Plugging-in the Third World

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In Geneva, a ten-week conference beginning September 24, 1979, will be held under the auspices of the International Telecommunications Union (ITU). According to the London-based International Institute of Communications, "by the end of the century, no aspect of human society will fail to bear the imprint of the decisions made at the WARC of 1979" — the first general World Administrative Radio Conference (WARC) in twenty years, and the first one at which the less developed countries of the world (LDCs) will control the majority vote.

Decisions reached at WARC-79 will powerfully affect the types and volume of communications and computer equipment produced and sold throughout the world. WARC-79 will have the power to expedite or inhibit the flow of news internationally, as well as affect the transmission of television programs by satellite directly into home receivers. Transborder data flows — the lifelines of international banking and multi-national corporations—may be either expanded or restricted, made cheaper or more expensive. Communications on which military security and verification systems depend could be seriously affected. Improved access to information could quicken the rate of economic development in the Less Developed Countries and expand the volume of world trade; restricted access could lead to growing isolation of nations or groups of nations one from the other.

The dangers arise out of the LDC attack on the ITU practice of "first-come, first-served," whereby a frequency is allocated to the first country that applies for it. To charges of "cultural imperialism," the LDCs add claims that the developed countries hog the radio spectrum, which is a limited resource, and threaten to preempt use of geostationary orbits for satellites.[1] Under such circumstances, they say, the UNESCO principle that there should be a "free and *balanced* flow of information between nations" cannot be realized (emphasis added). For these reasons, many LDCs favor a fixed plan of country-by-country allotments, irrespective of current need or ability to use the resources assigned.

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1. Geostationary (or geosynchronous) satellites maintain their position over the equator relative to the earth. Although 22,300 miles high, they must be far apart to avoid electronic interference. Comsat estimates that geostationary satellites servicing the Northern Hemisphere should be four or five degrees apart, although the distance depends upon the size and sophistication of the "birds" in question. A relatively small number of big, sophisticated multipurpose satellites can utilize available frequencies more efficiently than a large number of small ones.

MIT's Professor Ithiel de Sola Pool has stated that the adoption of such political planning at WARC-79 would be a catastrophe. Senator Harrison Schmitt of New Mexico, a former astronaut, has suggested that the United States might form a new "user-based" organization to replace present international arrangements if such a fixed plan wins the day. "Frequency and space allocations under such an arrangement," he says, "could be based on capability, use and need rather than on nationalistic and political considerations."

There might seem to be an analogy between WARC-79 and the Law of the Sea Conference. The United States accepts the concept that the riches of the seabed — like radio waves — are a "common heritage of mankind." In effect, however, the United States has been able to say: "If you fellows make unreasonable demands, we'll go it alone. We have the technology, we have the capital, and you can't stop us."

The analogy is not, however, an apt one. First of all, no international agency yet exists for regulating extraction of minerals from the sea. The ITU, to the contrary, is the oldest of the U.N. specialized agencies,[2] and has so far been a model of international cooperation. Should it be destroyed or even weakened, all nations would suffer. Secondly, even if the other developed nations of the West were to join the United States in by-passing the ITU, which is very doubtful, refusal to accept the decisions reached by the majority at Geneva would probably be counterproductive. Much of the ether might well become a jumble of indistinguishable noise.

Working with its allies and the more democratic LDCs, the American delegation may be able to head off unreasonable demands at WARC-79 — but it cannot safely defy or ignore decisions once they are made.

Success at the Geneva Conference depends on the United States developing a national policy on international communications that will wed the requirements of the Third World with America's own legitimate interests.

Lack of U.S. Preparedness

At Nairobi two years ago, in a successful effort to postpone consideration of a Soviet-proposed resolution which would have sanctioned the principle of government censorship in international communications,[3] John Reinhardt,

2. The International Telegraph Union, the first international governmental organization, was established in 1865. In 1934 it merged with the International Radiotelegraph Union to become the International Telecommunications Union, and in 1947 the ITU became a specialized agency of the U.N.

3. The original resolution was called a "Draft Declaration on Fundamental Principles Governing the Use of the Mass Media in Strengthening Peace and International Understanding and in Combatting War Propaganda, Racism and Apartheid."

then Assistant Secretary of State for Public Affairs and head of the American UNESCO delegation, said that the United States "is determined to help develop and increase the means of communication among peoples." He said that America would "make available, through bilateral and multilateral channels, both private and governmental, assistance to other states in helping them to develop their mass media." The United States further pledged support "for efforts of developing countries which are seeking to establish and strengthen their own information and communication systems in line with their own needs."

It has not been easy to make good these promises. This is due in part to the fact that the U.S. government does not control most of the resources in question, which are in private hands. As an executive of one communications firm puts it: "The government was offering to give away something it didn't own." That is not the whole story, however. One key official told the author: "The government does not seem to be able to handle a situation like this. We will wait until a crisis develops and then it will be too late."

Structural anomalies within the U.S. government bureaucracy make it particularly difficult to handle the issues posed by WARC-79. In most industrially advanced countries, national institutions control telecommunications. Frequency management is centralized in the hands of government professionals who deal with their foreign counterparts year after year. Not so in the United States.

In the United States, the spectrum is divided between the public and the private sectors. It is estimated that forty separate government entities have some responsibility over communications, not including ad hoc bodies such as the U.S. Delegation to WARC-79, which is still in the process of formation. One of these is the Federal Communications Commission, which regulates the private sector and also represents its views on WARC, with the help of seventeen "Service Working Groups." Until it was abolished fairly recently, the Office of Telecommunications Policy, in the White House, coordinated the use of frequencies reserved for the public sector — mainly the Department of Defense, the State Department, the intelligence community, and the U.S. Information Agency (now the International Communication Agency), of which the Voice of America is a part.

In 1977, both the House and Senate held hearings on international communications. Among the major public figures and experts who testified, there was a clear consensus that WARC-79 and other upcoming conferences could have a powerful political, economic and social impact on America and the world. A well-conceived national policy would not only protect U.S. interests but win Third World support as well. Everyone agreed that such a national policy was lacking. In fact, no serious efforts were being made to resolve the

conflicts of interest that existed within the government, on the one hand, and between the government and the communications industry on the other.

In the Senate, hearings were held by the Foreign Relations Subcommittees on International Operations, under the chairmanship of George McGovern. In his testimony, the President of the Communications Workers of America, Glenn Watts, described the management of U.S. communications policy as a "crazy quilt." Professor Anthony Oettinger, chairman of Harvard University's Program on Information Resources Policy, spoke of the "shouting matches" at the FCC between representatives of public and private interests. Oettinger called for the creation of a "domestic forum" without which "there is no way we can develop a coherent and consistent viewpoint to present at any international meeting."

William Harley, President Emeritus of the National Association of Educational Broadcasters, stressed the urgent need to help Third World nations develop effective communications systems. Communication, he said, "is so badly out of balance on the international scene that it constitutes a very unhealthy situation for the world. I think that it is our responsibility to do what we can to redress this admittedly enormous imbalance of media transmission, and to do it by providing practical assistance."

At hearings before the Subcommittee on Communications of the House Interstate and Foreign Commerce Committee, witnesses were even more outspoken. Harold Kassens, a member of the Industry Advisory Committee to the FCC Steering Committee for WARC-79, complained that the FCC had refused to systematically monitor domestic use of the spectrum, in the absence of which it is impossible, he said, to determine the country's actual needs. Sidney Metzger, Chief Scientist at Comsat General, agreed. Metzger also complained that the State Department had failed to keep the industrial sector informed on its discussions with foreign governments. David Honig, Professor of Communications at Howard University, charged that, "Essentially a very small group of engineers, both on the [Federal Communications] Commission staff and on the Advisory Committees, is making foreign policy." Honig insisted that the public be brought in on the act. Seconding the motion was Phillip Rubin of the Corporation for Public Broadcasting.

Hearing that the FCC and the Office of Telecommunications Policy were involved in a tug of war, each demanding a larger share of the radio spectrum, Congresswoman Mikulski commented that "all this internecine turf warfare" discouraged her. "I am wondering," she said, "how we are going to go to the World Conference with some kind of unified United States position." Subcommittee Chairman Lionel van Deerlin summed up: "There is only one direction to go from here, and that is up."

More congressional hearings are planned. In the meantime, the structural

problems within the bureaucracy remain unresolved. In fact, many feel that the recent quietus of the Office of Telecommunications Policy, a victim of President Carter's reorganization of the White House, left the government without a logical focal point for hammering out a national policy on international communications.

The FCC, which ran into stiff and perhaps unreasonable criticism at the House hearings, has probably done as much as could be expected. It has taken evidence from scores of interested parties and published interim statements on the U.S. position for possible presentation at WARC-79. Nine "notices of inquiry" distributed by the FCC have solicited comment from industry and public interest groups. With the Office of Telecommunications Policy, whose functions have now been transferred to the National Telecommunications Information Agency in the Department of Commerce, the FCC developed five basic principles for the negotiations, stressing the need to maintain flexibility in anticipation of technological innovations.

The State Department, which received inputs from other government agencies and from the private sector via the FCC, is responsible for developing U.S. policy on international communications. To comprehend the scope of the issues facing our policy-makers, it is essential to grasp the pivotal importance of information technology in the world today.

The Information Age

The Office of Telecommunications in the U.S. Department of Commerce recently published a ten-volume study entitled "The Information Economy." According to its chief author, Dr. Marc Uri Porat, the findings show that in 1967 information services accounted for 46% of the U.S. gross national product, 40% of the labor force and 53% of all labor income.[4] The percentages are undoubtedly higher now and will continue to rise.

The Information Age has been ushered in by three technological developments: new transmission systems which exponentially increase the quantities of information that can be carried simultaneously; generations of still-breeding computers which process and store the information to be transmitted; and satellites which virtually eliminate distance as a cost factor.

4. The study, as Dr. Porat expected, is controversial. America's biggest industry — education — is considered an information activity. Telecommunications and computers are also placed entirely in the "primary information sector," along with printing, the mass media, advertising and accounting. The information components of other industries and services, including government, form a "secondary information sector." Dr. Porat believes that information activities may account for an even higher percentage of the Soviet economy, due to the USSR's vast planning and control mechanisms.

The technologies of communications and computerization have become so indistinguishable that a new word has been coined: "compunications."

The United States has led in the development of compunications, as it has in space technology. U.S. computer firms are far in the lead and reap half of their revenues from foreign sales. Spurred by the first Soviet sputnik, America created Comsat, the Communications Satellite Corporation, and Comsat gave birth to Intelsat, the International Telecommunications Satellite Consortium. Intelsat, with 103 member countries, now handles nearly two-thirds of transoceanic communications; demand for its services is expected to double within the next four years. In the development of coaxial cables, helical wave guides and — somewhat further down the road — laser beams that travel through optic fibers, the United States is not alone. In fact, the American share of world markets for telecommunications equipment, although still high, has been dropping.

Protectionism vs. Interdependence

Progress in international communications demands interdependence. Standardization is essential to maintaining momentum and holding down costs. Failure to reach acceptable compromises on the utilization of the spectrum and on the uses of outer space could lead to communications chaos. Unfortunately, the necessary international cooperation is threatened by growing protectionist sentiments, brought on in part by America's traditional dominance in these fields. Europe and Japan are concerned over their dependence on data banks located in America. The establishment by Japan or the European Economic Community of different specifications for compunications equipment would cut off markets and tend to isolate America from its closest allies. Satellites have reduced the real costs of transmitting information internationally, but decisions may nevertheless be taken by foreign governments to set higher rates, pushing up costs of American companies doing business abroad. Even now, for example, the cost of sending a signal from the United States up to a "bird" stationed over the Atlantic is likely to be just one-half that of the downlink to Europe. Intelsat itself, which is an international consortium managed but not controlled by Comsat, could lose the virtual monopoly it now enjoys. Intersputnik, the East bloc counterpart of Intelsat, has so far found few customers outside of Eastern Europe, but the Soviet Union could conceivably develop its new Statsionar satellite system to compete with Intelsat, and a price war is not out of the question.

If the most modern industrial societies have the most highly developed information systems, this does not mean that access to The Information Age need follow economic development. It may well be the other way around. At Senate

hearings in 1977, John Magee, President of the Cambridge think tank, Arthur D. Little, Inc., insisted that "telecommunications is more of a precondition than a consequence of industrial and social development." It is in the U.S. national interest, said Magee, to foster development of communications systems within the LDCs. "A telecommunications system makes it possible for a developing country to establish connections with the outside world. In our information-oriented world, this is essential. Without these connections, many poorer nations have little chance of developing into viable economies." The export of relatively cheap communications equipment appropriate to LDC needs does not carry with it the dangers common to technology transfers in many other areas. It creates jobs, not unemployment. It does not put the recipient country into business competing with U.S. products. On the contrary, the initial supply of telecommunications equipment almost inevitably assures large follow-on sales.

Can the United States be sufficiently imaginative and far-sighted to use its compunications technology to develop productive and cooperative relations with the LDCs? This is the key to success or failure at WARC-79.

Why WARC?

In many countries, particularly those in the underdeveloped areas, radio broadcasting is much the most important communications medium. It does not require a complex infrastructure. It reaches the literate and illiterate alike. It is relatively cheap. Short-wave broadcasts, in particular, cover vast areas at very little cost; they are used for internal communications in more than 100 countries, including Brazil, Canada, China, Indonesia, the Soviet Union, Zaire. Most international broadcasts travel by short wave.

The United States is the largest international broadcaster. There are four privately-financed American stations, as well as the worldwide Armed Forces Network, the Voice of America, Radio Free Europe and Radio Liberty. The latter two are jammed and thus require more frequencies to get through.

For these reasons, frequencies in the short-wave broadcast band will be most in demand. It may well be possible to make additional short-wave frequencies available. With the development of satellites and cable, many communication services have already moved out of short wave, thus freeing frequencies that can be allocated to the broadcast bands. But short wave has many uses besides broadcasting. The U.S. military wants to maintain and even expand its allocations. So do many of the LDCs who do not yet have, and/or cannot afford, the necessary satellite communications systems.

Important as it is, radio broadcasting is only one of the many uses of radio

waves and presently occupies a relatively small portion of the spectrum. Other uses include television, telephone, radar, data and teleprinter, communications between ships, aircraft, police and taxis, citizens band radio, and all forms of satellite communications. Military and other government users, particularly in the United States and the USSR, occupy large portions of the spectrum. International news agencies feed their subscribers via short wave as well as cable and satellite. International activities of U.S. corporations now account for one-third of their profits and the "transborder data flows" of banks and other multinational corporations provide essential information for their transactions. Frequently business is done via private communications networks such as Globecom (Citibank of New York) and SWIFT (Society for Worldwide Interbank Financial Telecommunications). In other words, the use of radio frequencies is vital to national security and business interests, as well as the transmission of information intended for public consumption, both inside and between countries. Broadcasting is particularly sensitive politically. As a medium of journalism, education and general culture, it raises highly controversial issues, both within individual societies, and on the international scene.

At WARC-79 for the first time in twenty years the whole spectrum of radio waves will be reapportioned. The last general WARC, in 1959, was dominated by the developed industrial nations; many of today's national entities did not yet exist. One hundred fifty-four countries are invited to attend WARC-79. Each nation has one vote: Chad's vote will count the same as that of the United States. WARC-79 will also set principles for the use of geo-stationary orbits, i.e., decide on parking rights for satellites which maintain their position relative to the earth over the equator. The delegates will be slicing up the pie in the sky, as well as the radio spectrum.

Recent experience suggests that the spectrum may well be divided up more on the principle of "me too" than on a rational basis. At 1974's Maritime WARC, the Third World countries combined forces to insist that countries without ships or shore lines be granted short-wave frequencies for maritime use. Last year, at another specialized WARC on satellite broadcasting in the newly-developed 12-gigahertz band, specific orbital slots and frequencies were granted to every country in Europe, Africa, Asia and Australia — including many who lack the technology to benefit from them. The principle of "prior consent" was admitted by the back door, since frequencies were assigned to individual countries for their own exclusive use. Thus, no country will have the unilateral right to broadcast via satellite in this band unless the governments of the receiving countries make the necessary frequencies available.[5] Conceivably,

5. The State Department has not yet submitted this agreement to the Senate for ratification.

unless the United States has its ducks in a row at WARC-79, similar technical decisions could result in restrictions in the free flow of information, perhaps in the short-wave bands. Any flow of information across borders — by banks, for example — could eventually be affected.

Some LDCs, with Colombia in the lead, are demanding that each country be given sovereign rights to the outer space over its territory. Landlord nations could then set up celestial parking spaces and charge fees for their use. Since this would benefit only those countries lying on the Equator, the proposal probably will not receive much support. However, the "Group of 77" — which now comprises more than 120 nations — has proposed that each ITU member be given at least one geostationary orbit.

An Action Program

If progress has been made since the 1977 hearings on Capitol Hill, it is due in large part to Congressional prodding, and particularly to the efforts of two Senate staffers. George Kroloff, of the Foreign Relations Commiteee staff, organized the McGovern subcommittee hearings.[6] In the fall of 1977, together with Senator Percy's Executive Assistant Scott Cohen, he produced a broad-ranging study of the problem and proposed a series of concrete steps for dealing with it. The report said, for example, that the United States should help the LDCs set up their own news agencies, instead of warning that the Third World News Pool, set up at the Colombo Conference in 1976, threatened the free flow of information — a danger which has so far not materialized. Kroloff and Cohen quoted a top ITU official as saying that "the change in U.S. diplomacy in the new administration gives the United States an opportunity to be more listened to than in the past."

Action has already been taken on some of the Kroloff/Cohen proposals. They suggested that the National Security Council appoint a coordinator on U.S. information policies. Henry Richardson, a foreign service officer, was given the job. His experience is in Africa, which Kroloff and Cohen saw as the key, because of its 50 votes within the ITU and other United Nations' bodies. They pressed the State Department to appoint the head of the U.S. Delegation to WARC-79. On January 6 — six months late — the Department named Glen Robinson, Professor of Law at the University of Virginia and a former FCC Commissioner. His delegation may eventually have as many as 60 members — with, some fear, many different approaches to international communications policy. Professor Robinson will continue teaching at Charlottesville throughout

6. Kroloff, who was Capitol Hill's leading expert on international communications, has recently left government service and joined the public relations firm, Ruder and Finn.

the 1978-79 academic year and will not come to the State Department full time until late spring.

Kroloff and Cohen also proposed that action be taken on promises of aid made by the U.S. delegation to the Third World at the Nairobi UNESCO Conference of 1976. The Agency for International Development and the American compunication industry, according to the Senate staffers' scenario, should develop plans for subsidizing the use of satellites and for providing the LDCs with inexpensive technology, including simple earth stations to receive satellite signals.

Through the spring and summer of 1978, the pace of preparations for UNESCO and WARC-79 quickened. Congress called upon the President to submit a report by January 20 describing the mechanism created for developing a comprehensive international communications policy and explaining the goals of that policy. Plans for worldwide cooperation were also discussed at a conference organized by the Aspen Institute, which took international communications policy out of the governmental closet and exposed it to public scrutiny. The conference was chaired by Dr. Marc Porat, author of "The Information Economy" and now Executive Director of the Institute's Program on Communications and Society. Key international figures attending were Asher DeLeon, director of UNESCO's Commission for the Study of Communications Problems, and D. R. Mankekar, Chairman of the Non-Aligned Press Agency. U.S. Administration decision-makers included Professor Glen Robinson, head of the U.S. delegation to WARC-79, Henry Geller, head of the National Telecommunications and Information Agency, and Barry Jagoda, Special Assistant to the President for Media and Public Affairs. Among the academics and media representatives were MIT's Professor Ithiel de Sola Pool and Elie Abel, Dean of the Columbia Graduate School of Journalism. Abel is the U.S. member on the UNESCO Commission for the Study of Communications Problems, which is scheduled to come up with its own series of proposals in mid-1979, shortly before the WARC delegates assemble in Geneva.

The Prospects Ahead

Whether America likes it or not, WARC-79 is likely to produce a New World Information Order. If the LDCs vote for confrontation then the WARC-79 could, as Professor Pool has warned, turn into a catastrophe. On the other hand, a recognition on both sides that our interests are mutual, that progress presupposes interdependence, could lay the groundwork for a global communications system which would give the Third World a sharp boost and benefit the United States as well.

Of course, there is more at stake than the North-South issues on which we have concentrated attention. The U.S. compunications industry is competing

fiercely with Japan and West Europe. There is no assurance that this competition can be set aside in favor of setting common objectives for the broader purpose of contributing to Third World development.

For different reasons, Soviet policy is a question mark. Antithetical in UNESCO, U.S. and Soviet objectives might be considered parallel at WARC-79. By far the largest users of the radio spectrum and the only powers which currently have a full array of space technology, the voices of the United States and the USSR would resound convincingly if raised in unison. Moscow has been making encouraging signs along these lines. Nevertheless, the Soviet government may opt to compete with Intelsat and it might reject cooperation with Washington in order to exploit anti-colonialist and anti-American sentiment among the LDCs. Also, since the USSR is a closed society, America is more dependent on space communications for its military security. Knowing this, Moscow might push measures intended to weaken U.S. security systems or to increase their costs.

The People's Republic of China will be represented in 1979 for the first time at a general WARC. It is expected to look after its own domestic interests but there may be some surprises.

Although cooperation with the Soviet Union and the industrial nations of the West is much to be desired, the United States has the most to offer and also the most to lose if things go wrong. At the UNESCO General Conference which opened last October 24 in Paris, John Reinhardt,[7] again head of the American delegation, said that the United States was dedicated to reducing the "information imbalance" by helping the poorer nations to develop their telecommunications systems. Traditional aid programs will be strengthened next year, he said, when a new U.S. Foundation for International Technological Cooperation is due to go into operation. He went on to announce two new projects which the Carter administration intends to propose to Congress:

— Funding of a $25 million satellite communications system, to be managed by the LDCs themselves, for the dissemination of educational and other information into rural areas;

— Funding of regional centers for professional education and training in journalism and broadcasting, to be staffed partly by Americans from the media and from academe working together with representatives of the Third World nations concerned.

7. The head of the delegation, John Reinhardt, is now Director of the newly-created International Communication Agency, the old U.S. Information Agency with the addition of the former State Department Bureau of Educational and Cultural Affairs. Assisting in the "development and execution of a comprehensive national policy on international communications" is a part of ICA's mandate.

Reinhardt also suggested the creation of a Consultative Group on International Communications Research, sponsored by UNESCO, the World Bank and the United Nations Development Program (UNDP), to coordinate existing bilateral and multilateral assistance programs.

After a slow and painful start, it appeared in Paris that a U.S. policy on international communications was taking shape. The ITU's principle of "first come, first served" remains a major hurdle. The LDCs will not be willing to give up demands for political planning of the radio spectrum and orbital satellite slots unless they have assurance that access to these resources will be available when they are ready to use them effectively.

In preparing for WARC-79, that is now the primary task facing U.S. policymakers: working out a formula which, while protecting vital American interests, will provide the Third World with the assurance it requires.