustainability of community networks, which the Program should consider, is connectivity to the network and its quality. In most cases, the difficulties faced by communities still revolve around how to bring the network closer to them and how to ensure that the connection is of good quality. To make these experiences a reality and ensure their development, greater state investment in infrastructure, extension of fiber optics, and adding access points is needed. It is also important to promote coordination between private companies, state-owned enterprises, small cooperatives, and community networks.

Once the connection is established, the bandwidth also requires special attention. Two aspects come into play here: guaranteeing bandwidth and ensuring its symmetry between the inbound and outbound connections, so that the possibility of co-creating the internet can be realized. In "that little piece of the internet" that each community network is building, participants in the communities should not only be consumers of information produced in other geographies but also producers of their own resources and information that the community requires. Both aspects are essential to guarantee the connectivity of community networks in rural areas and the right to communication of communities.

Hence the importance of continuing to weave these networks in two ways. Continuing to propose these improvements to regulators that will bring these tools even closer to communities, and at the same time, accompanying communities with training proposals to be able to assume the different tasks and challenges that the deployment project of a community network entails. "We are working with this tool that ENACOM provided and we celebrate it, but it is still not the right tool. We are screwing a screw with a knife. Can it be done? Of course, it can. But it is not ideal. There is a high step from the territories to get there. The Seedbed is a little step that brings it closer," as described by AlterMundi.

Closure

The path towards technological sovereignty is being filled with seeds that have started to flourish. The experiences, the development of equipment, programs, methodologies, forms of organization, all are milestones of a path that continues to expand and deepen this possibility of co-creating the internet, and from there, not only solving connectivity but also many other problems and needs of communities.

Each link in those who make these developments collaborates with the desired technological and communicational sovereignty. From those who develop a program, design a free router or an antenna that is more friendly to this process, work with legislation, or develop a methodology to share this knowledge as the Semillero does, with the aim of facilitating the community experience. This meeting of actions changes the telecommunications universe in Argentina, an ecosystem that is unbalanced based on certain logics that do not include and leave out large sectors of the population.

It is important to highlight in this framework the role of public policies, which can be demand-driven, as is the experience currently being developed in Argentina, or they can be planned and extended to the entire population. It is also necessary to recognize the possible channels of influence in this policy so that there are mechanisms to review, improve, or expand them. And finally, the importance that public policy itself assumes the responsibility of achieving its appropriation and the sustainability of the projects.

Recording this path, visualizing it, leads to its replication in other places, demonstrating that it is possible, useful, and can be carried out in other geographies, in other territories, with other political and regulatory frameworks to collaborate with the initiatives of organizations that also struggle for other possible worlds built from below, sustainable, and for everyone.