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**SCIENCE AND TECHNOLOGY,
INFORMATION DATABASES AND SERVICES AT PDII-LIPI**

By

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SCIENCE AND TECHNOLOGY, INFORMATION DATABASES AND SERVICES AT PDII-LIPI

I. INTRODUCTION

Based on the LIPI Chairman's Decree, in 2001 the Center for Scientific Documentation and Information of the Indonesian Institute for Sciences [PDII – LIPI] (formerly the National Scientific Documentation and Information Center) was set up to support research in Indonesia, especially LIPI's researchers, to carry out, maintain, and provide services and to do research in the field of scientific documentation and information. It serves as the national documentation center of scientific knowledge and information. It plays an important role in organization and dissemination of information activities that creates users awareness.

Following the restructuring of the Indonesian Institute of Sciences in 2001, PDII-LIPI realigned its tasks in all aspects of its services, particularly in the delivery and system of documentation and information dissemination. It is now considered to be essential to go beyond databases in the form of bibliography, digitizing scientific works, and Indonesian patent documents. In the field of information dissemination, PDII-LIPI not only supports research in Indonesia but also provide service to the small and medium enterprises (SMEs), the small and medium-scale industries, and the rural communities. This service takes the form of both printed materials and electronics, making them available for distribution on printed index with abstract, CD-ROM and Website. The focus is on information of the applied sciences and technologies, and the appropriate technology. There is an option of going direct to the users, and an alternative scheme being developed, through a network of S&T Information Kiosks, spread all over the country. At the beginning S&T information Kiosk established in 1998 in Palembang (South Sumatra) under the *S&T-goes-rural Program* of LIPI (Iptekda-LIPI). This program is adopted and have been developed by the Ministry of Research and Technology in 27 province.

In carrying out the tasks, PDII-LIPI undertakes the following functions (Djatin, 2002):

- To provide scientific and technical information services;
- To do documentation activities of scientific and technical result published in the country and those of foreign publications on Indonesia;
- To collect Indonesian scientific publication;
- To conduct research on scientific documentation and information in Indonesia;
- To develop a national scientific bibliographical databases;
- To publish special publications to support the dissemination on information; and
- To develop network system, and scientific document and information infrastructures.

II. DOCUMENTATION OF SCIENCE AND TECHNOLOGY INFORMATION (STI)

The documentation work is carried out from the existing information. Within this working definition the main steps of documentation work consist of information acquisition, processing,

and maintaining collection of information. This activity covered both “content” and its “container” of the information (Blasius Sudarsono, 1999). The Documentation Division serves library or dissemination on information for science and technology. It includes books, research papers, conference papers, reports, thesis and dissertation, journal articles, and any other related materials.

2.1. Current Activities

1. Collecting and processing information on published research findings, dissertation, reports, and scientific articles on Indonesia as well as on current documents into microfiches;
2. Digitizing scientific articles of LIPI’s researchers;
3. Digitizing patent documents from the Patent Office of Indonesia;
4. Building *List of Control Vocabulary on Sciences and Technology of Indonesia*
5. Developing Intranet and internet for *PDII Online*

2.2. Database Development

The process of creating databases using Windows version of CDS/ISIS software.

A. ROUTINE ACTIVITIES

Table 1. List of PDII-LIPI’s Databases

Name Of Database	Description	Starting From	Number Of Record Until 2001
BUKU	Books and monograph catalogue	1986	29.123
LAPO	Research report catalogue, included abstract	1986	29.270
CONF	Index of work paper, seminar, conference, etc.	1986	27.680
TESIS	Database: Thesis catalogue with abstract.	2000	1.578
ARTI	Catalog of Scientific journal articles with abstract.	1986	30.417
TTG	Catalog of information on appropriated technology with annotation	1998	15.730

Continued

Name Of Database	Description	Starting From	Number Of Record Until 2001
ISDS	Catalog of ISSN (International Standard Serial Number)	1987	7.425
KARYA	Scientific paper of LIPI (Indonesian Institute of Sciences) researcher. Indonesia included	2002	1.977
LIPI	Scientific paper of LIPI (Indonesian Institute of Sciences) researcher. Full text, digitized by docushare	2002	2.300
PATENT	Catalog of Paten Indonesia included full text and abstract, are digitized by docushare	2002	500
PTN	Catalog of patent that collecting from patent documents outside of user request.	1998	4.629

B. PROJECT ACTIVITY IN 2002

Name Of Database	Description	Number Of Record 'till September 2002
DESC.	S&T Descriptors are collect from PDII's entire Database.	31.515
RUT	Through the program that is coordinated by the Ministry of Research and Technology, PDII-LIPI manages the database of Integrated Priority Research [<i>Riset Unggulan Terpadu</i>].	1940
RIAU	Bibliographic of information on Riau are collected from PDII's database.	592
TEUGM	PDII has received database that contains thesis from Gajah Mada University	10.227

2.3. Preservation

PDII-LIPI preserves documents both in terms of its information content and its physical states, especially in dealing with scientific journal articles and dissertation in the form of microfiche or microfilm. For collection development on microfiches, PDII-LIPI also receives copy microfiches (dialzo) from the Library of Congress of USA, KITLV (the Netherlands), USAID, and Royal Tropical Institute. These documents cover mainly data and information of the regions of Indonesia. Those microfiches accessed by the users are back-up articles from Indonesian journals needed but not found in the collection. PDII has collections more than 50.000 microfiche and microfilm.

III. DISSEMINATION OF SCIENCE AND TECHNOLOGY INFORMATION (STI)

The main objective of PDII-LIPI is to provide STI services to the whole scientific community with special attention given to researchers in the government institutions as well as in industries. While they are not preferred users, university students are not prevented to enjoy the facilities, and turn out to be the major users.

3.1. S&T Information Services

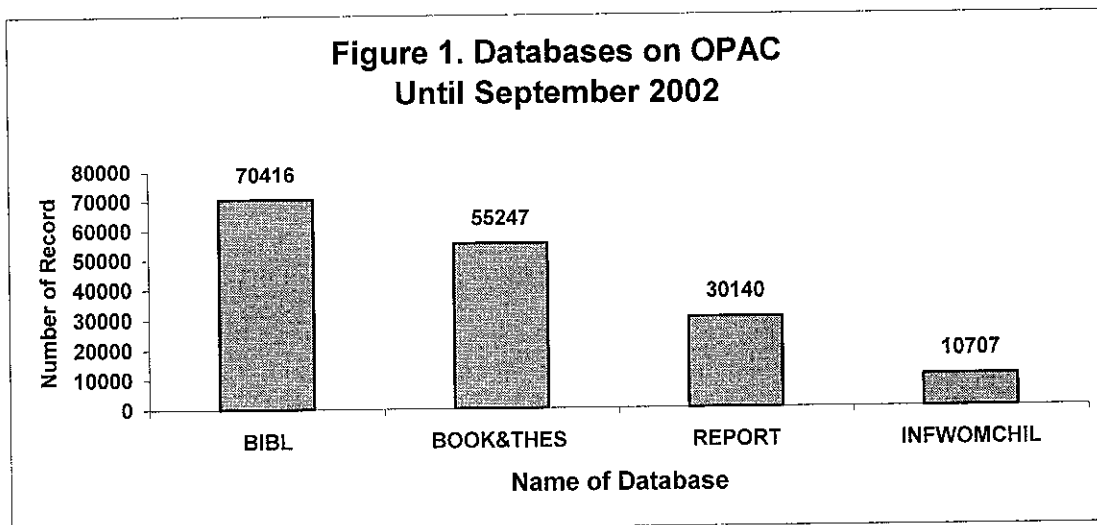
1. Answering specific inquiries from information available in PDII and undertake literature search and compile bibliography.
2. Information services that are offered from the library resources, the existed national databases and international databases on CD-ROM. PDII-LIPI receives current content on CD-ROM in some disciplines are biology & environmental sciences, computer and chemistry & engineering.
3. Promoting and coordinating scientific information services in the country and in the rural region
4. Conducting training courses in using CDS/ISIS and CD-ROM, and Internet services, collection management.
5. Facilitating exchange of information between and among national, regional, and international organizations

3.2. Library Services

The library is open to the public with an interest in science and technology, including researchers, academics, professionals, engineers, organizations, private agencies and public. At present work is being done to establish an on-line library so that it is accessible to anyone, anywhere.

Library information services are further enhanced every year with the addition of new books to its collection and by subscriptions to new foreign domestic journals. It currently has a total collection of 55.247 books, 30.140 researches reports, 70.416 journal articles on different

branches of science and technology. The library is kept open to users for 7 hours from morning to afternoon from Monday to Saturday.



3.3. Information Repackaging

The concept of Information Repackaging (IR) is a new library and information service, which is designed to meet the specific needs of users. IR adopts a systematic approach to service through the processes of interview, information searching, and information analysis. Information repackaging is required by the industries because they would save time, labor and costs for information retrieval.

Information Services for Researchers, Lecturers, Industries or Privates Company

1. Information Packages on Industrial Technology [PITI] covers various compilation of technical and engineering information, which include research reports, standards, patents, materials, new idea, and inventions of domestic and foreign sources.
2. Selective Dissemination of Information (SDI), PDII publishes "Fokus Info Indonesia" [abstract information on Indonesia article]; issued 4 to 6 times a year, of which currently 8 volumes have been issued. It abstracts and indexes journal articles relating to Indonesia on 14 disciplines/subjects.
3. PDII-LIPI publishes "*Pedoman Penampilan Majalah Ilmiah Indonesia*" [Guidelines for Indonesian Scientific Journal Periodical Appearance].

Information services for SME's

1. PDII-LIPI publishes Small Business Guide [*Panduan Usaha*], which are prepared for the small-scale or home industries. These publications are written in simple language so that the reader can follow the information and examples easily. Samples of the pamphlet titles are *Pandang Bandeng Duri Lunak* [crushed thorn of Bandeng fish], *Jam Jambu Mete* [Cashew nut jam], and *Sirih Instan* [instantly

piper beetle], *Sabun* [Detergent] *Deterjen* . Currently there are 24 publications on this.

2. PDII-LIPI publishes *Pohon Industri* [Trees of Industry] is showing the relationship between one product and the other, originating from the common root up to stem, branch, root, and leaves of a commodity. Titles of these are *Singkong* [Cassava], *Jagung* [Corn], *Kelapa* [Coconut], *Kedelai* [Soybean], *Saga* [medicinal plant], *Kelapa Sawit* [Oils Palm], *Jambu biji* [Cashew nut]. This information is very useful for diversification of products.

Users of PDII Services 2001

University student's (Under graduate, master&doctoral degrees)	64,4 %
Researchers, lectures	11,5 %
Privates company	13,2 %
Industries	2,3 %
Librarians	0,7 %
Public in general	7,9 %

3.4. WARINTEK [Information Technology Kiosk]

The main objective of *Warintek* is to provide information access to the community in rural areas by providing appropriate selective information, appropriate technology information, databases, and CD-ROM. This program also promotes primary potential of the rural products.

PDII provide training for Warintek management services

9 TOP WARINTEK USING INFORMATION SERVICES IN PDII-LIPI

WARINTEK	Number of User	
	2001	2002
SriWijaya Univ.- Palembang	151	98
Nat. Libr. of South Sumatra- Pib	273	83
Jember Univ.-Jember	98	95
UPN Veteran -Yogya	36	50
Iptekda - Padang	106	42
Andalas Univ.-Padang	23	25
Lampung Univ.-Lampung	10	23
Brawijaya Univ.- Malang	28	6
LP2AD Library Padang	0	6

3.4. www.pdii.lipi.go.id

LEMBAGA ILMU PENGETAHUAN INDONESIA
Pusat Dokumentasi dan Informasi Ilmiah

Di situs kami Anda dapat menemukan **informasi ilmu pengetahuan dan teknologi** yang telah kami himpun sesuai dengan tugas pokok kami dalam membina dan memberikan layanan dokumentasi dan informasi ilmiah. Koleksi pengetahuan terekam yang berupa buku, majalah ilmiah, laporan penelitian, artikel ilmiah, tesis maupun disertasi, dan dokumen-dokumen ilmiah lainnya kami kelola dalam bentuk perpustakaan. Silakan Anda mengunjungi juga di perpustakaan kami yang beralamat di Jalan Jenderal Gatot Subroto 10, Jakarta 12190. Perpustakaan ini kami buka untuk umum, pada Hari Senin s.d. Sabtu pukul 09.00 - 15.30. Kami menunggu kunjungan Anda dengan harapan Anda dapat menemukan informasi yang Anda perlukan di koleksi kami.

- **Layanan PDII online**, untuk pencarian dan pemesanan data / literatur melalui media Internet, sebagai peran serta PDII untuk ikut serta mengikuti perkembangan Teknologi Informasi dan juga sebagai pelayanan pencari data / literatur dari berbagai daerah di Tanah Air.
- Semua literatur kami (Teknologi tepat guna, Majalah ilmiah asing, Monograf, Thesis, Disertasi dan Laporan penelitian) terangkum dalam

IV. Cooperation With Other Institutions

1. Library of Congress: acquisition of Indonesia materials and microfilming
2. KITLV- The Netherlands: acquisition of Indonesia materials and microfilming
3. National Library of Australia: acquisition of Indonesia materials and microfilming
4. Institute of South East Asia Studies: supply of Indonesia materials in microform
5. Japan Science and Technology Corp (JST)
6. British Library: document supply and delivery
7. Department of Health in Indonesia
8. Some of University in Indonesia are Brawijaya Univ., Sriwijaya Univ., Surabaya Univ., Andalas Univ., Atmajaya Univ., UPN Veteran Univ. National Library of South Sumatra in Palembang, Gajah Mada University
9. PT. Grasindo
10. PT [Inc.] Astra Graphia
11. PT [Inc.] Minadaya Mandiri
12. R & D Board in Riau

V. Consultation And Training

1. Refresher courses for librarians and information workers
2. Seminar/workshop with the objectives to improve the knowledge and capabilities of the users in utilizing the available information sources
3. Practical training in the fields of library, documentation and micrography
4. Training on Warintek [information Technology Kiosk] management services

CONCLUSION

Tremendous expansion of the volume of scientific and technological research all over the world has brought about the explosion of scientific and technical literature. Every day a large volume of information is being generated in different languages, in different fields and in different forms all over the world. It has now become almost impossible and impractical for a single library or documentation and information centre to keep an exhaustive collection of all the publications made worldwide. It has already been accepted the world over that the ultimate solution to overcome this problem is resource sharing through networking.

References

Djatin, Jusni and Rochani NR. 2002. S & T information dissemination. Jakarta: PDII-LIPI.

Sudarsono, Blasius. 1999. The Development of information infrastructure for R&D: PDII-LIPI's experience. The 1st Regional Workshop on S&T Information Dissemination in South East Asia 22 -23 June 1999, Kuala Lumpur.