

The Science & Technology Information Center National Science Council, Republic of China

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I. General description:

The "Information Explosion" resulting from the proliferation of research and development is a fact of life today. According to statistics, there were nearly three millions of scientific books, periodicals and research reports published in 1968 in the United States. These materials are no doubt products of long time hard working combining with high talent and an immense amount of money, and are also, and should be used as raw materials for further researches. In order to avoid duplication and waste, the economical and effective way for a researcher to do research or for a country to develop its science and technology is to begin with searching for information on what have been done and what are being done before starting the project. From the information, one can possibly free from the risk of unnecessary investments of time, energy and money. Therefore, in advanced countries, information is regarded as important as equipment, talent and natural resources. It can be easily understood from the fact that there are so many information center, special libraries and data bases now available.

In view of the fact, the National Science Council of the Republic of China has set up its information center, namely "The Science and Technology Information Center" to provide

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information needed by local research institutions as well as industries.

The Science & Technology Information Center (STIC), known as Scientific Documentation Center (SDC) before January 1974, was established in 1973 at Nankang, Taipei, by the National Science Council with a view to stimulating the scientific and technological research and development in the Republic of China so as to satisfy the needs of a fast expanding economy. Before the inauguration of STIC, its main functions were handled by the former Scientific Documentation & Instrumentation Center located on the campus of the National Tsing Hua University. Recognizing that two such broad areas of responsibilities are too much for a single agency to handle with efficiency, the Council disbanded the organization and separated it into two independent units in March, 1973. One of the units is the STIC and the other is the Precision Instruments Development Center at the original site of SDIC.

II. Organization and functions:

As prescribed by the Executive Yuan (Cabinet), STIC is to perform the following functions and services:

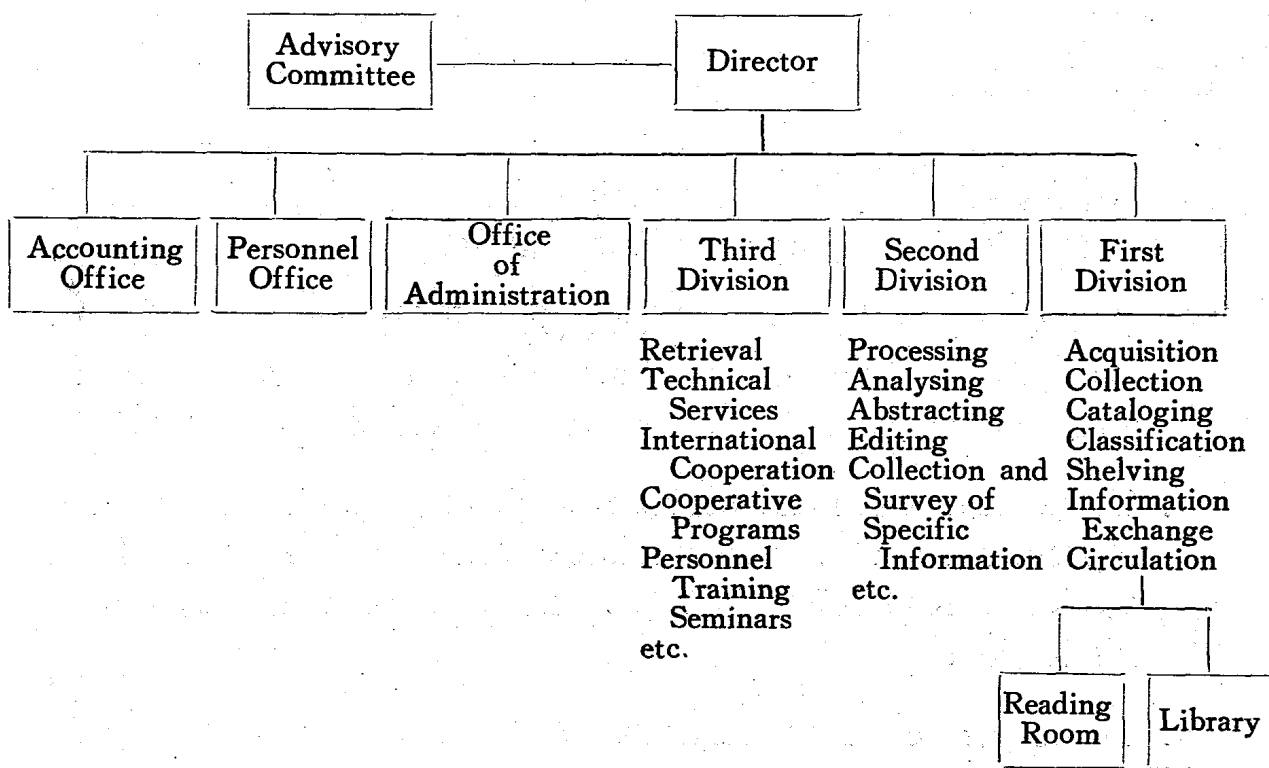
1. To collect, analyse, and abstract R & D information, periodicals, official gazettes of patents, etc. in the fields of science and technology and make announcement for public use.
2. To provide technical services such as referral, translation, reproduction, etc. in accordance with the needs of local academic research institutes and science and technology institutions.
3. To cooperate with foreign and domestic science and technology institutions for the exchange of information and other related matters, etc.
4. To collect and edit data on Chinese scientists and technical experts as well as technical reports.

5. Other matters related to the R & D of science and technology information.

Based on functions prescribed by the Executive Yuan, STIC has now developed to have three divisions:

1. The First Division is a resource department which is in charge of information acquisition, collection and exchange, etc.
2. The Second Division is a processing department which is in charge of information processing, analysing and abstracting, etc.
3. The Third Division is a service and cooperation department which is in charge of information retrieval, S. D. I., personnel training and cooperative projects, etc.

The following organization chart also shows the major functions of the STIC.



STIC develops its projects with emphasis upon cost beneficial. At the end of each fiscal year, a committee convened by the Director is held to evaluate projects statistically as well as

essentially. Projects that are considered to be feasible will be continuous and strengthened in the next fiscal year and would be ceased if not.

III. Present activities:

The present activities of STIC cover the following areas:

1. Centralized acquisition of books and periodicals for local public colleges and universities.
2. To strengthen the Cooperative Organization for Scientific Libraries and Information Units in the Republic of China.
3. Computerization in processing the union catalog of science & technology periodicals in collaboration with the Electronic Data Processing Center, Directorate General of Budgeting and Accounting and Statistics of Executive Yuan.
4. To collect and edit data on Chinese scientists and technology experts in collaboration with the Ministry of Education and National Youth Commission.
5. To transfer advanced technology and publish "Science & Technology Briefs".
6. To process US gazettes of patents and publish "Technical Information".
7. To collect science and technology periodicals, documents, and other publications both international and domestic in scope according to the needs of industrial development as well as academic research.
8. Industrial technology assessment study.
9. To offer technical services including information referral, retrieval, photocopy, and SDI, etc.

The future programs of STIC include:

- (1) the establishment of a data base,
- (2) development of a science and technology information

sharing system, and

- (3) development of international channels for science and technology information.

IV. Information networks:

Despite its brief history, STIC has already established a fairly extensive information network both at home and abroad. The educational and research institutes that have established close ties with STIC include the following:

Inter-Loan Units

National Tsing Hua University

National Taiwan University

National Chiao Tung University

National Cheng Kung University

Tung Hai University

Catholic Fu Jen University

College of Chinese Culture

Tam Kang College of Arts & Sciences

The National Central Library

National Bureau of Standards, Ministry of Economic Affairs

Chinese Petroleum Institute

Kaohsiung Refinery, CPC

Research and Training Center, CPC

Chung-Shan Institute of Science & Technology

Chung Cheng Institute of Technology

Ordnance Technology Development Center

Aero-Industry Development Center

Industrial Technology Research Institute

Metal Industries Research Laboratories, Industrial Technology Research Institute

Food Industry Research and Development Institute

Precision Instruments Development Center

The Sixth Department, Investigation Bureau, Ministry of Justice

National Taiwan Normal University

National Chung Hsin University
Taiwan Telecommunication Administration, Ministry of Communications

Information Suppliers

Thermophysical Properties Research Center, Indiana, U.S.A.
(Dr. Touloukian)
Simmons College, U. S. A. (Mrs. Chen)
University of California at Los Angeles, U.S.A.
Stanford University
KIST Technical Information Department, Korea
The National Technical Information Service, U.S.A.

Foreign Cooperative Units

Korea Scientific & Technological Information Center, Korea
Library & Information Center, AIT, Thailand
Commonwealth Scientific & Industrial Research Organization,
Australia
The British University
Kobe University, Japan
Nanyang University, Singapore
La Trobe University, Australia
National Diet Library, Japan
The Honnold Library for the Claremont Colleges, U.S.A.
The Library of Congress, U.S.A.
MIT Science Club
University of Virginia Library, U.S.A.
Seoul National University Library, Korea
Institute for Scientific Information, U.S.A.
East Asian Library, Rutgers University, U.S.A.
Science & Engineering Library, State University of New
York at Buffalo
National Library of Australia
Biblioteca National, Mexico
University of Hong Kong Library
Michigan State University
University of Chicago

Japanese Information Center of Science & Technology, Japan

In addition, STIC has formed a separate information network for industries. The component units of this network are grouped under the following categories:

Electrical & Electronic Industries

National Chiao Tung University
Taiwan Electric Appliance Manufacturer's Association

Mechanical & Metal Industries

Metal Industries Development Center
Metal Industries Research Laboratories, Industrial Technology
Research Institute

Food Industries

Food industry Research & Development Institute
Chinese Institute of Food Science & Technology

Industrial Management

The Chinese Institute of Management Science
Metal Industries Research Laboratories, Industrial Technology
Research Institute
China Productivity Center
China External Trade Development Council
Center for Public & Business Administration and Education,
National Chengchi University

Chemical Industries

Industrial Development Bureau, Ministry of Economic Affairs
Union Industrial Research Laboratories, Industrial Tech-
nology Research Institute
Li Shing Petrochemical Corporation

Textile Industries

China Textile Testing and Research Center
Graduate School of Textile Engineering, Feng Chia College
of Engineering & Business

V. Services:

STIC provides almost all kinds of information services including dissemination, referral, searching, SDI and duplication, etc., to meet the needs of our academic institutions as well as industries. Among services, the dissemination of current information in the fields of science and technology is one of the most important works of STIC. Every week, the Center publishes and sends without charge hundreds of its publications to researchers, institutes and industries concerned. From the fact that a great request for copies of articles listed on these publications, it is easily understood that they serve as good reference to readers. Following are some of the publications greatly in demand:

1. For academic research

(1) *Current Contents of Selected Scientific Periodicals*

It is published every week with eight categories covering the fields of engineering and natural sciences. Under each content, there list names of the libraries which hold the journal. From the information, readers can easily get copies of his interesting articles from the library nearby.

(2) *On-Going Research Projects*

It is published bi-monthly in two forms: Abstracts and List of Titles. Research projects listed on the serials cover major works in the fields of natural and applied sciences being done by public and private institutions within the country.

(3) *Bibliography of Scientific Research Reports Sponsored by National Science Council, Republic of China (1960-1973)*

It contains 7302 report titles and is processed systematically in the hope that it can avoid unwarranted repetition of research projects within this country.

2. Tools for information services

In order to meet the needs of information services, STIC designs research tools to serve the library profession to support

the works of all libraries in supplying information and to provide a reference source for business and professional office use in this country.

- (1) *Union List of Scientific Periodicals in Libraries of the Republic of China*
- (2) *National Union Catalog of Scientific and Technical Books in Libraries of the Republic of China*
- (3) *List of New Books*
- (4) *New Book Titles of Centralized Acquisition*
- (5) *Survey of Scientific and Engineers in the Republic of China*

3. For industrial technology development

(1) *Science and Technology Briefs*

It is published monthly with six categories. Articles listed on the serials are selected in collaboration with industrial research and development institutes concerned from trade journals based upon the needs of local industries.

(2) *Technical Information*

It is published monthly with three categories. The contents of publication include standards, specifications, manufacturing processes, know-how and all features of new products and materials. Articles listed on the serials are mostly selected from the patent sheets issued by the Patent Office of the United States based upon the needs of local industries. STIC receives the sheets every two or three weeks through the exchange program with the U.S. Patent Office.

LIST OF PUBLICATIONS

I. *Union Catalog of Scientific and Technologic Books in Libraries of Hsinchu Industrial Research Park.*

Vol. 1-3, with Title Index, by SDIC, 1970. (Out of print)

新竹工業研究園區科技圖書聯合目錄

II. *National Union Catalog of Scientific & Technical Books in*

Libraries of the Republic of China (up to 1969).

Vol. 1-8, with Title Index I-II, by SDIC, 1973.

全國西文科技圖書聯合目錄

III. *Science & Technology Abstracts.* (Ceased Publication)

科學技術論文摘要

1. A monthly publication from June, 1971 to December, 1972. Including: Physics, Chemistry, Nuclear Engineering, Chemical Engineering, Food Science, Electrical Engineering, and Mechanical Engineering. Published by SDIC.

Vol. 1, No. 1-12, with Vol. 1 Index.

Vol. 2, No. 1-6, with Vol. 2 Index.

2. By January, 1973, it was published into four separated volumes and ceased by August, 1973.

Electrical and Electronics Industry :

Vol. 1, No. 1-4. (bi-monthly)

Mechanical and Metal Industry:

Vol. 1, No. 1-4. (bi-monthly)

Chemical Industry:

Vol. 1, No. 1-4. (bi-monthly)

Food Industry:

Vol. 1, No. 1-5. (bi-monthly)

IV. *Survey of Scientists & Engineers in the Republic of China.*

Vol. 1-2, by SDIC, 1971. (Out of print)

科技人才資料

V. *Union List of Scientific Periodicals in Libraries of the Republic of China.*

科學期刊聯合目錄

Ist edition (up to 1968) 1970

Supplement (1969-1970) 1972

2nd edition (up to 1972) 1974

3rd edition (up to 1973) 1975 (Computerized)

VI. Vol. 1. *Periodical Index in Pure and Applied Science 1962-1967.* 1968Vol. 2. *Periodical Index in Pure and Applied Science 1968-1969.* 1970Vol. 3. *Index to Science and Technical Articles in Chinese*

Periodicals and Newspapers 1969-1971. 1972.

Vol. 4. *Index to Selected Science and Technical Articles in Chinese Periodicals 1972-1973. June, 1974.*

中文報章雜誌科技論文索引(第一輯至第四輯)

Vol. 1. *Index to Selected Science & Technical Articles in Chinese Periodicals 1974.*

中文期刊科技論文索引(第一輯)

VII. *On-Going Research Projects.*

進行之研究專題報導

A. Abstracts. (Bi-M), October, 1973.

1. Mathematical & Natural Sciences

2. Engineering & Applied Sciences

3. Biological, Agricultural & Medical Sciences (M) July, 1975

B. List of Titles. (Irreg.), February, 1974.

List of Titles. (Irreg.), Feb. 1975.

List of Titles. (Irreg.), May, 1975.

VIII. *Science & Technology Briefs. (M), July, 1973.*

科技簡訊

1. Electrical & Electronics Industry

2. Mechanical & Metal Industry

3. Food Industry

4. Chemical Industry

5. Management Science

6. Information Science (Ceased publication, Feb., 1975)

7. Textile Industry (July, 1975)

IX. *Bibliography of Scientific Reports Sponsored by National Science Council, Republic of China (1960-1973).*

行政院國家科學委員會研究報告目錄

X. *Current Contents of Selected Scientific Periodicals. (Irreg.), Nov., 1973.*

新到期刊目次選輯

1. Civil Engineering

2. Electrical & Electronic Engineering

3. Chemical Engineering & Plastics Industry

4. Mechanical & Metal Industry
5. Physics
6. Chemistry
7. Materials Science
8. Food Industry

XI. *Technical Information.*

技 術 資 料

1. S. D. I.
 - (1) LSI
 - (2) Plastics Molded
 - (3) Agricultural Machinery
 - (4) Oil and Vegetable Oil Industry
 - (5) TV Receivers
 - (6) Solar Battery
 - (7) Plastic Reinforced
 - (8) Solar Heater and Solar Air Conditioning System
 - (9) Industrial Quality Control
2. Patents:
 - (1) Electrical and Electronic Engineering
 - (2) Mechanical & Metal Engineering
 - (3) Chemical Industry
 - (4) Textile Industry
 - (5) General Appliances
3. Science and Technology Information Center-Newsletter.
(M) May, 1975

XII. *List of New Books.* (B-M) July, 1975

國外新書報導

1. Natural Sciences & Mathematics
2. Engineering & Applied Sciences
3. Agricultural Sciences
4. Education, Business, Social & Management Sciences
5. Medical Sciences
6. Humanities & Belles-Lettres

XIII. *New Book Titles of Centralized Acquisition* (M) July, 1975.

統一採購新書通報