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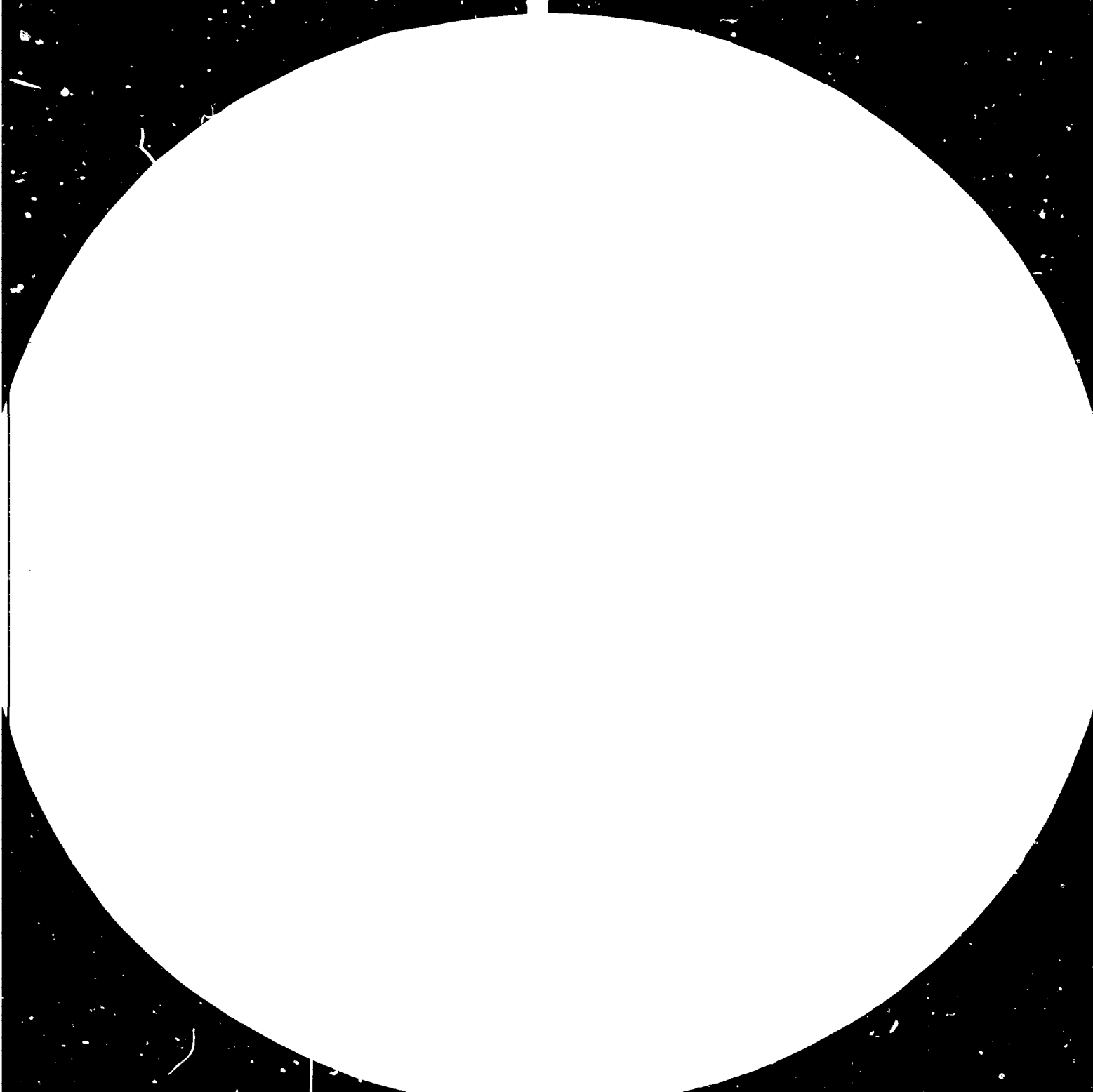
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UNIDO

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

VIENNA INTERNATIONAL CENTRE

P.O. BOX 300, A-1400 VIENNA, AUSTRIA

TELEPHONE: 26 310 TELEGRAPHIC ADDRESS: UNIDO VIENNA TELEX: 135612

11344

REFERENCE: 453/20

11 May 1981

A I D E M E M O I R E

EXCHANGE OF VIEWS WITH EXPERTS ON THE IMPLICATIONS
OF TECHNOLOGICAL ADVANCES IN MICRO-ELECTRONICS FOR
DEVELOPING COUNTRIES

Vienna, Austria
10 to 12 June 1981

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I. Background

The currently emerging technological breakthroughs have important implications for the growth and life-styles of the developed and developing economies. In the words of the report of the United Nations Conference on Science and Technology for Development:

"There are also a number of the rapidly developing fields in science and technology which are going to have a significant impact on the longer term development problems which will face humanity in the years ahead. These include the broad spectrum of activities relating to satellite technology, computer communications, micro-processing and electronics, and information science in general. Other areas which are attracting growing attention are activities in the field of non-conventional generation of energy, particularly in thermal nuclear fusion research, solar energy and the use of alcohol as fuel; in the field of biology, including bio-technologies, genetic engineering, enzyme technology and in the marine sciences, including ocean eco-systems, etc. Research and development in these areas may well provide major breakthroughs which could have great significance for humanity in both developed and developing countries. All these developments, especially the new

ones, should be pursued, evaluating attentively the risks for health and environment and preventing their misuse. Developing countries should also build or strengthen national and/or regional research centres in these or other such frontier areas to enable them to participate fully in the march of science, leap-frogging where possible."

The relevance of such technology breakthroughs for developing countries needs greater attention. The potential as well as the possible adverse effects of such technologies have to be examined. In particular, there is a need to identify those elements of technological advances that could contribute to a more rapid fulfilment of the basic needs of the masses of the population in developing countries. Moreover, the conventional route for developing countries to benefit from technological breakthroughs is through their initial adoption in developed countries in a form most suited to them, rather than to the developing countries themselves. The question has to be asked whether the major advances of technology could not be applied direct in line with the needs of developing countries. It should also be remembered that such technologies in developed countries will be increasingly capital-intensive while in many developing countries with mounting problems of unemployment it is the labour-intensive technologies that have to be applied.

There is a need to sensitize policy makers, senior officials and in certain respects the scientists and technicians in developing countries to the implications of the technological advances that have just emerged or are in the offing. Such a sensitization, based on in-depth examination of the potentials and implications of the technologies from the viewpoint of the developing countries would enable a more conscious and rational choice of technologies from now on and also planning the requisite technological capabilities to apply such technologies, wherever appropriate.

UNIDO has initiated in-depth studies on the implications of emerging technological breakthroughs for developing countries in selected subject areas. The studies in those sectors are expected

to provide the basic material for an international meeting, to be called International Forum on Technological Advances, where the implications for developing countries will first be discussed by experts and the policy issues arising therefrom examined in a meeting of ministers. Based on the results of the technical and ministerial-level meetings further follow-up measures will be undertaken.

The present consultations specifically relate to micro-electronics and are part of the overall programme of UNIDO on technological advances.

II. Objectives of the meeting

The United Nations Industrial Development Organization (UNIDO) is organizing an informal meeting to exchange views with experts who have undertaken relevant research, with representatives of the industry as well as development specialists on the implications of the technological advances in micro-electronics for developing countries; the meeting will be held in Vienna at UNIDO headquarters in the Vienna International Centre from 10-12 June 1981.

The meeting will cover a review of the state-of-the-art of the technological advances in the industry; applications in industrial sectors and trends anticipated; requirements in developing countries for developing technological capabilities in micro-electronics; and action to be taken at the national level, the international level and by UNIDO. The meeting will in particular review and analyse experience gained in the industry and industry-related sectors in developed countries and to recommend sector-specific and national level analysis to be undertaken; review the requirements of developing countries for developing technological capabilities in the field of micro-electronics in terms of manufacture, application and manpower; and consider mechanisms in developing countries for monitoring policies relating to development strategies in this field.

III. Documentation

The following documentation will be circulated:

- An issue paper prepared by the secretariat;
- A paper on application of micro-electronics for development prepared by a consultant for the Technology Programme;
- Technological perspectives in the machine tool industry with special reference to micro-electronics application.

Background documents contributed by participants will be made available.

IV. Financial and Administrative Arrangements

UNIDO will:

- Arrange round-trip air economy transportation between the airport of departure in the home country and Vienna;
- Pay in Vienna a daily subsistence allowance at the prevailing UN rate for the duration of the meeting plus travel days and an extra day's allowance for terminal expenses.

The participants will be required to bear the following costs:

- All expenses in their home country incidental to travel abroad, including expenditures for passport, visa, inoculations and other miscellaneous items as well as internal travel to and from the airport of departure in their home country.

A token fee will be paid to participants with whom this arrangement has been made.

UNIDO will not assume responsibility for any of the following costs which may be incurred by the participants while attending the meeting:

- Compensation for salary or related allowances for the participants during the period of the meeting;
- Any costs incurred with respect to insurance, medical bills and hospitalization fees;
- Compensation in the event of death, disability or illness;
- Loss or damage to personal property of participants while attending the meeting.

V. Language

The meeting will be conducted in English.



