Report to the G-8
On Culture in a Worldwide Information Society

Introduction

Information and communication technology (ICT) is an engine of growth and change for the world economy. If this technology is to be harnessed to enhance democratic principles, it must contribute to the creation and enrichment of an educated, informed citizenry; it must incorporate the accumulated knowledge and creativity of the past; and it must anticipate and enhance creativity for the future.

In this context, it is essential that ICT embrace a cultural agenda. Development effectiveness depends to a great extent on "solutions" that resonate with a community's sense of identity—and culture creates that sense of identity. Culture encompasses human knowledge, values, beliefs, behavior, customs, language, ideas, codes, institutions, heritage, rituals, and creative expression —all of which constitute essential signposts for understanding who we are and what we do. If advances in health, commerce, education, and economic growth are to be implemented and sustained, understanding culture is critical.

This report provides *Recommendations* in response to critical issues raised in a culture track program and a session on "The Future of Online Culture" at the 10th International World Wide Web Conference (WWW10) held in Hong Kong, May 1-5, 2001.[1]

The report is intended to explain to the G-8 members how they can include a cultural agenda in their efforts to promote global participation and empowerment in order to advance development goals of poverty reduction, economic growth, education, health,

sanitation, and global e-commerce.[2] The Okinawa Charter on the Global Information Society, created at the July 2000 G-8 meeting in Okinawa, Japan, affirmed the importance of using ICT in development:

> *Information and Communications Technology (ICT) is one of the most potent forces in shaping the twenty-first century. Its revolutionary impact affects the way people live, learn and work and the way government interacts with civil society. It is fast becoming a vital engine of growth for the world economy. . . . The essence of the IT-driven economic and social transformation is its power to help individuals and societies to use knowledge and ideas. Our vision of an information society is one that better enables people to fulfill their potential and realize their aspirations.* [3]

This report and recommendations argue for:

- the value of *the cultural agenda* in development;

- the potential of information and communication technology to implement the cultural agenda by transforming information from a scarce, inequitably distributed and fragmented commodity into a true public good; and

- the importance of integrating the cultural agenda and ICT into the G-8 program for advancing a worldwide information society.

Culture, Development, and ICT

> *Culture is not one of life's luxuries, it is life itself. . . . Culture is the soil that provides a society's nourishment and the basis on which it defines its value system, traditions, and behavior. It contains the morals and ethics of the community, governs society's conception of its own future and selects the means of getting there.[4]*

We are all both producers and consumers of culture. Therefore, a *cultural agenda,* encompassing—but not limited to—folklore, oral traditions, handicrafts, science, health, art, literature, music, and religion is vital to every nation's development and economic

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[2] The "G-8" group of nations includes Canada, France, Germany, Italy, Japan, Russia, United Kingdom, and the United States. The G-8 are the world's largest industrial economies, representing a combined $30 trillion of global gross domestic product (GDP), or about two-thirds of the world's economic output.

[3] The "Okinawa Charter on Global Information Society" can be found online at: http://www.dotforce.org/reports/it1.html

[4] *The Power of Culture: The Cultural Dimension in Development* (Copenhagen: Royal Danish Ministry of Foreign Affairs, 2000), chapter 3. Available online at: http://www.um.dk/danida/tpoc/index.asp.

sustainability. As the Royal Danish Ministry of Foreign Affairs (DANIDA) suggests in a recent publication, culture's role in enhancing national and international development is complex and powerful.

- Culture determines what is valued in a society, including the "ends" of development that are valuable to the poor.

- Culture influences how individuals, communities, and institutions respond to developmental changes, thus playing a key role in poverty reduction.

- The integration of a cultural agenda into development projects may make them more effective and meaningful by reflecting the lives and interests of the people served.

- The poor may earn income, improve their well-being, social organization, and social functioning by employing their cultural assets, including creative expression, traditional knowledge, and skills.

- A cultural agenda enriches the sense of community through active participation and fosters intellectual and artistic collaborations.

- Attention to culture improves the quality of teaching and learning critical thinking, visual literacy, and analytical skills.

- Culture provides a means of exploring new markets and revenues.

Information and communication technology is a valuable tool for implementing a cultural agenda in global development. In the past decade advocates of ICT—particularly in Canada, Europe, and the United States—identified the need for cultural institutions to participate in planning and creating national and international telecommunications systems. As a result, many national telecommunications policies now reflect the importance of providing all people with electronic access to their cultural heritage. During the same decade, white papers and "memoranda of understanding" argued for a strategic focus that would bring culture into the digital environment, and subsequently thousands of cultural institutions brought their collections online. Other notable efforts helped to integrate cultural concerns and ICT:

- The European Commission's funding frameworks created a variety of projects, including the AQUARELLE Information Network on Cultural Heritage; CHILLIAS, the European Virtual Children's Library; the DELOS Network of Excellence on Digital Libraries; and the eEurope Initiative for an Information Society for All, which stimulated research and collaborative opportunities for integrating technology and cultural products.

✍ The Museum Educational Site Licensing Project launched by the Getty Information Institute in the United States helped demystify intellectual property rights and opened the way for global access to art.

✍ Metadata standards emerged as a means of providing integrated access across collections.

✍ Projects based on "community culture nets" provided a better understanding of World Wide Web's potential to simplify access to who we are and what we do.

✍ New business models emerged for providing educational access to images.

✍ Alliances planned projects to build virtual digital libraries, online exhibitions, and electronic calendars of cultural events.

✍ National initiatives, such as Canada's Virtual Museums, became models for collaboration across institutions.

✍ New organizations, such as the European Museum Information Institute, provided an ongoing voice for policies and methodologies to harness technology for access to art and culture.

These diverse efforts demonstrate the rich potential of integrating cultural and ICT development, but under-capitalization and technological barriers pose significant threats to projects already underway. Recommendations for action are needed. The following recommendations encourage connections among people worldwide, funding, and technological research to address key issues, including: *Cultural Content, Standards and Good Practices, Access,* and *Information Policies.*

Recommendations

I.   Cultural Content

A. *Develop a critical mass of cultural content.* We are currently in a digital "dark age" with respect to lack of content. Without a critical mass of information, technological capacity is a hollow structure, like a library without books, or a highway without cars. As we approach an era in which it will be possible for substantial computing power and wireless networking capacity to be hidden within everyday objects, we will also find it necessary to re-create and re-define "content" to exploit new opportunities.

B. *Encourage creative expression and interactive production of cultural content.* Knowledge is not about circulation of information. It is about adding value to

ideas. A knowledge society must provide people with opportunities to think in new ways.[5]

The creation of a fully interactive online culture would transform links between computers to connections among people that could stimulate ideas and new skills. We must create mechanisms that encourage the participation and empowerment of all people in developing and developed countries and allow them autonomy and control.

II. *Standards and Good Practices*

A. *Develop standards for creating and managing digital collections and "guides to good practices" for creating cultural content.* Many institutions have begun to digitize collections, but many (even in the industrialized nations) have not. Typically, larger institutions find funding to implement complex and costly digitization projects. Smaller institutions, with fewer resources and no standards or models to guide them, risk costly mistakes.

Developing standards to formulate and manage data and to migrate data to new platforms is essential and will require significant investments, which in turn demand standards and terminology to ensure long-term viability of electronic information and the ability to search across databases. Good practices are needed in order to help smaller institutions and developing nations avoid "reinventing the wheel."[6]

B. *Create incentives for using de facto standards, and build a portal on international data standards, good practices, and policy frameworks to promote and encourage harmonization of cultural content.* Establishing digital cultural content in the developing world is a particularly urgent priority, if we are to create connections among people worldwide. However, developing countries are most vulnerable if they leap into efforts to digitize without the benefit of de facto standards and policy frameworks. Mechanisms should be created to disseminate knowledge about international standards and policies as quickly as possible.

For example, at WWW10, Extensible Markup Language (XML) was endorsed as a standard for the World Wide Web Consortium (W3C). Many major organizations—including institutions of memory (libraries, museums, archives) and galleries—have adopted the Dublin Core metadata standard developed for the

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[5] Suggested by Dr. Shalini Venturelli, (Associate Professor of International Communication Policy, American University), lecture on "Knowledge, Civil Society & Culture in the Information Society: Toward a New Model of IT Policy for Developing Countries," World Bank, Washington, DC, July 2001.

[6] A good example is National Initiative for a Networked Cultural Heritage, *Guide to Good Practice in the Digital Representation and Management of Cultural Heritage Materials* (forthcoming 2001).

discovery of objects and harmonization of content. The United Nations Economic, Scientific, and Cultural Organization (UNESCO), the International Council of Museums (ICOM), and the Council of Europe have published policy frameworks and conventions that advocate the use of standards.[7]

Funding strategies should require the use of such standards, and a portal on international data standards, good practices, and policy frameworks should be established.

C. *Promote institutional awareness of new economic models.* For cultural institutions, coming to terms with the Internet paradigm will be an important factor in keeping up with the dynamics and expectations of users in the knowledge society. A study underway for the European Commission is intended to provide memory institutions with information on how to address new ICT challenges. Results so far indicate that cultural institutions can earn revenue from ICT when they market their cultural resources to media companies (in a business-to-business fashion) or produce their own value added products and services (in a business-to-customers model).

D. *Support hiring and training of qualified staff, and develop training programs for technicians and managers of online material.* Information processing and "knowledge work" will become more and more vital to the mission of cultural and memory institutions. To meet this challenge, these institutions will require additional personnel with skills in managing and producing digital content and services. Because the number of qualified IT personnel is limited, the cultural sector will have to compete for employees with other industry sectors and actively support ICT training for their existing staff. Development of training programs at various levels (local, regional, national, international, and also institutional) is essential.[8]

E. *Promote collaboration and cooperation with the private technology sector in order to encourage and establish standards that will ensure sustainability of*

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[7] A good example of key policy frameworks that advocate standards is the UNESCO convention concerning the Protection of the World Cultural and Natural Heritage, which includes a provision that a World Heritage Committee be established and that each party submit an inventory of its national heritage to this committee. The UNESCO convention on the Means of Prohibiting the Illicit Import, Export and Transfer of Ownership of Cultural Property advocates use of the Object ID metadata standard as a means of protecting cultural property and reporting property that has been stolen. The Council of Europe has published useful guidelines on this topic, including their *Declaration on a European Policy for New Information Technologies* (Council of Europe, 1999), which includes recommendations for public access to and freedom of expression in networked information. The Declaration can be found online at http://culture.coe.fr/postsummit/nti/en/documents/enti_declaration.htm.

[8] Information and analysis contributed by Friso Visser, expert for Cultural Patrimony Applications, European Commission.

digital technology. Rapid changes in technology make preservation of digital content a challenge. Already, media on which information is stored are disintegrating, and the computer hardware and software needed to retrieve information from obsolete digital formats no longer exists. What are the long-term implications if we rely on current digital technology to preserve our cultural memory?[9] We must engage the private technology sector in a campaign to establish preservation standards as technology evolves.

III.   *Access*

A. *Develop alternate means of delivering Internet capabilities.* Funding is necessary for projects that will bring the Internet to "have-not" communities. Radio and solar-powered Internet centers must be supported.

B. *Foster new design concepts and interfaces to allow wider access and use of the technology.* Non-western societies may require design innovations. For example, the current Internet is a scrolling medium and is based on a western textual tradition. However, the online culture for developing regions will have to represent both oral traditions and the movement through space and time that characterize local life practice.[10]

Local sources for cultural information should be provided with ways of accessing and interacting with information once it is online. Therefore, the Internet and online applications must be adaptable to the slower and smaller downloading capacity of developing regions and to their own linguistic media. In this context, it might be useful to provide opportunities for re-using the hand skills and expertise of craftsmen in designing delivery devices[11]

C. *Encourage development of multilingual capabilities, and create new modes of mapping and indexing information and new conceptual search capabilities beyond the "semantic web."* Tools must be produced to simplify mapping of information such as taxonomies so that projects can more easily accommodate different terminologies and languages.

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[9] For more information on these issues, see Margaret MacLean and Ben H. Davis, eds., *Time & Bits: Managing Digital Continuity* (Los Angeles: Getty Trust Publications, 1999).

[10] For further information in this topic, see Edward T. Hall, *Beyond Culture* (New York: Doubleday, 1977).

[11] Suggestions provided by Ranjit Makkuni, Xerox PARC, with reference to the *Crossings Project*. The *Crossings Project* was a cultural exchange between schools in Devon, England and Cape Town, South Africa. Information is available online at http://www.devon.gov.uk/dcs/crossings/

Translation remains a significant barrier to expanding the worldwide information society. Online writing in more than two local languages is currently quite difficult. Netware that can write several languages on the same page and within the same operating system is needed. Currently, it is almost impossible to use the same operating system to write in more than three languages if they use different character sets, as is the case for websites covering multi-regional information in Asia, for example.[12]

E. Develop new authoring and interactivity tools. Cultural content requires that the integrity of the original material be maintained while also allowing for production and exploration of new content. Original material must be distinguished from altered or edited material, and users must be able to recognize who has made alternations, when, and why.

In order to enable people around the world to work together as a community to eliminate barriers to global communication, new tools are needed that support interactivity and "interworkability" in building online cultural content.

IV. Information Policies:
Frameworks and Intellectual Property Rights

A. Promote the adoption of clear, publicly available national and international information policy frameworks. In order to foster global cooperation, particularly with respect to access to cultural information across boundaries, governments must develop information policies. Most of the industrialized nations have created or are creating such policies, and must now work with developing countries to establish policy frameworks. The worldwide information society mandates better understanding of the value of open communication, access, and educational use of content.

B. Encourage proactive intellectual property rights that emphasize the public good. Currently, one of the major barriers to global access to information is the lack of a rich policy framework to handle intellectual property rights. Organizations and governments must learn to think about their digital content not only as financial opportunities, but also as opportunities to reach new audiences

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[12] Information contributed by Lynn Thiesmeyer, Director, Southeast Asia Online Archive. Thiesmeyer adds that using a dual-character operating system, the website administrator can install the font for a third language, but that will be all the system can support. To write a fourth language the process must be repeated using another system to install one more character set. The usual solution is to text-scan languages with different character sets and put easy-to-download snippets of the scanned material on a top page along with the "primary" language text. This process makes detailed inputting, revising, and updating prohibitively difficult.

and to promote open and democratic societies; they should be encouraged to develop and engage in demonstration projects that will help them view open and equitable access as a means to these ends.

Conclusion

The implementation of the recommendations in this report cannot be pursued by nations in isolation. Cooperation in the development of cultural content, standards and good practices, access, and information policies must be global.

The intellectual and cultural heritage of a society is an essential building block of sustainable development and economic growth and a vital component of a dynamic future. Therefore, the G-8 information and communication technology agenda for a worldwide information society must acknowledge the cultural dimension in development and must affirm and enrich cultural identities through its programs and policies.

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