

Community Networking Pilot Projects in Latin America

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Project's Goal: To promote social participation at the community level through the use of electronic communication, and to assess the impact and sustainability of pilot telecentres in Colombia and Ecuador, implemented by the local APC nodes, Colnodo and EcuaneX,



respectively.

Context

More and more people in Latin America are beginning to use information and communications technology (ICT), but electronic communications access varies widely from country to country. Across the region there are major obstacles preventing more general use of the electronic communications by citizens and community groups. Key deterrents are:

1. outdated government ICT policies that limit free access to telecommunications infrastructure
2. monopoly over telecommunications infrastructure development by the state and/or a few transnational companies
3. basic infrastructure deficits, such as a national shortage of phone lines
4. service setup and operation costs, and state-imposed tariffs, that are so high as to be prohibitive for small businesses and community organizations
5. where there are established connections to the electronic communications, message traffic often travels to and from the US electronic communications system, delaying message transmission and increasing costs for the end user
6. little or no community involvement or public consultation in the development of national telecommunications policies
7. limited access beyond major urban centres, thereby excluding rural communities from information exchange
8. few models of socially relevant use of the electronic communications
9. overabundance of Northern content, not relevant to Southern users
10. overabundance of content in general, with no capacity for organizing, analysing, synthesizing and targeting of information to interested communities.

Needs

In order to overcome these barriers, effort needs to be made at the community level to involve individuals and organizations in learning about the electronic communications, and defining local access systems to meet their unique needs. Particular emphasis should be focused on the following areas:

11. establishment of affordable, accessible, community-operated systems

12. proactive encouragement on the part of service providers and community leaders to attract policy-makers and community groups to the systems, including training and demonstrations of socially relevant applications of information technology
13. involvement of community leaders in ICT policy development, and education about the potential of these technologies for social policy development
14. ensuring relevant content, including tools to organize information better and make it easy to find
15. documenting and publicizing models of successful community collaboration and policy-making using electronic communications.

Regional Goals

In August 1996, the Latin American APC networks completed the first phase in the development of a strategic plan for the region. These networks met in Mexico, and with the help of an organizational development consultant, identified a number of key objectives to begin working towards, including:

16. Maximizing the program and operational efforts of Latin American networks to support and facilitate access to computer networking for community organizations and individuals interested in promoting social change;
17. Building and strengthening relationships in the region with like-minded communications advocacy organizations and the social change community;
18. Supporting, and where appropriate partnering with, the social change movement in defining and implementing applications of online information strategy, and help to seek funding where necessary;
19. Evaluating and reporting on the progress of community networking in the region, including analyzing the effect of regional APC activities on the ability of individuals and organizations to effect change in their local communities;
20. Defining and promoting new mechanisms of cooperation and affiliation with other organizations to establish a stronger computer networking presence in Latin America and the Caribbean;
21. Developing and implementing a plan to increase relevant Spanish and Portuguese information resources available through the APC networks;
22. Identifying key regional or national social change processes to serve as pilots or examples of online information strategy at work and documenting these to share with the community and among APC member networks.

This proposed community networking project allows two APC Latin American networks to begin much-needed work towards meeting these goals, while further developing strategic pilot applications of electronic communications use for community groups. The telecommunications centres and applications developed through the work of these projects will be tested models upon which further community networking initiatives can be established and spread.

Proposed Response

The Association for Progressive Communications (APC), a global association of 22 nonprofit computer networks, will work with support from the International Development Research Centre (IDRC) to implement, operate and evaluate two community networking pilot projects in Latin America. Since 1990, APC has worked with community organizations and the global social change and development movement to enhance policy work by making affordable computer networking tools, strategies and support available around the world. Due to the efforts of APC's 7 member networks in Latin America, members of the social change movement have begun using computer networks for basic applications such as sending e-mail and sharing news. Many more are only just beginning to learn of the community-enhancing capabilities of electronic communication.

Using this IDRC-sponsored project as a vehicle, APC will facilitate local access to communications equipment, training in the use of computer networks, and support in making strategic use of the electronic communications to engage local citizens and organizations in community development. Each Latin American APC network can offer examples of successful approaches to online strategizing and collaboration for social change. However these applications are in their infancy and need to be further developed, shared with a wider population, and evaluated during the course of this pilot project.

Two APC networks, EcuaneX in Ecuador and Colnodo in Colombia, will sponsor unique community networking projects in order to:

23. establish network access points in community telecommunications centres
24. develop the capacity of individuals to participate in community development using computer networking as a vehicle
25. provide training and specialized information services to build local skills capacity and to stimulate local community economic development
26. support the analysis of policy issues relating to the use of information and communication technologies by selected community groups
27. study the impacts of ICT use at the community level.

These projects will also enable community groups to more effectively participate in the development of local information policies, and the specification of community

infrastructure requirements. This informed involvement of the citizens and organizations in planning and decision-making will ensure that information technologies meet the needs of the communities they will serve, and will help spread relevant information more widely to smaller and rural communities that are currently excluded from this medium.

To learn as much as possible from these pilot community networking initiatives, APC will also undertake to closely monitor and document their progress over the two years. A research module and methodology is outlined in a subsequent section.

Project Objectives

The general objective is to promote social participation in the development process through the use of electronic communications by and for the people at the community level. The project aims to demonstrate the sustainability of telecentre facilities in marginalized urban neighborhoods in Colombia and in Amazonian communities in Ecuador to enable their access to computer networking and enhance their ability to use and produce information and influence social policy.

Although each of the community networking projects being undertaken by the participating Latin American APC Networks is unique, they all share some common objectives:

28. To support and facilitate access to computer networking for organizations, movements, and individuals interested in promoting social change and development, and thereby enhance their ability to influence social policy;
29. To increase community access to computer networks, and reduce the growing gap between the information-rich and the information-poor;
30. To build economically viable, low-cost public telecommunications access centres - telecentres - geared to working with specifically targeted community groups. In Ecuador, three to five telecentres will be set up by EcuaneX for indigenous communities of the Ecuadorian Amazon. In Colombia, Colnodo will work in partnership with Fedevivienda to set up three centres in Bogota and Armenia;
31. To provide documented, successful operational models that will spread community networking initiatives to more communities, particularly beyond large urban centres;
32. To find and develop content relevant to local community groups, initially focussing on environmental issues in the case in Ecuador, and urban housing issues in Colombia;
33. To train community groups in basic electronic communications, and more advanced strategic applications of electronic communications tools;
34. To use the electronic communications to build collaborative relationships between Latin American community groups and like-minded organizations all over the world.

35. To test technological approaches to electronic communication, monitor its impact and utilization and demonstrate the viability and sustainability of the telecentre concept.

Individual Project Objectives

Here is an overview of the main objectives of each project:

A. Electronic Communication Network for Indigenous Communities in the Ecuadorian Amazon

APC Network Sponsor: EcuaneX

Location: Nueva Loja area in Ecuador

EcuaneX staff will partner with a local NGO in the Ecuadorian Amazon to set up a telecommunications hub linked with three to five computer-radio communications systems in indigenous communities. The telecentre hub in Nueva Loja will offer, initially, electronic mail access, training and technical support and services. During the duration of the project, provision of full Internet access will be pursued depending on the evolution in technology and communication infrastructure. The main objectives are:

36. To set up a reliable electronic communication system for the indigenous communities of the Ecuadorian Amazon.
37. To train the indigenous population in electronic communications.
38. To build up a network of communities for sustainable development.

B. Community Development Networking: By The People For The People

APC Network Sponsor: Colnodo

Location: Santafe de Bogota/Armenia, Colombia

In partnership with Fedevivienda, a social housing umbrella organization, Colnodo seeks to set up "Neighbourhood Information Units" (NIUs) where individuals and organizations can learn to use the electronic communications to find relevant information and to participate in local community development. Key activities will include:

39. Community Needs Assessment
40. Information System Tools Development
41. Training
42. Information Resources Development
43. Links with Other Media

Three model centres will be established over the duration of the project, two in Santafe de Bogota and one in Armenia, with an initial focus on housing-related issues, with the following objectives:

44. To develop a community-based information system using Neighborhood Information Units with Internet access in three urban locations in Colombia;
45. To democratize access to new communications technologies and strengthen community's interlocation capacity to support the development of concrete user projects in areas such as housing, environment, peace, health, education and culture.
46. To empower local communities to influence local governments, other state entities, international cooperation agencies and/or credit agencies in the country and abroad.
47. To achieve that the telecentres become an integral part of the neighborhood enabling dynamic exchanges and effective information services for the people themselves, local governments, organizations that can support their processes, and all others interested in their information sources.

Methodology

The EcuaneX and Colnodo telecentre projects represent unique and innovative community development initiatives, which will become models for future Latin American networking. For this reason, it is essential that careful and thorough note is taken of the successes and challenges of each of these undertakings, so that future initiatives can build on the results. Consequently, a significant component of this proposal is devoted to the design and use of instruments to collect information about, document and analyze these two projects as they are being implemented. The proposed research methodology and analysis of the results will contribute to the long-term sustainability of the telecentres. In addition, future Latin American community networking programs will be informed by the experiences in Ecuador and Colombia.

APC's member networks EcuaneX and Colnodo are working with community organizations to set up network access centres to provide appropriate tools and training to meet the information-sharing needs of local citizens with the goal of enabling them to directly participate in the development of their communities.

In this project, APC member networks will build on their experience working with non-governmental organizations supporting them in their local, national and international communication and collaboration needs. As key providers of information access, Colnodo and EcuaneX will work closely with organizations whose mandate is to involve individuals in the development of their local communities. This represents a new and innovative approach to community network use, which both the APC and the wider ICT community can learn from.

APC's motivation for undertaking these projects is twofold:

48. To encourage wider use of computer networking by individuals

49. To develop the capacity of individuals to participate in community development through information exchange and collaboration using computer networking as a vehicle.

It is this second objective that the research methodology will address.

Specific objectives of these telecentres are:

- 50. to offer training and support in skills development related to new information and communication technologies
- 51. to work with individuals and organizations in developing applications that support wider citizen participation in community development
- 52. to stimulate small business opportunities both at the centres and within the community
- 53. to determine means for long-term sustainability of the telecentres.

Through the setup and operation of the telecentres, EcuaneX and Colnodo will have the opportunity to monitor the impact of their services on these objectives.

Proposed Research Tools

How will we know if the telecentres have been successful in achieving these objectives? Evaluation of the experiences and community enabling effects of the telecentres is critical. Despite the uniqueness of their individual community networking projects, Colnodo and EcuaneX will adopt a common research methodology.

Much of the information that will become available during the project will be of a qualitative and anecdotal nature, in addition to the quantitative data that will be collected at each telecentre. APC proposes to use the following methods:

- 54. Community Consultations
- 55. Telecentre Data Collection
- 56. Trainee Tracking
- 57. Telecentre User Evaluation
- 58. Survey of Selected Users
- 59. Telecentre Operations Evaluation

Community Consultations

Meeting the needs of the local communities is critical to the long-term success of the telecentres. To determine these needs, EcuaneX and Colnodo will collaborate with their partner community organizations to carry out community consultations, in two phases. Effort will be made to include people who would otherwise not be able to attend, so travel

subsidies will be available. In order to keep a record of the consultations, they will be recorded on video.

Phase 1 - Startup Consultations

The first consultations will be held at the beginning of the project, to identify issues and priorities for enabling community participation with computer networking.

Key themes to be addressed will include:

60. current communication emphases and patterns
61. perceived community information deficits, and priorities for addressing these
62. types of ICT applications and training that the community would like to have access to
63. readiness and willingness of individuals/organizations to adopt new technologies

Phase 2 - Service Evaluations

The second consultation will take place during the second year of project implementation, to determine how well the telecentres are meeting the original community objectives.

Feedback on the following will be requested:

64. perceived social and economic impact of the telecentres on community activities
65. specific instances of applications of ICTs to community life
66. evaluation of telecentre success in meeting community needs.

Market Research

This project proposes that operating costs of the Ecuadorian and Colombian telecentres be funded for the first two years, so the centres can develop strategies for long-term sustainability. From the outset, each of the centres will undertake research into local prospects for acquiring sufficient income to cover the costs of offering community networking services. Information to be collected and analysed will include:

67. current information-sharing and communication habits of the community
68. research into cost-effectiveness of telecommunications that, if demonstrated, would encourage the community to pay the telecentres for basic communication services
69. community willingness to pay for telecentre services: training, access, WWW site design, information systems, etc.
70. which services match community needs best
71. which sectors of the community to target
72. which services can be offered at sliding-scale prices to ensure that those unable to afford them will still be able to use them
73. market for specialized technical work that can be done by centre staff to contribute towards centre operations.

Telecentre Data Collection

Staff of each telecentre will be charged with collecting key statistics, including the following:

74. number of unique users of each telecentre
75. total number of uses/visits
76. number of people trained
77. number of people trained to train
78. telecentre cost per user
79. telecentre particulars: hours of operation, usage trend, range of services offered.

Statistical reports will be compiled on a regular basis, and analysed for trends. Findings will be included in interim and final research reports.

Trainee Tracking

In order to determine the effectiveness of centre training programs, the progress and satisfaction of each trainee will be documented. Information collected will include:

80. skill level of the trainee before training
81. educational level
82. training goals of trainee
83. details of training program undertaken
84. training methodology
85. skills acquired from training
86. trainee evaluation of program
87. evaluation of trainee progress by trainer.

Telecentre User Evaluation

Each telecentre will provide an electronic and/or printed User Evaluation Form to determine information about the user community. The following types of information will be collected from telecentre users:

88. contact information
89. reasons for using the telecentre
90. specific applications used and how they are applied
91. impact of electronic communications on their work/daily life
92. usage patterns
93. feedback on telecentre services
94. interest in participation in more in-depth study.

Specific questions will be determined by the research team.

Survey of Selected Users

Ecuanex and Colnodo will be working closely with individual citizens and community development organizations throughout the implementation of the projects. In addition to those people that are interested in being involved in further networking studies, particular groups who are undertaking clearly defined networking activities will be contacted to

participate in ongoing, in-depth analysis for the duration of the community networking project. EcuaneX and Colnodo will work closely with these groups and undertake to track and document these networking projects from start to finish in order to assemble "best practices" and "lessons learned" experiences to share with current and future Latin American networking initiatives.

Types of information of interest to the research team will include:

95. purpose/goals of networking project
96. how ICT is applied to the group work
97. number, description and roles of participating organizations/individuals
98. networking circumstances of participants: location, equipment, experience, enthusiasm, access methods
99. methods of communication/ types of communication activities
100. means of communication coordination: is there a "facilitator"/project coordinator?
101. barriers/challenges
102. successes/outcomes/results
103. general observations
104. suggestions for future networking support.

Telecentre Operations Evaluation

Monitoring the operations of the telecentres from the start of project implementation will inform long-term sustainability planning. Once the operating plans for each centre are established, these will need to be evaluated regularly. Questions to consider will include:

105. costs of delivering each service
106. whether the centre is achieving cost-effectiveness in service delivery
107. quality of service
108. does the centre have sufficient resources to meet community needs optimally
109. which community needs is centre able to meet, and which is it not
110. if there are gaps in the service offering, how can these be overcome.

Staff will notice trends and activities that will not necessarily be determined through other means. They will be invited to share their observations at various points during project implementation, by being asked to contribute additional information to draft findings reports. As well, they will be asked to provide periodic reports on the telecentres from an operational perspective. In addition, the research coordinator will travel to the different sites to do on-site evaluations.

Research Operation and Coordination

Each of EcuaneX and Colnodo will identify one network representative and one community representative to be a member of the APC Latin American networking research team. These people will work with the research coordinator to collect, share and analyze information about each project as it develops. It will be the responsibility of this team to ensure that the research needs identified here are fulfilled and reported on by each telecentre. The team will use a private APC conference for communicating findings and analyses. It is possible that

during the implementation of the project the specific evaluation tools will evolve and change from those proposed here. This too will be documented. A final report containing the analysis of findings will be produced upon completion of the project.

Concurrent with setup and operation of the telecentres, APC will undertake the following research workplan:

111. Establish research team
112. Identify research questions
113. Determine tools to be used to monitor the community impact of the telecentres
114. Define data collection procedures and reporting mechanisms
115. Develop and implement research tools
116. Analyze data to produce interim and final findings reports

Contribution to ICT Program Development in Latin America

In addition to monitoring direct community impact of the telecentres, these projects will also allow APC to make a valuable contribution to more general research into Latin American ICT program development. APC's research findings will provide useful information towards addressing the following larger questions:

How does increased access to information and communication technology, and to training in the use of that technology, contribute to social change and development at the community level?

Is community networking a sustainable activity?

What are the success stories and lessons to be learned from Latin American community networking experiences?

What are the needs and opportunities for the adoption of computer communications tools and resources by Latin American communities?

How can Latin American computer networks best serve community networking needs?

The lessons learned by the EcuaneX and Colnodo telecentres will not only serve local communities, but also the larger investigation into the impact of ICT on global civil society.

Project Schedule

The duration of the overall project is 2 years. APC will ensure the coordination and delivery of each of the described projects during that time, and day-to-day operations of the telecentres will be handled by the participating networks.

Each participating network has developed a detailed workplan outlining the activities to be undertaken to establish their community telecommunications centres and to deliver their programs. The general schedule is as follows:

Year 1

Months 1 - 2

- 117. Project Startup
- 118. Setting Up Centres
- 119. Hiring Centre Staff
- 120. Community Needs Assessment/Activities Planning
- 121. Establish Research Team and Define Research Tools

Months 3 - 4

- 122. Training Program Development
- 123. Resource Materials Development
- 124. Research Tools Development

Months 4 - 5

- 125. Full Operation
- 126. Promotion of Centres

Month 8

- 127. Online Meeting of Participating Networks

Month 12

- 128. 1st Year Project Evaluation
- 129. Project and Research Reports to IDRC

Year 2

Month 13

- 130. Activity Adjustments based on Evaluation
- 131. Begin Development of Self-Sufficiency Plans

Month 16

- 132. Online Meeting of Participating Networks

Month 23

- 133. 2nd Year Project Evaluation

Month 24

- 134. Final Project and Research Reports to IDRC

Program Coordination

In cooperation with the participating networks, the APC Secretariat will administer the overall project and ensure that final reports from each of the individual projects are submitted to IDRC. Leaders for each project have been identified in the individual project outlines. These people will be responsible for day-to-day operation of the projects, and for regular reporting to the APC Secretariat.

Two online meetings will be held to check in on project progress, and will be attended by APC Secretariat staff representatives, project staff and the research team. In addition, the research team will be responsible for regular reporting on research findings.

A final report including evaluations for each project and research findings analysis will be submitted to IDRC at the end of the funding period.

Expected Results

The intent of the proposed projects is to strengthen the ability of individuals and organizations in Latin America make positive change in their communities -- locally and globally -- by increasing access to electronic communications tools and strategies. Concrete results will include:

135. Increased access to computer networks for target groups
136. Increased number of Latin American community organizations and individuals trained in the use of computer networks for social change
137. Individuals trained in marketable electronic communications skills
138. Local, low-cost, economically viable, public electronic communications access and training centres
139. Business plans and models for operating community electronic communications access centres and training programs
140. Model applications of electronic communications strategies by specific community organizations, to be used and/or adapted by other organizations
141. Increased number of electronic communications trainers
142. Increase in relevant electronic communications-based information in Spanish
143. Informed community involvement in telecommunications policy development
144. Increased APC inter-network collaboration
145. Collaboration of target community groups with the wider global social change community.

Beneficiaries

Direct beneficiaries of this project are the communities served by the target groups, in particular: indigenous populations in the Ecuadorian Amazon, low-income housing community groups in Santafe de Bogota and Armenia in Colombia.

The communities that host the telecentres will benefit from the development of local expertise in electronic communications use, training, technical support and communications strategy development. People trained in electronic communications skills will be able to offer new services and stimulate the local economy. The local population will benefit from access to these centres. And, the general population will benefit from more active involvement in local community development.

APC Networks and the wider community of specialists and researchers in information and communications technology will benefit from the reports of documented, evaluated pilot computer networking projects. As well, community groups can use these models as the basis for organization-specific applications of electronic communications technology.

Latin American users of APC Networks will benefit from increased relevant community content.

Project Budget

Each participating network has outlined a detailed budget for their individual project. The IDRC contribution is presented here for each partner component (in US dollars):

IDRC Item	Ecuanex	Colnodo	APC
Salaries	12000	14400	15000
Research Expenses	6000	11240	12300
Consultants			3000
Training	11200	14000	
Travel			1500
Coordination			7500
Support Services			10814
Equipment	21000	10500	
Total	50200	50140	50114
			USD 150,454.
Exchange Rate: USD = 1.34 CAD			CAD 201,608.

Budget Summary (US dollars):

IDRC Contributions

Recipient-administered portion

Item	Year1	Year2
Salaries	27900	13500
Research Expenses	11550	17990
Consultant	1500	1500
Training	13600	11600
Travel	750	750
Coordination	3750	3750
Support Services*	5905	4909
Equipment	30000	1500
Total	94955	55499

(* 10% of non-equipment line items)

Budget Notes:

APC Coordination & Research Module Budget (in US dollars)

Item	Year 1	Year 2
Salaries	7500	7500
Research Expenses	6150	6150
Consultants	1500	1500
Travel	750	750
Coordination	3750	3750
*Overhead (10%, excluding equip.)	5905	4909
	25555	24559
Total (both years)		50114

(* 10 % overhead showing here is calculated on non-equipment line items for the total IDRC contributions to Colnodo, EcuaneX and APC.)

EcuaneX Budget (in US Dollars)

		1st	2nd	Total
IDRC	IDRC Contribution	35600	14600	50200
Equipment				
8	6 Basic Computers	7200		7200
8	1 Radio equipment	3000		3000
8	6 Radio Modems	2400		2400

8	6 Batteries + transformer	3000		3000
8	6 antennas	600		600
8	6 Solar panels	4800		4800
Personnel				
1	Coordinator	6000	6000	12000
4	Assistant/trainer	3600	3600	7200
2	Mobilization	2000	2000	4000
2	Supplies	1000	1000	2000
Training				
4	Workshops and direct training	2000	2000	4000
Local Contributions				
	INTERCOM-Ecuanex contribution	21300	7800	29100
Equipment				
	Complete radio system (Quito)	3000		3000
	1 Computer (Quito)	1500		1500
Personnel				
	Radio-computer consultant (6 months)	9000		9000
	Administrative support (Quito)	6000	6000	12000
Services				
	Free e-mail accounts	600	600	1200
	Hosting radio-computer system (Quito)	1200	1200	2400
	Community and others contributions	6600	3600	10200
	Community Radio equipment (estimate)	3000		3000
	Person in charge of community station (estimate)	2400	2400	4800
	Hosting telecentre in Nueva Loja (partner NGO)	1200	1200	2400
	Total project cost	63500	26000	89500

Colnodo Project Budget

Year 1

Plan: To establish two NIUs in two neighborhoods of Santafe de Bogota, where Fedevivienda's Housing Improvement Program operates.

IDRC	Item	Cost/US\$
8	4 Computers w/ modems	\$ 8,000
8	2 Color printer	1000
4	Technical training	8000
1	1 NIU Community Coordinator	7200
1	Colnodo Assistant	7200
2	Communications	2400
	* Utilities	1200
	Total for 1 NIU	\$17,500
	Year 1 Total (2 NIUs)	\$35,000

Year 2

Plan: Establish 1 NIU in Armenia (Quindio) where Fedevivienda members are working on projects together with the Housing Improvement Program.

IDRC	Item	Cost/US\$
8	Page Color Scanner x3	\$ 1,500
4	Technical training	6000
	* Community Coordinators	13068
	* Colnodo Assistant	4356
2	Communications	3960
2	Utilities	2880
	Travel to Armenia x4	2000
	Year 2 Total	\$33,764
	Total Costs, Years 1 & 2	\$68,764
Revenue		
IDRC total funding		\$50,140
* Total local contribution		\$18,624
Year 1		\$1,200
Year 2		\$17,424

Line item numbers in the Colonodo and EcuaneX budget tables correspond to the following IDRC budget categories:

- 146.Salaries
- 147.Research Expenses
- 148.Consultant
- 149.Training
- 150.Travel
- 151.Coordination



152.Support Services

153.Equipment