

The Net Bypasses the Third World

Uwe Afemann

Almost all studies of telecommunications describe information technology (IT) and the internet as a way to enable the developing nations too to leap into the information age, thereby overcoming poverty and opening up economic progress for all. In the Okinawa Charter on use of the internet at the last G7/G8 conference on Okinawa in July 2000, the rich industrial nations renewed their promise to the third world to provide aid and credits to bridge the digital gap between the poor South and the rich North.

In cooperation with international institutions, there have been numerous initiatives over the past ten years to spread the use of new communications technologies in the nations of the South. But one must not overlook the self-interest of the rich industrial nations, since it is largely in the interest of the big multinationals to try to reserve a piece of the billion-dollar-plus pie of the communications sector.

In its 1999 report on human development the United Nations Development Program (UNDP) states that more than 80 nations are worse off today than they were ten years ago. Even the number of the least-developed countries is likely to rise within

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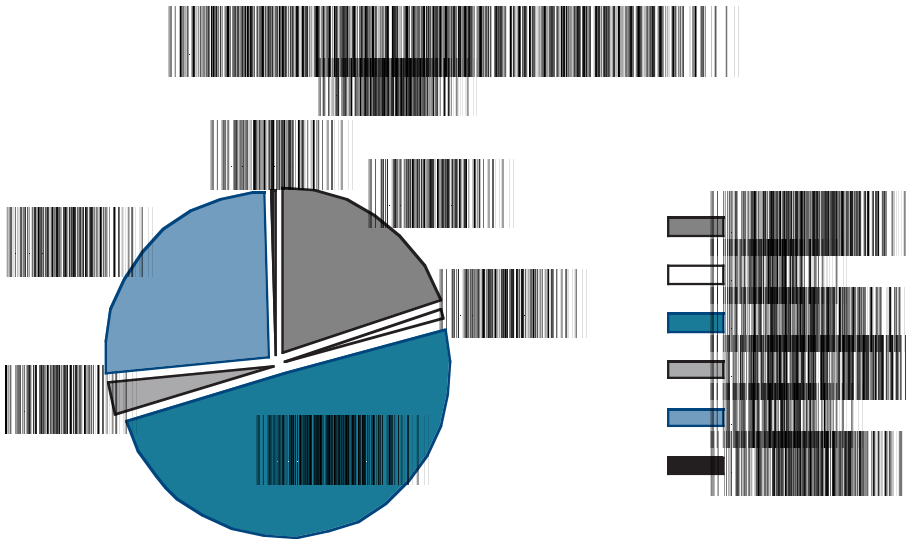
the next several years. Clearly there are a number of factors at work here. But there used to be a hope that the web itself, the new communications technologies, and globalization would be able to improve the position of the developing world. Back in the 1970s the introduction of communications media like the telephone, television for long-distance education, and satellites was promoted in developing nations. But it quickly became obvious which social groups benefited from their introduction: the phone companies and other producers of communications technologies, the banks that made loans available to finance the new infrastructure, and the local administrative elites, who were the first to use the new technologies.

With only 10 percent of the world's population, the G7 nations still have 85.3 percent of all internet hosts. With more than 40 percent of the world's population, the largest nations of the third world, China, India, Brazil, and Nigeria, jointly own only 0.75 percent of all hosts. In most developing countries comprehensive access to the internet and its accessory services is available only in the capitals. With the exception of the Republic of South Africa and Senegal, rural Africa does not have access to the internet. Most third-world nations are connected to the world wide web via satellite in the United States—and this generates income for the United States.

Internet Users

In March 2000, 275.5 million people used the internet. This equals approximately 4.78 percent of the world population. 40 percent of all North Americans, 15 percent of all Germans—but only 0.7 percent of Chinese. By and large, internet users are affluent, young, urban, and male. Worldwide, only 17 percent of women are internet users. This profile of typi-

oping nations these conditions are the exception rather than the rule. The average density of phone lines in developing countries is 5.2 per 100 inhabitants, while the industrial nations have a phone-line density of 54. In developing nations most telephone lines are in urban areas, and, to make matters worse, 50 percent of available phone lines in Africa are concentrated on the capitals, although only 10 percent of the population lives there.



cal internet users is further confirmed by a May 1999 poll of Latin American web users. According to this poll, 67 percent of users are between 18 and 34; 78 percent are male; 78 percent have a university degree, and 61 percent own a credit card.

There are three preconditions for internet access: a phone line, a computer with a modem, and a power supply to run the computer. In devel-

What is more, 90 percent of all of Africa's phone lines are located in the Republic of South Africa.

The situation is exacerbated by the poor quality of phone lines, because access to the internet via phone lines is possible only if the quality of the lines is fairly good. The rate of annual line problems per 100 lines in sub-Saharan Africa is 116, while it is only 7.4 in the industrial nations.

The G7 states combined own two thirds of all personal computers . In Africa a meager 0.76 percent of the population owns a PC, while in many countries not even one person in a thousand has access to a PC. In Asia as a whole, 2,12 percent of the population own a PC, though in India only 0.27 percent do.

The third precondition for internet access, the availability of power, can often be an insurmountable problem in the developing world. The lack of a reliable power supply, frequent power failures in the cities, and the complete lack of rural electrification is characteristic for many developing countries. In Africa 70 percent of the population in rural areas lives without any access to power, and more than half of all homes on the Indian subcontinent are without electricity.

Beyond the lack of infrastructure, cost is another obstacle to internet access. Here one must distinguish between the cost of hardware, software, internet access fees, and telephone tolls. Hardware and software for computers, as well as net components, must be imported from the North for expensive hard currency. But even if the startup costs were covered by donations from the industrial countries, getting spare parts would be an almost insurmountable problem. They are either horrendously expensive or they can't be procured any longer because of rapid technological development. Even if the absolute costs are similar - an average computer including a modem costs about \$2,000—a Bangladeshi must spend more than eight times his annual salary, while an

American spends only one month's salary for it. Internet fees weigh in very much like the purchasing costs for a computer. The monthly fees are also unaffordable for the majority of the population in developing countries: in Peru, for example, monthly costs are approximately \$18, in India \$35, in Africa \$58.

Privatization and Liberalization

One suggestion for improving the situation is to privatize the telephone companies, which are mostly state-owned, and to open up the market for other providers as well. This, it is argued, would automatically lead to lower telephone fees and improve infrastructure. But experience shows that this is not always the result. In Argentina Spain's Telefonica and French Telecom have divided up the market; they own the Telintar company jointly and have replaced a state-owned monopoly with a private one. Because of this monopoly status, they charge prohibitive prices. One five megabit line costs more than \$15,000 per month, approximately ten times more than it would cost in the US.

For many developing countries, income from international phone connections from abroad creates the only source of hard currency revenue, since more calls are placed to developing countries than are placed from them. Foreign phone companies must therefore make compensation payments. All told, developing countries receive more than \$10 billion annually in such payments. These moneys permit the subsidization of rural

phone services. There are serious concerns that, after privatization, the further development of rural phone service would cease. This is particularly true for the least-developed countries, since addition of telephone services there does not increase profits; either people are too poor or they live so far away from the centers that installation costs become too high.

These fears have been confirmed, for example, in India. During an international bid for proposals of the Indian government for the improvement of the telephone infrastructure in 13 of 20 regions, no offers at all were made for eight regions. This is not surprising, since only 3 percent of all Indian telephone users account for 80 percent of telephone revenues.

Under the prevailing globalization trends, the opening of markets leads to further concentration in favor of the global players of the North. The ten largest phone companies control 86 percent of the world market, and the ten largest computer companies 70 percent of the market. How can one ensure access for people from developing countries and with very low incomes in spite of this trend? In its 1999 report on human development the World Development Program of the United Nations proposed the introduction of taxes for the use of e-mail at the rate of 1 cent per 100 mails. This would result in an annual income of 70 billion dollars, which could be used to build the information sector in developing nations.

Many developing nations have moved towards the joint (instead of individual) use of internet connec-

tions. For example, many countries have created cyber cafes, telecenters or *cabinas publicas*. Many view these as a chance to give poorer people access to the internet. But excessive euphoria must be warned against: "As with almost all developments surrounding the internet, it is simply too early to evaluate the effect of telecenters, for there is very little indication that telecenters can be expanded to areas where they cannot even cover their costs. In developing nations, this means they are limited only to the affluent urban regions.

Opportunities?

There are areas of application where the internet is generally considered to offer opportunities for overcoming underdevelopment. The most salient example is e-commerce, trade via the internet. Third-world firms are promised an increase in competitiveness, the ability to react more quickly to changes in the world market, and a window to global markets. Yet most of the developing nations depend on exporting their agricultural products, the results of monocultures, or on the export of their raw materials. Since the owners and managers of the huge farms, mines, or oil fields are largely multinationals, the profits of these exports usually do not benefit the native population. In addition, world market prices for most of these products are made not in the South, but in the North. Unequal trade relations and tariff barriers are another obstacle to

the improvement of living conditions of the people in developing countries.

Whether the internet actually effects an improvement in trade (either within a country or beyond its borders), remains a subject of controversy even in the industrialized nations. So far only a very few companies are managing to sell merchandise over the internet at a profit. Aside from a few teleshopping companies, only a few dozen internet sites manage to make a profit through income from advertising. In all countries, only the rich elite, affluent and well-educated city-dwellers who constitute half again as much as the offline public, are of any interest to e-commerce. As a result, given their very low income, the large majority of the people in developing nations do not interest internet shops. Moreover, high-income elites from the developing countries mirror the industrial nations in their consumption behavior and prefer buying directly in New York, Paris, or London. As the typical internet shopper in the North belongs to the rich, so internet shoppers from the South are also counted among the rich in their countries. The incomes of South African internet users are seven times that of the average South African, for example, and 90 percent of Latin American internet users come from higher-income strata of society.

Still, there are a number of possible niches for developing nations in internet trading. One such initiative was launched by PeopLink, a US-based non-governmental organization. With a \$158,000 loan from the World Bank, an internet portal was created

for artisans from nations of the third world, to offer their merchandise for sale in the industrial nations. Some participants were thus able to compensate for sinking income through alternative shops. Yet one searches the servers of the World Bank in vain for reports about such projects.

Lack of information is often cited as the main problem for businesses in the third world. Internet access would help most of these businesses improve their sales and revenue opportunities, it is said. Yet the case of Botswana shows that the need of businesses for information in the informal sector, which forms the basis of life for most people, is satisfied for the most part through informal, organic information systems, not through information systems created on the basis of new communications technologies.

Education and Training

The second large sector for which the internet is often praised as a panacea is that of education and training. As in industrialized nations, universities and other educational institutions in most developing nations use the internet to exchange information. At least theoretically, scholars and students from these countries have access to information that would otherwise be closed to them. Access to the libraries of the North via the internet could provide a true remedy to the dearth of books and current periodicals in libraries in developing nations. Yet in practice access is often limited to professors and is not available for students.

Another argument advanced for the use of the internet in the university sector is that it supposedly improves teaching quality and reduces costs. Yet here too a more recent study of the University of Illinois from late 1999 refutes these claims. According to this study, preparation for and accompaniment of these events cost more money and require more staff time; also, the start-up costs for purchasing and maintaining the necessary computer hardware requires enormous sums.

There are a number of essential preconditions for using the internet for general-education schools in developing nations. Worldwide, approximately 23 percent of all adults are illiterate. In countries like India or Nigeria the illiteracy rate is at 50 percent, even though India is often considered the prime example for successful software export, that is, for successful application of high tech. In addition, in many regions of the third world, poverty prevents children from attending school. Teachers have little or no training, as for example, in rural Peru. Many youths must work in order to assure the family's survival, so there is very little time for school. In Africa only 48 percent of all first-graders ever complete the fifth grade.

Can the use of computers in teaching and internet access in primary and secondary schools make a difference in this area? Even in the third world, many schools already do have internet access, but most of these are expensive private institutions. Those who push internet access are UN organizations in cooperation with businesses from

the hardware and software sectors. Their chief motive in promoting internet access is surely the opening up of new markets, for students who use computers at school are likely to want them at home as well.

Cultural Threats

Some 80 percent of all available information on the net is in English, yet the world has more than 6,000 different languages; only 470 million of the six billion people on this planet speak English. Other languages and cultures are in danger of being neglected. Some consider the spread of the internet as a second conquest and are already talking about the internet as a new Trojan horse—and about the danger that the values of the North could be transferred to the South via the internet. One countermeasure against the uncritical acceptance of northern consumer and cultural values would be the counterproduction of information from the South; that way, the South could retain its cultural integrity, its national values, and its identity.

Another linguistic concern has to do with the script of the written language. Written languages that are not based upon the Roman alphabet are at a disadvantage because of the use of the ASCII-7bit-code. The use of UNICODE and Mime messages might be able to remedy this. When Chinese symbols were introduced for computers in 1996 and Cyrillic symbols in 1997, this led to dynamic growth of local contents and to a steep increase of users from these countries.

Whether the developing world will manage to leap into the information age will thus depend not only on overcoming infrastructural weaknesses; it will also depend on the necessary investments being made in the educational and training sector. This means, first and foremost, reduction of illiteracy and strengthening of elementary-level education, strengthening of continuing education on a professional level, and organizational changes in education. Numerous studies show that providing technology alone has only a minimal effect on the economic productivity and improvement in the standard of living of people in the third world.

Just as in the industrialized nations, currently it is only the economic elite

in the developing nations that profits from the internet.

Clearly, radio and television will continue to be the main sources of information in the third world. With about 19 radios per 100 inhabitants, reaching about 60 percent of the population—compared to less than one computer per 100 inhabitants, shared by at most three users—radio continues to have big advantages over the new communications media. Before they can be connected to the internet, more underdeveloped regions must be electrified.

Yes, it is important to nurture computer skills in developing countries. But it is also important to understand the risks as well as the opportunities of these new technologies.

The German Council on Foreign Relations

Read all about it in the web:

<http://www.dgap.org/english/summary.htm>!