Cellular Networks/Community Internet as a Social Program

March 2019

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What is a community cellular network?

A cellular telephone and/or Internet network that connects rural communities at **affordable costs** is **owned** by the community that is in charge of its **implementation, operation and management.**

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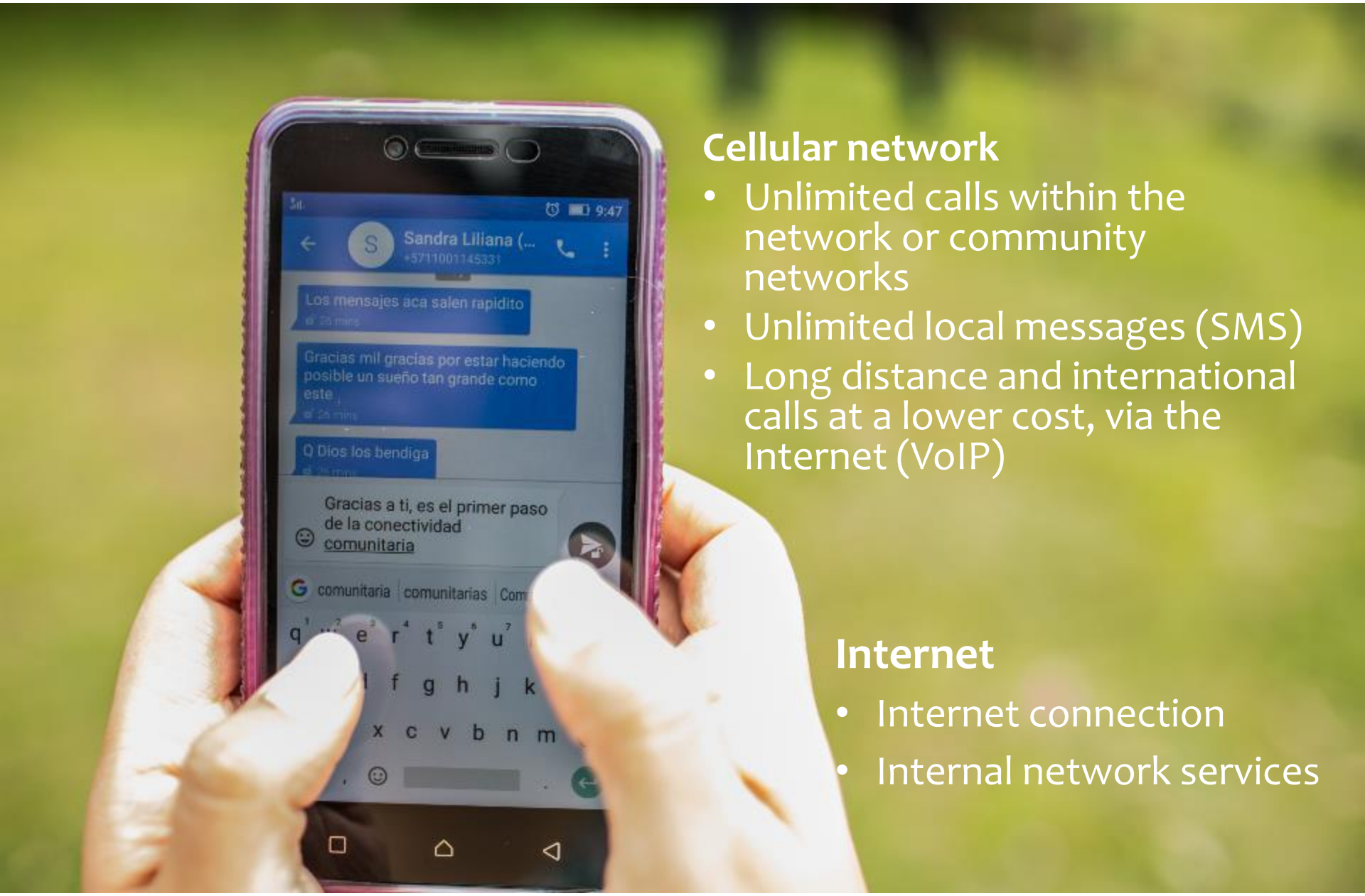
How is it different from commercial internet networks?

Community Network	Commercial Network
The community owns the local network	The commercial operator owns the network
The community designs, builds, and defines how the network will operate **- Digital Autonomy**	The commercial operator is the one who designs, builds and defines the way in which the network will operate.
The community defines the fees it will set for its affiliates	The commercial operator is the one who defines the price that he will charge to his users.
It's nonprofit.	The commercial operator seeks to obtain the greatest possible utility
Revenues are applied in the improvement of the Network, innovation, training. Remain in the community	Revenues are applied to network maintenance and utilities for business owners
The community owns the operation along with other communities that like her are part of an association	The operator owns the operation or leases the concession to another operator.

Adapted from Community Telephony Handbook - Rhizomatica



Cellular network

- Unlimited calls within the network or community networks
- Unlimited local messages (SMS)
- Long distance and international calls at a lower cost, via the Internet (VoIP)

Internet

- Internet connection
- Internal network services

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How does it work?

* Each community is organized to install, operate and administer its own cell phone network and/or internet.
* An organization associates communities to strengthen networks.
* Allied organizations provide technological, legal, technical and administrative advice. Rhizomatica, APC, Internet Society, Colnodo, University of Cauca, Worldcom.

The community administers its network, covers maintenance fees, receives advice, training, reports service tests for evolution and improvement.

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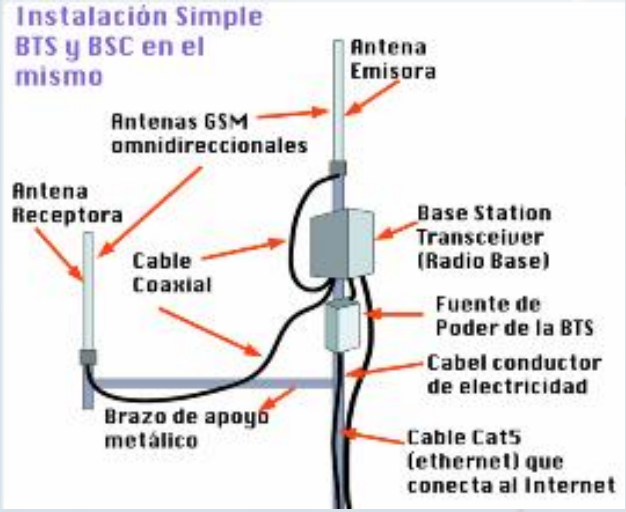
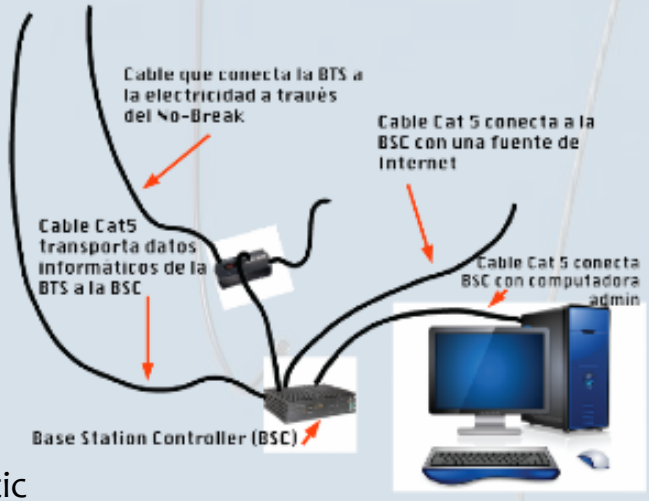
What technology is used?

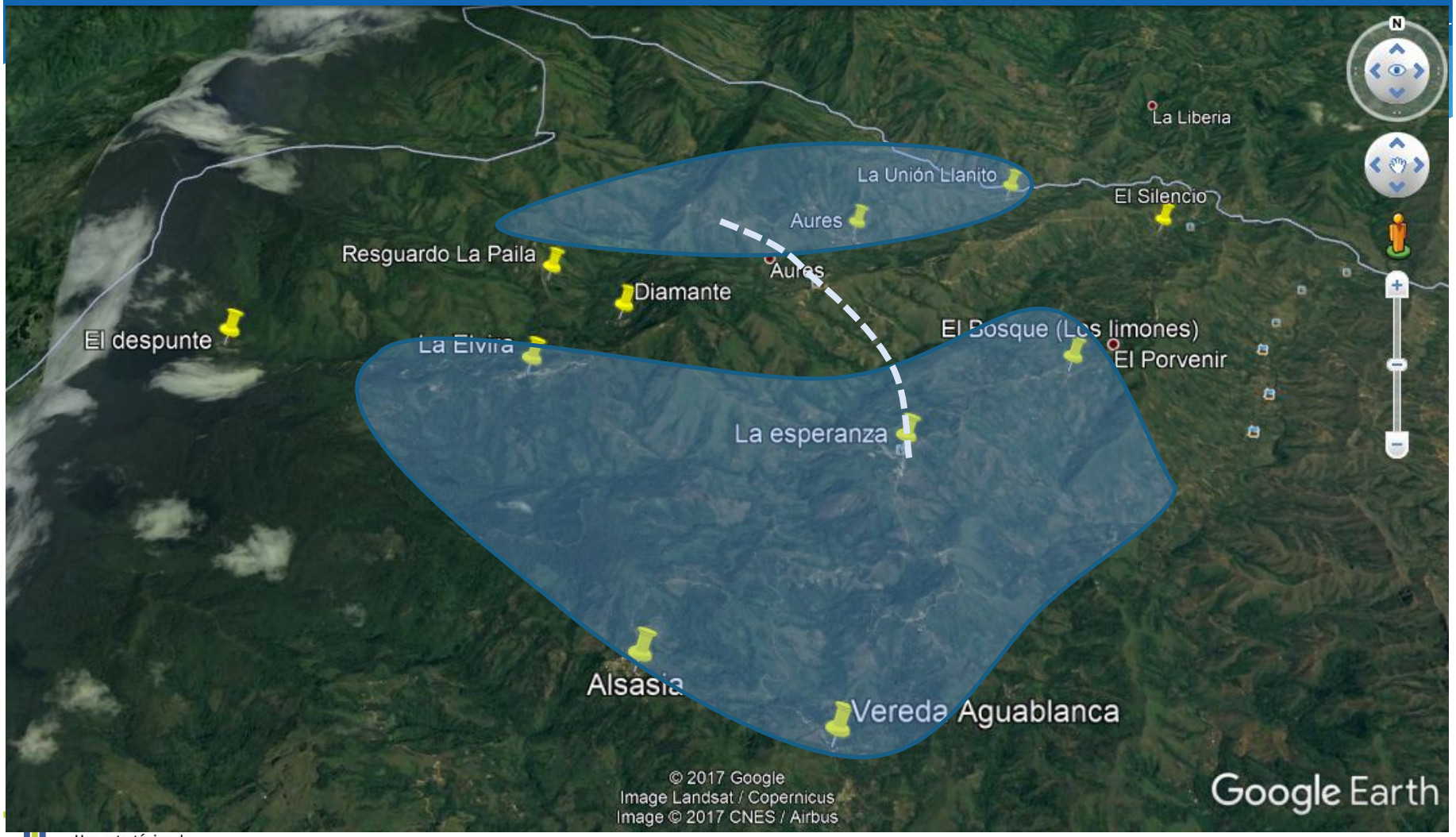




Source Rhizomatic

* Base Radio (BTS) and Control Station (BSC) Equipment
* Osmocom/OpenBSC: Free software that emulates the components of a cellular network
* 14 to 28 simultaneous calls.
* Perimeter from 5 to 8 km.
* Between 400 and 450 users

Expected coverage



How is the community organized?

* Organisational structure in the community to administer the system - **Community Operator**
* Each network has a person who administers it and one who supports in the operation and maintenance.

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What do we expect from the pilot project?

* **Demonstrate that with a new technical, organizational and economic scheme it is possible to provide cellular telephony services in a community and sustainable scheme.**
* The community contributes with the organizational structure, physical facilities, maintenance of the network. Allies provide legal, organizational and technical support. If the project is successful, the teams are transferred to the community organization, while they are left in commodatum.

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What do we expect from the pilot project?

Uses expected by the community

* For the protection of the community, allows alert in case of emergencies
* Convene and inform the community
* Internal communication between members of the community
* Communication outward, with family, contacts, other communities, etc.

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Installation preparation

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Installation

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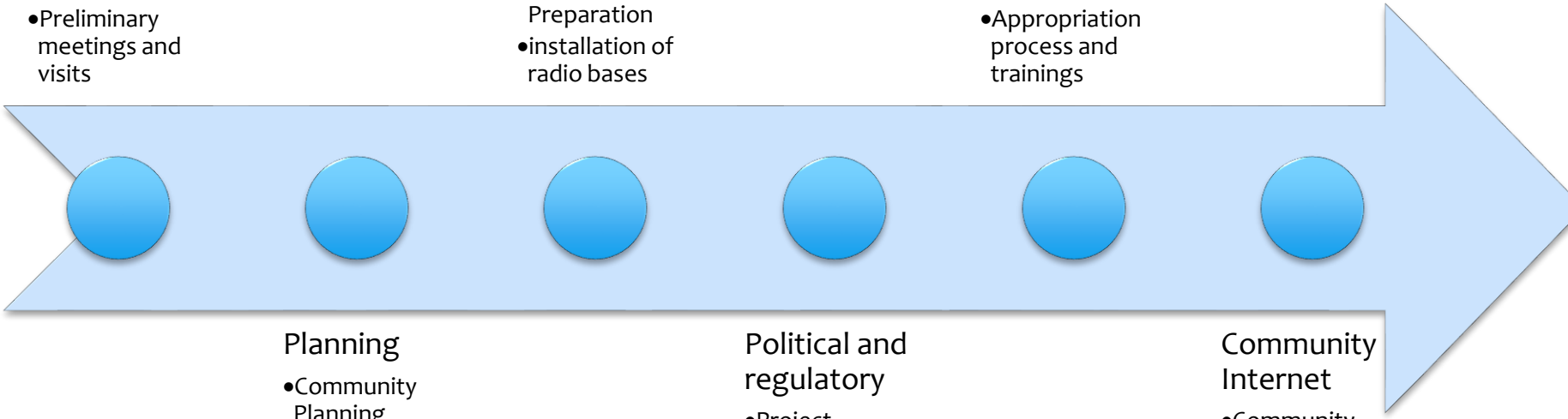
What have we done?



Identification of communities

- Dialogue with different communities
- Preliminary meetings and visits

Planning

- Community Planning Workshop
- Community planning and design visit

Installation

- Installation Preparation
- installation of radio bases

Political and regulatory

- Project presentation to ANE and MinTIC
- Search for opportunities
- Agreement

Sustainability

- Creation of community communications committee
- Appropriation process and trainings

Community Internet

- Community planning
- Community Design
- Implementation

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Political and regulatory

Accompany the Ministry of Information and Communications Technologies and the National Spectrum Agency in structuring the Policy for the Development of Social Telecommunications for Community Networks in order to establish the normative framework that regulates the Community Social Telecommunications services, giving as input the experience of deployment of this type of networks in Colombia and validating the technical, economic and social/organizational feasibility of the implementation of community telecommunications networks in rural and indigenous areas of Colombia with low or no mobile service coverage.

Ownership and sustainability

* Detailed characterization of the communities
* Digital Literacy Workshops
* Workshops proposed: marketing, educational resources, security, networks.
* Process Documentation

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Community internet network

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