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Scientific and Technological Scholarly Communication and Its User Needs: An Interim Summary Report

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Scientific and Technological Scholarly Communication and Its User Needs: An Interim Summery Report

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Information and telecommunication technology are causing revolutionary changes in society and its institutions. It is especially more so in the field of science and technology (**S&T**). Extraordinary advances in microelectronics have fueled this information revolution, and **S&T** scholarly communication are changing rapidly and dramatically because of it as are the needs of science and technology information users. To seek pertinent scientific and technical information (**STI**) is a complex matter in this electronic digitalized age of information environment. Before we meet information needs of scientists and engineers effectively, we must know the purpose for their seeking the information, the type of information they sought, and what we have been providing to satisfy their needs.

This paper is an interim summary report of a project: "**A Comprehensive National Inventory of Korean STI Services and A Random Survey of STI User Needs**", with a grant form Ministry of Science and Technology (**MOST**) through Korea Research & Development Information Center (**KORDIC**), to be carried out between 1994 September 1 and December 31.

The Project was originally conceived in 1992 as a part of United Nations Development Programme (**UNDP**) project, "**Promotion of Scientific & Technological Information**

Services", which was undertaken by the presenter acting upon the instructions of the Director-General of Uneseco.

The rational for the project presented to the final UNDP report and the current project background are:

"The way in which scientists and technologists make use of the information systems at their disposal, the demands that they put to them, the satisfation achived by their efforts, and the resultant impact on their further work are among the items of knowledge which are necessary for the wise planning of a national STI system and policy. Also, "Use" in one of four components of any STI system design which should be counted as an important element. To design a functional national STI system in the Republic of Korea, identifying current services with evaluative comments, and call attention to what appear to be deficiencies, and bring them together for planning and improvements are imperative. Therefore, the use studies should be carried out by an expert consultant ... The user survey, which will be the first national level survey of its kind conducted in ROK ... The survey will identify real target user, their needs, and any current STI deficiencies that might exist in ROK. First, the results of the survey will be reported to the government and facilitate the formulation of national STI policy. And then, with the established policy, its evaluated findings will also be incorporated into the further planning of an integrated national STI system."

Traditionally, the field of user studies has been characterized by a rather stereotype approach to research design and an orientation toward quantitative methods, the most frequently used technique being to employ some form of structure questionnaire and basic statistical analysis. This

is ideal for obtaining an overall quantitative picture of information use by a particular group but it is ill-suited for providing a picture of researchers' perceptions of their information environments and more integrated accounts of their information-seeking activities. Therefore, in order to obtain a more realistic picture of researchers perceptions of their information environments and more integrated accounts of their information-seeking activities, many user studies in recent years have adopted the marketing concept for planning new services, evaluating existing services, setting goals and priorities, and allocating resources. This concept strives to meet the users' needs, rather than hoping that the users simply accept services as they are offered, which has been the traditional practice of information providers. After reviewing and evaluating many methods in literature, the presenter decided to employ the marketing research technique called the **FOCUS GROUP INTERVIEW** method in this project. A Focus Group interview is a discussion involving small group of homogenous participants with a moderator in which various hypotheses about a product, services, or consumer problem are explored in depth. The components of a Focus Group interview are the setting, the moderator, the participants, the discussion, and the analysis.

The findings from the Focus Group study will be complemented by findings from a survey of current status of Korean Science and Technology Resources available in academic research libraries and information centers. The current holdings, resources, and personnels of **STI** will be collected and analyzed.

The project will also explore selected aspects of scholarly communication in science and engineering in ROK with the

objective of learning more about the relationships between information resources and scientific productivity of Korean scholars.

Some of the generalized profile of information-seeking behavior of scientists reported in literature and the project will focus on to bring findings are:

1) Information sources: Most useful are journals, plus trade literature and handbooks. Informal contacts is valuable.

2) Method for locating references: In rank order: personal recommendation, chance, and abstract indexes are the most used methods. The use of the library information department is not important.

3) Use and function of abstract journals: Scientists use abstract journals slightly less than social scientists. Both use them to a similar extent for current awareness.

4) Attendance at, and value of conference: Both attend conferences to a similar extent. Pure scientists gained information from social contacts, applied scientists from the papers presented.

5) Delegation of literature searching: Tend to delegate searching.

6) Late detection or information : Both experience instance of late detection to a similar extent.

7) Linguistic ability: Linguistic ability of scientists and

awareness of the language is greater than that of social scientists.

8) Stimulus for research/ideas: Written material, own work, and informal personal contact are important for both scientists and social scientists.