

VOLUNTEERING IN THE INFORMATION SOCIETY
SOLIDARITY@NETWORK_SOCIETY.INT

Manuel Acevedo
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EXECUTIVE SUMMARY

This paper discusses the topic of volunteering in the Information Society, and in particular, the role of volunteering in relation to information and communications technology (ICT) for human development. It underscores the value of volunteer action for capacity-building on ICT for development, providing examples to illustrate how volunteering can be considered as a valuable, even essential asset to bridge the digital divide and generate digital inclusion. The paper also identifies options for volunteer-based networks within the new trends and practices of development cooperation.

Volunteering in the Information Society

Volunteering is a mass social phenomenon and an expression of solidarity in action involving hundreds of millions of people in countries of both North and South. In a period when the international community and decision makers are attempting to better understand the context of the Information Society in order to determine coherent development strategies¹, it is timely to consider the role and value of Volunteering in the Information Society.

This leads to two preliminary conclusions. The first is that volunteering has already had a significant impact in the emergence of the Information Society, and that it is expected that such impact will continue, particularly to address digital exclusion. In the technology domain, volunteer contributions to some of the Information Society's basic technological pillars – UNIX, TCP/IP or the Web – have been fundamental. As some academics have proposed, the Internet is a cultural product of society; without volunteering, the Information Society would probably appear quite differently than how we know it today. The paper also discusses volunteer contributions to the Information Society in the areas of communications, public information and community.

The second conclusion is that ICT and network dynamics² inherent to the Information Society (ie. Castells' notion of Network Society) are also having an important effect on Volunteering and volunteer-involving organizations. Efficiency gains from the use of ICT are being introduced in volunteer-involving organizations, albeit at a slower pace than in sectors such as private sector or government. In addition, Internet provides a new channel for solidarity. Whether it is online volunteering, online fund-raising, or electronic networks for cooperation and activism, ICT brings about a new array of tools and resources for the volunteer sector – which in turn is modifying the way the sector works.

Besides the applications of ICT in practically every facet of human development, from health to disaster management, from education to income generation, ICTs themselves carry special value for development through networking technologies and the network dynamics they can foster in development cooperation.

Within this framework, ICT volunteering becomes a valuable asset towards the goal of a more inclusive and fair Information Society. ICT volunteering can be defined as the range

¹ *This paper was written during the process of the World Summit for the Information Society, which was held in two phases, Geneva in December 2003, and Tunis 2005.*

² *The ways people and institutions interact via networks (as opposed as via linear or hierarchical structures).*

of volunteer actions whose common characteristic is the targeted use of ICTs - in particular digital ICTs.

ICT volunteering has a clear added value for development. There are large numbers of people skilled and willing to contribute to digital (and informational³) inclusion in their own countries or overseas. This relates well to the massive capacity needs in ICT for development. In this regard, Youth becomes an important contributor and a development asset. In few areas of development like digital inclusion have young people such substantive and practical expertise to bring about important contributions to improve the world.

Following the two-way relationship between Volunteering and the Information Society sketched above, we have examined two types of actions: one where volunteers help others to make better use of ICT for their human development processes, and the other where ICTs are utilized as channels and resources for volunteering.

Volunteering to bridge the digital divide

The 'digital divide' can be defined broadly as the difference in the benefits obtained from the digital revolution, due primarily to insufficient access, capacity and content. Capacity-building is the principal niche of ICT volunteering as an agent that helps bridge the digital divide.

This assumes that ICTs can indeed be useful tools in the fight against poverty, as instruments of development - for example, to achieve the Millennium Development Goals (MDGs). There is still, however, lingering debate on ICT's role in development, as illustrated by the 'Health or Computers'-type dilemmas, where the investment in ICT is questioned in the face of more direct and at times urgent needs. Thus, it is necessary to first assess the role of ICT itself in order to understand the proper roles of volunteers in this facet of development cooperation,

The utility of ICT is best highlighted in relation to the concept of human development. Human development is about expanding choices in people's lives, or in other words, the removal of '*un-freedoms*' that constrain the quality of life for women and men. In the Information Society, informational freedoms are needed to help generate a wider set of choices and to enable access to those choices. Information becomes a key raw material of development, needed to generate knowledge. Thus the utility of ICT for human development becomes a function of the developmental value of information for people. It is not just about a farmer accessing agricultural market prices over the Internet to make a better deal when selling his maize or sheep, a clearer case of the utility of ICT; it is also when the farmer's daughter accesses information about university scholarships and joins a women's network to learn about her legal rights.

In this regard, ICT volunteers are well placed to assist others in accessing information and making the best possible uses of it. The paper proposes ten key types of actions which can be grouped into three categories: (1) awareness and promotion of the possibilities of ICT for development; (2) basic ICT skills building; (3) applications of the technologies for

³ *Meaning inclusion in terms of access to, production and sharing of information.*

various development areas (e.g., health, education, income generation, gender equity, disaster management).

The United Nations Information Technology Service (UNITes), www.unites.org, is an example of ICT volunteering initiatives⁴ aimed at bridging the digital divide. It was announced by United Nations Secretary-General Kofi Annan in his Millennium Report in 2000, and is managed by the UN Volunteers programme (UNV). These volunteers build human and institutional capacity on the opportunities and uses of ICT across all areas of development.

Networked volunteering for development

The second group of actions relates to the use of ICT as a vehicle for and in support of volunteering. In particular, it underscores the importance of volunteer networking in responding and adapting to the new dynamics and structures of the Information Society.

Online volunteering is the clearest example of the changes that ICT and the Information Society can have for Volunteering. It refers to volunteer actions where the Internet serves as the principal means of communication. It is a new form of volunteering – at least in an organized fashion – and much remains to be learned about ways and means to maximize its efficacy for host organizations as well as for the online volunteers. At any rate, on the basis of experience from the UN Online Volunteering service (www.onlinevolunteering.org) it may be argued that:

- It will facilitate the involvement of substantially higher numbers of people in development cooperation;
- It becomes a means to maintain involvement by people who have served in locations outside their place of residence;
- It improves the level of support that 'on-site' volunteers may receive.

If more people collaborate online with more development institutions and initiatives, this will imply an increase in person-hours dedicated to development cooperation at essentially no additional cost. This is the most visible effect of online volunteering for human development.

Volunteer organizations can reap clear benefits from the more extensive integration of ICT into their operations. It can help them (1) obtain information resources (e.g., for training purposes), (2) attract more/different volunteers (including people with disabilities), (3) better communicate with volunteers and host organizations, (4) better manage volunteers, and (5) increase efficiency in other administrative functions, including finance and personnel. The sector has, however, experienced relatively limited introduction of ICT, owing to technology costs and lack of technical capacity.

Online volunteering is only the basic expression of networked volunteering. ICT-enabled volunteer networks can multiply the value of digital solidarity for development cooperation. In the Information Society, networks provide the basis for Denning's aptly termed 'knowledge gardens', where connections are favored over collections for

⁴ There are other examples briefly discussed in the paper, such as NetCorps Canada International, or as part of volunteering-involving organizations including the Red Cross or Volunteers in Technical Assistance (VITA).

knowledge generation. In addition, they foster cooperation and facilitate sharing and a more rational use of limited resources, including time. Online volunteers become the basic nodes of volunteer networks.

While volunteers often participate in networks in the course of their activities, the deliberate promotion and establishment of ICT-enabled volunteer networks has only started to be addressed. These networks are poised to become a significant part of development cooperation practices and structures. Online volunteering services represent a basic model. Other volunteer-based network models include (i) those based on the open source approach to software products, (ii) knowledge networks for volunteers, or (iii) institutional volunteer networks. Moreover, the architecture of development projects could be revisited to include project-specific volunteer networks. In any event, most people that participate in development networks do it on a voluntary basis.

Volunteer networks may also have the effect of contributing to a new element of social capital, which could perhaps be called 'network capital'. Social capital is one of the enablers of human development, and the role of Volunteering as an engine of social capital is well recognized – which makes volunteering an indicator of development. Since communities are no longer defined only by place, but also by interest, they become organized in social networks. When the interaction takes place among members of an electronic network (which sometimes spans continents), the resulting social capital can be seen as a network-based social capital. In this context, 'network capital' becomes a valuable asset for development, and volunteer networks can also be expected to be among its main drivers. The value of network capital in relation to development cooperation merits specific research.

Challenges and Recommendations

This exploration of how solidarity in the form of ICT volunteering can help energize and stimulate human development leads to the identification of some challenges and implications:

Designing capacity into ICT4D activities and programmes. Having the proper capacity to put new tools like ICTs into good use is essential to obtain the intended benefits from them. While this may sound obvious, the design and implementation of projects that incorporate the use of ICT often lacks specific capacity-building activities. Lack of attention to reaching proper capacity levels is often at the root of the failure to integrate ICT into development processes.

Mainstreaming ICT into development. This goal, often expressed in international fora and by development agencies and leading development figures, is both ambitious and coherent with the changes under way at this early stage of the Information Society. Yet, most development agencies have made scant progress in it. Given the magnitude of the challenge, and that human/institutional capacity is arguably the critical constraint, the generalized involvement of ICT volunteering is arguably necessary to make significant progress into ICT mainstreaming.

Policy. The Information Society has been characterized by increasing development inequities. All possible assets to reduce development divides (including for the digital

divide), should be harnessed to reverse the trend, for example, by meeting the Millennium Development Goals (MDGs). Cultivating solidarity, therefore, becomes a policy issue. ICT volunteering, as a cost-effective, capacity-building asset for digital inclusion, should be far better funded, supported and utilized (as recommended, for example, by the European Union in a 2001 report).

ICT integration into volunteer organizations. In order to provide a more significant role for ICT volunteering, volunteer agencies should themselves make greater strides in their own ICT mainstreaming processes. To take advantage of ICT possibilities, volunteer organizations need to have political will as well as technical know-how. In other words, successful policies start at home. Online volunteering or the wider networked volunteering, with all its advantages, cannot flourish in a technology-deprived context.

World Summit on the Information Society. WSIS represents a unique opportunity to place ICT volunteering squarely on the development map. Many of the items in the Plan of Action that emerged from Phase I of WSIS (December 2003) would stand better chances of being implemented if ICT volunteering is realized as one of the key resources. ICT volunteering is one of the under-utilized, under-cultivated resources that could be 'discovered' in the second phase II of the Summit. The paper includes components of an 'ICT volunteering WSIS Plan of Action'.

1. INTRODUCTION

Objectives

This paper examines Volunteering in the context of the emerging Information Society. We will examine on the one hand how Volunteering contributes and is positioned on the Information Society, and on the other how the Information Society affects Volunteering itself.

In particular, we will focus on ICT Volunteering as an asset for capacity development and Human Development. The 'digital divide', which refers to the inequities induced by the uneven distribution in the use and coverage of informational technology, started to attract special attention in the international development arena around the end of the previous decade. The digital divide both adds to other socio-economic divides, and is consequence of them. We will explore the roles for ICT Volunteering in the efforts to bridge the digital divide and mainstream ICT into human development processes.

Context

The context of the paper is given by two main and related items. One is the growing recognition by the international community that the Information Society and ICTs offer both challenges and opportunities for the eradication of poverty. The other is the World Summit for the Information Society (WSIS), taking place in two phases, Geneva (December 2003) and Tunis (November 2005).

Scope of the paper

On the eve of the first major Global Meeting held to discuss the Information Society and its repercussions⁵, this paper aims to fill part of the knowledge gap on the new challenges, opportunities and practices of Volunteering in relation to the Information Society.⁶

The paper organizes a series of ideas, experiences, projections and propositions to provide the reader with up-to-date knowledge on the space of Volunteering in the Information Society. The paper delves deeper into ICT Volunteering and the dynamics of the Network Society as applied to volunteering for development (V4D). It also suggests areas for further work and research.

A comprehensive treatment of Volunteering in the Information Society is outside the scope of the paper, as that would require an extended research and compilation effort – in fact, it would probably require a book to do it justice.

⁵ Two other important meetings were the Global Knowledge Conferences, held in Toronto (1997) and Kuala Lumpur (2000)

⁶ A comprehensive document about this topic is 'Inclusive Information Society in Europe: The Role of Voluntary Organisations' commissioned by the European Commission [O'Donnell 2001].

2. VOLUNTEERING IN THE INFORMATION SOCIETY: THINK OF WHAT YOU CAN DO FOR THE WORLD.ORG

Volunteering is a mass social phenomenon and a basic expression of civic action, one that makes significant inputs to social cohesion. This also applies in the Information Society and there may be even greater needs (and opportunities) for volunteer action in this new social paradigm.

It is not easy to propose a crisp and widely accepted definition of Volunteering, mainly because it takes different forms and meanings in different settings. At an Expert Working Group Meeting on Volunteering & Social Development convened by the United Nations Volunteers programme (UNV), the core characteristics of a voluntary activity were identified [UNV 1999]:

- the activity should not be undertaken primarily for financial reward;
- the activity should be undertaken voluntarily, according to an individual's own free-will; and
- the activity should be of benefit to someone other than the volunteer, or to society at large.

Four different types of volunteer activity were identified within this broad framework: (1) mutual aid or self-help; (2) philanthropy or service to others; (3) participation or civic engagement; and (4) advocacy or campaigning. While each of these types is said to occur in all parts of the world, the mix of the different types will differ markedly from country to country.

Volunteering involves hundreds of millions of people around the world, often through civil society, but also through religious groups, companies, schools, trade unions, etc. Many of them give their time and share their knowledge through formally established institutions. 'Voluntary Organisations' are organisations in the social economy with some degree of formal or institutional existence, and that are non-profit-distributing, independent of government and other public authorities, managed in a disinterested manner, and active in the public arena, contributing to some degree to the public good. [O'Donnell 2001]. In addition, there is much volunteer action that takes place outside formal organizations, particularly at the community level.

2a. Volunteering and Human Development

Volunteering is a fundamental asset for development, and for inclusive and cohesive societies. On the one hand, it provides important products and services to society everywhere, in quantity as well as in quality, for example in the delivery of health services or through its role in humanitarian assistance. Only the Red Cross/Red Crescent societies involve about 100 million volunteers. [Suarez, 2002] ⁷

On the other hand, and as a 'collateral benefit', Volunteering is a key generator of social capital. The World Bank defines social capital as '*the institutions, relationships, and norms that shape the quality and quantity of a society's social interactions*'⁸. Social capital is a

⁷ <http://www.ifrc.org/voluntee/>

⁸ <http://www.worldbank.org/poverty/scapital/whatsc.htm>

type of glue that holds societies together. With social capital increasingly being recognized as a significant driver of human development⁹, then we can take Volunteering as a proxy indicator for human development.

Volunteering in development cooperation

Volunteering has always been a part of development cooperation ever since the latter came into formalised existence after World War II. It has fostered international cooperation, with volunteers crossing borders to take part in projects and activities. At a much greater scale, native volunteer action is fundamental to human development processes which occur outside development cooperation mechanisms - which are the majority of them.

The value of Volunteering for development has been acknowledged in many fora. For example, *UN General Assembly Resolution A/57/L.8 [UN, 2002], supported by 111 countries, recognizes* the valuable contribution of volunteering to economic and social development, that it benefits society at large, and that is an important component of any strategy aimed at poverty reduction and sustainable development. It also recognized that Volunteering, particularly at the community level, will help achieve the Millennium Development Goals and other goals and objectives set a UN conferences and sessions. Volunteering's special niche in development cooperation is in enhancing local capacity or the wider context of capacity development.

Volunteer action has specific attributes which reinforce capacity development processes. Together, these attributes result in some elements of added value of Volunteering to capacity development. The following table identifies the most relevant¹⁰.

Attributes	Added value
<ul style="list-style-type: none"> • <i>solidarity-driven,</i> • <i>free-willing</i> • <i>affinity at the local and community levels</i> • <i>adaptability and flexibility (eg. to various institutional settings),</i> • <i>participative, collaborative</i> • <i>extended involvement¹¹</i> • <i>boundary-crossing¹²</i> • <i>intercultural</i> • <i>proactive</i> 	<ul style="list-style-type: none"> • <i>Fosters international understanding and collaboration</i> • <i>Generates social capital (nationally and even internationally¹³)</i> • <i>Constitutes a massive resource, involving many millions of people, with potential for more (eg. through Online Volunteering)</i> • <i>Increases local ownership of development processes</i> • <i>Reduces costs¹⁴</i> • <i>Increases local sustainability (through knowledge transfer and local ownership)</i> • <i>Is prone to networking</i> • <i>Generates multiplier effects (eg. Involvement of other volunteers)</i> • <i>Makes less 'noise' in the system¹⁵</i>

⁹ And this is being accepted more and more, partly from the interest and follow-up generated after Robert Putnam's landmark 1993 publication 'Making Democracy Work' examining development levels in different parts of Italy.

¹⁰ This is based partly on the Capacity for Development publication, which makes a comprehensive treatment of volunteering characteristics in the development context.

¹¹ In comparison, for example, with some traditional technical assistance activities like 1-2 week trainings, where the 'expert' imparts knowledge and does not have the opportunity to accompany the results in the practice.

Yet, the fertile field of volunteering for human development has not been properly tilled. A study on Volunteering and Capacity Development commissioned by UNV [Pratt 2002] states that *'In its widest sense, volunteerism is far too crucial to developmental processes to be ignored (...) despite the major contribution of volunteerism to development, it has yet greater untapped potential for local and national capacity development. Finding ways to release and utilize such potential should therefore be a core consideration in the debate on improving capacity development processes.'*

At a time of growing inequality and deepening need in many parts of the world, there is a need to optimise all possible resources for Human Development. Volunteering presents a policy challenge but a substantial development opportunity. A 2000 Roundtable on Volunteerism and Social Development [UNV 2000] indicates:

'...while Volunteering constitutes an enormous reservoir of skills, energy and local knowledge, it is not widely recognized as a strategic resource which can be positively influenced by public policy. This is a limitation of public policy which needs to be rectified to foster the expansion of Volunteering as a social asset.'

There are concrete steps that can be taken which can accrue significant benefits to development actions and processes, while policy measures are modified – a slow moving course. The aforementioned UNV study recommends (1) the deliberate and explicit inclusion of Volunteering by development planners in capacity development plans, and (2) modest investments in national and local volunteering programmes, which can pay significant rewards in terms of capacity development (and enhancing social capital).

Status of Volunteering

It is important to measure Volunteering, because the analysis of its contributions will facilitate changes in policy to foster and facilitate Volunteering. In 2001, UNV and the U.K. based Center for Volunteering Studies developed a kit, 'Measuring Volunteering: A Practical Toolkit' to enable the measurement of the involvement and effects of Volunteering at the national level¹⁶.

¹² Pratt defines *relational volunteering* as the ability of volunteers to cross societal and organisational lines. His study cites as an example the activities of NGO leaders in Cyprus.

¹³ One area for research would be the study social capital at an international or even global level: how that social glue extends across boundaries, and how ICT contributes to international social capital

¹⁴ The cost benefit of volunteers increases with the magnitude of their involvement. For example the global polio eradication initiative, led by WHO, UNICEF and the Rotary Foundation, has been driven by volunteers around the world. In 2000, an estimated 10 million people volunteered to support the immunisation of 550 million children. WHO calculated that such support was worth \$10 billion [UNV 2001].

¹⁵ In other words, it provokes less disruption (explicit or implicit) because of the usual adaptability of volunteers and their limited pretensions.

¹⁶ Available from the International Portal on Volunteerism, the 'World Volunteer Web', at http://www.worldvolunteerweb.org/research/toolkits/meas_vol_kit/index.htm

While there have been comparatively few studies to measure volunteering, there is now more interest and activity aimed at quantifying the impact of Volunteering. And results have been telling in the few cases where largescale research has been conducted:

- Between a third and half the population of the European Union are members of voluntary organizations, or approximately 100 million people. There are more than two million volunteering organizations in the European Union as a whole. Operating expenditures of voluntary organisations as a percentage of GNP ranged from 4.8 percent in the UK to 2 percent in Italy. [O'Donnell 2001]
- Research coordinated by Johns Hopkins University estimated that the 'voluntary sector' accounted for around 4.6 per cent of the GDP of the 22 countries initially surveyed. The research revealed, moreover, that in addition to paid staff (19 million), the sector was sustained by voluntary labor equivalent to a further 10 million full time employees, excluding volunteers in religious organisations. [Pratt 2002].
- In 1997, the National Survey of Giving, Volunteering and Participating in Canada showed that 7.5 million Canadians volunteered, or 31.4% of the population aged 15 and over. The aggregate hours of volunteer time amounted to an equivalent 578,000 full-time jobs. [Industry Canada, 1998]

Solidarity in motion: Volunteering as a 'bank' of social capital.

Volunteering is the most widespread way of practicing solidarity. It is the lifeblood of civil society, which could hardly function without volunteers. It not only elevates the capacity of the person(s) working with the volunteer, or that of the volunteer herself: Volunteering increases society's collective capacity.

Social capital has received significant attention in development circles since the early 90's as one of the determinant elements of the progress of development processes, together with economic or human capital. Let us provide another definition of social capital in addition to the one at the beginning of this section 2: the networks of social interaction and the norms of reciprocity that allow the individual (volunteer) and the community to assume a habit of civic collaboration aimed at common goals. [UNV 2000]

Volunteering creates social capital by contributing to the habit and the practice of people working together for respond to common needs and to aspire to and reach common objectives. It furthermore helps to weave personal and institutional networks. Investment in social capital is in the interest of all countries, rich and poor, and in particular of their governments¹⁷. Therefore, government and other institutions would be wise to deliberately support actions and policy aimed at promoting volunteering, and particularly in development processes since it can be argued that *'the impact of investments in volunteering can be at least as great as, and will remain more sustainable than other forms of public expenditure.'* [UNV 2000]

Volunteering profiles in development cooperation

¹⁷ Among other things, social capital has a direct relation to governance, as it is ground in civic trust and participation.

When the major volunteering institutions first became involved in international development, the most important requirement from the volunteers was enthusiasm and the will to cooperate. That has changed with the passing of time - capacity in developing countries has increased significantly, and Volunteering for development has become more specialized. Significant levels of skills and expertise are required in many cases, particularly for sending volunteers overseas. For example, UN Volunteers going on international assignments have on average of 9 years of professional experience and 38 years of age.¹⁸

There are increasingly important roles for Youth and the elderly in development cooperation. We will refer to youth in the next section. As for older people, they are living longer and staying healthier, and wanting to reclaim an active participation in society which tends to decrease once professional responsibilities go away with the arrival of the first retirement check. The International Year of Older People 2002 demonstrated their interest for volunteer involvement, highlighted the vast and largely untapped pool of accumulated knowledge and experience, and demonstrated that they may become, at least in developed countries, the fastest growing volunteering sector.

One of the advances in Volunteering for development cooperation has been the increasing involvement of individuals from developing countries, whether to serve in another developing country or in their own. However, this is still modest in relative terms, as most national volunteering associations do not yet involve nationals from other countries as volunteers.

There is a renewed interest in supporting and learning more about traditional or indigenous forms of volunteering, as they can make substantial developmental contributions. Volunteering runs all along human history, and beyond collective work for collective property, various kinds of indigenous volunteer-based initiatives can be identified: reciprocal labor (like *mingas* in Andean countries), self-help groups, women workshops, credit circles, religious (health and education) services, trade-based welfare services, parent-run pre-schools or émigré/Diaspora organizations¹⁹ [Pratt 2002].

According to Pratt, volunteer organizations involved in capacity development are acting in various levels:

- Individual level: this has been the most traditional, focused on individuals, for example with literacy campaigns
- Community level: it may be the most common in the context of capacity development. The impact of the volunteer contribution is meant to be collective, e.g. the volunteer may collaborate with a farming cooperative, with planning for new services for a village, etc.
- Intermediary level: this is focused on institutional strengthening, rather than on technical assistance, for example with NGOs or municipal governments.
- Private sector: volunteers from companies are moving beyond purely philanthropic activities and more into the provision of professional services in their contributions, eg. to government agencies, universities or also private concerns (eg. a chamber of commerce).

¹⁸ UNV Annual Report 2002,, <http://www.unv.org/infobase/anrep/2002/index.htm>

¹⁹ A different type of « local organizations »

- Public sector: arising from the growing involvement of volunteers with government organizations in service provisions (or even in high level national advisory councils).
- Institutional development: if refers to 'institution building' in the socio-political sense of institutions (not organizations), as related to the unwritten norms that govern behavior among individuals and organizations [Prats 1999]. Volunteering in this context is tied to deliberate actions for participatory governance and, in fact, towards the explicit generation of social capital.

Focus on youth as potential life-long volunteers

There is a particularly strong incentive to promote Volunteering among the young: they may have a life of volunteering ahead of them. And, of course, there are other reasons:

- (1) Volunteering is another avenue for participation of young people in shaping the society they live in and will inherit;
- (2) Youth have significant assets to offer to society, now;
- (3) a type of 'young social capital' can be a sustainable asset to spread over decades;
- (4) in transitional countries²⁰ or those are recovering from civil conflict, youth tend to play an important role in establishing effective links among different social and ethnic groups;
- (5) Volunteering provides valuable skills and experience applicable to the job market;
- (6) Young people tend to place particular value on freedom, and Volunteering is an exercise of free will, while helping to build freer societies;
- (7) Universities have an increasingly evident social role. Involvement of their students as volunteers in areas related to their studies will help the universities offer a better well-rounded educational experience; and
- (8) Young people around the world are especially sensitive to development issues, and are increasingly willing and able to get involved in activities that support developing countries.

All the above applies in the context of the Information Society, and then some more. For starters, young people have played a protagonist role in producing the technological basis for the Information Society. Marc Andreessen founded Netscape when he was 26, and had earlier developed the Mosaic browser at 22. Bill Joy, later co-founder of Sun Microsystems, developed the Berkeley version of UNIX, a fundamental achievement, as a graduate student there in his 20's. Neither Jerry Yang nor David Filo had reached thirty when *Yahoo!* was already a household name. As for Bill Gates... well, he dropped out of Harvard at 19 to form a small company by the name of Microsoft. Many more names could be added to the list, but the point is clear: young people are protagonists in shaping the technological basis of the Information Society.

²⁰ Those subject in the past to authoritarian governments

It is almost an oxymoron to say that young people have the most expertise on using ICT as an age bracket. They know it (ie. can use the technologies for specific purposes), and they get it (ie. they understand the possibilities of ICT for a given context). The introduction of these technologies in human development is a field where Youth can put that substantive knowledge to use and provide significant benefits to development stakeholders around the world.

Moreover, ICTs themselves enable youth around the world to communicate with one another and to discuss their values and cultures, enhance their self-esteem, and even heighten their sense of social responsibility and civic leadership [UNV 2000]. The Civil Society Coordinating Group of WSIS wrote, '*Young people have been at the forefront of almost every innovation in the development of information and communication societies. Yet, young people have too often been seen as a burden rather than an asset, a group to be taught but not to teach, and to receive but not to give.*' With so much demand for human capacity in ICT, Youth constitutes an enormous resource of smart solidarity which needs to be applied.

Is the value of Volunteering any different in the Information Society?

Volunteering has proved to be a potent force for social inclusion across centuries, and in recent decades for international development cooperation. A new social context is bound to have an effect on this social movement. In broad terms, a more intensively globalized world moves citizens closer, and volunteer action will be felt in terms of humanizing globalization. Moreover, the digital revolution brings new tools for Volunteering. A detailed analysis of the emergence and evolution of the Information Society needs to consider the topic of Volunteering. [UNV 2002a]

European Union policies on the Information Society have recognized the role of volunteer organizations [O'Donnell 2001]:

- One of the recommendations from a report of a High Level Expert Group set by the European Commission to analyze the information society's social dimensions states that: '*The various possibilities for increasing the rate of development and adoption of applications of ICTs to increase social participation and to improve quality of life should be examined in more detail and actively pursued (...) The involvement of the target groups in the design, development and implementation of technologies is critical, as is the participation by voluntary bodies and NGOs representing such groups.*'
- The EU's 'Communication on Promoting the Role of Voluntary Organizations and Foundations' stated that '*voluntary organizations and foundations have a clear interest in being associated closely with information society developments.*'
- The High Level Group on the Employment and Social Dimension of the Information Society (ESDIS), in a recent document on e-inclusion proposed that: '*Public authorities should encourage the development of online activities in the voluntary sector, including its catalytic role favoring access to public services, by providing financial incentives, technical assistance and support to the networking of NGOs, including innovative forms of stakeholder partnerships with private actors.*'

The role and value of Volunteering in the Information Society can be approached from two complementary perspectives. One leads to examining the contributions of Volunteering to the emergence, evolution and functioning of the Information Society.

The other examines how the new social and technological characteristics of the Information Society are affecting Volunteering and volunteer action around the world. These two perspectives are treated in the remainder of this chapter.

2b. Influence of Volunteering in the Information Society

Many people still today hold a view of Volunteering very much related to local charitable organizations, or at best to community action: ladies baking pies to raise funds for a health clinic, or a group of neighbours cleaning up a park. A different picture emerges when the notion of Volunteering extends more widely to actions driven by solidarity and contributing to the common good. With this latter picture in mind, we could ask ourselves: 'Is the type of Information Society we want possible without solidarity (ie. Volunteering)?

Reviewing the contributions of volunteer action to the Information Society context will give us an idea of (1) its importance thus far, and (2) its potential into the near and mid-future. From key technological inputs to efforts to bridge the digital divide, or to the networking of civil society and community, Volunteering has already provided significant contributions at this stage. We will look at four key areas to search for examples and trends: technology, communications, information and community. This will be indicative, and by no means comprehensive - further research would throw more light on relating dimensions of the Information Society with roles of Volunteers²¹.

Technology

Volunteer action was essential in the development of some computer and network operating systems (eg. UNIX), network protocols (eg. TCP/IP), or Internet applications (eg. the World Wide Web). These are part today of the basic technological pillars of the Information Society.

Not only some key technologies have been developed through volunteer effort, but they have been 'gifted' to society for its greater good. Tim Berners-Lee, creator of the Web and coordinator of the World Wide Web Consortium, has said that '*The Web is a product of volunteers*'²². He made sure that this phenomenal technological breakthrough would not be copyrighted²³, through his personal decisions and his continued involvement in the evolution of the Web.

Free software and open source software are products of volunteer action and collaboration, and the 'Open Source' approach has recently received significant attention. Its products, like the operating system GNU-Linux, the programming language PERL, the web-server application Apache, or the web browser Firefox are widely used and regarded as solid and of high quality. In some software categories, open source products are viable alternatives to commercial products, and have in fact entered the

²¹ For example, in the evolution of areas like education, health, environment, or political/civil rights, etc. through in the context of the of the Information Society.

²² <http://www.unites.org/html/news/2001/n311001.htm>

²³ Mr. Berners-Lee would be immensely rich had he chosen to cash in on his innovation. Fortunately for the world, he gave it to the public domain.

enterprise Information Services (IS) shops²⁴. In a way, these software products have become global public goods because of their wide usage.

Open Source has received even more attention because of its approach. No one holds restrictive ownership over free or open source applications²⁵. For example, GNU-Linux is maintained and improved by thousands of volunteer programmers, software artists who pursue the excellence of their craft. It has a few well-respected coordinators, chief among them Linus Torvald²⁶, who facilitate its orderly progress. Peer-review is the mechanism through which a specific innovation proposed by a programmer is eventually incorporated into new versions. Such an approach attracts superb programmers, who zealously care for the quality of what they are collaboratively creating – this must be related with the robustness of certain open source applications in a field so error-prone that it has changed the meaning of the term ‘bug’²⁷.

One could foresee that volunteers will continue to create products for the common good. Non-profit entities have launched low-cost hardware, like the Simputer²⁸ from India. There is a steady flow of open source socially-oriented applications²⁹. In fact, one of the exciting possibilities in ICT Volunteering for Development is the organization of Open Source, volunteer programmers that can work closely with development stakeholders to produce tailor-made applications for them and build their ICT capacity.

Computers themselves may turn into a kind of volunteers - that is, their owners and operators may volunteer their use. One of the famous pioneers in this field was the SETI@home project from UC Berkeley, which has been installed in over 5 million computers³⁰. It is a screen saver program that squeezes spare computing power to crunch data from a radio-astronomy search for extraterrestrial intelligence.

Communications

In the Information Society, NGOs and other Civil Society organizations (CSOs) have played (and continue to play) a fundamental role to ensure the free flow of information and the right to communicate. CSOs depend to a large extent on volunteer action. They produce information and knowledge resources, advocate for action at the governmental and international levels, provide training for other CSOs and development stakeholders, and collaborate with other organizations (including with governments) towards the goal of a fair and inclusive Information Society.

For example, the **Association for Progressive Communications (APC)** (www.apc.org) is an international network of CSOs dedicated to empowering and supporting groups and individuals working for peace, human rights, development and protection of the

²⁴ These are not known for ideological purchasing criteria and have reasonable budgets for ICT; see for example, *Business Week's special report on Linux*, 3 March 2003.

²⁵ These products use GPL or General Public Licensing, specifying what can and cannot be done with them.

²⁶ Mr. Torvald could certainly be one of the ‘poster children’ of ICT Volunteering.

²⁷ In ICT terms, bugs are software errors that affect the functioning of one or more software programs.

²⁸ <http://www.simputer.org>

²⁹ Just a few examples: the Software Livre project from Rio Grande do Sul, in Brasil, <http://www.softwarelivre.org/>; or UNESCO's Free Software Portal, http://www.unesco.org/webworld/portal_freesoft/Information/Websites/index.shtml

³⁰ <http://setiathome.ssl.berkeley.edu>

environment, through the strategic use of ICTs. Some of its members were the first providers of Internet in their countries. While APC is active in global policy³¹, its members focus more on the use of ICT by Civil Society in developing countries.

The **CRIS Campaign (Communication Rights in the Information Society)** (<http://www.crisinfo.org/live/index.php>) was launched in 2001 by a group of international NGOs and local networks which work in the area of communications and media. This is a prime example of activism for the right to communicate (which is not yet a formally, legally recognized human right). The Campaign was mounted in part to play a role in the WSIS process, and their vision of the Information Society is based in the Right to Communicate, as a means to enhance human rights and to strengthen the social, economic and cultural lives of people and communities. CRIS advocates four pillars for the Information Society: (1) to create spaces for democratic environments; (2) to guarantee a better use of knowledge and the public domain; (3) to maintain civil and political rights in the Information Society; and (4) to guarantee equitable and affordable access.

ICT is by no means only digital. Radio and television are important traditional ICTs, which reach a much higher number of people around the world than digital ICTs. Therefore, they must also play part of the ICT for Development picture, and in particular they must play a key role in the communications dimension of the Information Society. An example of work in this field is **AMARC, the World Association of Community Broadcasters** (www.amarc.org), is an international community-radio NGO, with almost 3000 members and associates in 106 countries. They support and contribute to the development of community and participatory radio along the principals of solidarity and international cooperation.

Information

Ultimately, ICTs are informational tools. Producing information (or content) is one of the main areas of application for the technologies. Accessing and manipulating information is another. Volunteers contribute to these efforts all around the world, benefiting people they know (eg. those they help to find information) or people they're not bound to ever meet (eg. collecting data for public use, or publicly sharing information they produce). Let us look at varying examples.

As part of the daily operations of the **World Meteorological Organization (WMO)**, millions of volunteers give time for data collection. Individual daily recording by farmers, fishermen and sailors of temperatures, rainfall, humidity and other climatic conditions are fundamental for weather prediction. These volunteers report their findings to national meteorological and hydrological surveys around the world. There are curious anecdotes, as with the Hawker family in South Australia which has recorded rainfall on a daily basis since 1860. [UNV 2001]

Community telecenters are public centers that provide residents with access to ICT. They are essential to achieve the goal of universal access to information and communication services, particularly in developing countries. Many successful telecenters benefit from contributions of volunteers. These volunteers help users to find information, as kind of information brokers. They go out into the community to understand the information

³¹ For example has been quite active in the WSIS process, and is one of the few CSOs that are part of the UN ICT Task Force

needs of various groups of users (eg. teachers, doctors, farmers, local officials, mothers, businesspeople), so the telecenter can best support them. They train users to become self-proficient in the applications that are relevant, and provide them with continued personal support over time. Volunteers can transform a 'technology access community center' into a local development center with access to technology' [Nath 2001b]. In doing so, they can help achieve the most critical dimension of sustainability for a community telecenter: social sustainability³² by generating awareness, interest and ultimately the demand from people in the community for the telecenter services.

Content is big business in the Information Society. Major news agencies and media conglomerates control much of what reaches the public. Yet, independent media still provides a different voice in many countries, be it through print, radio or other channels. **IndyMedia** [www.indymedia.org] is a 100% volunteer-run network of alternative media. Also known as the **Independent Media Center (IMC)**, it is a network of '*collectively run media outlets for the creation of radical, accurate, and passionate tellings of the truth. We work out of a love and inspiration for people who continue to work for a better world, despite corporate media's distortions and unwillingness to cover the efforts to free humanity*'. It was created at the time of the 1999 Seattle WTO meeting. There are dozens of affiliated IMCs around the world. Indymedia is also an excellent example of how the possibilities of the Internet as an ICT and media integrator. Their web site includes print, audio, video, radio/video/TV programming and streaming.

The Internet has enjoyed since its start a strong spirit of solidarity. Many people have used it to post and freely share valuable information and knowledge. An outstanding example is the **Bytes For All** website (www.bytesforall.org). Entirely volunteer-based, it covers myriad uses of 'ICT for the People' in the South Indian continent. With its special thematic issues, news and useful ICT resources, Bytes for All is one of the best online information resources on ICT for development.

Community

A very important dimension of the social appropriation of ICT is **community networking**. According to Gurstein [2002], '*A community network is a locally-based, locally-driven communication and information system. Community networking, as practiced by thousands of community-based ICT projects in many countries combines the sense of both the geo-local and online contexts with the interactions, which occur when people and organizations collaborate locally to solve problems and create opportunities, supported by appropriate ICT systems. Community Informatics helps provide the technologies and socio-technical strategies for enabling community processes and achieving community objectives.*'

Using bottom-up approaches, community networks³³ represent powerful models of how ICT can serve local needs, facilitating the production and sharing of information, and using the Internet as a constant forum for dialogue and encounters, in particular fostering a more participatory governance. The community is usually a space prone for volunteer action, and, as might be imagined, volunteer action is at the core of such networks.

³² Many telecenters face significant problems of sustainability. Financial sustainability is not the only challenge: without sufficient demand from the community (ie. social sustainability) or the continued involvement and support from a variety of stakeholders (institutional sustainability) these public centers will have a difficult time to survive.

³³ The terms 'citizen network' and 'civic networks' are also used

The **Global Community Networks Partnership (GCNP)** (<http://globalcn.tc.ca/gcn.html>); is a loose coalition of community networks, as well as individuals and other institutions working to support the use of ICT for local development. It was established in 2000 at its first formal forum in Barcelona. GCNP aims at sharing experiences among community networks, promote cooperation among them, represent them at the international level and support innovative social projects empowered through ICT.

2c. Impact of the Information Society on Volunteers and Volunteering

A new social paradigm is bound to have implications on all social spheres. Volunteering, as a social phenomenon, is no exception. The Information Society is creating new needs and opportunities, and thus new opportunities for volunteering, like the actions we saw seen in the previous section. In this regard, volunteer organizations would do well to re-examine their profiles and capacities. One positive consequence of the new social context is that some young people for whom the term 'civic action' sounds old-fashioned and boring maybe turned on by ICT Volunteering, using skills they possess and feel they can share with others less knowledgeable.

In some respects, ICTs themselves are also changing how volunteering is done. The new technologies are also gradually penetrating volunteer organizations. Moreover, networks, as organizational modes of the Information Society, are also changing the landscape of Volunteering. Let us explore all of this next.

Online Volunteering: a new channel of solidarity

Online Volunteering is the clearest example of the changes that the Information Society can induce on Volunteering as a whole. It is quite simple: volunteer tasks where the communication takes place over the Internet. While volunteer tasks have been carried out on the Internet since its origins (scientific collaboration was indeed one of the reasons behind its creation)³⁴, Online Volunteering in structured and well-managed schemes represents perhaps the largest new opportunities for Volunteering for Human Development.

In section 3d Online Volunteering will be covered in some detail. But let us anticipate two of its more relevant features for development: (1) it allows for the involvement of many more people in cooperation tasks, and (2) it is at the foundation of volunteer networks which will help transform the nature of development cooperation.

CAV - Computer-Aided Volunteering

As in most sectors of socio-economic activity, volunteer organizations³⁵ are incorporating the use of ICT in their internal operations and to better serve their constituencies, although at a comparatively slower rate (than companies, governments, or universities). As it happens, ICT offers some special productivity gains for the Volunteering sector, since these are essentially 'Human Resource' organizations, which means they are transaction-

³⁴ *Volunteering online is nothing new, nor is it just restricted to development [Fraunfelder 2000].*

³⁵ *Or the so-called 'volunteer-involving organizations', which use volunteers but are not volunteer-sending or supporting per se*

intensive because every individual (volunteers and candidates, as well as host organizations) deserves and requests specialized service.

According to Gannon [2001], e-mail and the Internet provide 'volunteer-involvers' with some of the best opportunities in the use of ICT. He identifies four main ways in which ICT can be utilized in these organizations:

- *ICT as Resource*, to assist with information gathering or sharing; ICT provides plenty of resources on volunteering and support to volunteers (including training). The reader is directed to the appendix in Gannon's paper for a rich set of Volunteering-related Web resources.
- *ICT as Visibility*, to 'get the message' out and have a 'cyber-presence'. Web sites or electronic newsletters provide cost-efficient means to provide information to the public and to market the organizations' services, on a 24/7 basis.
- *ICT as Accessibility*³⁶, for two things: a) to make it easier for volunteers to find out about volunteering opportunities, and b) to assist people to physically volunteer. For example, they facilitate the participation of people with disabilities, as with online volunteering. ICT also decrease physical risk to volunteers in dangerous environments (eg. conflict situations, natural disasters).
- *ICT as Assistant*, to make the day-to-day tasks of a volunteer manager easier. This includes all tasks related to management of projects and volunteer assignments, as well as financial and human resource management,

In addition to the above, ICT provide excellent communications facilities, between volunteers and volunteer managers, among the volunteers, and among volunteer organizations. Electronic discussion fora ³⁷ encourage volunteer management professionals and volunteers to share ideas, problems and experiences.

One example is **CyberVPM** (Cyber Volunteer Program Managers) (<http://groups.yahoo.com/group/cybervpm/>), managed by the Association for Volunteer Administration (AVA) and with about 700 subscribers. Information about CyberVPM is available at AVA's website, at <http://www.avaintl.org/network/cybervpm.html> .

While ICT are making big differences in the way these organizations carry out their business, there seems to be a wide gap between possibilities and actual practice. Gannon reports data from research performed in 1999. A survey of over 400 volunteer-involving organisations in the United Kingdom showed that many lacked even the most basic ICT. About half did not have email, though evidence indicated that figure would decrease. About a quarter had a web site, mostly very simple. Less than half of the organisations (44%) had their PCs networked. While the situation will have probably improved since then, the findings showed that there is still a significant way to go for UK volunteer-involving organisations to become able to apply ICT in their work.

³⁶ Gannon believes this may be potentially the most important aspect of ICT for Volunteering-involving organizations, a feeling I share.

³⁷ Often referred to as 'listservs'

Box 1

A model for Government support to ICT absorption by volunteer organizations:
VolNet (www.volnet.org)

*VolNet — the **Voluntary Sector Network Support Program** — was a four-year, \$20-million Canadian program launched in February 1999 to help 10 000 voluntary organizations in the country get connected to the Internet and expand the technological capacity of the voluntary sector.*

VolNet was developed and delivered by the voluntary sector. Industry Canada³⁸ created the VolNet National Advisory Committee (VNAC) in June 1998. VNAC comprised representatives from various fields in the voluntary sector, as well as from the private and public sectors. VNAC developed the following objectives for VolNet:

- *Increase the number of voluntary organizations connected to the Internet*
- *Increase voluntary organizations' awareness of the benefit and strategic importance of the Internet*
- *Enhance the voluntary sector's ability to share information with other voluntary organizations, governments, and other major stake holders via the Internet*
- *Address the barriers to using the Internet which are the result of social inequalities of race, poverty, gender, disability, age, or language by assisting voluntary organizations, which are working in these areas, to access and use the Internet*
- *Where appropriate, assist voluntary organizations to empower their constituents through the use of the Internet*
- *Ensure that organizations become aware of the need for a strategy to sustain the use of the Internet in the organization.*

To deliver the program, VolNet tapped into the Internet and service delivery experience of the voluntary sector. Across the country, 48 voluntary sector organizations or consortiums with such experience were chosen as VolNet delivery agencies. These agencies delivered the VolNet Service Package — discounted computer equipment, free Internet access for one year and Internet skills development — to 11 152 voluntary organizations across the country.

Of a total cost of \$31.1 million, Industry Canada contributed \$20 million; the rest came from delivery agencies and their partners (\$3.8 million), VolNet participants (\$4.5 million) and the private sector (\$2.8 million). At its peak delivery period, VolNet was managed by 10 Industry Canada employees. Industry Canada kept administration costs below 10 percent of the department's contribution to the program.

Volunteer Networking in the Network Society

We mentioned earlier that one of the fundamental consequences of the Information Society is the emergence of networks as a principal mode of organization and relationships.

While volunteers have long established and utilized networks (eg. the Red Cross, or the Rotary Foundation), the Network Society offers new electronic tools and operational

³⁸ *The equivalent of the Ministry of Industry in Canada*

methods that strengthen ways of operating in cooperative fashion. Quite a handy feature, since cooperation is the basic function of volunteers.

In relation to development, volunteer networking has a tremendous potential to make fundamental inputs into development cooperation. Section 3e discusses this topic in some length.

3. ICT VOLUNTEERING: WIRED SOLIDARITY

ICTs are tools for the creation of knowledge. As such, they are applicable across the developmental spectrum, addressing both developmental needs as well as creating and taking advantage of opportunities. These technologies are also instrumental in the operational networking of organizations

In this regard, ICT Volunteering has significant (and yet significantly underutilized) roles for digital inclusion, and in fact for the evolution of technical cooperation towards networked models. This section describes features of ICT Volunteering for development, while section 4 discusses the extent of opportunities for ICT Volunteering and ways to move towards fulfilling some of them.

3a. ICT and Human Development

There is a substantial bibliography on the relation of ICT and development, and it is not the intention of this paper to discuss this topic in any substantial extent³⁹. However, and given the variety of views on ICT for development, this subsection expresses our perspective of this topic on which the subsequent notions and propositions for ICT Volunteering are supported.).

The relationship of ICT and Human Development is derived from the very concept of the latter. Human development is a process to expand choices or freedoms, which is related to the availability of opportunities. Taking advantage of opportunities, even becoming aware of them, depends on both capacity and empowerment (ie. the chance of putting that capacity to use). Information and knowledge are needed to attain capacity, to apply it and to avail of existing opportunities. Therefore, since ICTs are particularly effective tools for information and knowledge, they can serve as tools and enablers of human development.

This is why ICT has gained increasing attention for the purposes of achieving the global freedoms from 'Want' and 'Fear' that the UN Secretary General described in his landmark 'Millennium Report'. In particular, the wide use of these informational tools is arguably instrumental for achieving the Millennium Development Goals.

Knowledge as fuel for human development

Knowledge can be described in many ways. One way to see it is through the flow from information to knowledge. Information becomes knowledge as it is interpreted and

³⁹ The reader can find a good number of authoritative references on ICT for Development along the text as well as in the listed bibliography.

made concrete in light of a person's understanding of the particular context and previous experience.

Denning [in UNDP 2002] offers a lucid metaphor/approach to knowledge creation on the basis of connecting people. In his view, it is impossible to extract knowledge from anything. Instead, knowledge is gardened. The gardener seeds, feeds and weeds the garden. Knowledge grows. It emerges out of a fertile field, tended by people interacting with people, groups, networks and communities. If not properly cared for, knowledge fields become degraded. Since the real experts in development are those that live the reality on a day-to-day basis, development organizations must support these 'expert gardeners' to successfully tend their gardens. Ivory towers have to give way to adobe lighthouses.

Knowledge is increasingly perceived as the principal driver of economic growth and development, whether in the North or South, as expressed in international fora like ECOSOC, or by organizations like the World Bank, UNDP or OECD. It is not surprising that many development organizations are given more value as a consequence of the knowledge they can provide and stimulate than by their financial resources. In this regard, Stiglitz offers a powerful bit of advice which applies well to the functions of cooperation agencies: 'Scan globally, reinvent locally' [UNDP 2002]

Technologies change the way resources are used to produce outputs; this is mediated by knowledge. Therefore, gaps in the means to generate knowledge (like those resulting from the digital divide) add to the disparities in resource availability. Stiglitz [UNDP 2002] claims that it is the compounded gap of resources, knowledge and organization that really separates developed from developing countries today. Taking a cue from advanced, resource-constrained countries (like Japan, Singapore and South Korea), we may even argue that today knowledge generation is the critical link for socio-economic development.

Knowledge and information are being codified, stored and made accessible at levels unimaginable in earlier decades. Advances in ICT are driving down the costs of info storage and communications to zero. With access to broadband, we can download a book in a few seconds, an encyclopedia in an hour or two. Even simpler, we can access encyclopedias online like Wikipedia, an experimental collective effort to collect and organize knowledge which may become the Google of encyclopedias. With the upcoming Internet2 the PC and the TV will likely converge the PC and TV into one information appliance, connected to global networks at tens and even hundreds of Mb/second.

True, we are far from that point. However, by 2015 (when the MDG campaign culminates) we could be close to being a largely wired planet where electronic networks affect more or less directly the vast majority of the world's population. If the last 10 years are any indication, what is probably safe to say is that ten years from now we will have a very different panorama in how ICT are used for human development.

At any rate, while looking ahead, we need to work with what is here and now (ie. with its costs, speeds, and informational power) for one of the fundamental global applications of these technologies: the reduction of poverty.

[Can ICT really reduce Poverty?](#)

Let us part from the elegant and powerful definition of poverty from the Nobel laureate Nadine Gordimer [Gordimer 1996], *"Poverty is the sum of all our hungers"*. If ICT are indeed useful tools in fighting poverty, they must be effective in confronting some or all of those hungers, ie. hungers for food, for health, for jobs, for participation, for dignity. Through ICT (but certainly not only because of ICT), people can get better prices for the fish they caught; they can learn to prevent HIV/AIDS; they can get employable skills; they can be active in a women's network; they can get their voices heard in political issues. There are many examples of how ICT is being used in various development areas⁴⁰; awareness of such examples will help to extend their use where practical and feasible.

But how about the overall poverty, the sum of the hungers? Can ICT contribute to reduce 'Poverty' with capital letters? The answer may ultimately reside in the value of information for confronting poverty. What is information about food prices worth to a farmer? And about sea conditions to a sailor? Or about legal rights to someone in the wrong ethnic minority? In collective terms, we may ponder what is the aggregate value of information to an entire community.

It is only after assessing the value (thus the need) for information that informed choices can be made about whether and how to use ICTs (ie. informational tools) in specific settings. This is why, for example, there are cases of poor women in countries where they were traditionally marginalized who have taken enthusiastically to Internet, for the chance to expand their horizons and communicate with others (including other marginalized women). The utility of ICTs in a particular context will be directly related to the value of information to the people there.

If this sounds overly abstract, let's consider education. In our day, hardly anyone questions the value of education for reducing poverty. And yet basic education, or even just simple literacy, is at its very core about learning to access and process information, like ICT. Today we herald education as a fundamental human right. However, a hundred years ago (and in some countries like Afghanistan much more recently for girls) education was not generally taken as a basic right. ICTs help us with our information needs, and in more advanced economies the concept of literacy increasingly includes the basic capacity to use the new technologies.

Yet, it must be well understood that while ICTs provide access to information and stimulate the creation of knowledge, they are only a small part of the development puzzle. They do not provide direct benefits like food, medicine, shelter or credits. Those that expect miracles need look elsewhere. ICT is not the answer to development, or the panacea for its ills. But it can be a component of the various possible solutions in any specific context. We don't eat information, but we can use information to get more and better food. In fact, information sometimes saves lives directly (eg. in disaster situations or simply by warning fishermen not to go out to sea).

[Collateral damage: information poverty and the new exclusion](#)

⁴⁰ Besides innumerable studies, the reader may check : Bytes for All, www.bytesforall.org (earlier referred to); the Digital Opportunities Channel, <http://www.digitalopportunity.org> ; the Digital Divide Network, <http://www.digitaldividennetwork.org/> ; Bridges, www.bridges.org; UNDP, <http://www.sdn.undp.org/it4dev>; Bellanet www.bellanet.org; the Stockholm Challenge, <http://www.stockholmchallenge.se/>; or the Development Gateway's ICT4D section, <http://www.developmentgateway.org/node/133831/>.

The digital divide worsens informational poverty, and is also partly a result of it. Just as ICTs are multisectoral tools that span applications from agriculture to zoology, so does informational poverty have a pervasive tendency to spread to all areas of human development. It's a classic example of vicious cycles of poverty [Rodríguez-Ferrera, 1997]: lack of proper access to the proper tools (in this case information tools) results in a decreasing ability to successfully overcome development challenges and improve the quality of life, which in turn diminishes the possibilities of accessing the proper tools.

The issue is not whether ICTs cause further exclusion or not. These tools can be used in beneficial ways (a mobile phone that can connect an entire village, as the much noted experiences of Gram een Phone show). Besides, the world will not put aside ICTs because of the unfairness inherent to the digital divide. The problem is that not being able to access important resources for development (like in our case, ICT) will cause people and communities to fall further behind, perhaps irreparably (Castells' Fourth World). Hence the need to accelerate the developmental appropriation of ICT.

The 'last mile of connectivity' need not be the last mile of information. The value of ICT for people that lived even in extreme poverty will likely reside in how their good intermediaries – NGOs, community radio stations, local government or public service institutions like schools or clinics – can use ICT to better serve them.

To put all of this in context, let us wonder about this: wherever they exist, are public libraries in developing countries contributing to exacerbate differences because illiterate people cannot benefit from them? Are they also a counter-asset to human development?

Build it and they will come: taking capacity for granted

A much touted 'Hole-in-the-Wall' experiment at the Indian Institute of Technology [PBS 2003] demonstrates the importance of deliberately planning capacity building into any development activity considering the use of ICT. An Internet-connected computer was placed in the hole on the wall of a slum, and it was reported that children had taught themselves to use it. However, it was later shown that most of their time was used to draw with paint programs or playing computer games. No special educational programmes or content in Hindi (the only language the children knew) were provided, and the Internet connection rarely worked. [Warschauer 2002]

Having the proper capacity to put new tools like ICT into use is essential to take advantage of their practical possibilities. While that may sound obvious, often projects that incorporate the use of ICT (still a minority of development projects) lack specific capacity building tasks. Insufficient attention to reaching proper capacity levels is often at the root of the failure of technology-based projects. A typical example is the attempted integration of ICT into education without working with teachers so they can learn the programs and tools, create and adapt content, as well as introduce ICT into the curriculum (be it in mathematics, geography or languages). Too often, the PCs provided to schools through poorly designed projects have become expensive and embarrassing paperweights.

This gap of attention towards capacity may be due to the complicated and process-related nature of capacity building⁴¹. Training is only one step in the road to capacity-building. An accountant may receive a two-week class on electronic spreadsheets – that is training. The same accountant will need more extended assistance (over months and possibly one or two years) to informatise accounting in her institution – that is capacity-building.

Training, human resource development⁴² and certainly education are required to fulfil the capacity needs of the Information Society. But any ICT-enabled developmental strategy will require the inclusion of specific activities aimed at building capacity on the application of ICT to development [UN ICT Task Force, 2003].

Volunteers can play an essential role in extending capacities in ICT for Development, at all levels of capacity building (training, human resource development, and long term coaching). This is their principal role in helping to bridge the digital divide⁴³, as will be argued in the following sections.

3b. What is ICT Volunteering?

ICT Volunteering may be defined as the range of volunteer action whose common characteristic is the targeted use of ICTs (particularly digital technologies). This covers two types of actions. One relates to volunteer activities applying ICT to respond to development needs – eg. building the capacity of health workers to create and access medical databases. The other is based on the use of ICT as platform and resource for volunteer action itself – eg. Online Volunteering.

ICT Volunteering will be an essential force in bridging the digital divide. Figure 1 below illustrates the key dimensions of the digital divide, or, in other words, the elements required to have an ICT-enabled society. We see that together with infrastructure, capacity is at the base, cutting across all elements of content or applications. At this stage in the global Information Society, there are massive needs in capacity. To extend the benefits of the digital revolution to everyone, and to avoid deepening the digital divide, a Herculean effort in terms of human resources will be required, perhaps not too dissimilar from the great alphabetization drives of the 60's, or the major vaccination campaigns carried out in polio and others⁴⁴.

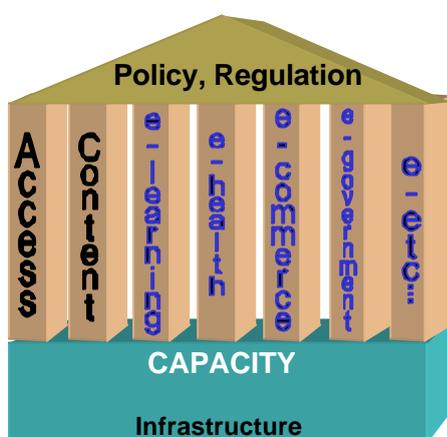
⁴¹ Capacity-building is another term in development jargon that escapes most people. It is quite similar to coaching and mentoring that takes place over extended periods.

⁴² Oriented towards creating a skilled workforce

⁴³ This implies building capacity in many dimensions of the digital divide. One very important aspect is the creation of local digital content.

⁴⁴ A brief mention to volunteer involvement in polio vaccination was made in a footnote under 'Volunteering in development cooperation' in section 2a.

Figure 1 A simplified model of the ICT-related components of the Information Society



Special value of ICT Volunteering

ICT Volunteering has special added-value for development. To begin with, there are large numbers of people skilled and freely willing to contribute to digital and informational inclusion, in their own countries or overseas - let's call it 'digital solidarity'. This includes many among Youth, as discussed earlier. In few areas in development, if any, can young people provide such substantive contributions to improve the world as in ICT for Development. A twenty-year old can make quite a difference by helping a local NGO create a database to monitor all their activities or to contact other local or international NGOs with similar interests.

ICT facilitates volunteer action. It makes it easier for interested people to learn about volunteer possibilities, as through volunteer-matching online services and advertisements in the web sites of NGOs. It enables a larger number of people to give their time and knowledge through Online Volunteering channels. It simplifies volunteer cooperation, with Free and Open Source software being extraordinary successful examples. In addition, the development and culture of Internet, despite its appropriation by commercial interests, still has much solidarity flowing through its data ports - eg. many people freely share information and knowledge over the Net. In ICT Volunteering, the medium is the medium.

ICT Volunteering is probably necessary if mainstreaming of ICT is ever going to occur in development agencies. We will look later on at mechanisms already existing (though by no means sufficient), both specially dedicated ICT Volunteering initiatives (like UNiTeS or NetCorps Canada International), as well as special programmes within volunteering-involving organizations (such as within the Red Cross or Peace Corps).

Beyond computerds : profiles of ICT volunteers for development

People that are not familiar with the work of ICT volunteers may assume that they are always ICT professionals (or techno-geeks, or computerds) who cooperate in setting up local networks or trouble-shoot hardware and software. However, these only cover one band of the ICT Volunteering spectrum.

ICT Volunteering ultimately aims at the absorption of those technologies by development stakeholders for their needs and processes. Therefore, the usual profile will be a professional in a relevant thematic area (education, health, business development, environment, etc.) who has expertise in the applications of ICT to that area, and can share it with others. For example, an architect who knows how to apply computer-aided design (CAD) tools in building design and construction management, and could work with other architects and construction organizations to build their capacity on applying ICT to suit their own needs. Or a teacher who has successfully integrated ICTs into her courses, and can work with other teachers to bring the technologies into their classrooms for enhanced learning (and teaching).

Thus the profile we refer to for ICT Volunteers is mostly 'ICT-savvy' people, ie. knowledgeable and advanced computer users. While young people in developing countries are fairly ICT-savvy, they are not the only ones by any means. In fact, some retired/elderly people have tapped into the technologies and possess the additional benefits of a richer professional experience, greater 'wisdom', and more time in their hands. They can make excellent contributions for NGOs, government offices, small and medium entrepreneurs, academia, etc. And with Online Volunteering, your 'ICT-savviness' does not need to be high: basic knowledge of Web browsing and use of e-mail may be all the ICT one needs to know.

Based on these profiles, ICT Volunteers may be found anywhere. Let us however point out some groups to tap from that hold particularly rich pools of expertise and solidarity. The case was already made for the young and the elderly. Where else can we look for willing and able ICT volunteers? :

- Academia: many students (particularly in the North) have grown up using ICT, so most of those who want to get involved in development activities can share their experience on ICT applications⁴⁵.
- Private Sector: companies have substantial expertise on the use of ICT for all processes (research, design, manufacturing, sales, marketing, management, etc.). Corporate volunteering schemes may provide substantial numbers of ICT volunteers – and in particular may attract employees for international development activities.
- Government: here is a different type of 'corporate' volunteer. As Public Administrations integrate the use of technology, Government volunteers could establish ideal bridges of cooperation with other governments to build capacity on various dimensions of e-governance⁴⁶.
- Women's associations: in many places, women do not have equitable access to ICT. Associations that promote gender equity can have an important role in promoting the use of ICT among girls and women, as well as their involvement in technical careers. Women entrepreneurs can also provide significant support as mentors and role models.

⁴⁵ One of the most promising projects under UNiTeS is its university volunteer network, for the purpose of involving not only students but professors, staff and researchers in development projects selected through the UNiTeS mechanism.

⁴⁶ Including 'back-office' functions (ie. internal administration, procurement), direct services to the citizenry (provision of information, interactive services), and citizen-involvement and participation (e-civic fora, consumer rights, Ombudsman offices)

- **Professional associations:** links among members of professional associations in a given sector makes it easier to foster knowledge-sharing on the use of ICT in that particular sector, within or between countries.

We have not put emphasis on North-South collaboration on purpose, for two main reasons: (1) in the Network Society, the lines of digital fracture and exclusion do not necessarily correspond to geo-political boundaries; and (2) South-South collaboration, all else being equal, will tend to be more fruitful.

[Examples of ICT Volunteering initiatives](#)

ICT Volunteering initiatives are springing up to respond to the demand for capacity on ICT for development. Almost all are fairly recent, and correspond to different organizational approaches to ICT for development. Some are mentioned below, while references are provided to others for further reading.

UNV manages two major ICT volunteering initiatives, UNITeS and the UN Online Volunteering service:

UNITeS, the **United Nations Information Technology Service** (<http://www.unites.org>), is a global volunteering initiative aimed at supporting institutions worldwide to bridge the digital divide. Announced by the UN Secretary General Kofi Annan in his *Millenium Report*, UNITeS is unique in scope and breadth. Volunteers under the UNITeS umbrella build human/institutional capacity on the uses and opportunities of ICT to advance human development processes. The programme fosters the participation of volunteers from the South, and also makes it possible for developing country nationals to serve in their own countries as UNVs. Over 60% of nearly 200 on-site volunteers placed since August 2000 come from the South. Online Volunteers also participate, supporting their peers on the ground, and helping to research content for the UNITeS Knowledge Base. Very importantly, UNITeS devotes particular attention to the promotion of ICT Volunteering among other development agencies and stakeholders.

UN Online Volunteering service (<http://www.onlinevolunteering.org>) is provided by UNV, and was launched in March 2000⁴⁷. This service has brought together online volunteers and development organizations (from both South and North) through the largest database of online volunteering opportunities for development anywhere in the world. More than 30,000 people have joined the service, and about half have taken on assignments, giving their time and expertise to over 600 development organizations around the world. It recently marked its fifth anniversary, with special information coverage (http://www.onlinevolunteering.org/fifth_year.htm).

NetCorps Canada International <http://www.netcorps-cyberjeunes.org/> offers volunteer internships in developing countries for people 19 to 30 years old with appropriate skills in ICT. These internships, of approximately six months, are implemented by some of Canada's largest volunteer-sending international development organizations in partnership with Industry Canada. It started in 1998, and by November 2002 it had sent out its 1000th volunteer.

⁴⁷ Until December 2003 it was jointly managed with the Netaid Foundation (<http://www.netaid.org>) and offered through the NetAid web site.

The International Federation of the Red Cross and Red Crescent Societies, (<http://www.ifrc.org>) makes intensive use of technologies in supporting its volunteers (about 100 million in total) as well as applying ICT in the work done at the field level. It is one of the best references of how a volunteer-involving organization integrates ICT into what it does. The main uses of ICT in the field work of Red Cross/Red Crescent are: (1) communications between field bases and centers; (2) teleradiologic and telemedicine; (3) warning and alerts (for example for sick people who stay at home); (4) prevention, eg. for disasters, early warning systems, medical situations.

As far as the internal use of ICT, Red Cross/Red Crescent reports that the main areas are (1) public information and campaigns; (2) volunteer recruitment; (3) volunteer training; (4) communications among volunteers and other members; (5) knowledge networking and online collaboration; (6) decentralization of internal management functions. [Suarez 2002]

VITA (Volunteers in Technical Assistance), www.vita.org, is a private volunteer organization involved in international development. The organization offers services in a variety of areas including information dissemination, the design and installation of specialized communications systems, preparation and publication of technical materials, disaster information coordination, and management of long-term development programs, some of them directly focused on ICT for development.

In 2003, VITA's original service, the *Technical Inquiry Service*, observed its 44th year of operation, answering almost 300,000 queries from individuals and groups, on a wide variety of subjects to improve the income, health, productivity, education and general quality of life of the requesters. In this respect, VITA is a leader in Online Volunteering for development and using the Internet to develop knowledge networks bringing together international expertise around crucial development issues.

3c. Volunteering for ICT: crafting skills and capacity

ICT Volunteering should serve to build human/institutional capacity on the uses and opportunities of ICT for Development. This highlights the importance of raising awareness (about the possibilities) together with the actual uses or applications of ICT. The capacity needs on the use of ICT for Development are massive, ranging from basic technological literacy to applications for education, health, community empowerment, economic opportunities and in fact across the entire development spectrum.

The roles of ICT volunteers in community telecenters⁴⁸ illustrates well these stages in the overall capacity building process:

- At the raising awareness stage, it is important to understand the needs, problems and hopes of the various actors in the community, in order to determine what elements of information and ICTs may be more suitable. Frequent outreach to different groups and profiles of people will serve to make them aware of the

⁴⁸ *Volunteers may well play other roles in a telecenter, like directly accessing information for people who may not be able to master the basic skills (as an 'information broker'), performing technical tasks with the installations and equipment, and promoting the involvement of other volunteers. Here we are only illustrating those roles typical of capacity building.*

opportunities and practical uses of the technologies they can expect at their telecenter.

- Basic ICT training will be needed by a majority of users. This will develop the skills for general use of the computer, for creating content (eg. word processing), for viewing images (eg. digital pictures, scanning), and to use e-mail and the Web. Young people may have instinctive curiosity for computers and jump in to learn in an ad-hoc way. But for the rest of the potential users, there could well be an initial fear of the computer, so that ICT training requires personalized attention and to be amenable – to learn to do things quickly which are fun and make people feel good about their progress.
- The creation of capacity takes place once the familiarity and basic skills are already at hand. It requires periodic monitoring and accompaniment of the progress in applying the skills learned for well-defined purposes. For some users, it will require more advanced training (eg. in audio-visual processing to generate digital video or for the creation and management of web sites). Whether the user goes to the telecenter to find basic information (about prices, jobs or health), or for advanced applications (teachers involving the students in collaboration with other schools, NGOs creating electronic communities to involve people in their activities), the objective is to build and expand the capacity of each individual user so s/he can receive a real benefit from the use of the technologies.

Volunteers are excellent capacity development agents. Building capacity requires human interaction and understanding, which most effectively emerge from direct and continued personal contact and exposure, something typical of volunteer inputs in development. Stiglitz [UNDP 2002] uses the term 'deep knowledge' to denote the knowledge generated only through repeated and extended interactions (total immersion). Volunteer action can contribute powerfully to the attainment of this type of deep knowledge on the appropriation of ICT by citizens and communities.

3d. Volunteering through ICT: using the networks to collaborate

Online Volunteering⁴⁹: solidarity-ware.

The Internet provides a new channel for volunteer action. Online Volunteering (OV) represents the free and targeted provision of information and knowledge in perhaps its purest form. Online volunteers typically use the simplicity of e-mail to communicate with their host organizations and remit that information and knowledge. They can also carry out online services (eg. moderating an electronic discussion forum or managing a web site remotely), in which case they are managing information for their organizations. Using the ubiquitous nature of the Internet, they learn about opportunities for virtual collaboration emanating from any corner of the world.

⁴⁹ The term 'Online Volunteer' was coined by Douglas Evangelista, director of the Latin America, Caribbean and Arab States division at UNV, and enthusiast and visionary of the possibilities of ICT for Development. He had long defended that 'the support takes place online, but the volunteers are definitely not virtual, but very real people'. At the time, the term Virtual Volunteering was more widely used (it is still used in some places today).

Development organizations and stakeholders use the Internet, generally web-based services and sometimes through their own web sites, to post activities and opportunities of collaboration for online volunteers. Online Volunteering services like the one offered by UNV goes further. It offers their hosts organizations a set of online tools to manage their OV assignments - eg. to keep track of which people have applied for a specific assignment or to provide reports about the contributions of its OVs.

In order to avoid confusion, let us also indicate something that Online Volunteering is not: the action of finding 'on-site' or face-to-face volunteer opportunity through electronic listings. That is simply an online matching service for volunteering provided by some organizations.

What are some typical tasks of Online Volunteers? From translations to writing project proposals, from research to legal advice. There are many examples of real OV assignments listed in the UNV OV site, and even more if a visitor to the site looks in the database for available assignments. In principle, any type of collaboration whose products are information or information-related and are conducted at least partly online could enter the concept of Online Volunteering. As a consequence, the kinds of tasks which can be carried out by online volunteers can only be limited by the imagination. As a reference, the following box contains real examples of OV assignments from the UNV service only in relation to HIV-AIDS.

Box 2	
<u>UNV Online Volunteering: Sample of HIV/AIDS-related assignments in 2002</u>	
<ul style="list-style-type: none"> • <i>Projects: formulation, promotion, planning</i> • <i>Advice on institutional strategy and proposal development</i> • <i>Research for HIV/AIDS campaign</i> • <i>Web: design, development, management, hosting</i> • <i>Research about web resources: web sites, discussion groups.</i> • <i>Research and Documentation</i> • <i>Contact Building</i> • <i>Marketing</i> • <i>Graphic Arts</i> 	<ul style="list-style-type: none"> • <i>Translations (including medical/scientific)</i> • <i>Data Base: development, management</i> • <i>Preparation and editing of articles, brochures, etc.</i> • <i>Newsletter: Editing/Layout</i> • <i>Fundraising (including consultancies on it)</i> • <i>Online job opportunities development</i> • <i>Virtual organization management - OV programme coordination</i> • <i>Institutional development</i>

The dynamics of Online Volunteering are necessarily different than for 'face-to-face' volunteering. The volunteers need to be disciplined and able to carry out their responsibilities without supervision. The hosts need to maintain periodic contact, follow-up to communications from the volunteer in as real-time a response as possible, and has to learn how to manage volunteers which in 99% of the cases s/he will never encounter

in person. The Virtual Volunteering web site⁵⁰) and the Virtual Volunteering Guidebook from Cravens and Ellis⁵¹ treat these dynamics in considerable detail, providing advice for both OV's and hosts, and contain references to a number of institutions making use of Online Volunteering in a systematic way⁵².

Online Volunteering signifies a quantum leap in the opportunities to volunteer for developmental causes. The number of potential host organizations increases by orders of magnitude: the host may be across town, or across an ocean. The ease with which the hosts may announce their requirements for online volunteers means that in principle, and as long as they have a minimum of Internet access, any host can announce their need for volunteer support to a global audience.

In addition, the flexibility of Online Volunteering implies that there many more people could become involved on development issues. Many people want to do something at the international level, but cannot let go of responsibilities from work, family or studies, or may not have access to financial means to live overseas for an extended period of time. The online volunteer does not need to change residence or to alter her lifestyle. It is the ultimate in flexibility⁵³ –: there is no problem with volunteering at 3:00 A.M. in pajamas.

Therefore, if more people can collaborate with more development institutions, this could imply a highly significant increase in person-hours dedicated to development cooperation – at essentially no additional cost. Therein lays the promise of Online Volunteering for Human Development.

It may be argued that Online Volunteering cannot be compared with traditional face-to-face or 'Onsite Volunteering' either in terms of commitment or as an experience. This is true: it is a different modality for cooperation, and it is not meant to substitute for 'face-to-face' volunteering, but rather to complement it and enrich it. At any rate, significant contributions or impacts can and do occur. One only needs to click through the stories highlighted since 2002 for the 'Online Volunteers of the Year' to realize the possibilities⁵⁴.

The experience of one of the first winners (in 2002) provides us with window into the real opportunities laying ahead for Online Volunteering. Laurie Moy was a homemaker with an interest and a degree in International relations, living in Houston, Texas. She started to volunteer online for the NGO 'People with Disabilities Uganda' in 2000, and eventually went on to become coordinator of a group of over 200 OV's at their peak in 2002⁵⁵. These volunteers were themselves organized by topics, with some doing web site work, other involved in mobilizing resources for PWD Uganda, others providing educational resources, etc. Laurie eventually visited Uganda, as an ICT Volunteer under the UNITEs initiative, and met the people she had labored so much for. She has gone on to establish a NGO in the U.S., 'Pearls of Africa' (www.pearlsof africa.org), dedicated to the support of people with disabilities in Uganda. Appropriately enough, Pearls of Africa is supported by online volunteers.

There are exciting possibilities for cooperation between onsite and online volunteers. As we will see in the next section about volunteer networking, the boundaries between 'on-

⁵⁰ <http://www.serviceleader.org/new/virtual/index.php>

⁵¹ <http://www.serviceleader.org/new/documents/articles/2003/04/000173print.php>

⁵² The UNV Online Volunteering site also contains valuable guidance in more compact fashion.

⁵³ As long as the volunteer has regular access to a computer and the Net

⁵⁴ http://www.onlinevolunteering.org/news/news_article.php?art_id=1411

⁵⁵ http://www.isv2001.org/en/library/documents_show_text.cfm?document_id=153

site' and 'online' volunteers are disappearing, tending to integrate volunteer action regardless of time and space. For example, in the vision of the former UNV Executive Coordinator Sharon-Capeling Alakija 'every serving UN Volunteer will be linked to one or more online volunteers, and most UN Volunteers will continue their involvement online after completing their field assignment'⁵⁶.

3e. And then they can cooperate: Volunteer Networking at the core of new approaches to Technical Cooperation

The 'C' in ICT stands for 'communication', and we would not have a digital revolution without it. In the ICT for Development context, the same 'C' has a lot to do with 'collaboration' and 'coordination'. Fast, ubiquitous communications allow for the exchange of information and generation of knowledge for better-informed decisions. They also form the basis of networks, which facilitate the collaboration of people and institutions around the world. And software tools serve to coordinate activities organized and decentralized through networks.

Development networks are changing the nature of capacity development, and they have one common feature: most people involved in them do so on a volunteer basis. Thus, to speak of development networks means to speak about Volunteer Networking.

Networks and Technical Cooperation

ICT is part and parcel of the renewed strategies of technical cooperation and capacity development. As the industrial revolution substantially expanded manual power with the steam engine and electricity, today's information revolution is augmenting brainpower via the new ICTs. Fortunately for developing countries, brain capacity is much more evenly distributed in the world than other resources. Thus, part of the challenge lies then in extracting utility from the new technologies to optimize brain 'empowerment' in those countries.

In the context of capacity development, networks are flourishing because of their ability (1) to enhance knowledge generation, (2) to involve more people and institutions in development activities, and (3) to improve the productivity of development organizations. ICT, and the Internet in particular, provide extended possibilities for already existing human/institutional networks as well as for the creation of new ones.

Networks among development practitioners and access to global knowledge systems can substitute for conventional models of technical cooperation [UNDP 2002]. In the Information Age, new modalities are emerging for information access, capacity building and knowledge acquisition, helping to overcome some of the failures of conventional technical cooperation – eg. the dependence on donor-established channels for knowledge access. Browne (2002) points out that knowledge acquisition becomes one

⁵⁶ Interview with Sharon Capeling-Alakija.

http://www.unvolunteers.org/infobase/unv_news/2003/96/03_12_03QandA.htm

Ms. Capeling-Alakija, a leading advocate for Volunteering, and a champion for ICT Volunteering, passed away in November 2003. During her term as UNV Executive Coordinator, initiatives like the Online Volunteering service and UNITeS were launched, and a special 'e-Volunteering' unit was created, managed by the report's author until mid 2003. She will be warmly remembered by all who had the privilege of working with her.

of the essential facets of capacity development, requiring the expansion of South-South and South-everywhere exchanges via knowledge networks. Nath (2000) points out that knowledge networking need not be confined within the closed boundaries of information flows as it has the potential to evolve as an alternative institutional model for development promotion.

In this context, what a person knows is important, but no less important is her/his ability to access, generate and apply information and knowledge. The more that knowledge is crafted in real time (and it comes with increasingly shorter shelf-lives), the more value that will be assigned to connections over collections [Denning, in UNDP 2002]. Organizations that focus on collecting knowledge at the expense of enabling people connections end up with repositories of dead documents. It is thus critical for a knowledge-based organization to strike the right balance between connecting and collecting.

The networking approach reflects the organic nature of knowledge. But networks do not operate in a vacuum: they transit information channels, and are fueled by human commitment and shared values/objectives. Networks are based on flows, and inactive networks simply disappear. Therefore, targeted communications become a necessary institutional practice. Since the most important resource that development institutions possess and provide is knowledge, they need to consciously plant and nurture Denning's 'knowledge gardens'. And today, those gardens reside in networks.

Part of the appeal of networks within new models of technical cooperation is that they can bypass its donor-driven nature. They also debilitate the faulty notion of the expert-counterpart model from North to South. Networks of development practitioners across the globe are emerging, sharing relevant knowledge, information and experience from good/bad practices. They connect these people in different sectors and project areas, fostering collaboration between individuals and institutions. The network is its own source of support, and a superior one to that provided by a few designated experts.

Development networks are volunteer-driven

Networks of development practitioners are essentially volunteer networks. They depend on people's tendency to collaborate when they find a fertile environment to do so.

Collaboration within an internal institutional network takes place on a voluntary basis, though some institutions (like UNDP) are starting to incorporate participation in these networks as an indicator of employee performance. However, collaboration through inter-institutional networks or other ad-hoc arrangements (eg. virtual communities of practice) occurs voluntarily in most cases. People contribute and benefit from their participation, and a measure of 'e- social capital' emerges resulting in both (1) habits and practices of electronic cooperation, and (2) collective knowledge creation.

[1 volunteer * 1 volunteer] > 2 volunteers

Collaboration usually brings about added value to the individual collaborators – otherwise they would not bother to work together. This is particularly true in the volunteer realm, since Volunteering itself is precisely about collaboration. The effect of collaboration among volunteers (ie. collaborators) augments the contributions of each individual. Let's picture this: a volunteer in a project on HIV-AIDS in South Africa poses a question in a network; another volunteer in Zambia does not know the answer, but

inquires among other colleagues, professors or family members; she sends the answer back to South Africa, explaining how she went about getting it. The result?

There are actually various results: (1) both volunteers know more; (2) at least a third person became involved (ie. gave time and knowledge); (3) the volunteer in South Africa is grateful and will likely try to revert the favor; and (4) more importantly, the volunteer in South Africa applied what he learned in his work with HIV-AIDS patients. Applying this for a network involving dozens or hundreds of volunteers, the benefits can multiply exponentially. The total becomes much more than the sum of its parts. In other words, solidarity breeds solidarity.

It is not surprising, therefore, that an institution like UNV with a sophisticated understanding of the role of Volunteering in human development, considers networks the third asset of Volunteerism⁵⁷.

7 conceptual models of volunteer networks for development⁵⁸

Promoting and facilitating the participation of volunteer networks for Human Development will be at the core of expanding the role of volunteering in technical cooperation. We now explore various volunteer network concepts for further discussion and investigation. These concepts are in addition to the straight-forward notion of volunteers tapping into existing development and knowledge networks to collaborate and access valuable information.

1. Connections of individuals to development organizations

We have discussed earlier the characteristics of Online Volunteering. Collaboration over the Internet is not new (in fact, it was one of the objectives for which it was initially established). However, what is innovative is to place Online Volunteering services as part of the international development cooperation architecture. Online Volunteering services can provide a structure and support to online volunteers and host organizations alike. Online Volunteering is a mechanism of knowledge creation through the 'connections' earlier alluded to.

2. Virtual Communities of Practice

They bring together people with shared interest into global networks for mutual support, information, resource exchange and knowledge creation. They can be established for (1) simple collaboration on a given topic (e.g. AEGIS, a global education resource on HIV/AIDS⁵⁹); (2) for a specific project or activity (e.g. establishment of an 'e-Think Tank' on ICT in Tanzania⁶⁰); and (3) also for campaigns concerned with social or environmental justice (eg. International Campaign to Ban Landmines⁶¹).

3. Direct collaborative volunteer-to-volunteer networks,

⁵⁷ The other two being (1) individual volunteer action, and (2) volunteer institutions.

⁵⁸ This section is taken and modified from Acevedo 2003a.

⁵⁹ AEGIS (Aids Education Global Information System) <http://www.aegis.com/>

⁶⁰ This was done by a UNV in Tanzania in support to a newly created National ICT Council in Tanzania, (<http://www.unites.org/html/projects/tanzania.htm>)

⁶¹ Which resulted in an international agreement and a Nobel Prize for the Campaign and for its initiator and 'chief campaigner', Jody Williams. <http://www.icbl.org>

The driver of such networks may be a volunteer organization like UNV or the Red Cross, or a development agency like UNESCO. These networks can be set up either internally within an organization, or across organizations. Volunteer agencies have an added incentive to create and promote such networks, so that volunteers in different activities/places can easily exchange ideas, experiences, documents and contacts.

In such institutional volunteer-based knowledge networks, the distinctions between volunteers at the field level and those who serve online (eg. from home or school) are quickly blurred:

- An online volunteer, collaborating from her home in Canada for an NGO in Jordan can also help a volunteer serving on-site in Bhutan. In addition, she can also be collaborating with another online volunteer that lives in the Philippines.
- Someone in an international on-site volunteer assignment in Jordan can contribute to the activities of another on-site volunteer in Bhutan. Also, he can receive the support of online volunteers from Canada and the Philippines.

4. The 'Open-Source' approach to development

Drawing from Free and Open Source software, an 'Open Source' approach to development would be based on bringing together (virtually) people with expertise and passion around a subject, and having one or more credible coordinator to enable the group to come to closure on issues. The Open Source Movement is powered by volunteers who collaborate amongst themselves through networks. UNDP advocates this clear example of volunteer-based, network-enabled development approach, and indicates it to be very promising [UNDP 2002].

5. Establishing institutional networks of volunteer organizations.

Volunteer agencies can improve their inter-institutional collaboration through networks that link them and bring them closer together. With the proper ICT systems, they can:

- ❑ make more rational use of training and technical resources – eg. shared e-learning offerings;
- ❑ share candidate databases, and offer a wider range of opportunities to people interesting in serving;
- ❑ exchange more knowledge resources (on volunteer management, monitoring and evaluation, promotion of volunteering, etc.); and
- ❑ have wider access to demand for volunteer services (ie. project and assignment opportunities).

6. Human Knowledge Metadata Networks

Metadata is information about information. On the Internet, it is used to describe the contents of a data object (a document, a web site, a picture), so that it can be found by search engines.

ICT allows now for an innovative type of volunteer-based network service where individuals would indicate their wish to contribute their knowledge for development in an alternative way. Instead of identifying an area of expertise (as in some online volunteering services), each person would identify 'knowledge metadata' that indicates

specific knowledge they might like to share with development projects and stakeholders. For example, a nurse may want to share her knowledge on how to prepare alternative remedies for diarrhea in the absence of medicines/usual remedies. That will be all she wants to share and be contacted on, and nothing else, ie. not her overall expertise in tropical diseases.

These knowledge identifiers would be categorized by the provider of the service, and searchable by development stakeholders⁶², who would then get in touch with the person that is willing to share that specific knowledge bit. This can be done through a simple web site. It could potentially involve large numbers of people (since just about everyone has knowledge which can be of practical value to development), through a different approach to knowledge networks. Quality control and information taxonomy would be among the challenges to a successful volunteer network of this nature.

7. Diaspora Networks

This special type of volunteering networks is targeted at the vast pool of talent and solidarity existing in communities of expatriates that live outside their country of origin. Immigrants have traditionally maintained strong links to their native countries, but the dynamics of the Network Society and its ICT tools provides a more suitable environment for them to collaborate in those countries' development processes. An example is the Digital Diaspora Network – Africa (DDN-A) set up by the UN ICT Task Force.⁶³

3f. Ten important types of volunteer action in the integration of ICT for human development.

The following 10 types of volunteer action to foster the integration of ICT for human development cut across a variety of thematic areas and sectors. They are indicative, and by no means exhaust the possible roles for volunteers in creating digital dividends and in ICT-enabled development policies.

1. Provision of basic technological literacy – helping people to get their first ICT skills
2. Information brokering – acting as the human last miles of connectivity when users cannot have direct access to information⁶⁴
3. Promotion of local digital content – across economic, public services, cultural, governance spheres
4. Inclusion of marginalized and disadvantaged groups into the Network Society – ethnic minorities, immigrants, people with disabilities, unskilled/unemployed youth

⁶² Possibly based on some pre-established criteria set by the 'owner' of the knowledge metadata, eg. that they are a French-speaking NGO in Africa.

⁶³ It is included in the First Annual Report of the UN ICT TF (ECOSOC document E/2003/56 from 28 April 2003) (<http://www.unictaskforce.org/perl/documents.pl?id=1206>)

⁶⁴ The evaluation report of UNV's participation in Egypt's TACC project states that 'The role of UNVs as effective information intermediaries or 'infomediaries' was proved in how they would transform local queries into forms that are searchable over the Internet and translate the information harnessed from the Internet into locally understandable forms. The comparative advantage of having UNVs playing such a role is uncontested and needs to be aggressively promoted.' [Nath 2001b]

5. Education of decision-makers on the possibilities of ICT for local and national development processes – working with local officials, community leaders, NGOs, professional associations, cooperatives⁶⁵
6. Incorporation of ICT into the educational system and learning methodologies – primarily through working with teachers, parents and school administrators
7. Involvement in community telecenters to outreach to communities, provide training and enhancing capacity to local users, mobilize other volunteers and generally emphasize the role of these center as ‘local development centers with access to technology’.
8. Establishment and management of online cooperative and knowledge networks – through groupware applications, virtual communities of practice or simple electronic discussion fora.
9. Incorporation of ICT into actions and policies aimed at confronting the HIV-AIDS pandemic – particularly in the countries most devastated by the disease and where it has gone beyond a health issue to become a governance problem [Acevedo 2003b].
10. Applications of ICT to disaster management and post-conflict situations – for example to coordinate tasks during emergency situations, or to provide new opportunities to people in refugee camps.

Specific examples can be seen in the ‘Projects’ section of the UNiTeS web site (<http://www.unites.org/html/projects/projects.htm>), the UNV internal publication ‘Exploring Opportunities for ICT Volunteering in Human Development’ (<http://www.unites.org/html/resource/ict4hd/ict4hd.htm>) linking ICT Volunteering and the MDGs, as well as in many of the ICT-for-Development portals mentioned elsewhere in this document.

4. CHALLENGES AND RECOMMENDATIONS FOR ICT VOLUNTEERING

ICT Volunteering is a valuable and necessary resource to address the massive ICT capacity needs in the developing world. The road ahead is similar to that which prompted the great literacy drives of the 50’s and 60’s, which in fact led to the establishment of major volunteer-sending agencies in some countries. This road is more challenging, as technological infrastructure also plays a part – in comparison, the only equipment needed to alphabetize someone is a book, paper and pencil

Traditional technical assistance approaches to address the magnitude of ICT capacity-building demand in the South would be enormously expensive. Large numbers of volunteers skilled in ICT and driven by a sense of solidarity can be instrumental in meeting that demand. But this cannot happen in a vacuum. Policy considerations come into play. The extent of ICT Volunteering will be inherently dependent on how pervasive is the

⁶⁵ A variant of this role oriented towards policy makers is the involvement in high-level Councils and other advisory bodies – aimed in particular at the democratic and participatory definition and implementation of national ICT for Development policies. Let us bear in mind that that people in high positions do tend to volunteer their services for Councils, Boards of Advisors, and similar groups.

mainstreaming of ICT in development processes. This relates in turn to the awareness of decision-makers of the role of ICT for development.

4a. What is working and what has not?

ICT volunteering today represents a very small percentage of the volunteers involved in development. This correlates with the minor extent to which ICT is integrated in development policies, programmes and portfolios. Volunteer agencies have dedicated little attention to their work in bridging the digital divide, with few exceptions.⁶⁶ Key lessons learned so far in relation to ICT Volunteering, its role in development processes and institutional integrations can be summarized as follows:

- Even a single, yet committed/skilful person in an enabling environment can make significant contributions on ICT applications in the context of a project, even a major one. ICT-for-development capacity is usually the main constraint to take full advantage of the possibilities that ICT offers, not money or equipment. ICT volunteers demonstrate the approach of ICT as means and not as ends of development, and work with others in projects so they are able to integrate the technologies in their own areas of responsibility.
- It is essential to build sufficient institutional capacity on ICT applications at a development agency. It will be difficult and arduous to mainstream ICT until and unless agency staff, particularly those involved in project formulation, approval and management, are themselves aware of the possibilities. Some champions are often required to drive others interest – especially by showing early successful examples. Even a dedicated ICT-for-development team at an agency's headquarters cannot ensure that every project is ICT-enabled.
- Senior management commitment is essential for significant ICT integration, and this means in turn they also have to possess sufficient understanding of the opportunities and requirements. There are numerous cases of high-level decision-makers that make little use of ICT, do not know how it can benefit the organization and are not particularly adept to change. Political will is probably the most important factor⁶⁷ related to ICT mainstreaming in development, and this applies within agencies as well.
- Generation and articulation of demand for ICT Volunteers requires significantly more effort than finding ICT Volunteers. The former requires an understanding of ICT opportunities and targets (ie. for a project or institution). Terms of Reference received from the field often undergo a few revisions before they can serve to look for the appropriate candidates. Finding the volunteers is relatively easy: many people are capable and willing to provide their ICT expertise, and the Internet is a particularly effective way to reach them.
- Short-term assignments have limited effect and impact, particularly for international posts. It takes time for the volunteer to absorb the context of a given project and its

⁶⁶ *The US Peace Corps is devoting particular attention to ICT for development, offering specific training to its volunteers on the introduction of ICT tools into local processes, and participating in a new initiative from the US Govt, the Digital Freedom Initiative*
(http://www.peacecorps.org/index.cfm?shell=resources.media.press.view&news_id=761)

⁶⁷ ...even more than financing.

socio-economic environment. For true capacity-building, the involvement of an ICT Volunteer should be at least 6 months, and preferably two years or more⁶⁸.

Assignments lasting a few weeks need to be meticulously prepared, so that the volunteer can start as soon as she takes up the post, and in such a way that no assessments of the situation are required of the volunteer. Later involvement as an online volunteer may partly alleviate these shortcomings for short-term assignments and help to sustain capacity enhancement of the counterparts.

- ICT Volunteering for development is cost-effective, but not free. Someone has to pay for costs related to travel, living expenses, insurance, settlement/re-settlement, etc.⁶⁹ Mobilizing financial resources in the area of ICT for Development is turning out to be an uphill battle, and ICT Volunteering is not exempt from this. Expectations from a few years ago of significant funding from governments, private sector and large foundations have not materialized. No major digital development funds have appeared so far, as was widely rumoured after the Okinawa G8 Summit and previous to the establishment of the UN ICT Task Force⁷⁰.
- ICT Volunteering can contribute to the mainstreaming of ICT for development, but this is strongly dependent on how far mainstreaming policies go. In this respect, the slow and erratic advance of ICT mainstreaming into cooperation agencies, when many of them proclaim the need to do this in development policy and plans, is contradictory and does not lead by example.
- Agencies with active ICT Volunteering initiatives need to outreach more to the development community overall to elevate the awareness and visibility of ICT Volunteering. Marketing and communications are important at the institutional (headquarters) level, as is empowerment of the individual ICT Volunteers to become advocates and promoters of what they do.⁷¹
- Volunteers can have a fundamental role as the 'human last miles of connectivity' and information brokers to the community - particularly to people who have neither the means nor will to learn to access information directly).⁷²
- Online Volunteering has a mostly untapped and enormous potential for development cooperation. Its cost/benefit ratios are minimal. For example, assuming an average of 5 hours per week, mobilizing 40,000 online volunteers would mean a

⁶⁸ This is why development projects last a few years and not a few months.

⁶⁹ O'Donnell reports that the European Commission recommends, as a policy response to digital exclusion, the use of European Union funds for ICT projects developed and delivered by voluntary organizations.

⁷⁰ It would be at a level of funding similar to the Global Environment Facility (GEF) that came out as a result of the Rio'92 Earth Summit. GEF is funded to the tune of hundreds of millions of dollars annually.

⁷¹ Let's take as a reference the TACC project in Egypt. The community outreach work of UNV in the project was well recognized by all involved. The governor of Sharkeya indicated that the UNV-TACCs model needs to be replicated at a much larger scale. Even the language of the Government in relation to the local appropriation of technology by the community via the TACCs (and not simply as technology access centers) was adopted from UNV's approach. Yet, this apparent success in breaking the largely technical mindset and approach relating to telecentres has not led to a widespread diffusion of the model nor of volunteer involvement in other community telecenters around the country. [Nath 2001 b]

⁷² The evaluation report of UNV's participation in Egypt's TACC project reflect that 'The role of UNVs as effective information intermediaries or 'infomediaries' was proved in how they would transform local queries into forms that are searchable over the Internet and translate the information harnessed from the Internet into locally understandable forms. The comparative advantage of having UNVs playing such a role is uncontested and needs to be aggressively promoted.'

theoretically similar number of volunteer hours provided as the 5,000 on-site volunteers that UNV managed in 2002. This would be at a minute fraction of the cost – ie. over 95% of UNV staff (slightly over 100) works to support the agency's on-site volunteers.

4b. Volunteering to enable mainstreaming of ICT into development

We have claimed in this document that volunteering is important in achieving the goals of mainstreaming ICT that many national and international agencies espouse, mainly because the basic impediment to it is precisely internal capacity in these agencies. Let us now expand on the rationale and the ways to do this.

Mainstreaming of ICT into development agencies can be understood in various ways. One way to describe it is as having two interrelated dimensions [Acevedo 2003c]. One refers to internal purposes, meaning the informatization of administrative and operational processes, and for communications with/among staff. The other relates to external purposes, ie. the integration of these technologies in the project and programmes of an agency's field portfolio. The latter is where less progress has been achieved by far, and where ICT Volunteering can provide for quantum leaps in advancement.

So how do we propose for ICT Volunteering to contribute to the mainstreaming of ICT into the work of development agencies? First, the potential use of ICTs in a project should be considered at the early stages of project formulation (and not as an after-thought when the design is essentially completed). This will determine the role of ICT Volunteers in the project. The determination of the use of ICT in a project would involve (1) assessing the value of information to a project, (2) examining the communications strategy of the project, and (3) assessing present and potential networks on which to draw support for the project.

When analysis of these three tasks result in the decision to incorporate some ICT elements into the project, one or more ICT volunteers can perform the activities related to putting ICT to work to better fulfil the objectives of the project. These activities will be tailored to the individual project. They may include some of the ones in the list below, which are applicable across development themes and thematic area specific:⁷³

- (i) Creation and management of a web-site for a project. This is a simple, inexpensive way to organize key information related to the project, and to share with any in the world that has Internet access.
- (ii) In depth assessment of information needs (eg. economic research data), resources (eg. databases) and applications (eg. publishing programs).
- (iii) Production of local content in a variety of electronic formats (text, multimedia, etc.)
- (iv) Creation/adaptation of software applications, for example those based on

⁷³ Always with a capacity-building approach, and not for simply providing a direct service or a finished product.

- Free and Open Source software code.
- (v) Involvement and management of Online Volunteers⁷⁴. The proactive engagement of OVs is an important topic on its own.
 - (vi) Setting up the proper electronic network tools to communicate with stakeholders around the country and outside the country.
 - (vii) Introduction of computer-based monitoring and reporting tools for project managers and target communities.
 - (viii) Access to online or distance training facilities and offerings.
 - (ix) Establishing graphical databases (ie. Geographic Information Systems) to better manage information assets of project which could be dispersed over a large physical area.
 - (x) Introducing computer-mediated collaboration to facilitate the participation of people with disabilities in the project.
 - (xi) Collaboration with other projects dealing with similar development issues.
 - (xii) Use of mobile devices (PDAs, mobile phones, satellite radios) by development workers and stakeholders.

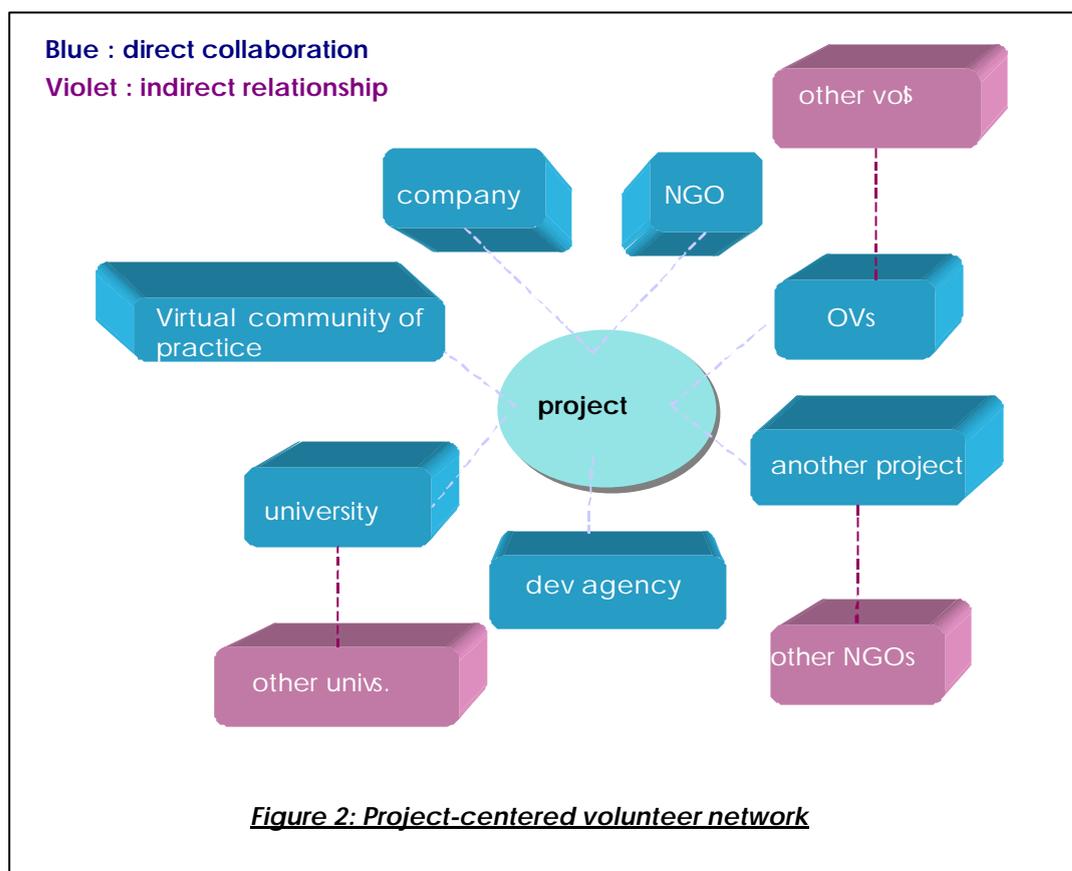
4c. Alternative project architecture through volunteer networks

Development projects have traditionally been about the achievement of a set of objectives in a given physical location and time. Most of the participants are local staff, with links to some capital city or headquarters location, and the involvement of a small number of outside personnel, often for training or guidance purposes. The projects act in relative isolation fashion, with little contact among each other. In the context of the Network Society this project model is falling increasingly obsolete, and it is heading for change.

We can visualize a project as a network entity, where a number of networked nodes with well-defined individual and collaborative tasks provide the inputs and resources to achieve the project's objectives. A discussion of 'the project as a network' is beyond the scope of this paper, and a good topic for additional research. What we wish to highlight is that volunteer contributions would powerfully facilitate to these new type of project architecture, in particular, the role of volunteer networks created specifically for a given project.

Figure 2 illustrates such a multi-faceted involvement of volunteers around the world in a project network. It represents a potential volunteer domain of the overall project network. The great majority of volunteer participants would collaborate online, either as individuals or in teams (ie. teams formed in the same institutions or as virtual teams across institutions). In this generic example, the volunteer involvement would be as follows:

⁷⁴ It would be important, however, that any one project staff would soon be able to deal with one or more online volunteers directly collaborating with her/him.



- ❑ online volunteers participating on an individual basis, without institutional representation or affiliation (and volunteers that those OV's would be in regular contact with);
- ❑ staff and/or volunteers from a other related projects (and members of NGOs collaborating with such projects);
- ❑ members or collaborators of one or more NGOs with thematic expertise or other direct interest in the project issues;
- ❑ corporate volunteers from one or more companies
- ❑ individuals participating in a virtual community of practice linked with the project issues;
- ❑ students and professors at one or more universities (and associated colleagues at other universities); and
- ❑ staff from a different development agency than the one supporting the project.

Variable network geometries with different configurations and densities can thus be established, with a practically infinite set of combinations. The key is to deliberately

architect and stimulate any such network. This implies, among other changes, that the project would have to be designed a network conception in mind.

A significant contribution from volunteer agencies to this shift in project architecture would be by providing a 'Volunteer Network Specialist' for the project. In close association with the project director and other staff, this person would build a network tailor-made to the project needs. This volunteer may not need to reside at the physical project location, but wherever s/he would be better enabled to configure and manage the volunteer network. A description of this volunteer's assignment may be as follows:

- ❑ Initial visit of the volunteer to the host organization (about 2-3 months); getting to know the people and the context, absorbing the projects issues; initiate project network design, discuss with the project manager and staff the appropriate network design; choosing appropriate software (eg. 'groupware' to enable online collaboration, electronic discussions lists, etc.);
- ❑ Returning home; outreach to appropriate people and institutions willing to cooperate; defining terms of cooperation, interfacing with project staff; managing the multifaceted contributions in order to facilitate their inputs to the work of the project manager and staff;
- ❑ Visiting the project 2-3 times per year (for a variable length of time), to better follow-up on project progress and changes, as well as maintaining the personal relationships with project personnel;
- ❑ Providing periodic reports to (1) project, (2) volunteer/sponsoring agency; maintaining weekly contact with project manager; and
- ❑ Organizing any events or special activities for the network in support of the project, such as a physical meetings or facilitation of field visits by 'nodes' of the network, preparation and distribution/publication of collaborative documents, etc.

4d. A door into the present future: The World Summit on the Information Society

The World Summit on the Information Society aims at developing a common vision of this emerging social paradigm, and how it should evolve to be a fair and inclusive society. In particular, it is exploring how ICT can be used as tools of development and inclusion, in other words, how to bridge the digital divide.

WSIS will be the first UN Summit taking place in two phases: Geneva, December 2003; and Tunis, November 2005. It will thus provide the possibility to track the advancement of any agreements. Very importantly, it will serve to continue to educate decision-makers on the complex issues of the Information Society⁷⁵.

There are many areas of the Plan of Action crafted in the first phase (culminating in December 2003) where Volunteering can have an important role, like any of the sections on thematic applications (health, education, human rights, etc.). Essentially, any area related to human capacity and creation of content would benefit from ICT Volunteering

⁷⁵ *In the opinion of a member of the Canadian delegation to WSIS, one of the reasons that makes this Summit process complex is the all-encompassing range of issues in the Information Society. In his words, it requires a 'deep discussion of the Universe and its surrounding'. ☺*

contributions. Without going into specific thematic considerations (education, HIV-AIDS, etc.), the following could form part of a viable 'Volunteer Plan of Action' emerging from WSIS ⁷⁶ after November 2005:

- ⊕ Support to national and international university volunteer networks in ICT for Development⁷⁷. One good example of where these networks could serve important purposes is in the building of capacity of teachers in secondary and primary schools to integrate ICT into learning. Universities could set up such programmes to support schools in their country (or province), with students serving semester-long internships and covering each a few schools.
- ⊕ Creation, expansion and support of national/regional online volunteering services, in various languages and always for development purposes;
- ⊕ Coordination under UN ⁷⁸ a 'Programmers Without Frontiers' programme, which would channel support from programmers to development projects and institutions, with emphasis on Free and Open Source software.
- ⊕ Support to ICT Volunteering programmes like UNITEs, NetCorps Canada, VITA, GeekCorps, and others.
- ⊕ ICT Volunteering initiatives dedicated specifically to the digital inclusion of people with disabilities – and managed by people with disabilities themselves.
- ⊕ Support to volunteers networks that facilitate involvement of the Diaspora in e-enabling activities in their native countries
- ⊕ Promotion of corporate volunteering initiatives on ICT4D
- ⊕ An international 'Telecenter Volunteer Exchange' facility to allow people from successful telecenters to share their experience with others. While these exchange mechanisms can be organized around any topic (e-governance, ICT and education, etc.) this one is specifically mentioned because of the importance of community telecenters in the efforts reach universal access to ICT tools and services, and the hundreds of telecenter projects in place or already completed around the world. .
- ⊕ Basic computer literacy programmes. Local and national ICT volunteering programmes can provide fundamental inputs to allow wider sections of society to make use of digital technologies. In 2001, an ECOSOC-convened high-level panel of experts on ICT for Development recommended 30,000 ICT Volunteers should be quickly activated for this purpose.

⁷⁶ Some of these propositions are echoed in the WSIS Volunteer Action Plan 2003-2005 developed by the Civil Society's Volunteer Family at the end of phase I of WSIS (the full action plan and a report on Volunteer Family activities until the end of 2003 are available from <http://www.isv2001.org/wsis2003/REPORT.PDF>)

⁷⁷ A good example is provided by Spain, where the Universidad Autónoma de Madrid coordinated a group of over 10 Spanish universities in their participation in the international University Volunteer Network under UNITEs.

⁷⁸ Manuel Castells made this challenge at a meeting of the UN ICT Task Force in Feb 2001. A UN agency, like UNV or UNESCO, would make it easier to software programmers to participate, as they may have a more implicit trust in them than in other national or regional organisms – this opinion was shared by people involved in the Open Source movement in personal discussions held during 2002-2003..

- ⊕ Effective financial mechanisms for volunteer-powered initiatives to bridge the digital divide, particularly to support actions by Civil Society organizations aimed at digital inclusion.

4e. Areas of research on ICT Volunteering

As part of an extensive study of the role of voluntary organizations in an inclusive Information Society, the European Commission has identified the following areas for further research, based on the differing nature of the organizations as 'champions', 'mediators' or 'supporters' [O'Donnell 2001]:

<p>Role of voluntary organizations and ways to support those roles</p> <p><i><u>Champions</u> deliver support and services aimed at encouraging access and effective use of ICTs by people experiencing disadvantage, as well as the generation of local content.</i></p> <p><i>Developing the champion role centers on policies to support innovative programmes and projects delivered by voluntary organisations to increase the use of ICTs by people experiencing disadvantage.</i></p>	<p>Research topics (role-specific)</p> <ul style="list-style-type: none"> • <i>Mapping survey to identify the voluntary organizations playing the champion role.</i> • <i>Qualitative research to identify ways to overcome the restraints and barriers to their work.</i> • <i>Qualitative evaluation of their projects, with an aim to improving the quality and effectiveness of the project outcomes, including impacts on social networks, community development and confidence-building.</i>
<p><i><u>Mediators</u> act as front-line conduits between disadvantaged groups and ICTs. They look for opportunities to encourage people experiencing disadvantage to use computers and the Internet or make some of the benefits available to them, for example in relation to government information and services.</i></p> <p><i>Developing the mediator role centers on policies for building strong communication and information networks with the voluntary sector and using these networks to make information available on services, programmes and opportunities for people experiencing disadvantage.</i></p>	<ul style="list-style-type: none"> • <i>Qualitative research to improve the process by which these voluntary organisations act to mediate government content online to people experiencing disadvantage.</i> • <i>Assessment of mechanisms for designing and delivering government services and online content for disadvantaged groups.</i>
<p><i><u>Supporters</u> facilitate the use of ICTs by disadvantaged groups as a natural extension of their overall work with these groups.</i></p> <p><i>Developing the supporter role centers on policies for building ICT capacity within voluntary organisations.</i></p>	<ul style="list-style-type: none"> • <i>Investigate social capital function of voluntary organisations in increasing awareness and trust in information technologies by people experiencing disadvantage and more widely in disadvantaged communities.</i>

In addition, research is recommended in the following areas:

- (1) a detailed inventory and analysis of ICT Volunteering practice⁷⁹;
- (2) indicators of impact/performance of ICT Volunteering in the initiatives to which it has contributed;
- (3) methodologies to programme ICT Volunteering inputs for the purpose of mainstreaming ICT into a specific development agency;
- (4) the study social capital at an international or even global level: how that social glue extends across boundaries, and how ICT contributes to international social capital.

4i. Painting scenarios

If you have had the patience to reach this point, you may be wondering what may emerge from all that has been discussed and proposed. Let us think up some potential scenarios, by the end of 2010 – that is, five years after the end of WSIS in November 2005. It is always enjoyable to play with a crystal ball, and yet none of these scenarios would require large infusions of cash – they would result more from forward vision, political will and institutional commitment. So let's jump to November 2010 and imagine that:

- A university network under UNITEs⁸⁰ involves over 500 colleges, universities and research institutions from some 40 countries (with slightly less than half from developing countries). All together they generate more than 10,000 ICT Volunteering assignments per year. A parallel benefit has been the intensive research carried out on ICT and Development across groups of universities belonging to this network, helping development agencies and governments to better include ICT in national development policies.
- A private sector programme to provide 1/1000th of employee hours for development cooperation⁸¹ results in the joint provision by about half of the companies represented in the UN Global Compact (www.unglobalcompact.org) of some 50,000 ICT volunteer hours.⁸²
- There are Online Volunteering services in all continents, and in various languages, including English, French, Spanish, Hindi, Russian, Portuguese, and Arabic. They are expected to surpass the number of 1 million of online volunteers by the following year⁸³.
- Major international ICT for Development initiatives, like the Digital Solidarity Fund, the Global E-Schools and Community Programme, or the International Federation

⁷⁹ including both specific ICT Volunteering initiatives (like a UNITEs or NetCorps Canada) as well as ICT Volunteering that takes place within other volunteer-involving organizations,

⁸⁰ We mention the one under UNITEs because it is already in place today.

⁸¹ First put forth by STM Electronics, a member of the UN ICT Task Force, this also included contributions amounting to 1/1000th of corporate income.

⁸² This is a very conservative estimate, if we consider that just one multinational firm that employs 50,000 people around the world has an approximate yearly input of 100 million hours – a thousandth of this would amount to 100,000 hours.

⁸³ A feasible figure, given that without much publicity the UN Online Volunteerin service was able to involve over 15,000 OV's by its fifth year, and operating only in English.

of Telecenters have specific volunteer units to facilitate the inclusion and participation of significant level of ICT Volunteers into their worldwide operations.

- Thousands of e-mentoring relationships are established as part of major programmes from UN agencies and bilateral donors to combat the effects of HIV-AIDS. Most of them take place in the sectors of teaching and government services. These not only help to sustain capacity in the countries affected, but mobilize professional departments and organizations in other countries for a larger involvement in the HIV-AIDS pandemic.

5. CONCLUSIONS: SOLIDARITY@NETWORK_SOCIETY.INT

Volunteering is a social phenomenon that cuts across time and civilizations. As such, it is contributing to the emergence of a new social paradigm, the Information Society. In turn, Volunteering is also affected by the new context of the Information Society. This merits a deliberate and comprehensive assessment of the role of Volunteering in the Information Society.

Moreover, in an age of increasing inequalities, solidarity is more than a pleasant attribute that flourishes among some in society: it is needed more than ever to advance towards a fairer and more sustainable world. Volunteering is a basic expression of solidarity in action. Thus, understanding the value and mechanisms of solidarity in this new society, particularly for the purpose of veering it in a freshly human and dignified direction, requires consideration of the support to Volunteering as a policy matter.

That human and dignified direction can be termed 'Human Development', which according to Amartya Sen is grounded in one of the most sublime features of humanity, ie. freedom. In the Information Society, Human Development requires informational freedoms to help generate and access a wider set of choices. This is mediated by the proper instruments, among them ICTs.

The problem is that the stubborn and still wide digital divide stands in the way to extending informational freedoms evenly and quickly enough. If we accept the notions of a Network Society as the operational reflection of the Information Society, then curtailing freedom of movement around the networks implies restrictions in practically all other freedoms and choices, thus of human development.

For this reason, we have focused on the exploration of how solidarity in the form of ICT Volunteering can help to energize and stimulate human development. We have seen that ICT volunteers can contribute from the simple task of introducing a teacher to the basic notions of ICT, to policies facilitating the true mainstreaming of ICT into development processes. Volunteers can work on any area of ICT applications to human development – which is to say across the entire developmental spectrum.

ICT Volunteering contributes not only to respond to pressing developmental needs, but also to open new development opportunities – coherent with the fundamental shift introduced by the Senian concept of Human Development. ICT Volunteering is slowly becoming an institution of the Network Society by creating and occupying networks for development. In doing so, it will contribute to new knowledge-based trends in development cooperation, adding a friendly face to the emerging practice of networked cooperation.

ICT Volunteering also contributes to the participation of more people in development, particularly via the Internet. Online Volunteering provides a flexible format and a large number of opportunities for the involvement of the global citizen. It is the basic building block of volunteer networks. While social capital is a valuable and customary by-product of volunteering, volunteer networks create a different type of 'e-social capital' or network capital which will be interesting to study further in the context of the Information Society.

WSIS presents a timely opportunity to firmly place ICT Volunteering in the development map. It constitutes a basic resource for the implementation of the Summit's Plan of Action – we'd even argue that without the extensive use of ICT Volunteering such a Plan cannot have the necessary human resources for implementation. Decision makers would do well to realize that the level of funding dedicated to ICT Volunteering will be minute relative to funding of overall projects and activities to whose success they can powerfully contribute.

Volunteering in this new century has a new address: Solidarity@Network_Society.Int. 'Solidarity' because that is what volunteers practice; 'Network' because it is how volunteers will increasingly be organized; 'Society' because Volunteering is a social phenomenon; 'Int' because Volunteering has never been as international as now. ICT Volunteering, in particular, is an outstanding exponent of the new address.

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