The Journal of Community Informatics, (2004), Vol. 1, Issue 1, pp. 39-57

*Latin American Community Telecenters: "It's a long way to TICperary**"

Michel J. Menou
CIDEGI, France & Somos@Telecentros < michel.menou@wanadoo.fr >

Karin Delgadillo Poepsel
Foundation Chasquinet, Ecuador & Somos@Telecentros < karin@chasquinet.org >

Klaus Stoll
Foundation Chasquinet, Ecuador & Somos@Telecentros < klaus@chasquinet.org >

Abstract

Community Telecenters, that is centers for community development using ICT (Information and Communications Technologies)[1], have become the focus of attention in international development circles over the past ten years, especially in Latin America. A virtual community called Somos@Telecentros is progressively taking shape in the region (http://www.tele-centros.org) with a specific interest in supporting and enabling these Community Telecenters.

As part of the build up effort an inventory of telecenters was conducted, followed by a review of the situation. The latter involved self-description, recording of stories on the web and through Email, and Email and face-to-face interviews. The results were synthesized into an analytical panorama of the telecenters movement in the region, the challenges faced, the solutions encountered and the lessons learned.

This paper will summarize these findings and highlight a number of key issues, in particular, the trade-off between top-down connectivity and computer literacy programs and horizontal and community-led and controlled comprehensive development efforts.

---

* An earlier version of this paper, authored by P. Bonilla Soria, K. Delgadillo Poepsel, K. Stoll and M.J. Menou was presented at the 3rd Conference of the Association of Internet Researchers: NET / WORK / THEORY, Maastricht, The Netherlands, October 13-16, 2002

** TIC is ICT in Latin languages.

[1] ICT is TIC in Latin languages.

The Somos@Telecentros community and the Telelac projects

For more than 20 years, collective access to telecommunications facilities and services has been tried in industrialized countries as a means to alleviate economic and social disadvantages faced by marginal, isolated or rural communities[2]. In the second half of the 1990's, various non-governmental organizations, especially in Latin America, began to offer collective access points to telecommunication facilities, with an emphasis on Internet access[3]. In the same period a number of international organizations, especially the International Telecommunications Union (ITU); the United Nations Education, Science and Culture Organization (UNESCO); and the Canada's International Development Research Center (IDRC) undertook to emulate and adapt these endeavors through "pilot projects" that supported "Multipurpose Community Telecenters" principally in Africa. The rapid spread of Internet access and use at the international level, and the resulting concerns for the so-called "digital divide" and its consequences prompted many non-governmental organizations and even some governments to follow a similar path. By the end of the 1990's, "telecenters", under various names, were becoming relatively common in many parts of the world, and even more widely referenced in the debates and strategy developments concerning poverty alleviation and what information and communication technologies (ICTs) could contribute to such efforts. The very notion of a "telecenter", its characteristics and more importantly its actual effects were however, and continue to be, a subject of considerable discussion. (Fuchs, 1998; Gomez, Hunt, Lamoureux 1999; Menou & Stoll 2003).

It was thus natural for the IDRC to consider investigating what the reality might be concerning the development and significance of Telecenters in relation to "Development" in the Latin American region. The IDRC looked to identify Latin American partners that could undertake a survey and analysis of the telecenters in the area. In the course of preliminary discussions, a somewhat different approach emerged where the project would not be limited to a single immediate outcome but would primarily seek to facilitate the construction of a cooperative network among telecenters and a participatory approach to the proposed studies and activities (Menou, 1999). The Chasquinet Foundation, based in Ecuador, agreed to assume responsibility for the coordination of the project. This developed further through an online discussion among a number of actors within the telecenters movement in the region followed by face to face meetings among some of these, on the occasion of a workshop on telecenters evaluation organized by IDRC. A two-year project, called Telelac 1, was formally approved by the IDRC in December 1999.

The focus of the project was originally to be on the consolidation of data and lessons learned about telecenters operating in Latin America and the Caribbean. At the first meeting of project participants three other objectives were added:

- establishing mechanisms for cooperative learning and sharing experiences, especially through an online resource center and electronic discussion groups;
- building an effective community network that could become self-sustaining;
- developing, and possibly applying, appropriate methodologies for impact assessment.

In sum, the project evolved and was implemented so that it could contribute to the creation of conditions that would support action research, on the one hand; and the building of a pro-active and representative community of telecenters in the region, on the other. The latter objective was conceived as the necessary collective platform to achieve open and continuous learning, and to facilitate effective participation in the articulation of policies and plans related to the use of ICT for development.

Even though all objectives could not be achieved, progress under Telelac 1 was significant. This led the IDRC to request a proposal for a second phase. After a somewhat excruciating process of successive

[2] Thus the often used name for these facililtes--"telecottage" reminiscent of cottage industrie.s

[3] Among these, the Red Cientifica Peruana, RCP, initiated the Cabinas publicas Internet [Public Internet cabins] in 1994, which were widely, and often incorrectly and abusively, acknowledged as a "best practice".

revisions resulting from institutional changes within the donor community, Telelac 2 was finally approved by the IDRC and the Institute for Connectivity in the Americas (ICA) and activated in July 2002 for a period of a further 2 years. Considering that the community of telecenters was already emerging, Telelac 2 was intended to offer indirect support to this process by:

- Setting up cooperative mechanisms for research, learning and experimentation, and the dissemination of best practices and results;
- Providing capacity-building opportunities for telecenter practitioners in LAC as a way to enhance their performance, relevance and sustainability; and
- Strengthening the regional network and its capacity to partner and influence the private and public sectors in the region.

The network's geographic scope encompasses both Latin America and the Caribbean. The majority of participants are Spanish speaking. Spanish is the main language of communication within the Network. One result of this has been to reduce the collective participation of Brazilian actors in the telecenters movement and even more those from English or French speaking countries and territories, even though individual participation from these regions has been substantial.[4] The cost of providing translation has unfortunately been prohibitive restricting access from not only other major European languages but also from the significant indigenous languages as well. However its should be noted that the lack of direct personal contacts, the difficulties in creating the encounters through which mutual understanding and trust might be built, as well as the slow process of building and appropriating a culture of networking and sharing can be regarded as even more significant barriers to the development the Network than language.

The Somos@Telecentros community is at the moment an "open space". Telecenters, telecenter personnel, social activists, academics, and anyone interested in this phenomenon may join by registering on the web site. The only requirement is to agree to a set of principles[5]. Currently more than 1900 persons and some 350 telecenters or telecenters organizations have registered. One can roughly estimate that more than 30% of the members are actively participating in the activities of the community, participation being understood as sharing of materials, especially through the online resource center; contributions to the discussion lists; or attendance at the local or regional meetings in addition to the regular activities undertaken in the respective locations.

The on going strengthening of the movement is likely to rely on the formation of effective though flexible national structures. Toward this end, Somos@Telecentros has encouraged the holding of national meetings which since 2001 have taken place in 9 countries[6] and has supported a regional meeting for Central America and the Caribbean organized by the Inter-American Bank for Development[7]. The outcome of the national meetings has been directed to feed into the discussions at the regional meetings, which economic conditions have prevented many members from attending (as has been the case even for national meetings, at least in the largest countries). A variety of local circumstances and the focus on the formalization of the regional network from 2003 led to some loss of impetus in the building of national groups. However, the momentum seems to have recovered somewhat with the activation of national discussion lists. Three regional meetings have been held to date, in Quito, Ecuador (July 2001 & April 2003) and São Paolo, Brazil (May 2004).

---

[4] A phenomenon which can also be observed in related regional endeavors such as the Mistica a virtual community focused on the social effects of ICT in Latin America and the Caribbean; http://funredes.org/mistica/

[5] Democracy, open access to knowledge, solidarity and mutual help, participation and transparency, pro-active participation, respect of diversity and gender equality

[6] Argentina, April 200; Brazil, June 2001 & May 2004; Chile, July 2001; Colombia, June 2001 October 2003;
Cuba, February 2001; Ecuador March 2001& April 2003; Mexico, March 2001; Peru, March 2001 & April 2003; Venezuela, June 2001

[7] http://www.tele-centros.org/comunidad/tallerBID.html

At the 2nd regional meeting a process of formalization was engaged in through the election of an interim steering committee entrusted with the task of leading this process. Bylaws and organizational structures were discussed in an open working group. The community has now been incorporated as an international non-governmental organization under Ecuadorian law and a board of directors was elected at the 3rd regional meeting.

A series of general and thematic discussion lists (see Table 1) has allowed for continuing interaction among the participants, while lists restricted to specific coordination functions are established as need arises. The main channel of interaction among the participants is the Telecentros list. It has an average of 200 messages per month. A significant level of interpersonal and small group interaction appears to be taking place in parallel to this, both electronically and through direct observation. From 2003 national lists began to operate in Argentina, Colombia, Ecuador, México, Perú; and in 2004 in Bolivia, Brasil, Chile, Guatemala, Nicaragua, Paraguay, Venezuela established their own lists. These it is hoped will play a significant role in strengthening the community at both the national and regional levels. The online resource center meanwhile provides access to a growing collection of documents[8] and references on all aspects of telecenter activities presented in a systematic fashion with emphasis on the sharing of experience among members of the community and offering practical answers to specific needs. The resource center currently receives some 1000 visits per month.

Table 1. Somos@Telecentros electronic discussion lists

List	No. Of Subscribers	Countries represented
Telecentros	671	Latin America & Caribbean Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Curação, Dominican Rep., Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Uruguay, Venezuela. Other Australia, Belgium, Canada, Denmark, France, Germany, India, Italy, Japan, Netherlands, Portugal, Slovakia, South Africa, Spain, Sweden, Switzerland, U.K., U.S.A.
Tigers [Linux]	72	Argentina, Chile, Colombia, Cuba, Ecuador, Mexico, Paraguay, Peru, Uruguay, Venezuela USA
Equity (e.g. Gender)	27	Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guatemala, Mexico, Peru
Training	6	Ecuador, Peru
Virtual Telecenters School "Oscar Pedraza"	48	Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Nicaragua, Panama, Peru, Venezuela
Rural distance education	119	Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Peru, Uruguay, Venezuela,
CoVITALC (research)	46	Argentina, Bolivia, Brazil, Chile, Colombia, Dominican Rep., Ecuador, Guatemala, Mexico, Nicaragua, Panama, Peru.
Rules of operation for Somos@Telecentros	19	Argentina, Brazil, Chile, Colombia, Ecuador, Guatemala, Mexico, Nicaragua, Paraguay, Peru.

As the host for the central functions in the network, the Chasquinet Foundation has provided staff and logistical support far beyond that for which it was compensated through the above-mentioned projects. An average of 3 full-time equivalent staff have been engaged in support of the "central functions"--web development and maintenance, list moderation, support to working groups, etc. In addition, a great deal of the activities of the Network are coordinated and implemented by its volunteer members.

[8] Some 350 as of August 2004

Implementation of the "State of the art"

A first step in the building of the Telecentros virtual community was naturally to call telecenters and telecenters organizations that were sharing the basic values of the community[9] to join in and register themselves in a directory. This was done using a variety of channels, especially the electronic discussion lists that focus on ICT and development[10]. The data requested was detailed enough to provide a basis for an initial classification of the Telecenters in accordance to a variety of characteristics[11]. In March 2000 a first perspective on the community was tentatively drawn up. The reliability of this information was however limited. More importantly, it lacked the touch and feel of real life experience that is required for inviting readers to learn from the experiences, especially in the cultural context of Latin America and the Caribbean.

This led to direct contact with the participants with a request for them to tell the story of their telecenter by sending the information in an Email, following a simple format[12]. A lottery[13] was combined with this exercise with the goal of increasing participation. Direct contacts and messages to discussion lists were initiated between June and October 2000. This effort yielded a total of 27 stories[14] (Hunt 2001). About the same number were promised but not received. The ones received appeared to be exceedingly factual and lacking both a critical reflection and the "special human interest" that would illustrate the individual and collective experience arising from the Telecenter activity.

It was thus decided to make yet a third attempt with another methodology, the "virtual meeting" (Blanco Garcia 2001)[15]. The objective was to deepen the representation of the experiences with regard to five areas:

- Ethnography of the place: social, geographic and economic environment
- Story of the telecenters' operators: their motivations, expectations, and interactions with their milieu;
- Story of the supporting project;
- Story of the telecenter: the interactions among stakeholders that facilitate or limit the development of the telecenter; and the
- Stories of the activities and services, their positive and negative effects and impact.

This was to be achieved by means of open in-depth interviews in form of a continuing conversation, and designed to obtain the desired information including the biography of the respondents. Biography being understood here as the set of factual events experienced by the informant and the associated images and

[9] See note 3

[10] Among those one can mention: Telecentros, telecentres-1, MISTICA, GKD, Library Juice, IFLA, DevMedia, INFOANDINA, ENREDO, Genevalink, Greenstar, Bellanet, CCTA & IDTG (Perú), PACT (Perú), ISOC, OneWorld, RITS (Brazil), Red EPTIC (Brazil).

[11] For example, starting date, localization, legal status, main activities, sources of funding and business plan, community participation, social groups served, connectivity and equipment.

[12] Full Name of storyteller; Telecentre Name, E-mail, Web site; Brief description of the set-up and resources of the telecentre (one paragraph); Describe the social role your telecentre intends to play. How does it support civil society? What are the main problems faced by the community in which the telecentre is established? How does your telecentre contribute to working toward solutions for these problems? (give examples) What obstacles or problems does the telecentre face in operating? What helps you to do a good job? (e.g. specific resources or people; give examples) What results can you report at this stage in the development of your telecentre?

[13] With a prize of 500$ US in equipment

[14] Brazil 2, Chile 1, Colombia 5, Cuba 5, Dominican Rep. 1, Ecuador 2, El Salvador 1, Guatemala 2, Mexico 1, Nicaragua 1, Paraguay 1, Peru 3, Venezuela 2,

[15] The description of this part of the study is derived from Ilian Blanco Garcia's report.

representations, including those of the interviewer (Alonso, 1999, p.225) as in the case of oral history. It should further be stressed that the purpose of the study was not only, nor primarily, to assemble meaningful data for a "survey", but for the building of a body of knowledge that would serve the learning and sharing of experience of Somos@Telecentros members.

Due to financial and material limitations, as well as technological constraints[16], the interviews were conducted by means of electronic mail. Such a virtual setting and process imposes drastic constraints in the dialogue, and of course excludes those who cannot or have significant difficulties in writing. The interviews concentrated on telecenter "operators", that is managers and staff, or managers of telecenters programs. Other stakeholders, in particular a representative sample of the communities served by the telecenters could not be included. However, the prize attached to the stories was allocated on the basis of a "popular vote" by electronic mail, open to all members of Somos@Telecentros thus allowing in principle the beneficiaries to highlight what they considered as the best achievement. The interview guide was designed on the basis of a critical review of the information already available and the specific objectives of the study. Rather than a rigid set of questions, it was a list of topics and desired outcomes designed to help in the recording of the information. The quality of the interviews was quite satisfactory in general, despite the unnatural environment, perhaps in part due to the fact that people were made to feel special by being invited to tell their stories. It was originally planned to conduct 30 interviews with 3 investigators. As a result of various circumstances only 23 interviews from 10 countries were completed in usable form[17]. Concern for balance in gender or other key characteristics and material constraints resulted in a slightly different composition of the sample compared to the set of stories gathered in the earlier round. It might also be noted that even though the interviewees were informed that the interview was taking place in a fully "free space", it is intriguing that the bureaucratic control existing in some real environments apparently was carried over into the responses of some participants.

The content of the interviews was disaggregated into discrete topics that reflect qualitative information relating to various topics, times and stakeholders in the establishment and operation of a telecenter. The information highlighted in the account of real life endeavors by the actors was extracted and organized using methods recommended by S.J. Taylor and R. Bogdan. (Taylor & Bogdan, 1986). These elementary components were then grouped into logical categories and the latter combined into a kind of conceptual map showing the interrelations, convergences and oppositions existing among them. This allowed for the construction of a comprehensive text, while making appropriate reference to the original sources. The comprehensiveness and coherence of this text with regard to the various queries initially considered was then checked. A preliminary version of the "state-of-the-art" was presented in summary form at the regional meeting held in Quito at the end of July 2001. On this occasion a number of interviews were eventually completed or revised in face-to-face interaction. A second round of consolidations then took place in order to produce the final version (Somos@Telecentros, 2002).

The State-of-the-art report contains, in addition to the consolidated stories, a series of national profiles for 16 countries[18] resulting from desk research and the information provided by the members of Somos@Telecentros community. Five thematic chapters based upon the outcome of the process just described offer some sort of synthesis. This should of course, be regarded as an on-going effort. Participants in Somos@Telecentros are expected to keep their stories up to date as well as to provide up-to-date information regarding the situation in their respective countries.

As can be expected, discrepancies were observed between what the investigators were expecting and what was actually collected. A number of issues, which were earmarked for inclusion in the final report, had to be dropped for lack of sufficient information. Also, the level of education, the approach to the appraisal of the milieu and endeavor, and the critical reflection varied significantly among the respondents. This diversity of perspectives further added to the inherent heterogeneity of the situations and endeavors. It

[16] E.g. cost of travel, cost and quality of voice connections.
[17] Brazil 3, Chile 1, Colombia 3, Costa Rica 1, Dominican Republic 1, Ecuador 2, Guatemala 2, Mexico 3, Peru 3, Venezuela 3.
[18] Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Guatemala, Peru, Venezuela

proved impossible in particular to provide a general view of the social context in which telecenters operate; this aspect had to be mentioned in conjunction with each particular case. No attempt was made at hiding contradictions or at identifying best practices. Rather there was an attempt to understand the roots and rationale of the respective discourses. The material gathered was intended as much as possible to cover the following topics:

- the operators: their identity, personal characteristics and relationship with the local community;
- planning of the telecenters: the underlying philosophy, specific objectives, installation and training;
- operation of the telecenters: objectives, services, users, equipment, management and approach to sustainability; and
- effects and impact: the initial situation in the local community, changes that occurred, production, current relationship with the local community, vision of the future.

Even though all telecenters share a common conceptual background, geared at contributing to sustainable and comprehensive human development, and to some extent they share basic ideological premises, their answers to specific challenges might vary widely. One of the most obvious instances of difference was found in relation to the issue of the financial sustainability. The majority seemed to accept that users would be charged, within reasonable limits, with a view to sustaining the operation. This met with radical objections of the Sampa.org network in São Paulo, Brazil, which contends that it is fundamentally unjust to charge people for the use of their rights and that it is the responsibility of the community to provide these services. Another contentious topic is in the negotiation of social acceptance when facing traditional values and power systems where these are seriously challenged by the intrusion of free access to "global information" such as domestic violence or gender equity. Some argued that confrontation has to be engaged at least up to a certain point, while others, and probably the majority preferred a smooth incremental approach. In practice the major differences were found in the social environment and its approach. There was for example, a fair degree of variation in such areas as internal administrative routines, relationship with the stakeholders, production of contents, and development strategies exhibited. Conversely the more technical activities and aspects exhibited the most convergence. The management of connectivity issues, equipment and training activities were dealt with in almost parallel methods by all telecenters.

A picture of Latin American Telecenters

The reality we are trying to describe is rapidly changing for a number of reasons. Public policies, private sector involvement and society's response to the related needs and challenges are all changing. National "digital inclusion"[19] programs for instance became commonplace during the past few years, while they were an exception when Somos@Telecentros was launched. The overall economic and socio-political conditions can also change quite dramatically over a short time, especially in Latin America, as is illustrated, by the pitiful recent history of Argentina. What was true a few years ago, when most of the empirical evidence for this paper was assembled, may no longer hold in a number of areas. A few countries in Latin America have not been or only superficially covered. As noted earlier, English and French speaking countries and territories in Latin America and the Caribbean are represented in the network by a limited number of participants from a few countries[20]. In addition, the relative novelty of telecenters in developing countries and the propaganda of their sponsors, operators, users, admirers or detractors, in the

[19] Digital inclusion seeks to foster not only broader access but also the social use and appropriation of digital technologies in order to meet the needs of communities, particularly the most underprivileged, the creation of appropriate knowledge and contents and the strengthening of individual capacities. In this way digital inclusion can contribute to improving the economic, social, political and personal lives of the vast majority.

[20] Which is unfortunate since most Caribbean States are now developing digital inclusion programs, often based in public schools.

absence of any solid conceptual framework, allows for multiple variations and interpretations of the facts. Furthermore, obtaining accurate factual information is not an easy task in the particular cultural and historical context, irrespective of the methods used. Even though telecenters registering with Somos@Telecentros are asked to fill in a fairly simple descriptive sheet, many items remain blank or ill covered; a continuing effort needs to be pursued in order to assemble reliable data. Far more time, data and insights will need to be available till one can present ”the” picture of telecenters in Latin American, or any other part of the developing world.

Offering a meaningful typology of telecenters is at the moment quite difficult and artificial. In their study Proenza and co-workers (Proenza, F., Bastidas-Buch, R., Montero, G. 2001, p. 13) used for instance a classification with 7 categories of telecenters[21], mainly based upon the legal form of the entity in charge. However a telecenter can be based in a school but be supported by a program of the central government and develop a variety of activities for different segments of public, thus cross several of their identified categories. In view of recent events in countries hit by financial or political crises, one may need to add to their classification a component describing the state of activity, ranging from “promised before the elections and still not on” to “fully operational without interruption”. Colle and Roman (1999) have proposed a more detailed grid with 10 dimensions[22], some of which are in fact inter-linked (e.g. Private sector and for profit). However, the publicly available information does not allow for categorizing telecenters along such lines without risking serious misinterpretations. Furthermore the significance of these labels is dependant on the social reality and actual endeavors, which are often far more versatile and delicate. At this stage, it was felt more appropriate to stick to only 3 types of initiatives: those of central or local governments operating within communities, those of central or local governments operating from educational institutions (schools or public libraries) and those of non-governmental organizations (NGO’s) or the private sector. Note that the plain cyber cafés or similar purely commercial ventures are not included in this category, nor reflected in the figures below[23].

Table 2 shows the 2002 estimates for existing and planned telecenters, distributed across the three main types. It should be regarded as a very rough indication. The figure of 6500 “telecenters” in 2002 is to be compared with the 50 that were assumed to operate in 1996. In the first category the currently identified telecenters are mainly those of Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Panama, Peru, Uruguay and Venezuela. The expected increases result from various governmental programs that have been announced principally in Bolivia, Brazil Colombia, Ecuador and Mexico. The second category corresponds to telecenters installed at the initiative of central governments, but often also include state or provincial governments and municipalities in educational institutions of all levels, from primary school to universities, and in public libraries or cultural institutions. Such programs play a significant role in countries such as Argentina, Colombia, Guatemala and Mexico. Though primarily targeted at youth, these telecenters are also expected to serve the entire community. The production of educational software and applications is eventually included in related programs. The relatively high proportion of future development results from the attractiveness of such programs for public authorities with regard to both their logistical convenience and more importantly their appeal to public opinion. But the implementation of these plans is more often than not subject to all types of interferences. The provincial government of Pichincha in Ecuador has for instance initiated the establishment of telecenters in the primary school and hopes to reach 1000 centers by the end of the program. The majority of telecenters in the third category are the result of community initiatives. The expected increase here is bound to programs of international cooperation agencies that are actively supporting these initiatives.

---

[21] Commercial, Franchise, NGO, University, School, Municipal and Polyvalent.

[22] Public sector versus Private sector, Publicly funded versus Privately funded, Commercial (fee-based) versus Free, Urban versus Rural, Narrow focus versus Multi-purpose, Independent versus Networked/grouped, Community-based versus Establishment, Stand alone versus Attached, Profit versus Service, Thematic versus Universal.

[23] The revolving argument about the inclusion of not of cybercafés among telecenters will be discussed below under Issues and challenges.

Table 2. 2002 estimates of telecenters by main type

Initiatives supporting the telecenter	Currently Identified	Announced increases
Central & Local Governments based in communities	4 560	1 850
Central & Local Governments based in educational institutions	1 780	1 500
NGO's & Private sector	106	837

The main aspects of telecenters based in public entities, which will be called "government telecenters", and in NGO's respectively are summarized below.

"Government" telecenters at the national level

Governmental programs to support telecenters on a large scale can be traced back to 1998 with the argentin@internet.todos in Argentina, which discussed the establishment of a large number of Community Technology Centers[24]. Such moves have since become commonplace. The strategic vision here is to provide free or low cost connectivity to members of the public who cannot afford private access, or are not any time soon likely to be served by an appropriate technology infrastructure. Most programs come under a broader agenda of digital inclusion as part of an overall program of "modernization" and the preparation of the countries to become partners in the global "digital economy". In this connection computer literacy, facilitation of E-Government initiatives and creating E-business opportunities are often associated with the basic connectivity concerns.

A common feature of these programs is there impressive size, at least in the plans. The first version in 1999 of the CTC program in Argentina contemplated the creation of 1350 units (telecenters), each with 5 computers, 2 printers, 1 scanner, 2 camera USB's for web casting, 1 digital camera, software and furniture. The E-Mexico project announced in 2000 contemplated the opening of 2470 telecenters in all municipalities of the country. The COMPARTEL program in Colombia was directed to establishing telecenters in 191 main towns serving 557 constituencies. In the Dominican Republic there were to be 322 computer labs established in schools. As part of the ICT strategy for education in the OECS[25] countries all schools are understood as being in the process of being equipped with computer labs that will also be open to the local communities. Carlos Afonso gives an idea of the magnitude of such efforts in the case of Brazil where the Ministry of education is considering the installation of some 130.000 computers in 13.000 schools; "... disregarding training, maintenance, instructors, software and other associated expenses, 130000 computers at 1000 US $ each make 130 millions US $" (Afonso, C.A, 2002).

The development of these programs originally followed typical patterns of direct administration with predefined beneficiaries, conditions and rules, and management by central units. Later on decentralized approaches have emerged where the telecommunication regulatory agencies[26], or other central government bodies, allocate resources to organizations, through a regular tendering process that will implement standard telecenters in specified localities, usually major centers in the provinces. In both cases, the definition of the capacity to be installed seems to follow rules of "fair distribution" rather than for example, social need. (That there would be a fixed ratio between the permanent population, on the one hand and the

[24] The use of a mostly U.S. terminology is perhaps symptomatic.
[25] Organization of Eastern Caribbean States
[26] For instance the COMPARTEL program in Colombia (http://www.compartel.gov.co) or the Program for Public Internet booths in district capitals of the Fondo de Inversión en Telecomunicaciones (FITEL) in Peru (http://www.osiptel.gob.pe/Index.ASP?T=P&P=2695)

capacity of a telecenter remains to be demonstrated.) There is also some question whether government telecenters when "parachuted" into institutions such as schools, public libraries, town halls, healthcare centers, post offices or the like, without either proper preparation of the environment, training of the staff or adjustment of the institutional rules may not be in serious danger of not delivering the service the community is supposed to enjoy. Another difficulty lies in the lack of suitable provision for maintenance, or amortization and renewal of equipment that is a standard feature in public administration as well as of course, the frequent budgetary crises resulting in the temporary freezing of expenses, when other more drastic actions are not instituted. As one may expect the installation and continuity of government telecenters does not always escape political influence.

In many cases the funding of these programs is secured with funds for universal service that are set up as part of the deregulation of the telecommunications sector. The wording of telecommunications acts and their Universal Access provisions is usually obscure enough to offer a comfortable margin of interpretation, usually in the direction of supporting the operators of the infrastructure rather than the needy communities. In some cases when the funding relies upon generous provisions, such as with the Brazilian FUST (Fund for the Universalization of Telecommunications) the amount collected may become a tempting target for any Minister of Finance confronted with a severe fiscal crisis[27]. Rather than allowing for a steady development, governmentally initiated telecenters result in a continuing seesaw between emphatic promises, delayed and/or partial implementation, and occasional implementation especially in pre-election times.

As can be expected the interaction with the civil society organizations that may be active in the particular communities, the production of local content – beyond a directory like web page of the locality, users education beyond basic computer and Internet literacy, and the connection with community development struggles all remain a matter of personal readiness among telecenters' staff. Fortunately many of these are sufficiently committed to deliver effective services. This again suggests the observation that the way in which programs are implemented, and more importantly who implements them matters far more than what their remit appears to be on paper. The key role of individuals and the need for all actors to actively seek personal transformation as a requisite for social transformation has become a leitmotiv of Somos@Telecentros coordination (Delgadillo Poepsel, 2000). Another striking aspect, especially in view of the geographic extension of the programs, is the general lack of attention paid to the possible building of networks. Each telecenter is seen as a separate access point and the networking left to the individual initiative of the users and natural effect of the communications that will take place. But the multiplier effect that networks of communities communicating through telecenters both within the country and with the diaspora can have upon development calls for a more interventionist approach such as the one proposed under the project "Conectandonos al futuro de El Salvador"[28] which contemplated a structured national network of some 100 "Infocentros"[29].

"Government" telecenters at local level

The involvement of local governments in community access and use of ICT started before the activities of central governments. The City of Buenos Aires (Argentina) initiated participatory administration centers in 1996. At about the same time municipal communication networks were launched in Montevideo (Uruguay) and Santiago de Chile. Being closer to the grass root realities, local governments are in principle in a better position both to develop programs that make room for the needs of the population, respond to its expectations and articulate themselves with social movements; while at the same time ensuring that core requirements such as provision of connectivity and enabling the deployment of E-

[27] In 36 months of operation the FUST is believed to have collected about 1 billion US $, http://www.anatel.gov.br/Tools/frame.asp?link=/biblioteca/releases/2004/release_08_01_2004(2).pdf visited Aug. 27, 2004.

[28] http://www.conectando.org.sv/index.htm visited Sept. 25, 2002. The actual implementation of the scheme suffered a number of alterations and delays but still presents marked differences with the more traditional approaches.

[29] A choice of name that was intended to emphasize collective access to, and use of, information as opposed to mere connectivity.

Government projects are equally present. For instance, in Manizales (Colombia) coffee producers can find online assistance while in São Paulo (Brazil) unemployed people can find online job offers.

Local governments might also be expected to be more flexible in the management of these programs. Even though the Popular Participation Committees, such as those of Porto Alegre (Brazil), started without concern for the use of ICT, this innovative form of organization tends naturally to link up with the new communication opportunities that telecenters offer with the possible result of a mutual reinforcement with regard to management, services and interaction with the local authorities. Proximity factors at the local level also makes it relatively easier to develop strategic alliances among stakeholders, including ICT industries, local businesses, grass root organizations, etc. as has been effectively demonstrated by Sampa.org in São Paulo (Brazil) (Ortiz, R.A.A, 2001).

"NGO's" telecenters

Diversity is the most obvious feature in the NGO telecenters category since the starting point is often either a specific community seeking to take advantage of ICT in its struggle for development, or a particular need within community or a segment of the community. Some telecenters will thus focus on environmental protection, education, income generation, healthcare, cultural heritage, human rights, etc., while others will be concerned with street kids, women, or minorities. These roots in the community are both a strength and a weakness. As a strength, they provide the necessary impetus, vision and basis for participation. But the inherent tensions, contradictions and above all poverty and lack of skills are often reflected in the development of the telecenter. Whether they are operated by a community group, or by a social development NGO, or a conjunction of the two, major constraints for all are financial sustainability and human resources.

The sustainability issue is linked to the external sources, whether national programs, charities or international organizations, which are often providing the start up funding, and the structural poverty that affects most of these communities. There are, however instances where the communities themselves have managed to assemble the resources needed to start up and have continued to operate at least in part, independently, from NGO or other support[30]. As discussed earlier, the debate is quite open. As usual it is lost in the foolish attempt at applying business profitability principles to basic social needs and services. The actual challenges are eventually complicated by the vagueness of regulations or their inappropriate application where the result is to treat telecenters in the same way as for-profit cyber cafés, imposing on them the burden of telecommunication licenses or taxes. Even if the amortization of the infrastructure is not being required, it takes time before revenues can be developed to balance the cost of operations particularly where the fee structure is set up to reflect the needs of the poorest segments of the communities, a dilemma that is observed in all parts of the world (Oestman and Dymond, A.C., 2002**).**

Human resources for the operation of the telecenters presents another major difficulty. The training of staff for the basic technical functions is relatively straightforward but the more complex skills related to network or hardware maintenance, for example, require more effort and time. In fact, computer maintenance is not available in many places for lack of a sufficient market. Once trained and experienced, the staff, usually young and educated people, naturally look for career development opportunities which are only infrequently possible in the social sector. They cannot be expected to resist the offers from the private or public sector which badly need computer savvy personnel. Also, from a development perspective, skills cannot be restricted to telecenter staff. There is a need to equip all the users not only with the ability to use the facilities but also to create relevant content and develop purposeful applications that will support the various development efforts. Such comprehensive approaches are best illustrated by the unique example of the Ashaninka community in Peru, which has embarked on a long-term strategy for human resource development effort aligned with its other social transformation targets (Castro, M.E., 2000). This latter endeavor is also a fascinating illustration of the necessary appropriation process and the resulting effective empowerment of the local population. This type of ICT enabled community re-birth is of course, at odds

[30] Cases of this nature can be found for instance in Ecuador in Lumbaqui or Recoka in the Amazon or Papallacta

with the immediate concerns for sustainable connectivity that is at the core of commercial cyber cafés and even many government telecenters.

Because of their ties with community groups, NGO telecenters do not restrict their services to basic telecommunication and computer services (phone, fax, copying, Internet access, etc.). Rather they are concerned to use the resources that connectivity makes available in support of basic educational, cultural and economic programs. They are thus at the same time a learning center, social center, meeting place, market place, recording studio or whatever local people feel appropriate. In this respect, the technological marvels such as the 1st generation Lincos telecenters-in-a-container[31] falls short of a real response to the requirement for social appropriateness (Granqvist, 2002). Even though it may not be associated with specific services, a key application and use of community telecenters, in particular among indigenous communities, is the struggle for their rights, which of course goes far beyond outspoken "communication rights". In many instances what is at stake is simply the right to exist.

There are a number of other issues raised by NGO or community based telecenters. Both cost and social principles are moving community telecenters towards emphasizing the use of open source software to the greatest extent possible, even though this may in the short term increase the skills shortage they are facing for their staffing. Connectivity raises additional problems especially in remote mountain or jungle areas, but also in the poor suburbs of the major metropoles, the more so when spectrum licenses are dealt with from the perspective of "profit opportunities" rather than "social needs" and when de facto monopolies are established by international corporations under the banner of open market competition. Also, a number of telecenters are already using radio, integrated or not with Internet platforms, for the delivery of services and community interaction. As critical as it may be, media integration is not sufficient. In practice multiple forms of human intermediation are also required in order to create the required connections between the information resources, the communication technologies and the local community.

Issues and challenges

According to NUA figures for September 2002[32], Latin America and the Caribbean would represent close to 5.5% of the total Internet population, as compared with 30.92% for Asia and the Pacific, 1.04% for Africa and 0.84% for the Middle East. But this 5.5% corresponds to about 7 % of the population of the region. If one considers, with appropriate precautions, the position of the 20 countries of Latin America and the Caribbean among the 75 that appear in the Network Readiness Index (Kirkman, G., Cornelius, P.K., Sachs, J.D., Schwab, K., eds., 2002, chapter 2), one finds that none of these is in the 2 first quartiles (NRI between 6.05 and 4.06), where only 3 Southern, in fact Asian, countries, can be found. 15 of them are in the 3rd quartile, out of 34, and 5 in the last quartile (NRI between 3.08 and 2.10), that is half of this group. If one considers the basic figures regarding connectivity the picture is equally unsatisfactory[33]. Even though Internet presence and use is by all yardsticks steadily growing, it remains very low compared to advanced countries and even some emerging countries of Eastern Europe. Interestingly when comparing the figures of the 2002-2001 and 2002-2003 NRI, it appears that 1 country has kept the same score, 5 have a higher score (increases ranging from 0.02 to 0.61), and 14 have a lower score (decreases ranging from 0.05 to 0.39). This seems to indicate that the overall situation is not really improving. Only the major countries of the "Cono Sur"[34] appear in the upper half of the sample. As artificial and uncertain as they might be, the

[31] The description that was provided in 2002 on the Lincos web site (http://www.lincos.net/html/eng/descripcion.html), no longer available, stated "The structural design of these centers is based on transportation containers properly modified and conditioned for these purposes. They were selected because of their convenience, availability, safety, and transportation easiness. The units are permanently installed in a community with an awning that provides them with shade and protection from the rain.".

[32] http://www.nua.com/surveys/how_many_online/index.html visited August 27, 2004

[33] Of the 31 countries of the region that appear in the ITU Digital Access Index, 14 are in upper, 15 in medium and 2 in low DAI groups. Broadband subscribers per 100 population ranges from 0 (in 18 countries) to 1.3, Internet subscribers per 100 population ranges from 1% to 23,8% with only 14 countries above 10% (of which 9 Caribbean countries).

[34] Argentina, Brazil, Chile

figures in table 3 below provide a basic overview of the background situation. It unfortunately does not truly reflect the dramatic inequalities that affect people in Latin America with regard to connectivity and use of modern ICT, as well as with any other aspect of society. An illustration can be found in the study of metropolitan Lima (Peru) by Ana-Maria Fernandez-Maldonado (2001), which shows that the lower income segments of the population, representing more than 80% of the total population are severely deprived of most telecommunication facilities, and for the lowest segment, appear to have no telecommunications access at all.

The commonplace debate whether telecenters will succeed in bridging the so-called digital divide, like most issues favored by the media, is a non-issue. Especially if raised in terms of the telecenters ability to sustain themselves financially in a competitive market. This divide is one of the many facets of the basic social divide, which is growing in all countries. With or without "Simputers" or "Volkscomputers"[35] the total cost of Internet access will for many years to come remain beyond the reach of the great majority of poor families in the region. Collective access is thus the only alternative. But more importantly the potential benefits of this facility cannot be achieved through individual use, at least in the short to medium term. For this to be realized there is the need beyond computer and information literacy; a proper articulation with other government, social or community efforts towards the creation of new opportunities for broad changes and improvements in the conditions of the poor people. This is to say that from whatever corner, a comprehensive approach is required that would leverage all strengths and assets. Even though a basic requirement for integrated development has been acknowledged for many years, it is striking to see that segmented piecemeal approaches continue to be the norm in practice.

Table 3 Network Readiness Index and connectivity

[35] Names given to the low cost simple computers recently designed in India and Brazil

Country	**NRI Score**	**NRI Rank**	**Net-work Access Rank**	**Net-work Use Rank**	**PIB per capita**	**Fixed lines per 100 inhabitants**	**Inter-net users in % of population**
United States	6.05	1	1	2	32,198	66.10	40.7
Canada	5.23	12	10	16	19,962	63.50	36.3
Argentina	4.01	32	33	31	8,257	20.11	2.5
Chile	4.00	34	30	34	4,921	18.57	4.2
Uruguay	3.80	37	38	37	6,335	27.07	7.6
Brazil	3.79	38	37	40	4,675	14.87	2.4
Mexico	3.58	44	41	43	4,330	11.22	2.6
Costa Rica	3.57	45	53	48	2,763	20.41	3.9
Trinidad & Tobago	3.52	46	58	49	4,726	20.58	1.9
Dominican Rep.	3.52	47	35	42	1,925	9.28	0.3
Panama	3.42	48	47	55	3,305	16	1.6
Venezuela	3.41	50	44	50	4,088	10.91	1.7
Peru	3.38	52	46	44	2,530	6.69	1.5
El Salvador	3.30	55	60	56	1,984	7.61	0.7
Jamaica	3.29	56	64	64	2,707	18.68	2.4
Colombia	3.29	57	52	53	2,844	16.04	1.6
Paraguay	3.15	63	72	47	1,646	5.54	0.4
Bolivia	3.04	67	67	52	1,077	5.80	0.4
Guatemala	3.00	68	59	62	1,754	5.46	0.6
Nicaragua	2.83	69	69	65	452	2.98	0.4
Ecuador	2.65	71	62	73	1,620	9.10	0.2
Honduras	2.64	72	70	72	859	4	0.3

Sources: Kirkman et al., 2002, p. 11: "America Telecommunication Indicators 2000" ITU quoted in Proenza et al. 2001, p. 3.

Summarizing key issues concerning the development of telecenters for the debate in the workshop on community telecenters at the 2nd Global Citizens Networks conference, Menou and Silva (2001) tentatively listed the following:

1. Securing effective community participation in the design, operation, management and development of one's telecenter or network of telecenters;
2. Securing social sustainability, especially when the cost-benefit balance takes diverging forms among the various groups of stakeholders;
3. Secure financial sustainability;
4. Assemble and keep a body of qualified staff to operate the telecenter;
5. Produce local contents that respond to the needs of all members of the community and at the same time could be attractive to a broader, possibly global, public;
6. Respond to the educational and training needs of members of the community;
7. Contribute to the process of wealth creation within the community;
8. Breed among the telecenter operators and the leaders of the community the vision, capacity and legitimacy required in order to negotiate alliances and support with entities of the public and private sectors;
9. Use effective procedures and tools for the open, continuing and collective assessment of the outcomes, successes and failures of the endeavors;
10. In sum, identify and satisfy the conditions for putting in practice the formula: "Social Development = Empowerment of the People + Telecenters".

During the discussion, Raul Román rightly proposed to add one more item: Establish and nurture trust among stakeholders, especially within the community.

Apart from perseverance and luck, there is no recipe for achieving the above. It is of course easy to abuse such metaphors as "turning the vicious circle of poverty into a virtuous circle" that are so popular at the International Monetary Fund[36]. Actually one of the causes of the vicious circle is "the inertia which characterizes popular sectors of Latin America. This inertia prompts them to adjust to the circumstances that shape their lives rather than seek ways to change these circumstances" (Palma, D., 1998). To be fair it should be acknowledged that these attitudes are the result of complex socio-cultural influences marked by 500 hundred years of external and internal colonization, and the hard learned lesson that "the more it changes, the more it is the same". The first step in the possible way out is the recognition of their own social capital by members of the community and the community as a whole. It is the foundation upon which a process of empowerment can take place. Assuming the dominant powers at play are willing to let it grow. ICT can play a noteworthy role in this process by allowing the community to hear its own voice and make it heard by many, and by bringing it on top of the wave of "modernity", as modestly as that may be. An increase in the number of persons "having access" to ICT or a collection of "success stories" in E-commerce by local entrepreneurs are only remotely connected to this process.

The proliferation of cyber cafés, at least in places where foreign tourists tend to concentrate, is often taken as a model of development. The number of cyber cafés in Quito (Ecuador) is now estimated at some 800; they charge around 3 US $ per hour, that is 6 times the current minimum wage. The assumption is that these are small enterprises that are generating income in the community and can have a multiplier effect. The same economic justification could as well be used to the less fashionable sex tourism business. Of course in a falling civilization that takes quick money making as an absolute ethical principle, such considerations are in order. This is not to say that some cyber cafés could not pursue social development goals in the long run, or that telecenters should not seek the highest possible financial autonomy. But confusion of genres seldom brings clarity. The generalization of massive national programs whose actual contribution hardly goes beyond connectivity and elementary computer literacy, and that are eventually designed and operated according to commercial rules, poses another threat. It is likely to popularize a mere consumerist perspective[37] as opposed to a social vision such as the one proposed by Mistica (2002).

To the extent that few telecenters and telecenter networks are represented by specific organizations, and are themselves so diverse and dispersed, it is difficult for them to consolidate their interactions and form a critical mass that can boost internal growth as well as allow them to play a pro-active role on the local, national and regional political scenes. This is why Somos@Telecentros is putting a priority on the building of a strong representative movement. Such a transformation is however going against some of the existing libertarian traditions and informality of practices. It also raises risks of bureaucratization and institutionalization, as is constant in social movements, which may jeopardize the original objectives. Nevertheless, even when the processes of consultation, or partnership building with civil society are sincere and honest, in the end it is the same components of the techno-structure that dictate their approaches, implement programs and get the returns. Observing the evolution of the discourse of the major representatives of the techno-structure -- politicians, government officials, industry representatives -- one can only be struck by the extent to which the ideas of social transformation and socially responsible application of ICTs have been absorbed and emptied of any true meaning. Only the presence on the scene of a second interlocutor -- as for example a community sufficiently organized to effectively articulate its own interests -- can put limits to the doubletalk.

---

[36] There is a long Western philosophical tradition which considers poverty as a vice or the direct consequence of it, in fact the vice of the poor themselves, not of those who exploit them.

[37] A sign of this trend can be found in Jensen, M., Esterhuysen, A. (2001). The Community Telecentre Cookbook for Africa: Recipes For Self-Sustainability. How to Establish a Multi-purpose Community Telecentre in Africa. Paris, UNESCO. Here social diagnosis and needs assessment are treated as standard marketing activities and community participation reduced to representation in the management bodies of the telecenter.

Conclusion

So, what is a telecenter? Colle and Roman claim that they have encountered some 30 different definitions of "telecenter" and thus propose to stick to one they consider the most generic: "shared premises where the public can access information and communication technologies" (Colle and Roman, 1999). We contend that what characterizes a community telecenter is its social vision, its dedication to an explicit mission to support the social and personal development of the individuals and communities they serve, and their contribution to improving the condition of the people. We therefore feel that a telecenter would be better identified, if not defined, on the basis of the following basic features:

1. A community.
2. The struggle of this community for overcoming the drawbacks and deficiencies in its environment and in itself in order to improve its quality of life.
3. The awareness of the community that ICTs can help it accomplish its development objectives and its capacity to use ICTs for this purpose
4. A physical space appropriate for the implementation of the social development programs and the use of appropriate ICTs
5. The production of information and services that support the efforts for improving the quality of life
6. An economic and legal framework that provides conditions for the regular operation of the telecenter and its ability to achieve financial, technical and social sustainability.

Research about telecenters has up to now been conducted almost exclusively by external observers on the basis of relatively short visits. It is certainly time to move into true participatory action research where the observation and analysis will be conducted mainly by the actors themselves, on a continuing basis, and be primarily directed at providing them with outcomes that can help the further development of their efforts. This of course requires that the actors be trained and equipped with the tools that will allow them to become pro-active partners in the research process. The latter will further require the participation of professional researchers from outside the communities to serve as catalysts in the processes of data collection, arbitration among diverging interpretations, and synthesizing of results. Another significant limitation to present research on telecenters is its relative lack of focus from both an institutional and disciplinary point of view, combined with a limited amount of available results. This has led Somos@Telecentros, under the Telelac 2 project, to look towards the building of a virtual research consortium, called CoVITALC, open to all interested organizations (such as telecenters, academic and research institutions, public and private organizations).

Among the objectives of the proposed consortium are:

- The development of a joint research agenda and promotion of specific research activities, exploring areas of special relevance to practitioners and writing up the findings in generally available toolkits[38].
- Further development of the Regional Resource Center, seeking to expand its present coverage, strengthen its dissemination and exchange functions, possibly adding an open text archive of research and learning materials.
- Support the production of a participatory action-research package geared at preparing actors of the telecenters movement to effectively participate in the research process.
- Run workshops for the preparation and dissemination of the action research package.

[38] In addition to gender as a cross-cutting issue, particular attention is likely to be paid to such topics as: Technology for connectivity and community service, Self sustainability models, Governance of e-communities, Micro-finance and remittances, E-commerce, Production of local content, Use of national languages, ICTs for people with special needs and disabilities, Methods for assessing the role of ICT in social development, Human factors in effective use of ICT for social development, Self development and social development, Gender accountability in telecentre operations and in the LAC telecentre movement.

- Promote, and participate in the production of a comprehensive program on community informatics and telecenters (modular curriculum and syllabi with supporting teaching and learning material) that could be used in formal and informal education programs in traditional and distance education modes[39].
- Organize, in cooperation with the national Somos@Telecentros conferences, annual regional training workshops for operators and managers/leaders of telecenters and other digital inclusion projects in order to take stock of available know how and revise the research agenda.

It is our most sincere hope that this perspective will attract researchers and practitioners from all possible places and trades who are keen to contribute to a better understanding of, and enhanced capabilities in, harnessing ICT in the service of real human development.

References Cited

[39] A project which has already begun to take shape within the Community Informatics Research Network

Afonso, C.A. (2002). Communication on the discussion list Somos@Telecentros, May 21, 2002 (telecentros@listas.tele-centros.org).

Alonso, L. E. (1999). "Sujeto y discurso: el lugar de la entrevista abierta en las prácticas de la sociología cualitativa." In Delgado, J. M. & Gutiérrez, J., eds. *Métodos y Técnicas cualitativas de Investigación en Ciencias Sociales*. 3a reimpr., Ed. Síntesis Psicología, Madrid, España.

Blanco Garcia, I. (2001). "Experiencias de trabajo con encuentros virtuales para recabar Historias y Experiencias de Latino América y el Caribe". Vinculart A.C., México D.F., México. Retrieved September 1st, 2002, from ftp://ftp.chasquinet.org/pub/docs/HISTORIASmetodologias.doc.

Bonilla Soria, P. (2002). "Los procesos de análisis y sistematizacion de las entrevistas virtuales en el marco de la identificación de experiencias y aprendizajes de los telecentros de America Latina y el Caribe". Quito, Ecuador, Somos@Telecentros y Fundación Chasquinet. Retrieved September 1st, 2002 from ftp://ftp.chasquinet.org/pub/docs/SISTEMpaul.doc

Castro, M.E. (2000). "Apatyabakaiya Aménero Sankenarentsi: Juntos Miremos lo Escrito [Looking together at the text]". IDRC PanAmericas meeting, Picton, September 2000. Retrieved Sept. 20, 2002 from http://www.idrc.ca/pan/panlacminant.htm

Colle, R.D., Román, R. (1999) "Communication Centers and Developing Nations: A State of the Art Report. Retrieved September 4, 2002 from http://www.devmedia.org/documents/Banga.htm

Delgadillo Poepsel, K. (2000). "Telecenter Network for Latin America and the Caribbean: Sharing Lessons Learned by Telecenters and Enhancing their Efforts on behalf of Civil Society". IDRC PanAmericas meeting, Picton, September 2000. Retrieved Sept. 20, 2002 from http://www.idrc.ca/pan/panlackardoc1_e.htm

Fernandez-Maldonado, A-M. (2001). "Patterns of social diffusion and use of new information and communication technologies in Lima". Paper for the International Research Seminar on The Social Sustainability of Technological Networks, New York, 18-20 April 2001.

Fuchs, R. (1998). "'Little Engines that Did' - Case Histories From the Global Telecentre Movement". Ottawa: IDRC. Retrieved August 28, 2002 from http://www.idrc.ca/acacia/engine/index.html

Gómez, R., Martínez, J. (2000). "Más allá del acceso: ¿Qué puede hacer la Internet por una mayor equidad social?" International Development Research Centre & Fundación Acceso, San José, Costa Rica. Retrieved August 29, 2002 from http://www.idrc.ca/pan/pubacceso5_s.htm

Gómez, R., Hunt, P., Lamoureux, E. (1999a). "Telecentros en la mira: ¿Cómo pueden contribuir al desarrollo social? [Wondering About Telecentres: can they contribute to sustainable development in Latin America?]". Revista Latinoamericana de Comunicacion CHASQUI, no. 66, Jun 1999. Retrieved Sept. 28, 2002 from http://www.idrc.ca/pan/chasquiSP.htm

Granqvist, M. (2002). "Assessing ICT efforts in marginalized regions from a critical social viewpoint. Learning from the case of Lincos in Dominican Republic" Undergraduate thesis on Communication for development, University of Malmö, School of Arts, Culture & Communication. Retrieved 25 August 2004 from http://www.funredes.org/olistica/documentos/thesismanne.doc

Hunt, P. (2001). "Historias Reales – Telecentros en América Latina y el Caribe". Unpublished working document. Quito, Ecuador, Foundation Chasquinet. Retrieved from ftp://ftp.chasquinet.org/pub/docs/tcstories4ESP.rtf

Kirkman, G., Cornelius, P.K., Sachs, J.D., Schwab, K., eds. (2002). *The Global Information Technology Report 2001-2002: Readiness for the Networked World***.** Center for International Development at

Harvard University and the World Economic Forum. Retrieved September 3, 2002 from http://www.cid.harvard.edu/cr/gitrr_030202.html.

Menou, M.J. (1999). The Infocenters Forum. Project outline. Unpublished document. April 27, 1999.

Menou, M.J., Silva Contreras, M.P. (2001). Contenidos y Debate. Taller 13 Telecentros Comunitarios, 2o Congreso Mundial de Redes Ciudadanias, Buenos Aires, Argentina, 5-7 de Dezembro de 2001. http://www.globalcn2001.org/esp/taller13con.html and ~/taller13deb.html

Menou, Michel J., Stoll, Klaus (2003). "Community Development Telecenters". In: Gurstein, M., Menou, M.J., Stafeev, S., eds. *Community networking and community informatics: Prospects, Approaches, Instruments. Part 1 Global experience* (171-186). St Petersburg, Russia, Centre for community networking and information policy studies, http://www.communities.org.ru/ci-text/cdt.doc.

Mistica (2002). Trabajando la Internet con una vision social. Documento colectivo de la comunidad virtual Mistica por el proyecto Olistica, coordendo por Kemly Camacho. September 2002. Retrieved Sept. 27, 2002 from http://funredes.org/mistica/castellano/ciberoteca/tematica/esp_doc_olist1.html

Oestman, S., Dymond, A.C. (2002). "Telecentros - Experiencias, Lecciones y Tendencias". Intelecom Research & Consultancy Ltd. Retreived Aug. 22, 2002 from http://www.intelecomresearch.com

Ortiz, R.A.A, (2001). "Além da Inclusão Digital: O Projeto 'sampa.org'". Dissertação de Mestrado em Ciências da Comunicação. Escola de Comunicação e Artes, Universidade de São Paulo, Brasil.

Palma, D., (1998). *La promoción social de los sectores populares*. Humanitas/CELATS, Buenos Aires

Proeza, F.J. (2001). "Telecenter sustainability- Myths and opportunities". *Journal of development communication, Vol 12, 2* – quoted from preprint.

Proenza, F.J, Bastidas-Buch, R., Montero, G. (2001). "Telecentros para el desarrollo socioeconómico y rural en América Latina y el Caribe". Washington D.C., FAO – Centro de Inversiones, UIT - Sector de Desarrollo de las Telecomunicaciones, BID - División de Programas Sociales, Departamento de Operaciones 2 Unidad Rural, Departamento de Desarrollo Sostenible, Unidad de Tecnología de Información para el Desarrollo. Retrieved Aug 4, 2002 from http://www.iadb.org/regions/telecentros/index.htm

Somos@Telecentros (2002). Estado del Arte de los Telecentros en América Latina y el Caribe. Retrieved Aug. 21, 2002 from http://www.tele-centros.org/estarte/index.html.

Taylor, S. J., Bogdan, R. (1986). *Introducción a los métodos cualitativos de investigación*. Paidos, Buenos Aires, Argentina.