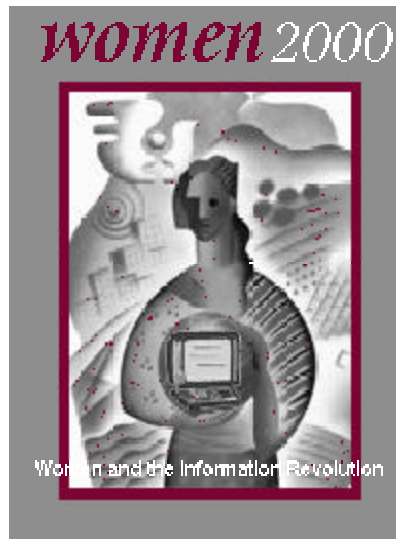# Women2000

Women and the Information Revolution

**Published to Promote the Goals of the Beijing Declaration and the
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Contents

Introduction

At the United Nations Fourth World Conference on Women (FWCW), which was held at Beijing, China, in September 1996, one of the most striking features was the use of the information superhighway to spread the word about the Conference and the NGO Forum well beyond the boundaries of previous global conferences. In addition to the close to 40,000 participants, most of whom were women who had travelled to Beijing from all the corners of the globe, thousands of women and men joined the superhighway daily to follow the Conference and Forum using computers and telephone lines.

In the two years preceding the events, women and men from all regions, cultures and walks of life had reflected together on-line, seeking consensus on fundamental issues related to gender and women's human rights. New computer networking technologies (CNTs) made this possible by broadening participation for diverse groups and enabling women in particular to participate and build new partnerships.

The experience gained by the United Nations around the FWCW helped to reveal the power of the Internet as a tool for use by women for information dissemination and communication. The UN's Division for the Advancement of Women (DAW), in its role as Secretariat for the Beijing Conference, worked to stimulate the use of computer technology for the Conference and continues to see a role in facilitating its use in the follow-up to Beijing. In order to disseminate information on the Conference, DAW established a World Wide Web (WWW) site and, in collaboration with the United Nations Development Programme (UNDP), a local Internet server was set up at the official Conference venue.

User statistics collected during the FWCW demonstrated the potential demand for such a tool: a total of 158,722 requests for files under the FWCW Internet space were received from 68 different countries. Equally impressive was the success of Internet activities at the NGO Forum Beijing'95. As a result, DAW, with partners UNIFEM and INSTRAW, is developing a joint initiative called WomenWatch. This project, along with the recent Workshop held in this connection are described at the end of this issue of Women 2000.

Fourth World Conference on Women and NGO Forum Join the Information Superhighway	
NGO Forum	
E-mail messages	52,000</TD<TR>
Visits to the WWW	135,000</TD<TR>
Fourth World Conference on Women	

Visits to the WWW and the Gopher	158,722</TD<TR>

The experience with electronic communication networking at Beijing reflects the explosion in the field of communications witnessed in the past 20 years, including advances in computer communication technologies which have expanded global access to information at a remarkable rate. This revolution in information technology has created new opportunities as well as challenges. Just as advances in radio and television have seemed to transform our world into a "global village", CNTs have introduced a concept that changes the nature of space. They have created a sphere, or cyberspace, where multiple and diverse opportunities for social interaction can evolve from the local to the planetary level. They have introduced an electronic "virtual community" where millions can come to share information and ideas as well as organize and mobilize for action on an unprecedented scale. This interaction can occur at a speed previously unheard of.

"The logic of networks is essentially a logic of spaces. Cyberspace itself is comprised of a vast conglomeration of data and information flow within which it is possible to define specific spaces where common interest groups gather to exchange information or coordinate activities." (Sally Burch, President, Agencia Latinoamericana de Informacion (ALAI))

During the preparations for Beijing, exchanges took place among women's organizations using several on-line instruments established by groups such as the Association for Progressive Communications (APC) and UNDP -- electronic conferences or bulletin boards on specific topics, mailing lists, WWW pages, etc. Organizations and individuals who used these spaces, including many who had indirect access through other organizations or by redisseminating information using traditional media, were better informed and able to prepare joint actions. This was an important factor in NGOs having a better-informed and -coordinated input at Beijing than at previous UN women's conferences. [1]

It has also been argued that by participating in these spaces, "many women and organizations are developing their experience and confidence to participate in other on-line circles and to publicly express their viewpoints. Having access to an interactive space of communication provides women with opportunities to develop discourse with a propositional focus, going beyond the rhetoric of denunciation and complaint. Moreover, the new opportunities offered by electronic networks can be a training ground for women to develop the means of expression in the new media practices that will develop through this technology and in other media". [2]

Electronic networking is fast becoming a fact of life, in both industrialized and developing countries. The electronic "superhighway" has made the communication of information more rapid and far-reaching than ever before in history. (UNICEF exhibition, "Summitry Works: Words into Actions", UNICEF headquarters, June 1996)

As the electronic highway evolves into a new mass medium, it is essential that women be fully involved in its development. Experience in the past with other mass media has not always been positive for women. There is no guarantee that experience with the new CNTs will be any different. Negative stereotyping and discrimination against women as well as forms of sexual harassment on line are already evident. The Platform for Action (PfA) adopted at the FWCW called for women to take an active role in shaping the use of cyberspace to prevent similar patterns of abuse as seen in other mass media. The Platform will be implemented at a time of rapid growth in the new information technologies. Since communications are at the heart of empowerment of people, women must ensure that the new technologies serve to empower them. Computer literacy is becoming an indispensable tool for organizing and mobilizing communities throughout the world, and women need to be directly involved in this new medium.

This issue of Women 2000 examines the growth in computer networking and the experience of women in using these new technologies.

How fast are computer networks growing?

The Internet is a global network of computers linked by high-speed datalines and wireless systems. It was established in 1969 as a militarycommunications system. It allows individuals to access information from manysources using a computer.[3] The use of the Internet more than doubled in sizein 1995 and has done so every year since 1988, becoming the fastest-growingcommunications medium ever.

Measuring the real Internet population, its use disaggregated by sex,the size of the potential demand and the trends for growth is difficult, andresults are often contradictory. The special nature of the medium and itsrapid development throw up new figures every day. Some sources have estimatedthat a new web site is launched on the Internet every four seconds.

It is difficult to gauge reliably the size and demographic profile ofusers, because user-tracking software remains inadequate, and it is notpossible, for example, to distinguish new "hits" from repeat visits to a site.Nevertheless. it is estimated that the Internet links 50 million users in morethan 80 countries worldwide. Some consider that this will increase to around300 million in the next five years. [4]

The WWW is the fastest-growing segment of the Internet, growing at rateof 3,000 per cent every year. It allows exchange of multimedia data (text,audio, video, graphics and animation) between users connected to the Internetusing hypertext links.

In the United States, which has taken the lead in the market, datasuggest that there are between 16.4 million[5] and 37 million people (in theU.S. and Canada) [6] who have access to the Internet, spending an average of 5hours 28 minutes per week on line. Users in Europe are 5 to 8 million ormore. In Japan, there are approximately 4 million users. [7] In Latin America,electronic mail is rapidly replacing regular mail, as it is much moreefficient. [8] In Africa, new Internet domains have been registered in the lastyear in Angola, Benin, Burkina Faso, Djibouti and Madagascar. In countriessuch as Kenya, Namibia and Senegal, the number of domains is rising rapidly.Kenya has around 133, compared with South Africa's more than 83,000. [9]

In terms of market size, the global Internet market is expected to soarto $200 billion by the year 2000 [10] The Internet Society expects 120 millionhosts to be connected to the Internet by the end of the decade, up from 9.5million in 1996. [11] Investment bankers at Morgan Stanley project that thenumber of Web users will jump from 9 million in 1995 to more than 150 millionbyr 2000. [12]

Forecast of Internet markets by segment (millions of US$)		
	1995	**2000**</TD TR>

Network Services (ISPs)	300	5,000</TD<TR>
Hardware (routers, modems, computer hardware)	0500	02,500</TD<TR>
Software (server, applications)	300	4,000</TD<TR>
Enabling services (electronic commerce, directory services, web tracking	20	1,000</TD<TR>
Expertise (system integrators, business consultants)	50	700</TD<TR>
Content and activity (on-line entertainment, information, shopping)	500	10,000</TD<TR>
Total market	**1,670**	**23,200**</TD<TR>

Source: "Cyberatlas", The Internet Research Guide, I/PRO, July 1996, WWW site

Markets for Internet-related products may be largely a function of access. Many countries in the developing world do not have access to computers; some do not have reliable electricity or telephone service to support the CNTs, and in places where the capacity exists or is growing, there is need for training, and for resources for time on line.

Supporting technology transfer from industrialized to developing countries, some assistance is being given by international organizations, bilateral donors and computer companies for acquisition of computers and training. For example, since 1994 the United Nations Economic Commission for Africa has increased the number of electronic domains -- mother computers under which host computers are hooked into the Internet in Africa. The UNDP Sustainable Development Networking Programme is heading an effort to bring connectivity to developing countries in a participatory manner that would enable women's and other groups to have access to the Internet. USAID, with the Leland initiative, is another significant player -- focused on Africa.

Use of the Internet is spreading rapidly because of the relatively low cost of the basic infrastructure. However, the information revolution has continued to perpetuate many inequalities. The majority of people around the world do not participate on an equal basis, either as participants or as producers.

While the potential of the new medium has been recognized, it is clear that until its use has spread to developing countries, and to all groups in society, including women, it reinforces existing inequalities. Mr. Mathe Diseko, First Secretary of the South African

Permanent Mission to the UnitedNations, stated in a speech to the United Nations Economic and Social Councilon 16 July 1996 that:

For those in possession of information technology, power, influence, privileged status and domination are further enhanced and assured. The reverse is true for those without access to informatics. But it has also great chances of contributing to equity, development and progress, permitting those lagging behind to leap-frog to more advanced stages of development. Informatics has enormous potential to redress the disparities and material inequalities of our world the cheapest and fastest way. But in it are also great possibilities of accentuating our material inequalities, the powerlessness of the have-nots and the misery of millions bypassed by the information superhighway. [13]

The Taub Urban Research Center at New York University recently publisheda study based on data gathered by two consulting firms in the United States.Entitled "Leaders and Losers on the Internet", it addresses the impact of theInternet on urbanization. It notes that while many had predicted that globalcomputer networking could decentralize work and living patterns, to date theimpact of the Internet has been mainly to reinforce the economic andintellectual leadership of a handful of urban centres and nearby suburbs. [14] Computer science professor David Gelernter of Yale University, in commentingon the study, said that it showed that Internet connections were spreadingbeyond university- and computer-based origins into centres of affluent, well-educated people. He expressed doubts, however, about the economic and culturaladvantages of having many Internet connections. [15] The introduction of CNTsis raising new questions about the theory of technology-led urban decline inindustrialized societies. For developing countries, it may become another ofthe factors attracting people to urban areas.

While the new medium includes the potential for democratizinginformation and communications as a result of its interactive andparticipatory nature, evidence suggests that fewer women than men use the newtechnologies and that the computer environment is often hostile or denigratingto women and includes forms of sexual harassment. [16] Women, nevertheless, area fast-growing segment of the Internet's user population.

Sources estimate that 82 per cent of Internet users worldwide are male;others estimate that 34 per cent of Internet users are women. [17] Most of thefemale users seem to be located in North America, especially in the UnitedStates. Even in the United States, the estimate of female Internet usersvaries from 29 per cent to 36 per cent. [18]

Surveys have shown that men are much more likely than women to use theWWW. However, women are slightly more likely than men to use Internet E-mailand to participate in Internet mailing lists, underscoring a strongpredisposition among women toward Internet communications features. [19] Womenare also more likely than men to use the Internet exclusively from work oracademic locations, while men are more likely to use it from multiplelocations, including after-hours use from home.

Internet Navigation needs to be more intuitive. With men, the computer tends to be perceived as a gadget... . Women see the computer more as an efficiency vehicle. (Jodi

DeLeon, Microsoft Network Product Manager, quoted in "What Women want On-Line", Interactive Media & Marketing, 6 November 1995)

The contribution of women to Internet tools such as the UseNetnewsgroups is "typically not very high, but the actual numbers are subject todebate. In the unmoderated feminist newgroups, approximately 80 per cent ofthe messages are posted by men. In the moderated feminist groups, there isusually about a 50/50 balance between women and men." [20] Different networksattract different audiences. SeniorNet, a consumer-oriented on-line-serviceavailable on America On-line that caters to the 'mature market', reports thattheir audience mix is 51 per cent female and 49 per cent male. For otherservices such as CompuServe, Genie and Prodigy "between 60-90 per cent of thecustomers are male." [21]

How are women using the information superhighway?

The Women's Networking Support Program of APC has recently conducted a survey on women's experiences with electronic networking. Early results are from 30 countries in Africa (Cameroon, Nigeria, Senegal, Tanzania, Zimbabwe), Asia and the Pacific (Australia, India, Japan, Malaysia, Philippines), Eastern Europe (Croatia, Russia Federation, Ukraine), Western Europe (Austria, Belgium, France, Ireland, Italy, Netherlands, Switzerland, UK), Latin America (Brazil, Colombia, Ecuador, Mexico, Peru, Uruguay), Western Asia (Jordan) and North America (Canada and United States). Initial findings indicated that women are increasingly active in using electronic communications, and that many tools such as E-mail have become a routine part of their day-to-day communications activity. Increasingly, women are experimenting with on-line conferences, mailing lists and web sites. At the same time, the survey showed that women continue to face barriers in using the information superhighway, such as lack of training and the high cost of equipment and, in some places, of getting connected. [22]

Networking has been recognized by female scholars as a tool for women's empowerment, and women have taken to the Net to create a "cyberspace of their own." [23] In many places, women writers, editors, news directors and lobbyists, are not only surfing the Net, but have become active in establishing numerous sites of special interest to women on the WWW. Women's sites cover subjects such as gender and sexuality, feminism, women's health, women in computer science, engineering, women's studies, women in academia and women in industry.

Research carried out for the UN Division for the Advancement of Women found that women were initially less present on the electronic networks (less willing or less motivated to use the technology) than men, and that not surprisingly, certain circles have developed on the Internet (particularly in the US, where electronic networking is most developed) that are characterized by a male-dominated and patriarchal on-line culture which discriminates against women or treats them negatively. [24] But women face two particular challenges in their use of computer networks. The first is to master access tools so they can make the best use of CNTs. The second is to use the new Internet publishing tools to develop their own publishing and media activities on the networks as paradigms of gender-sensitive media products. [25]

Any discussion of women and electronic communications cannot ignore the lessons learned from the experience of women's role and portrayal in the traditional media, public, and private, and the efforts made to make these media hospitable to women.

The women's movement has long been critical of mass media, charging that they are deeply implicated in reinforcing patterns of discrimination against women in society. An analysis of sex roles and stereotypes indicates that few reports deal with issues of special concern to women or reflect a gender perspective. [26]

In relation to CNTs, this is a crucial moment. The rules of the game are still in formulation. Women, therefore, need to discuss the need for gender- sensitive information; participate in decision-making on network development and evolve

alternative and gender-sensitive practices. Women need to decide whether they will create their own closed spaces on the Internet or assert their presence in mixed spaces. And once again, the answer is, surely, both. Without this kind of action, we can expect that the new medium will increasingly be yet another means to perpetuate negative stereotypes, or another male enclave where women are discriminated against and marginalized. [27]

Women have increasingly created alternative communications outside the mainstream media to counteract discrimination and stereotyping. Independent alternative media controlled by women include print media, video, film, radio broadcasting and, increasingly, the CNTs. Women have created and used alternative communication channels to support their efforts, defend their rights, diffuse their own forms of representation and question dominant models of mainstream culture. With the advent of the CNTs, women are also finding ways to use them to support their advocacy efforts. For example, women's groups in Mexico have found that electronic networking has facilitated their work in fighting NAFTA. Groups are also appearing that help women gain access and training. For example, WON, the Women's Online Network, is an on-line advocacy and action group which is sponsored by various women's groups.

Women are taking new steps and increasingly moving in new directions by networking electronically ... these days it is not unusual to see women's networks and organizations making the most of new information and communication tools to get their message out and make their voices heard." The Tribune, a women and development quarterly, International Women's Tribune Centre, Newsletter 55, September 1996)

The new media are a logical extension of alternative forms of media previously used by women. They have characteristics similar to those of the alternative media, and suited to the needs of women's networks because of their decentralized and horizontal nature. The essential difference from the mainstream media is their relation to space. The challenge is to maintain the Internet as an open communication system with democratic access to information and not as a centrally controlled medium. For women's organizations, this may mean establishing and defining their own spaces or influencing the character of on-line culture in favour of gender balance and non-discrimination. [28]

What did the Fourth World Conference on Women say about electronic networking?

Recognizing the speed and importance of technological changes in electronic communications, the PfA adopted by consensus in Beijing called on organizations at all levels to increase the participation and access of women to expression and decision-making in and through the media and new technologies as a means of strengthening women's participation in democratic processes.

The PfA identified the need for access, training and network development for women. Chapter J, "Women and the Media", specified that:

Women should be empowered by enhancing their skills, knowledge and access to the information technology. This will strengthen their ability to combat negative portrayals of women internationally and to challenge instances of abuse of power of an increasingly important industry... Women therefore need to be involved in decision-making regarding the development of the new technologies in order to participate fully in their growth and impact. [29]

The Platform called on international organizations, Governments, media systems, NGOs and media professional organizations to increase the participation and access of women to expression and decision-making in and through the media and new technologies of communication.

Concerned about the image of women projected in the media, participants at the FWCW agreed that "print and electronic media in most countries do not provide a balanced picture of women's diverse lives and contributions to society in a changing world." [30] The PfA called for a "balanced portrayal of women and girls in their multiple roles" and encouraged the "use of non-stereotyped, balanced and diverse images of women in the media". [31]

The PfA also requested the mass media and advertising organizations "to develop, consistent with freedom of expression, professional guidelines and codes of conduct and other forms of self- regulation to promote the presentation of non-stereotyped images of women" and "that address violent, degrading or pornographic materials concerning women ... ".[32]

At its fortieth session, in March 1996, the United Nations Commission on the Status of Women (CSW), the main intergovernmental body focusing on women, and delegates, experts and NGOs examined the measures proposed in the PfA and agreed that advances in information technology had opened up boundaries. It was agreed that the role of women in global communication networks needed to be strengthened, and that barriers to information technology and to women's involvement at every level of its development should be reduced. [33] These conclusions were subsequently endorsed by the Economic and Social Council.

Notably, several organizations and bodies held meetings in this field in preparation for the Beijing Conference. One important gathering to assess strategies and plans for using electronic networking was held in Bangkok from 12 to 17 February 1994. The "Women Empowering Communication" conference was sponsored by the World Association for Christian Communication (WACC) in association with ISIS International and the International Women's Tribune Centre (IWTC). More than 400 women from over 80 countries participated. As a result of the meeting, the Bangkok Declaration was adopted, which emphasized strengthening women's communication networks. [34]

UNESCO convened an international symposium on "Women and the Media: access to expression and decision-making" in Toronto, Canada, from 28 February to 3 March 1995. A Platform for Action was adopted which stressed the need for greater involvement of women in both the technical and decision-making areas of communication and media. The symposium was attended by over 170 media professionals from more than 70 countries, and its results served as an important input to the negotiations on women and the media at Beijing. Following the Conference, UNESCO and the Society for International Development are studying the culture of the Internet and its potential as an effective tool for women. The project, "Women and Cyberculture", analyses the impact of globalized communications from a gender perspective.

Sexual harassment is also identified in Chapter J of the PfA as one of the acts of gender-based violence encompassed under the critical area "Violence against women". On the Internet, harassment presents an important issue for women. It has occurred in both public forums and private E-mail. It takes different forms and can be subtle, such as personal questions directed to a woman, or blatant, such as sexual propositions to women via E-mail. [35] The Internet neutralizes social status indicators such as appearance, voice, organizational hierarchy and often sex. This anonymity seems to encourage certain individuals to act with fewer inhibitions than they would face to face and remains a disturbing problem.

Conclusions

Electronic networking is being discovered by women as a useful medium for gaining access to information globally and for interacting quickly with people in many parts of the world, something which was not possible just a few years ago. Increasingly, networking is viewed as a tool for feminist empowerment. Clearly, however, the cost of equipment, lack of training and the hazards and irritation that some women have encountered on line, as well as the limitations women face in allocating time to networking activities, are obstacles yet to be overcome in many parts of the world.

At the FWCW, which served to bring women from all parts of the globe together, including through electronic networking, the call was for greater participation by women in the use of the new technologies.

To this end, networks need to be strengthened to help women overcome some of these obstacles and to access information disseminated electronically through traditional media as well as to provide training and assistance in direct use of the Internet. Some of the existing networks in this regard include the Network of East-West Women for Eastern and Central Europe, FemNet in Africa, Laneta in Mexico, ALAI in Latin America, Virtual Sisterhood in North America, and the APC networks, which operate globally. The United Nations is developing WomenWatch as part of the global effort to give women better access to electronic communications (see WomenWatch below).

The information revolution offers both opportunities and challenges to women. Lessons from efforts to make the traditional media more gender- sensitive offer some lessons for women in order for them to participate actively in the development of the new communication technologies. If used effectively, these new technologies have the potential to help women step out of their isolation and to support the growing globalization of the women's movement.

Many bodies in the United Nations system are continuing efforts to study the impact of the information revolution,taking into account the results of recent global conferences, including the Beijing Conference,and to make effective use of the new technologies for monitoring follow-up to these events. The System-Wide Medium-Term Plan for the Advancement of Women, 1996-2001 is one tool being used by the UN system to support implementation of the PfA adopted at Beijing. The Commission on the Status of Women and the Economic and Social Council of the United Nations will review implementation of the goals of the PfA in 1998 and 2000. Along with Governments, women's groups and the media, the United Nations is seeking to take advantage of the information superhighway to increase awareness of the global agenda as agreed at these conferences and to stimulate discussion and action on a global scale.

WomenWatch: United Nations Internet Initiative in the Follow-up to the FWCW

In the follow-up to the FWCW, the United Nations is continuing to provide information electronically on global women's issues, an effort which began during the Conference. It also is examining the various ways by which women and women's groups can expand their capacity to use the information superhighway to network with interested individuals and organizations around the world. A major initiative in this regard is WomenWatch, a joint project of the three entities in the United Nations system specifically mandated to focus on women's issues, i.e., the Division for the Advancement of Women, the United Nations Development Fund for Women and the International Training and Research Institute for Women. The purpose of the project is to make information and data on global women's issues widely available in a cost-effective manner. Not a substitute for other forms of communication, the project nevertheless aims to make effective and appropriate use of the new communications media in the follow-up to the Fourth World Conference on Women.

In June, an expert workshop on "Global Information through Computer Networking Technology in the Follow-up to the Fourth World Conference on Women" was convened by the cooperating partners in the joint WomenWatch project. The Workshop took place at United Nations Headquarters in New York. It resulted in recommendations for the development of WomenWatch and related electronic information networks on global women's issues. Forty-four Internet users and potential users from both developed and developing countries participated, including non-governmental organizations concerned with women's advocacy and United Nations partners in the use of computer networking technology. Participants held wide-ranging discussions on three broad themes: (a) experience and best practices with electronic computer networking technology and its use as a tool for follow-up to the FWCW and related conferences; (b) improving access, training and links with other communication tools and networks, and (c) principles for cooperation between NGOs and the United Nations in the conceptualization and implementation of the WomenWatch project. The discussions provided information and insights from the perspective of various regions, expertise and organizations represented at the workshop.

Noting that women, both as users and producers, were underrepresented in electronic communication networking, it was considered essential for women to develop strategies to use computer networking to their advantage. While noting the problems of access in many parts of the world, the workshop confirmed that the Internet was an important potential tool for making women's voices heard and for enabling women to disseminate and exchange information.

Experts stressed that global electronic communications tools were important for advocacy and mobilization and formed part of a broader advocacy programme to achieve the objective of women's empowerment. It was suggested that there were three priorities for WomenWatch: providing vital information, serving as an organizing tool and facilitating outreach activities. The importance of organizing the resource base for easy access and linking to other information resources was emphasized.

Participants underlined the value and potential of tools such as the WWW for raising awareness and educating users in the North, but emphasized that, given disparities in access across urban/rural, class, gender, age, ethnic and North/South lines, it was important to also consider off-line distribution strategies. These include repackaging strategies and E-mail query tools to access information available on the Web. In this regard, E-mail was recognized as the primary working tool for the majority of women users of electronic communication systems.

It was recommended that parallel and linked processes be established for envisioning and building a beyond-Beijing on-line initiative. Partners in WomenWatch should include the media, the private sector, NGOs, women's organizations, United Nations entities, Governments, academics, libraries, redistributors, funders and new users.

The experts attending the workshop concluded that the United Nations has an important role to play in promoting greater understanding and use of computer networks by women and in providing information about the FWCW and its implementation through electronic means.

Taking into consideration the recommendations of the Workshop, a key aspect of WomenWatch will be to define the need for and coordinate electronic conferencing and bulletin boards to facilitate interactive feedback with users. Internet query mechanisms will also be established for E-mail-only users. The information will be organized in an Internet-accessible database to allow users in developing countries who do not have direct access to all Internet tools to retrieve the information. WomenWatch will develop partnerships with various groups that repackage and redisseminate information to women's organizations and resource centres in locations with no Internet access. It will also work closely with organizations that provide training for women in the use of the new technologies.

The WomenWatch Committee will liaise with the United Nations Department of Public Information to develop and implement a strategy to publicize WomenWatch and coordinate with the development of the United Nations home page.

Participants at the recent United Nations workshop on computer networking technologies recommended, inter alia that there be a global women's conference on line in the year 2000 to review implementation of the Beijing Platform for Action. What do you think of this idea? Send your ideas to the UN Division for the Advancement of Women via Internet: daw@un.org, or write: Division for the Advancement of Women, Room DC-2 1216, United Nations, New York, NY 10017.

For copies of the Report of the United Nations Workshop on Information Dissemination through Computer Networking Technologies in the Follow-up to the FWCW and of Women 2000, visit the DAW web site: http://www.un.org/dpcsd/daw/dawnew.htm or by E-mail to: daw@un.org

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Key Terms to Know

Computer networking technologies (CNTs): The various tools being developed for electronic dissemination of information.

Domain: A method of identifying computer addresses on the Internet. Typically the name of an institution or entity followed by a "dot" and an abbreviation, e.g., "gov" for governments, 'edu" for educational institutions, "com" for companies, "net" for networks or "org" for organizations.

Electronic conference or bulletin board: A collection of messages related to a particular topic.

Electronic mailing list (also called Listserv): A list of E-mail addresses of people who regularly communicate with each other. You can subscribe to receive messages automatically by sending a request via electronic mail to a specified address.

E-mail: Short for "electronic mail", it's like a letter, a message that one person can send and have received almost instantaneously by someone anywhere in the world via computers and modems using telephone lines.

Gopher: A menu system that organizes and provides easy access to information available on the Internet. The gopher can help you locate information, download files and search databases.

Home page: A Web screen that acts as a starting point. A user can go from a home page to multiple sites across the world's computer networks.

HTTP (Hypertext transfer protocol): The Internet standard that enables information to be distributed across the Web using hypertext markup language (HTML) to upload information.

Internet (The Net): A global network of computers that makes it possible to share information electronically. It offers both one-way communication and "virtual" interactive communication. It allows networking, conferencing, commercial transactions, shopping, banking and publishing. The most popular uses of the Net are E-mail and the World Wide Web (WWW).

Modem: Either an internal or external attachment to your computer that allows you to transmit or receive data through your phone lines. The name is short for modulator-demodulator.

Newsgroup: a single forum for discussion on Usernet. A newsgroup's name denotes the appropriate topic of conversation in that newsgroup. For instance, "comp.sys.mac.comm" is for discussion of communications on the Macintosh computer system; "sci.physics.research" is for discussion of research in physics. The contents of a newsgroup consist of postings -- individual messages, submitted from anywhere on the Internet.

On line: On or actively connected to a computer network.

Logging on: Connecting to a computer network.

URL (Universal Resource Locators): On the World Wide Web, a URL can be thought of as a road map for accessing a specific resource, such as a Web page or gopher site. URLs express the type of resource to be accessed, the specific site where the information is stored and where at the site the information is located. Many URLs begin with the characters http://, gopher://, or ftp://.

Web browser: Enables users of the Internet to discover, retrieve and display documents and data available on the WWW. Web browsers allow the user to view selectively hypertext documents, access powerful text-searching tools, listen to sound files, and view graphics, animation and video across the Internet.

World Wide Web (WWW): Originally a project developed by CERN (European Laboratory for Particle Physics) for sharing information within internationally dispersed teams over computer networks. It allows text and graphics to be shared with anyone else on the network. The WWW is one of the fastest growing areas in the field of computer-mediated communications. It is estimated that there are over 400,000 Web sites.

- Sources:
- US News and World Report, 13 November 1995
- UNICEF exhibition: "Summitry Works: Words into Action"
- Internet Corner
- Multimedia Online
- The Tribune, Newsletter 55, International Women's Tribune Center, New York, September 1996.

- Computer NewsNote, IWTC publication, New York.

Did You Know?

Historically, the creation and development of the computer industry was dominated by men. There were nevertheless a few women pioneers in this field, for example:

Edith Clarke (1883-1959)

Clarke filed a patent for a "graphical calculator" and contributed to simplifying and reducing the time spent in laborious calculations in solving problems in the design and operation of electrical power systems.

Grace Murray Hopper (1906-1992)

Hopper was called "Amazing Grace" because of her outstanding achievement in the computer field. One of her contributions is the invention of COBOL, the first user-friendly business software program, which is still in use.

Source: "Past Notable Women of Computing"
(http://www.cs.yale.edu/HTML/YALE/CS/HyPlans/tap/past-women.html#Grace)

Selected Bookmarks on Women's Issues

African women's issues
http://www.africaonline.com/AfricaOnline/women.html

ALAI's Women's Program
http://www.ecuanex.apc.org/alai/comgenen.html

A Web of One's Own
http://www.reference.be/womweb/"

Computers and the Communication of Gender
http://www.itcs.com/elawley/gender.html

Ebben, Kramarae "Creating a Cyberspace of your Own"
http://gertrude.art.uiuc.edu/wits/introduction.html

FinFo: Finnish Woman
http://www.vn.fi/vn/um/finfo/english/finwoman.html

Gender and Technology (CPSR)
http://cpsr.org/dox/program/gender/index.html

Gender and the Web
http://www.scu.edu.au/ausweb95/papers/sociology/chua

Gender in Cyberspace
http://sunsite.unc.edu/cmc/mag/1995/feb/last.html

Hoffman, Kalsbeek and Novak, "Internet Survey"
http://www2000.ogsm.vanderbilt.edu/baseline/1995.Internet.estimates.html

Il Paese de la Donne. Women from Italy .
http://relay.isinet.iunet.it/PdD

International Network of Women in Technology
http://www.witi.com La Mujer- Peruana
http://ichu.rcp.net.pe/MUJER

LANETA, Red de Mujeres, Mexico
http://laneta.apc.org

Leading to Beijing: Voices of Global Women
http://www.cee.umn.edu:80/radiok/beijing

Network of East-West Women
http://www.igc.apc.org/neww/

NGO Forum on Women'95
http://www.igc.apc.org/womensnet/beijing/forum/forum.html

OneWorld Online
http://www.oneworld.org

Russian Feminism Resources Home Page
http://www.geocities.com/Athens/2533/russfem.html

"The Accidental Superhighway" A Survey of the Internet. The Economist.
http://www.economist.com/surveys/internet/index.html

The Association for Women in Computing
http://www.halcyon.com/monih/awc.html

Virtual Sisterhood
http://www.igc.org/vsister/

Web-sters Network: Women in Info Technology
http://lucien.berkeley.edu/women_in_it.html

Women and Computer Science (Including collection of photographs)
http://www.ai.mit.edu/people/ellens/gender.html

Women: Computing and Networking
http://tampico.cso.uiuc.edu/~gressley/women/

Women for women in Bosnia
http://embassy.org/wwbosnia/wwbosnia.html

Women in decision-making. The European Network.
http://www.reference.be/wo-mancracy

Women's Online Media. Japan
http://tsuru.suehiro.nakano.tokyo.jp/WOM/index.html

WomenzNet, Australia
http://www.womenz.net.au

Notable Events

DAW
Expert Group Meeting "Women and Economic Decision-Making in International
Financial Institutions and Transnational Corporations"
Simmons College
Boston, Massachusetts
11-15 November 1996

World Food Summit
Food and Agriculture Organization of the United Nations (FAO)
Rome, Italy
13-17 November 1996

AW/UNFPA/DSD
Expert Group Meeting "Women, Population and Sustainable Development:
The Road from Rio, Cairo and Beijing"
INSTRAW
Santo Domingo
18-22 November 1996

Expert Group Meeting "Vocational Training and Lifelong Learning of Women"
International Training Centre, ILO
Turin, Italy
2-6 December 1996

Committee on the Elimination of Discrimination against Women
16th session
UNHQ, New York
13-31 January 1997

Micro Summit
Grameen Bank, World Bank, Citibank, UNDP, Women's World Banking
Washington, D.C.
2-4 February 1997

IPU Symposium - "Towards Partnership between Men and Women in Politics"
New Delhi
10-14 February 1997

Commission on the Status of Women
UNHQ, New York
10-21 March 1997