INTERNATIONAL TELECOMMUNICATION UNION
Telecommunication Development Bureau

Indicators workshop on community access to ICTs

Mexico City
6-8 October 2003

Report

I. Background

Taking account of concerns expressed in Resolution 131 (Marrakesh, 2002) of the Plenipotentiary Conference, as follows:

"The Plenipotentiary Conference of the International Telecommunication Union (Marrakesh, 2002),

recognizing

…
b) that the basic indicator traditionally used in the telecommunication field was the number of fixed telephone lines per hundred inhabitants, but that that indicator no longer reflects the actual penetration of telecommunication services in those countries where community access programmes have been implemented,

bearing in mind
…
b) that current indicators cannot serve to measure the real impact of the introduction of community connectivity;

c) that new indicators are needed to analyse the development of communities where community connectivity is introduced, thereby enabling the true impact and effectiveness of each country's public policies to be measured;

resolves to instruct the Secretary-General

to promote the adoption of measures necessary to ensure that community connectivity indicators are taken into account in regional and world meetings convened for the purpose of developing the plan of action of the World Summit on the Information Society,

resolves to instruct the Directors of the Telecommunication Development Bureau and the Telecommunication Standardization Bureau

1 to promote the activities required in their respective Sectors to define and adopt new indicators for the purpose of measuring the real impact of community connectivity on the development of communities;

invites Member States

to participate actively in the work to be carried out at the regional and world levels to prepare these new community connectivity indicators."

Considering the wish of the countries of Latin America and the Caribbean expressed in Section 2(u) of the Regional Preparatory Ministerial Conference of Latin America and the Caribbean for the World Summit on the Information Society, held in Bávaro (Dominican Republic) in January 2003, with regard to:

"2…
u) Furthering and promoting the development and establishment of performance evaluation and dissemination systems and mechanisms that include community measures and indicators that reflect the efforts and progress made by the countries of the region in establishing facilities for ICT access and use within a community context;"

Further taking into account the work entailed in the preparatory process for the World Summit on the Information Society (PrepCom-3):

Draft Declaration of Principles - 25 September 2003

18 Monitoring and evaluating, with appropriate indicators [under the auspices of ITU and other relevant organisations], taking into account different level of developments, is essential to measuring the progress in bridging the digital divide, internationally agreed development goals, including those contained in the Millennium Declaration, and to assessing the effectiveness of investment and international cooperation efforts in building the information society.

Draft Plan of Action - 26 September 2003
"

B. Objectives, goals and targets

…
7 *Based on internationally agreed development goals, including those in the Millennium Declaration, which are premised on international cooperation, indicative targets may serve as global references for improving connectivity and access in the use of ICTs in promoting the objectives of the Plan of Action, to be achieved by 2015. These targets may be taken into account in the establishment of the national targets, considering the different national circumstances:*

a) to connect villages with ICTs and establish community access points;
…
j) to ensure that more than half the world's inhabitants have access to ICTs within their reach.

E. Follow-up and evaluation

29. *A realistic international performance evaluation and benchmarking (both qualitative and quantitative), through comparable statistical indicators and research results, should be developed to follow up the implementation of the objectives, goals and targets in the action plan, taking into account different national circumstances.*
…
b) *Appropriate indicators and benchmarking, including community connectivity indicators, should clarify the magnitude of the digital divide, in both its domestic and international dimensions, and keep it under regular assessment, and tracking global progress in the use of ICTs to achieve internationally agreed development goals, including those of the Millennium Declaration.*
…
f) All countries and regions should develop tools so as to provide statistical information on the Information Society, with basic indicators and analysis of its key dimensions. Priority should be given to setting up coherent and internationally comparable indicator systems, taking into account different levels of development."

In addition, considering the concerns voiced at the 20 June 2003 meeting of the Statistical Conference of the Americas (SCA-ECLAC) regarding the need for statistics on ICTs and the creation of an observatory for the information society in Latin America and the Caribbean (OSILA).

The Mexican Minister of Communications and Transport, Pedro Cerisola y Weber, gave the following address during the workshop's opening ceremony:

"During the ITU Plenipotentiary Conference (Marrakesh, 2002), it was recognized that there was a need to promote knowledge and the development of skills in all populations in order to achieve greater economic, social and cultural development and to raise the standard of living of the world's citizens.

To this end, every Member State must establish policies and regulations aimed at reducing the digital divide between those who have access to communication, knowledge and information and those who do not. Our countries have approached this challenge in different ways and many have found in high-speed community connectivity a short- and medium-term solution.

This gives rise to the need to establish new indicators for analysing the impact and penetration of community connectivity, especially in disadvantaged urban and rural areas. Such indicators must provide information on penetration of the service, as well as data for evaluating the impact and effectiveness of public policies regarding the social coverage of telecommunications.

Mexico accepts this challenge and is actively promoting the identification of these indicators as a way of measuring efforts to extend high-speed connectivity to the whole population. To this end we have conceived the "e-Mexico national system", the aim of which is to reduce the digital divide that exists between different sections of the country's population and integrate them into the information society, enabling Mexicans to communicate with one another and with the rest of the world

.

This will enable the population to gain access to numerous opportunities for individual and collective development, to integrate individuals and social groups, to strengthen democracy and participation by citizens, to increase knowledge and competitiveness, generating greater development opportunities and a better quality of life.

This project is composed of three key components - connectivity, content and systems - and represents the major transformation taking place in education, health, commerce and interaction with government bodies in Mexico. We have made progress in the three components and, as regards connectivity, the first satellite connectivity network - "e-Mexico" - came into operation on 5 June 2003.

With this network we are already providing at least one point of access to the Internet, via digital community centres located in schools, libraries, hospitals, municipal offices, social development centres and community centres.

In the medium term, we envisage the creation of two more networks with similar features to bring connectivity to a further 6 400 digital community centres throughout the country, as well as the terrestrial networks which form part of the programme. Provision is via public telecommunication network operators, including the Internet connectivity already offered by some cable television networks.

With this system we are moving from an approach based solely on infrastructure growth to a model of distance education, distance health and transparency of procedures and dealings with a digital government. With e-Mexico we are generating a virtuous circle involving technology, content, education and training, personal improvement and economic development, as well as promoting the intensive use of information technology applications.

Hence all players - government, private sector and civil society - are joining forces to provide community connectivity, initially in order to achieve universal access, with the aim of moving on subsequently to the concept of universal service. Initiatives such as the e-Mexico national system cannot be measured with indicators which refer to the past and do not reflect the impact of the solutions our countries are finding for our connectivity needs.

This is the case with the teledensity indicator, which measures only the number of fixed lines per 100 inhabitants and does not incorporate either mobile telephony coverage or access via community connectivity.

Wireless solutions are without doubt the source of the greatest impact and growth today.

In the case of Mexico we have a teledensity of approximately 15.6 lines per 100 inhabitants, which neither reflects nor incorporates mobile service coverage, which stands at 27 lines per 100 inhabitants. This means 27 million mobile telephone lines which, when added to 15 million fixed lines, gives a total of 42 million lines in a country of 100 million inhabitants. In addition to new indicators, therefore, the concept of teledensity needs to be redefined in order to move towards a new concept of teleconnectivity.

Thus, pursuant to the agreements of the Plenipotentiary Conference (Marrakesh, 2002), we participate with pleasure in this workshop - a forum for the exchange of ideas and experiences that is bound to generate the set of indicators and the redefinitions we require."

II OBJECTIVE

The Mexican Government and ITU invited all Member States of the Americas Region and related international organizations to meet in Mexico City from 6 to 8 October 2003 in order to discuss and propose indicators and indices for measuring community access to ICTs. The workshop programme is attached in Annex 1.

III SUBJECTS DISCUSSED

Experiences and proposals were presented by the following countries and international organizations: Barbados, Colombia, Cuba, Ecuador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Dominican Republic, Trinidad & Tobago, Centre for International Services – University of West Indies, ECLAC, CITEL, OSILA, UNDP and ITU.

The list of workshop participants and presentations are available at the following web site: <www.itu.int/ITU-D/ict/mexico03/>.

IV CONCLUSIONS

On the basis of the work done in the workshop, it was agreed to adopt the indicators and indices included in Annex 2.

In addition, it was agreed to continue analysis and study of the indicators and indices contained in Annex 3.

V RECOMMENDATIONS

Recommendation 1 (Mexico, 2003) was drawn up, containing the agreements reached in this workshop (attached to this final report).

ANNEX 1

Workshop programme

Workshop on indicators for community access to ICTs
Mexico City
6-8 October 2003

Programme

Monday, 6 October	**Opening sessions**
0800-0930	Registration and logistical support for participants
0930	**Opening of workshop**
0935-0940	Address by Ms Rosa Santizo, UNDP Deputy Resident Representative
0940-0945	Address by Mr Martin Hilbert, Consultant from ECLAC's Business and Productive Development Division
0945-0950	Address by Mr Roberto Bastidas, ITU Representative for North America, Central America and the Caribbean
0950-0957	**Opening address by Mr Pedro Cerisola y Weber, Minister for Communications and Transport, Mexico**
1000-1025	Coffee break
1025-1055	**Election of workshop chairman and rapporteurs**
	Working methods
	Regional and national experiences and initiatives
1100-1145	Multipurpose teleservice centres: case study in Central America Questions and answers
1145-1230	Indicators and telecommunication funds Questions and answers
1230-1430	Lunch
1430-1515	Information society observatory in Latin America and the Caribbean Questions and answers
1515-1545	Presentation of experiences - Mexico
1545-1600	Coffee break
1600-1630	Presentation of experiences - Ecuador
1630-1700	Presentation of experiences - Caribbean
1700-1730	Presentation of experiences - Cuba
1730-1800	Presentation of experiences - Nicaragua

Workshop on indicators for community access to ICTs
Mexico City
6-8 October 2003

Revised programme (7 October 2003)

Tuesday 7 October	**Proposals concerning indicators for measuring and quantifying community connectivity to ICTs**
0900-0930	Availability of community access indicators
0930-0945	Framework document on ITU-T community connectivity indicators
0945-1000	Proposal from Cameroon on community connectivity indicators
1000-1030	Proposal from Honduras on indicators
1030-1100	Proposal from Mexico on indicators for measuring and quantifying ICTs
1100-1130	Coffee break
1130-1200	Measurement of ICT penetration in Haiti, implementing an ICT observatory
1200-1230	Presentation by Sushant Suri
1230-1300	Development of ICTs in Colombia: measurement and monitoring
1300-1430	Lunch
1430-1500	Connectivity Agenda for the Americas
1500-1630	Discussion on indicators for measuring and quantifying ICTs
1630-1800	Reporting and coordination meeting
2000-2200	Dinner (with the compliments of the Ministry of Communications and Transport)
Wednesday 8 October	**Conclusions and recommendations**
0900-1000	Presentation and discussion of proposals for Recommendations to WSIS, ITU and other bodies
1000-1100	Presentation and discussion of conclusions concerning community connectivity indicators
1100-1130	Coffee break
1130-1300	Presentation and discussion of conclusions (continued)
1300-1500	Lunch
1500-1700	Approval of conclusions and recommendations
1800	Closure of workshop on indicators for community access to ICTs

ANNEX 2

ICT community access indicators agreed upon at the Workshop

Introduction

Community connectivity policy has currently been implemented worldwide through universal access mechanisms involving community centres where the general public can use Internet and digital communication services. It is thus important to identify indicators capable of describing universal access and universal service in order to measure them and set targets in the context of ICT and national policy development.

Universal service

The following minimum indicators should be available for universal service.

Households with:

Indicator	Number	%
Electricity		
Radio		
Television		
Telephone: – only fixed – only mobile – fixed and mobile		
Computer		
Internet access		
[Pay TV]		

These data should generally be obtained from National Statistics Offices, which carry out periodical censuses and various surveys, in order to provide such figures and keep them up to date. If such data are not gathered, it is recommended that National Statistics Offices should include them in their censuses or surveys.

Universal access

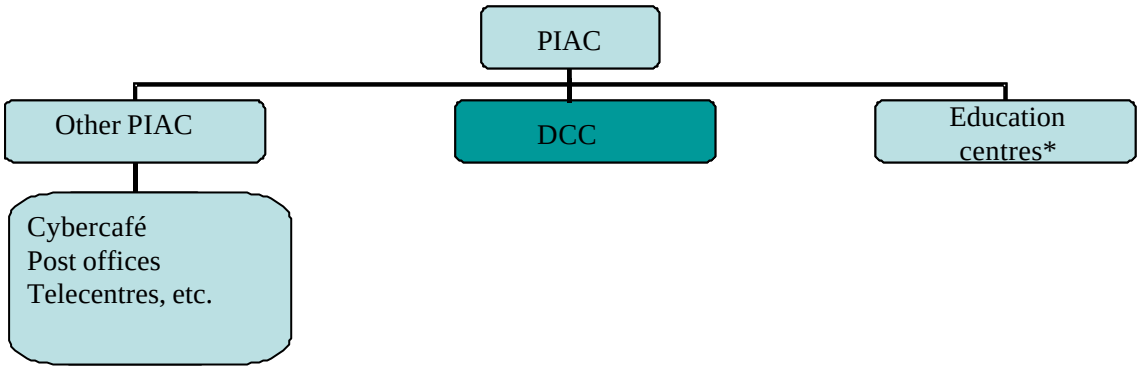
Universal access relates to the number of people in a country covered by information and communication technologies, to which end the necessary infrastructure is required for the provision of the various services which constitute these new technologies. Universal access may be guaranteed in various ways, one being through public internet access centres.

Public internet access centre

Definition

A public internet access centre (PIAC) is a site, location, centre or instruction at which Internet access is made available to the public, on a full-time or part-time basis. This may include digital community centres, Internet cafés, libraries, education centres and other similar establishments, whenever they offer Internet access to the general public. All such centres should have at least one public computer for Internet access. It is very useful to classify centres by type, as illustrated by way of example in Figure 1. A further breakdown into private and governmental establishments is also necessary.

Figure 1



* When open to the general public, outside teaching hours.

Digital community centre

Definition

A digital community centre (DCC) is a place where the public can access Internet services from terminal facilities placed at their disposal. A DCC should offer equitable, universal and affordable access.

Minimum requirements for a PIAC to be considered as a DCC:

- At least two computers
- A minimum connection speed to the Internet service provider (ISP) of 64 Kbps per centre, with an acceptable amount of bandwidth available to users.
- At least one printer.
- Support and maintenance.
- Minimum opening hours per week: 20 hours.

INDICATORS

Number of localities with PIACs

This is the number of localities with PIACs. This indicator should be given by number or range of inhabitants. Also, governmental and private PIACs should be identified, with both absolute and relative values. Figure 2 shows a typical example (case of Mexico), although each country may classify data according to its own specific characteristics and statistics.

Percentage of the population with access to a PIAC

Figure 2

	Locality by range of inhabitants	Number of localities	Population	PIAC coverage							
				Governmental		Private		Total		Percentage	
				Localities	Population	Localities	Population	Localities	Population	Localities	Population
		199 369	**102 377 645**	**2 465**	**4 389 517**			**2 593**	**70 138 808**	**1.3%**	**68.5%**
Urban	> 500 000	30	27 081 194	30	181 360	30	27 081 194	30	27 081 194	100.0%	100.0%
	50 000-499	148	27 732 016	140	499 238	148	27 732 016	148	27 732 016	100.0%	100.0%
	999	572	12 591 472	452	974 793	572	12 591 472	572	12 591 472	100.0%	100.0%
	10 000-49 999	2 291	11 287 222	999	1 451 538	na	na	999	1 451 538	43.6%	12.9%
	2 500-9 999										
Rural	1 000-2 499	5 295	7 657 632	509	787 011	na	na	509	787 011	9.6%	10.3%
	500-999	8 698	5 852 496	196	294 383	na	na	196	294 383	2.3%	5.0%
	100-499	33 778	7 696 776	86	127 985	na	na	86	127 985	0.3%	1.7%
	1-99	148 557	2 478 837	53	73 209	na	na	53	73 209	0.0%	3.0%

Note: It is assumed that Internet access is available in all urban localities covered by private PIACs.
Telmex provides Internet access service in all urban localities (3 043).

This indicator measures the number of inhabitants who enjoy PIAC coverage as a proportion of the total population of the country. It is considered that when a locality has at least one PIAC then the entire population in the community will be covered by that PIAC.

Users

Whereas the number of households with access to ICTs and ICT coverage reveal the number of potential users of the technologies, we have to count the actual number of users. This should be broken down according to the number of users utilizing the PIACs. The only reliable way of obtaining this information is through surveys carried out by National Statistics Offices or specialized companies.

Number of Internet users through PIACs

This is the number of people who use the Internet from PIACs, taking into account the technical records used in the different surveys. The data should at least show the age of the users and the frequency with which they use the service, for better international comparison.

The following data are suggested as an example:

Public Internet centre users:

Number of Internet users: 1 585 000
Percentage accessing Internet from public centres: 38%
Number of users accessing Internet from public centres: 602 300

Usage indicators

1) Potential population = A potential DCC user is anyone of age 6 years or more.

2) Target population for DCC services = Potential population minus Number of non-community Internet users.

3) Actual usage = Actual users/Target population for DCC services (an actual user being one who accesses Internet at least once a month).

4) Average DCC usage rate = Total DCC usage time/Total available DCC time.

5) DCC density in rural areas = (Number of DCCs in rural areas/Target population in rural areas) x 1 000 inhabitants.

6) DCC density in urban areas = (Number of DCCs in urban areas/Target population in urban areas) × 1 000 inhabitants.

Infrastructure indicators

Total number of DCCs.

Total number of computers in DCCs.

ANNEX 3

Indicators for future study

A. Tariffs and financing

1) Average hourly access cost: Average hourly rates charged by DCCs.

2) Public subsidies to DCCs.

B. Other indicators

1) Distribution

2) Number of male/female DCC users.

3) Average age of users.

4) Content: It is acknowledged that content is one of the key drivers of the information-and content-based society, and it is recommended that a country should evaluate the prevailing situation in terms of content.

5) Quality of service: Transmission speed, availability, continuity of service, mean time between failures, mean fault clearance time at a DCC.

6) User satisfaction: Quality, training, availability. A correlation between quality of service and user satisfaction is anticipated.