

DEPARTMENT OF SCIENCE & TECHNOLOGY
An Outlook for Indias Future (2000 A. D.)

INTERIM REPORT on COMMUNICATIONS

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NCT PANEL ON FUTUROLOGY

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Preface, Outline & Introduction

PREFACE

The formation of the **National Committee on Science and Technology (NCST) Panel on Futurology in mid 1973** has been starting point of futuristic studies in India. The Panel identified nine areas, namely, (i) *Energy Generation and Needs*; (ii) *Housing*; (iii) *Transportation*; (iv) *Communication*; (v) *Urbanology and Slum Problems*; (vi) *Rural Development*; (vii) *Food*; (viii) *Management*; and (ix) *Education*, for study with a view to prepare scenarios for the year 2000 A.D. presenting likely and desired future perspectives and available options in these fields. It is hoped that these studies will afford the decision makers with a list of future courses of action. With this end in view the Futurology Panel hopes to prepare a series of monographs and technical reports in the field of future studies in the above areas. It also aims to encourage and simulate future consciousness and research in few advanced centers of study.

Nine technical sub-groups of Futurology Panel have been constituted to prepare monographs on the above topics. This constitutes an objective study. Statements made in this Report, however, do not yet constitute any policy position. It is hoped that this study will provide to our policy makers in different organizations a reasonable degree of data and information and a set of technological and social alternates relevant to choose the future coruse of action. The Futurology Panel will welcome comments and suggestions.

New Delhi
the 11th October, 1976

(**S. C. Seth**)
Member-Secretary
NCST Panel on Futurology

OUTLINE

1. Introduction

2. Emerging Scenario: The most likely future:

Knowledge-based bureaucratic society; Agro-surplus regions, Urban complexes dominate; Limited access to one-to-one and many-to-many media; "Bombay-film" swamps other mass communication metaphors; One-way character of mass media created Pavlovian Syndrome and passivity in the people.

3. Critical issues raised by the emerging scenario:

- Will geographic distribution of access to communications be concentrated or spread widely?
- Will the availability and price structure of media systems support a small spectrum of users or many types of users and uses? Interchangeability of messages and movement.
- What is the meaning of difference between 'hard' and 'soft' technologies and what choices should therefore be policy-derived?

4. Preferred Scenario - What Policy Decisions are needed:

4.1 Issue of Geographic spread of availability of Communication media to spread information/knowhow/problem-solving ability.

- Compensatory effort to vitalise rural areas using broad spectrum of communication devices - low power local radio transmitters, more local print media, public telephones, etc.
- Community building in urban and rural areas through multi-media Communication centres for technical learning, etc.
- Pricing policies to favour broad-based use of postal and telecommunications over transport wherever possible;
- Support for role of Traditional media and art forms - Music/Drama/Dance;

4.2 Issue of availability and price structure of media systems to support variety:

- Role of wide variety of special-interest print publications - postal rate, paper-pricing and legal aspects;
- Role of local daily and weekly newspapers;
- Positive role of metropolitan newspapers and newspaper chains;

4.3 Issues of Technology Policy:

- Preferred broadband telecom strategy; all trunk communications services on main intercity routes between the 25 main urban centres to be digital, including digitised voice channels; to support packet-switching.
- Videotape sets for institutional (educational) use rather than broadcast TV: TV, in colour rather than black-and-white, to be used only in metropolitan cities, as a public information medium with on-line or rapid feedback from viewers.
- Modular technology wherever possible - use of microcomputer chips to provide versatility to user devices, e.g. party-line telephones.

- Expansion of telex and message-switching services and multiple newswire services in different languages.
- Communications satellite to supplement coaxial and VHP links

INTRODUCTION

This paper draws on the numerous reports and papers of other technical sub-groups as well as on the notes by members of this sub-group. A preliminary preferred-future sub-system design describing a district-wise **Rural Radio Service facility** based on low power FM transmitters was circulated earlier. It appears in "Special Notes for Discussion Volume III of the Panel on Futurology, and indicates the sub-groups concern for issues. Also appearing in the Special Notes Volume III are Notes by Mr. B. G. Verghese on the role of traditional media on the future, and a paper by Dr. Narsing Deo on the impact of microcomputer electronics.

A 'Systems approach' to all kinds of communication activities and media is necessary in order to see how they will combine to affect the human and social environment of India-2000 A.D. The simplest scheme that will serve to classify communication is 'one-to-one (in person, telephone, telex, post), 'many-to-one' (post), 'many-to-many (group meetings, theatre, newspapers, small magazines), and 'one-to-many' (broadcast media such as TV, radio and news agencies), The balance between these facilities as actually experienced by different elements in a society will determine the type of society that results from the social infrastructure of communication systems.

In Section 2 of this paper we present the 'Most Likely future scenario' obtained by an extrapolation of current trends. Certain basic issues of social and technology policy which can be seen to be crucial are then isolated in Section 3. In Section 4, a 'Preferred Future' is outlined in terms of its Communication systems. It is aligned with the preferred Future of the other Sub-Groups in that it expresses a social preference for a participative, socialistic and egalitarian society. Section 4 is divided into sub-sections which take up each of the policy issues raised in Section 3. In each case specific Positive Policy options have been identified for debate, which, it is hoped, will contribute towards achieving the preferred Future.