Digital Territories: a government strategy for digital inclusion in rural areas

Rossana Coely de Oliveira Moura¹ and Tânia Saraiva de Melo Pinheiro²

¹ Agrarian and Rural Development Studies Centre, Brazil, Country, rossana@nead.gov.br
² Federal University of Ceará in Quixadá, Brazil, taniapinheiro@ufc.br

Abstract: More challenging than digital inclusion in urban areas is to provide access to information and communication technology in rural areas, which are characterized by very low population density and poor infrastructure. The Brazilian Federal Government observed that most urban initiatives in digital solidarity were not able to overcome the difficulties of working far from urban centers, and launched the Digital Territories nationwide project, which is part of a nationwide program: Citizenship Territories. Although it has a dynamic methodology - a necessary condition to respect and preserve local identities - it is based on a framework, which is presented in the following work, conceived through a process over a long period of time, involving a wide range of stakeholders, including the rural communities themselves.

Keywords: Digital Divide, Government, National Programme, Policy, Knowledge Society.

1. Digital Inclusion Government Policies

1.1 First steps

In 2000, the Brazilian government set up an Inter-ministry Workgroup to examine and propose policies and regulations related to new electronic ways of interaction within the government itself, and with its citizens. Electronic Government, or E-Gov, was the name given to the Federal Government’s set of actions to promote the use of information and communications technology (ICT) to improve public services offered to citizens, suppliers and staff (BRASIL, 2005).

In the case of services provided to citizens, a report published in 2002 highlighted that, although it still was not enough, the range of internet services offered was expressive, but it would be useless to provide growing internet services if universal access were unavailable. Thus, the result of e-gov’s first years
of work was the definition of seven goals to guide its next steps. Those goals included stimulating access to internet, especially through access points within public or community institutions.

From the initial results, and as a way of structuring its actions, the incoming government created eight Technical Committees for the Electronic Government: 1 – Free-license Software Implementation; 2 – Digital Inclusion; 3 – Systems Integration; 4 – Legacy Systems and Software Licenses; 5 – Sites and Online Services Management; 6 – Network Infrastructure; 7 – Government to Government (G2G); 8 – Knowledge Management and Strategic Information.

One of the duties of the Digital Inclusion Committee was to stimulate public policies for digital inclusion, and to promote the establishment of community access points by city and state governments, private companies, and society in general.

The concept that digital inclusion promotes social inclusion multiplied initiatives of digital inclusion using different methodologies and sponsors. For those who cannot afford to have computers and internet at home, or even to pay for internet use, the alternative access is community telecenters.

A telecenter may be defined as a “shared site that provides public access to information and communications technologies” (PROENZA, 2005). It can be commercial (cyber-cafés), public, in a school, in a non-profit organization, or in a community. The latter is set up and managed by communities, and provides access even to those who cannot afford the use. Some community telecenters choose to charge for some services, but reinvest the profits for its maintenance.

After much discussion in the digital inclusion environment, especially within the government, the common use of the word telecenter is associated to public non-profit locations, offering free internet connections to citizens who cannot afford to have their own. It is common to find telecenters that have some government support (city, state or federal), and are maintained by Organized Civil Society, NGOs or other kinds of local institutions.

This paper is about this specific case of community telecenters operating in rural areas.

1.2 What happens in Rural Areas?

By 2007, digital inclusion in urban areas was already the object of important Federal Government actions, such as distance learning programs and telecenters. These actions involve different offices such as the Ministry of Education, the Ministry of Communication, the National Institute of Information Technology, and the Ministry of Planning. The Digital Inclusion Committee is the place to bring together all different initiatives, in order to join efforts to provide efficiency in public policies.

Digital inclusion in rural areas was restricted to isolated and disconnected initiatives to provide computers and internet access. With so many difficulties,
unfortunately, they deal more with access, and less with real digital inclusion. Digital inclusion for rural areas is much more than just having internet access. It is a practice of citizenship involving interaction with the world of information and communication, taking into account local education and culture.

Analyzing data available in the Digital Inclusion National Observatory (Onid) database, we get a better idea of how rural areas are very poorly covered by internet access. The Observatory database was created to gather information about all digital inclusion initiatives in Brazil through the spontaneous registration conducted by the projects themselves. So, it does not include all initiatives, but can help to highlight rural versus urban distribution.

Input data for registration consists only of project identification, contact information and address. There is no classification into rural and urban projects, but by a careful analysis of project identification and location we arrived at an approximate distribution, as presented in Table 1.

Table 1 – Telecenters in Onid x Population (2008)

<table>
<thead>
<tr>
<th></th>
<th>Telecenters (%)</th>
<th>Population (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>4,8</td>
<td>16,7</td>
</tr>
<tr>
<td>Urban</td>
<td>95,2</td>
<td>83,3</td>
</tr>
<tr>
<td>Total</td>
<td>100,0</td>
<td>100,0</td>
</tr>
</tbody>
</table>

* (MDA/DIEESE, 2008)

The situation changed in 2008, when, after supporting different experiments for some years, and observing different initiatives that were identified through Onid, and by networking with rural communities, the Federal Government launched its national policy for digital inclusion in rural areas: the Digital Territories Project (Projeto Territórios digitais).

2 The dawn of Digital Territories

2.1 What is it part of?

As Digital Territories is part of the Federal Government’s Citizenship Territories Program, first we need to introduce the latter.

How can the Brazilian Government deal with rural areas in such a huge country? How can it choose a place to build a new school or hospital? How to deal with places with a population density so low that it becomes impossible to have enough government representation. The first step was to organize the rural areas into Rural Territories.

Rural territories are sets of locations sharing the same economic and environmental characteristics, a common identity, and sharing social, cultural and
geographic cohesion. Each of them has no more than 50 thousand dwellers; and a population density of less than 80 inhabitants/km². They are bigger than a city and smaller than a state, and show more clearly than either of these the reality of their social groups, economic activity and institutions. That makes it easier for government actions to develop these regions. Sixty territories have been created so far.

The second step was to promote Territorial Councils, working as an interface between citizens and all government levels, and interested institutions, mainly NGOs. Councils are composed of representatives of social movements, communities, and all institutions interested in the development of the territory, as well as municipal, state and federal governments.

As it was quite impossible to start working in all territories simultaneously, the Brazilian government decided to focus on the thirty poorest, as measured by the Human Development Indicator, and progressively add another thirty every year. By 2008 there were sixty territories, as shown in Figure 1. They are called Citizenship Territories (Territórios da Cidadania), to distinguish them from the other rural territories.

![Figure 1 Citizenship Territories](image)

The selection of a territory as a Citizenship Territory is conducted by the Federal Government together with the establishment of an investment plan for all governmental areas of action. The plan is not detailed, because is does not say where, when, and how any action will be executed. It is mainly a budget. It is up to the local Territory Council to lay out a detailed plan, aided by a federal government consultant. Once the plan is completed, the Citizenship Territory starts to receive government funds. All citizens can monitor the project’s actions through the program website (BRASIL, 2008).

At the end of 2008 a new government action was added to the Citizenship Territories program, concerned with making internet reach rural areas. As it is hard to find anyone interested in investing in this type of connection and training in places with such low demographic density – there are only isolated initiatives, as we stated – the government decided to take the first steps on a large scale.
Digital Territories is the Citizenship Territories sub-program responsible for setting up telecenters in the territories. Such public and free use spaces can be set up in land reform settlements (assentamentos da reforma agrária), agricultural schools, traditional communities, labor unions or in Rural Family Houses. The first telecenters, called Digital Houses, were inaugurated in 2008, and the goal is to equal the number of Citizenship Territories by 2010 that, by that time, will have reached 120.

2.2 How did we get that far?

The creation of the Digital Inclusion Technical Committees for the Electronic Government in 2003 motivated different government initiatives in digital inclusion, all of them grounded in the belief that e-gov would only become a real agent of democracy if people had access to the information and services available on the internet.

It was not long before that the Ministry of Agrarian Development, responsible for the development of rural areas, started its own initiatives. The first thing to be done was to define how to implement telecenters in rural areas, far from any kind of technological support. A methodology had to be defined, in accordance with the communities’ way of working, ideas had to come from the communities (bottom-up), respecting local singularities, and not only from decision-makers or academicians (top-down).

The MDA’s Agrarian and Rural Development Studies Centre (Nead) led the task of defining the guidelines for digital inclusion in rural areas.

Nead is a project for technical cooperation between the Ministry of Agrarian Development (MDA) and the Inter-American Institute for Cooperation on Agriculture (IICA) that seeks to contribute to the improvement of rural development policies, by promoting studies and research with the purpose of evaluating and improving public policies aimed at agrarian reform, family agriculture and sustainable rural development (NEAD, 2008).

Nead began this task by gathering information about different digital inclusion initiatives, mainly in rural, but also in urban areas. Many different projects and even ideas were heard, and Nead sponsored two different academic institutions to propose the development and implementation of methodologies that became pilot experiences on how to conduct digital inclusions in rural areas.

The first one was in the state of Ceará. The project, named Rural Digital Inclusion Centers (CRID – Centros Rurais de Inclusão Digital), was developed by Multimedia Laboratories, at the Federal University of Ceará. Its methodology is based on four areas: laboratory management, digital inclusion, computers for education, and distance learning. The first CRID was implemented in 2004.

---

1 An example of this project can be found at www.odebrechtonline.com.br/materias/00101-00200/167/(accessed 01 Nov 2008).
sponsored by Nead, the National Institute of Colonization and Agrarian Reform (Incra), and the Bank of Northeast Brazil (BNB). “Each CRID is a computer education laboratory [...] with the mediation promoted by a local school” (MATTOS, 2005) which means that education has a central role.

The second pilot experience was in the state of Rio Grande do Norte. In 2006, the Federal Center for Technological Education of that state (CEFET-RN) implemented an experience named Digital Inclusion Center, sponsored by the Ministry of Mines and Energy (MME), the São Francisco Hydroelectric Company (Chesf), and the Cerro Corá City Hall, as well as by Nead. Their methodology had two main differences from CRID: no emphasis in integrating the use of computers and internet with school activities; and a huge emphasis on using the telecenter to help increase local production and distribution through some kind of e-business.

At that time, the Brazilian Federal Government’s digital inclusion programs, conceived for urban areas, such as Brazil House and Culture Points, had been consolidated. So, Nead became a closer observer and also learned from them.

Different executors, partners and goals, led to the conclusion that Nead could only give the guidelines, but the detailed methodology had to be specified case by case when talking about a nationwide project.

The Digital Territories Project identity was first used in 2007, and meant to be a compilation of the different experiences sponsored and observed. The very beginning of 2008 was the time to make public revisions of the main guidelines, to open the project to any interested partners, identify unapproached issues and decide the next steps. From January to April, two meetings per month were held, joining people from private and government companies, social movements, academy, and all citizens interested in participating.

The project guidelines were revised, the name chosen for the telecenter was Casa Digital (Digital House), and the first state chosen to receive one of those houses was Pará.

3 The project guidelines

3.1 The implementation maturity stages

What happens if a computer stops working in such a remote place? This is one of the first questions asked by beginners in the project. They are accustomed to seeing an implementation process taking place with just a few hours of training, and cannot imagine how a community can learn to do everything needed to maintain a telecenter, in an autonomous way, counting on only a few hours of training.

That question can be used to explain some of the greater differences between urban and rural projects: this education process has to be measured in months or, preferably, in years; the community has to commit to the telecenter, and allocate
as many people as necessary to keep it open seven days a week, even at night, so that those who work dayshift can also become users. As they cannot afford to pay salaries for so many people, work should be voluntary; the pilot projects have shown that this is a natural decision in organized communities.

As rural communities are far away from “knowledge provider” urban centers, the implementation of a telecenter is a three-stage maturation process: preparation, adaptation and consolidation, or, as we prefer to call them, childhood, adolescence and maturity.

The preparation, or “childhood”, is characterized by a direct intervention by a formation (training) team from an executor institution, that can be an NGO, academy, social movements and so forth. Equipments are installed, and many short-term workshops are held for those community members who will propagate that new knowledge through the community. This childhood can last from 3 to 6 months, depending on the methodology chosen. Most digital inclusion projects stop here, before the community has reached a self-sustainable maturity level.

In the second stage, adaptation or “adolescence”, the training team starts watching at a distance, through internet, and visits to the community are less frequent. We suggest monthly visits. Like a teenager, the community starts to walk on its own, and it is common to see conflicts between what is intended to be done, and what the implementation team expected. A good implementation team, like a good educator, will know how to trade off between its own beliefs and the community choices. The suggestion is that this stage should be six months long.

Consolidation or “maturity” is the last stage, marked by no more dependency on the implementation team, who will work only as an eventual consultant for a suggested period of one more year, before consolidation is complete. Experienced popular educators say that, after beginning the project, two years are needed to confirm if it is really self-sustainable.

3.2 Descriptive guidelines

Nead sponsored an experimental telecenter with emphasis in education. It sponsored another where supporting production was the most important task. Which one is the best? It is preferable to have both of them, besides developing digital and e-learning culture. But the most important goal is to be a self-sustainable project.

Digital Territories, as a country-wide project, cannot have a rigid methodology or it will not be able to respect local specificities, which is an important condition for self-sustainable projects. Instead, it defines the main goals that have to be pursued. The maturation stages are some of these goals – they give directions on the global time of the implementation process.

Other main parameters are presented below. They are the result of the planning meetings held in the beginning of 2008.
3.2.1 Principles

No matter who is implementing a Digital House, these principles must be respected:

- preferable use of FOSS (free and open source software);
- respect for personal diversity;
- search for sustainability;
- promote shared management;
- transfer of technology and sharing of knowledge;
- use of free licenses and standards for all knowledge produced by the community (all community knowledge must be open source);
- be a non-profit community space, connected to internet;
- avoid political mishandling;
- guarantee minimum access conditions;
- adopt social and environmental responsibility.

3.2.2 Mission

Contribute to the consolidation of the Citizenship Program by promoting access to information and communication technology.

3.2.3 Objectives

The general objective is to provide access to information and communication technologies, infra-structure and education to the Citizenship Territories, strengthening its actions.

To reach the general objective, four specific objectives are defined:

- integrate digital inclusion public policies;
- implement national infra-structure (physical, technological, and human resources);
- implement Digital Territories;
- accomplish active participation of the communities.

3.2.4 Conditions to have a Digital House in a community

To be able to receive a Digital House, a community has to be within the Citizenship Territories, it has to be indicated by the Territory Council, and must attend some technical conditions:
to be located in a rural area;
- to have access to electrical power;
- to be a formal social organization;
- to have, preferably, a school nearby;
- to have the intention of installing the telecenter in a public access place, to keep it open seven days a week, 24 hours a day;
- to provide secure conditions for users and equipment.

3.2.4 Digital Territories Workplan

The Digital Territories Project planning considers four dimensions. The first one – public policies – is the starting point. This strategic level refers to the decision, by the Federal Government, to carry out such a project and to deal with establishing nationwide partnerships, setting up a nationwide team, and defining general goals as shown in this document.

The second dimension, also within a nationwide scope, is an executive one. It refers to the implementation and maintenance of a national infra-structure supporting the telecenters of the territories and allowing their interaction.

The next dimension is at territory level. The main actors are the Territory Council and the institution that will implement the Project, who will start detailing the implementation schedule and characteristics of each Digital House (telecenter).

Finally, and most importantly, there is the community dimension. The work plan can only be completely detailed if done together with each local community to receive a telecenter. Moreover, the schedule and contents (technical, pedagogical and administrative) to be considered in each case, can only be completely detailed if held this dimension.

4. Final remarks

The development of Citizenship Territories presupposes the formulation of alternatives that are capable of facing contemporary economic, social and environmental problems and challenges, and that lead to the construction of new concepts of endogenous, human, local, and sustainable development. The transformation of realities requires and stimulates the appearance of new ideas and concepts to explain reality, and to organize initiatives and actions for a contemporary society.

Digital inclusion, as a basic tool for the sustainable development of Citizenship Territories, will make public access to information and communications technologies feasible, thus it will become a promoter of social inclusion of the less
privileged, who are at the margin of the productive process and, consequently, of the social and economic development of Brazilian society.

Hence, the Digital Territories are intended to produce significant contribution to social inclusion, and offer quality of life improvement, in the social organization, and in sustainable rural development.

References


MDA/DIEESE. Estatísticas do meio rural / Departamento Intersindical de Estatística e Estudos Socioeconômicos ; Núcleo de Estudos Agrários e Desenvolvimento Rural, Brasília : MDA : DIEESE, 2008. (Statistics in rural areas)

