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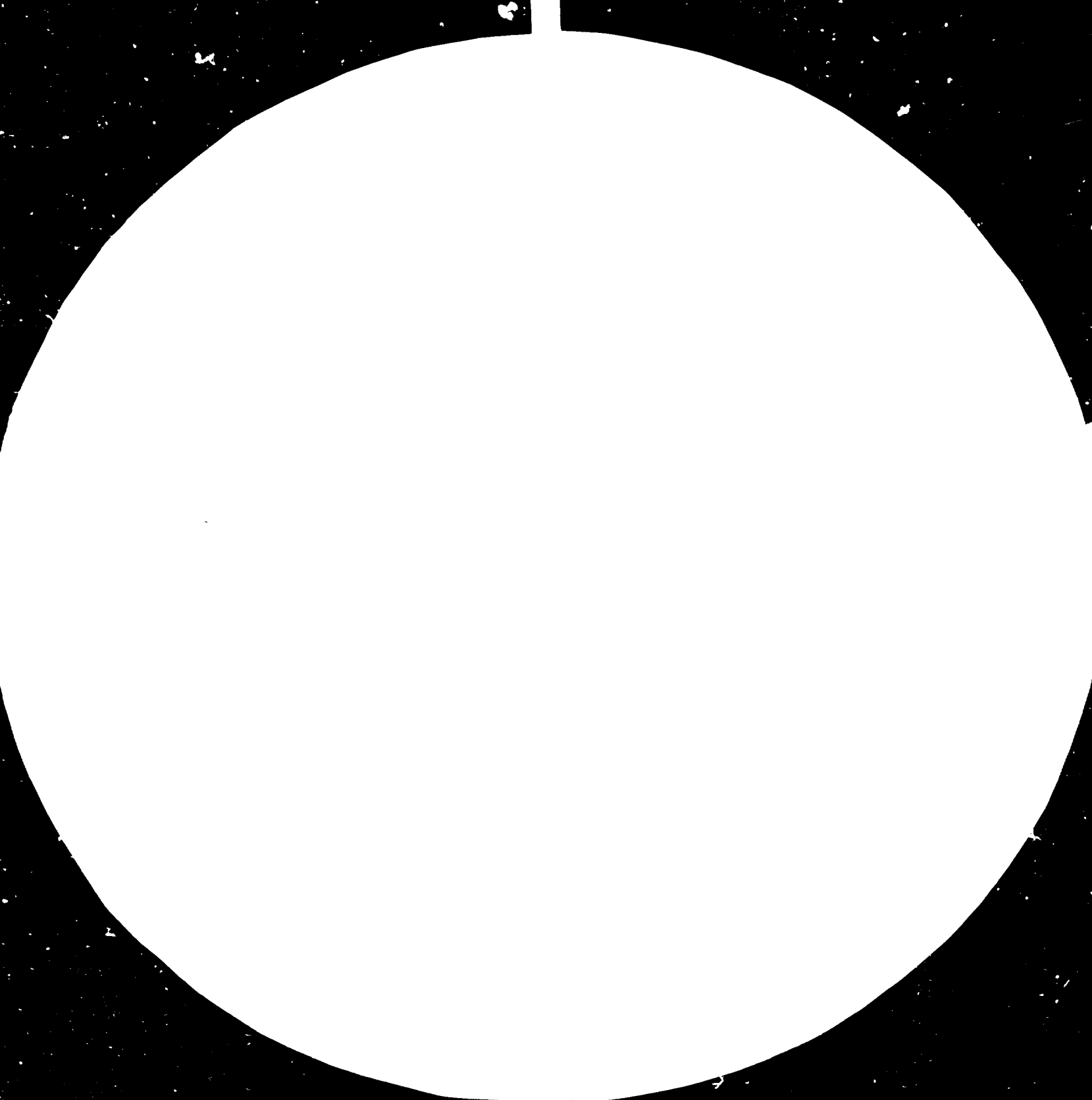

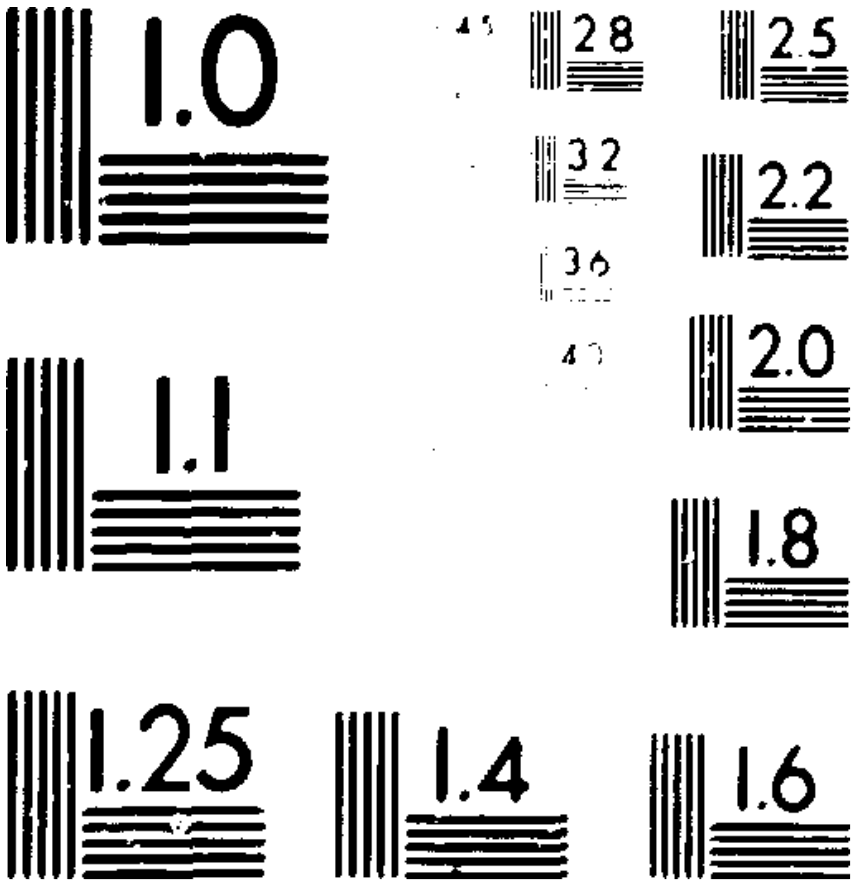

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SOME ACTIVITIES RELATED TO MICROELECTRONICS IN DEVELOPING COUNTRIES*

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The Council is a non-profit research, educational and publishing group founded in 1954 to promote the study and public understanding of critical economic and political problems of the peoples of the United States and other countries and to encourage constructive action in meeting such problems through national and international cooperation.

SOME ACTIVITIES RELATED TO MICROELECTRONICS IN DEVELOPING COUNTRIES

Catalog of Intelligence Sources on Microelectronics in North America

Under preparation is a catalog of some of the numerous and varied sources of technological and industrial intelligence on microelectronics in North America. The idea for the catalog grew out of the First Latin American Seminar on Microelectronics and Development organized by FLACSO (Facultad Latinoamericana de Ciencias Sociales)in Buenos Aires in December 1981 and a paper prepared for that Seminar by Ward Morehouse, President of the Council, entitled "The Third World in Silicon Valley: Technological Intelligence and Other Strategies for Enlarging Developing Country Access to Microelectronic Technology."

Materials thus far assembled for the catalog encompass a wide variety of public and proprietary sources of technological and industrial intelligence on microelectronics, including consulting firms with detailed knowledge of industrial applications of microelectronics. It is apparent that, even though some types of information about the most advanced technologies are closely held, there is a very substantial body of intelligence about microelectronics that is available through open sources or that can be acquired legitimately through proprietary sources for the payment of appropriate fees.

Some exploratory work has also been undertaken, in collaboration with the Innovation Research Group of the Brighton Polytechnic in Britain (which would be responsible for European coverage if some concrete activity along these lines were to materialize), on a "dynamic technology directory for developing countries on the semiconductor industry", which is further described in the preliminary outline attached.

Biotechnology Intelligence File and Information Exchange

This involves an effort to use computer-based information technology as applied to another area of advanced technology, namely biotechnology. The

Council is working in close collaboration with the International Center for Law in Development, a group of Third World lawyers and social scientists concerned with the impact of technology on socio-economic change in developing countries, in developing a decentralized Biotechnology Intelligence File, which would be based on an informal network of groups and institutions primarily in the Third World but with some industrialized country participation, concerned with legal and socio-economic aspects of biotechnology.

The project is still in its formative stages. The first steps toward creating a biotechnology intelligence file have been taken by the joint ICLD/CIPA Biotechnology Group in New York. A series of workshops on legal and socio-economic aspects of biotechnology are being held in different parts of the Third World (e.g., Mexico, Brazil, India, Philippines) to identify issues and categories of information that should be included in the File and to work out mechanisms and procedures for sharing data.

Other Applications of Microelectronic Technology

The Council provides secretariat services to the Intermediate Technology Development Group of North America, which in turn has been involved in assisting a small British electronics firm, Fairford Electronics, in introducing its energy-saving digital motor control technology to the North American market. This technology is highly relevant to developing countries, where, by and large, industrial use of electrical energy has not made the same advances in efficiency as have occurred in the industrialized countries over the past decade. Fairford Electronics is interested in exploring possible joint ventures in developing countries. The attached article from Development Forum describes the technology briefly.

Related is the use of a small computer (Apple) in providing a low-cost computer-aided design capability for hand looms. One of the consequences is to increase markedly worker productivity with a relatively modest capital investment. The attached case on AVL Looms from the ITDG Handbook of Tools for Community Economic Change gives further details.

Research Studies and Surveys

The Council and its staff have been involved in several different studies and surveys related to the application of microelectronics in developing countries. Thus, Ward Morehouse co-authored with Ravi Chopra a study of government policy and industrial development in electronics in India entitled Chicken and Egg: Electronics and Social Change in India; this study has been published by the Research Policy Institute at the University of Lund in Sweden.

Also co-authored by Morehouse and Chopra is a study prepared for the United Nations Institute for Training and Research (UNITAR) on Frontier Technologies, Developing Countries, and the United Nations System After Vienna (UNITAR Science and Technology Working Paper Series No. 12, 1981), an analysis of the impact of technological trends in industrialized countries on developing countries in relation

to the UN Conference on Science and Technology for Development Programme of Action and policies and activities in science and technology by the United Nations System.

The Council has also undertaken several studies for the UN Centre on Transnational Corporations on microelectronics and related advanced technologies. For example, profiles or dossiers on some 15 North American semiconductor companies were prepared in 1980. And in 1981, the Council undertook a study of transnational corporations and renewable energy technology.