UNION INDEX OF BOOKS IN THE FIELD OF DOCUMENTATION

BY

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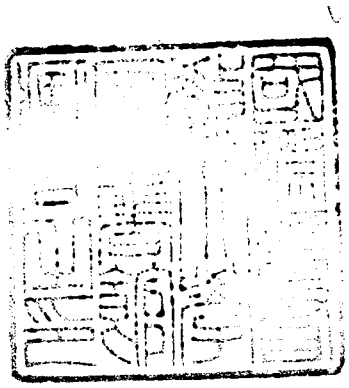
1970

GAKUJITSU BUNKEN FUKYU KAI

c/o TOKYO INSTITUTE OF TECHNOLOGY

Ookayama, Meguro-ku, Tokyo



Made and Printed in Japan by the Gakujitsu Bunken Fukyu Kai.

CONTENTS

PREFACE

In 1952, Minister of Education, Japan, gave me official order to make research and study tours to western European countries, at the same time Unesco granted me Unesco - Netherlands Government Fellowship on documentation study and research at documentation centers and course within Netherlands for the period of 6 months, while Consejo Superiore de Investigacions Cientificas, Espana, also granted me fellowship on "Estudio sobre archivos y documentaciones espanoles" for the period of 9 months within Spain, and short period fellowships or official assistances were given me from other countries including Finland - Rutherian Evangelic Mission Headquarter -, on same subject.

During these periods, I met with considerable numbers of elemental words or in certain case modified words. A certain known literature or dictionary treating these words, lexicographically or bibliographically was rarely be found there. So that, only detailed analytical search in related literatures could furnish definition, synonyms, related, relative, ways of use, birth and death of those words. In these cases, book indexes in the literatures were relatively helpful for the search. There was no union index like proposal herewith at that time. Thenceforth, starting form of this union index is organized and this organizing work is going on up - to - date.

Try to define with group of elemental words searched the territory of science of documentation and information, and to separate either core elemental words by appearance frequency analysis of elemental words searched in the literatures concerned, or core, primary and of higher order modifiers by trying to give semantical measurement and order analysis to the modifiers obtained, are realized. Under independent or combined states of elementals words or modifiers, definition, contextual way of use, meaning and semantic nuance therein, reference literatures pertaining to the elemental words and modifiers are ascertained, at the same time, researcher and his reference literature cited by others, in other words, reference frequency analysis was carried out, and all those data were organized into internationally ever not known secondary literature in the new style shown in "How to use the Union Index", and by that the fulfilment of bibliographical lack in the said field could be realized.

Here, the territory of documentation and information is in manual, semi - mechanical, mechanical or automatic, reprographic documentation – microphoto - documentation, hierarchical knowledge and systems concerning presentation and dissemination of information from documentation materials.

For the union indexing processing, unit card is prepared entered both card surfaces or surfaces of multiple cards – say first, second, ... etc. cards – with

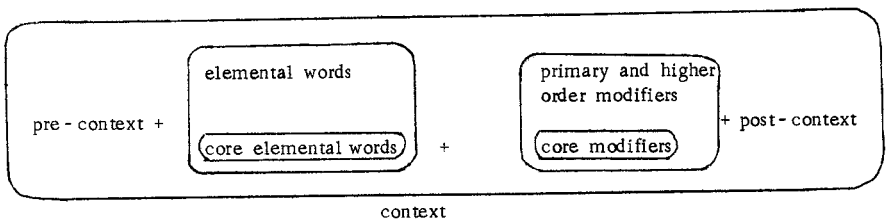
index term
bibliographic code(s)
index code(s)
context(s) to the index term
bibliographical reference(s)
annotation
definition
and other collational remarks.

Here, above each item gives respectively secondary literatures, devices, and structures; viz.;

- bibliographic code → localizer of the index term in the literatures concerned → aids for information retrieval
- bibliographical code → chronological data of birth and death, etc. of index term

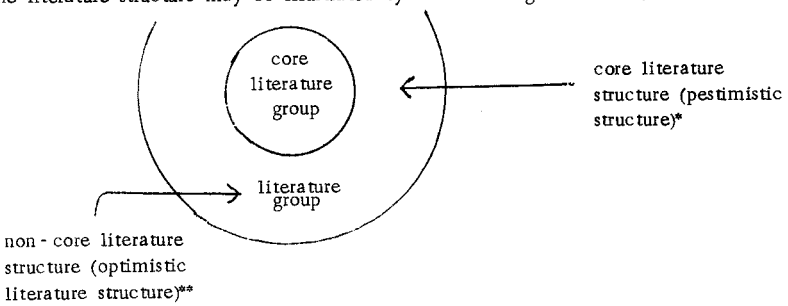
- o bibliographical reference -> related reference to the index term -> aids for document retrieval
- o definition -> definition, its chronological changes in nationwise and territorial nuances
- o context -> nuance, way of use and chronological, national, and territorial changes of the index term
- o number of bibliographical codes -> appearance frequency of index term (elemental word + modifier); ascertion of coreness of the index term, i.e., core index term provisioning; analytical data regarding result of elemental word's and modifier's analysis
- o bibliographical reference -> resulting data of reference frequency analysis -> ascertion of core literature (book and periodicals) -> statistical solidification of pestimistic literature structural element
- o bibliographical reference -> resulting data of enumerative reference citation analysis -> statistical solidification of optimistic literature structure element -> near total literature coverage regarding the subject.

Again, herein, context may be illustrated by the following illustration:



context

and the literature structure may be illustrated by the following illustration:



literature structure concerning the subject of index term.

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* in: Memoirs of the Toshokan tanki daigaku. N. 1. 1967. p. 7:

** in: Memoirs of the Toshokan tanki daigaku. N. 1. 1967. p. 7:

*** in: Memoirs of the Toshokan tanki daigaku. N. 1. 1967. p. 8: 9: Medical Library. V. 3. N. 7/8. p. 178ff: therein, word of "core journal" is used but herein replaced by the word "core book".

In concluding my preface, I want to record my heartiest thanks to have helped to make research and study during my stay in European countries, especially to

Miss E. Talsma (OKW, Den Haag), Mr. Kreykamp (OKW, Den Haag), Dr. L. Brummel (K. B., Den Haag), Dr. van der Wolk (T. H., Delft), Dr. Goebel (Mikroverlag, Den Haag), Mr. van der Laan (M. E. V. D., Den Haag), Mr. Donker Dijvis (FID., Den Haag), Miss Wichen (NIEDER, ISO. Den Haag), Miss Ackermann (NIEDER, ISO., Den Haag), Mr. Th. P. Loosjes (LTH., Wageningen), Mr. Nikaise (KU., Arnhem), Mr. Moulijn (PTT., Den Haag), Dr. Kersain (CD. CNRS., Paris), Mr. Otto Frank (ETH., Zuerich), Dr. Eppelsheimer (D. B., Frankfurt am Main), Mr. Oehman (J. K., Stockholm), Mr. Urqhart (DSIR., London), ASLIB (London), Dr. Erikson (K. M. K. I., Stockholm), Dr. Iose Maria Albareda (Secretario General de CSIC., Madrid), Dr. J. Cain (B. N., Paris), Mille. P. Dumaitre (FM., Paris), Dr. Frank Francis (BM., London), Mr. G. Lorphebre (FID., Bruxelles), Dr. Bjoerkbom (KTH., Stockholm), and governments of Netherlands, Belgium, France, Switzerland, West Germany, Denmark, Finland, especially His Excellency President Kekonen, Sweden, United Kingdom, especially authorities of British Council, Spain, Italy, Lebanon, Iraq and Spanish Morrocco, Unesco, especially Mr. Carter (Library Unit, Unesco), Dr. Holmstrom (Science Unit, Unesco), and authorities of Ministry of Education, Japan, especially, Director Murayama, Investigate Official Shibuya, Section cheif Tatematsu, Secretaries Kataoka and Kuroda, Mr. Mutsugen Nakajima (Tokyo, first founder of scientific and technical documentation service in card form in Japan in 1929), and Mr. Tetsuji Okada (Tokyo).

1970 March 4th
White Snow Fall

Shigenori BABA
Professor
National Junior College
for Librarianship

HOW TO USE THE UNION INDEX

INTRODUCTION - INDEX TERMS -

Index terms were collected from book indexes in literatures in the field of documentation as indicated in the list attached. For the literatures which lack book indexes, index terms, especially, considerably significant literature words, names of persons, etc., were picked up from contexts of chapter, section, part, or other identification headings given thereby.

CONSTRUCTION OF ENTRY

Index term thus picked up is used for filing word. Bibliographical locator (index term) of the index as filing word in the literature is constructed with abbreviation code of the name of author and title of the literature, year of publication of the literature, page indication where index term is locating, further supplemental indications such as illustration, table, bibliographical reference numbers, definition and contextual and or bibliographical reference(s) pertaining to the index term, as example, as shown in examples below: -

CASE EXAMPLE OF TERM ENTRY: -

Citation index

BCP - MIH (1963). p. 33: 36: 131: 151: 153 (with figures):
KA - SIC (1965). p. 115 - 116:
MMG - CPTNU (1965). p. 205:
KA - TMIR (1966). p. 156 - 187:

All references cited in the literature are brought together in a directtory, each reference accompanied by a list of citing source documents. The primary arrangement of the index may be by author of the reference, creaing an author citation index; by publication in which the reference appeared, creating a journal citation index; or by date of publication of the reference, creating a chronological citation index. (KA - TMIR)(1966). p. 186 - 187):

BIBLIOGRAPHICAL EQUATION OF THE ENTRY -

BIBLIOGRAPHICAL LOCATOR (INDEX TERM) = AUTHOR CODE + TITLE CODE + YEAR OF PUBLICATION CODE + PAGE LOCATION CODE + COLLATION REMARK + (CONTEXTUAL) ANNOTATION.

= Bibliographical code (= (Index code)) + Secondary Literature

Here, term includes natural, literature and technical word, subject heading, descriptor either generic or semantic, contextual, etc.

CASE EXAMPLE OF REFERENCE ENTRY DIRECTLY CONNECTED TO THE TERM ENTRY ---

ASM - WRU experience

CBF - CTPRCO (1965). p. 9 (reference)

American Society for Metals Searching Service, a computer-based retrieval system designed by the Wester Reserve University Center for Documentation and Communication Research.

Reference : -
The metallurgical searching service of the American Society for Metals - Western Reserve University: an evaluation. Washington, D.C. National Academy of Science - National Research Council. 1964.

BIBLIOGRAPHICAL EQUATION OF THE ENTRY

BIBLIOGRAPHICAL LOCATOR (INDEX TERM) = AUTHOR CODE + TITLE CODE + DATE OF PUBLICATION CODE + PAGE LOCATION CODE + REFERENCE REMARK + ANNOTATION + REFERENCE TO BE CITED

CASE EXAMPLE OF TERM ENTRY WITH REFERENCE ACCOMPANYING WITH INDICATIVE ANNOTATION

abbreviations, identification less common

MMG - CPTNU (1965). p. 23n. (footnote 15):

Reference: -

Labov, T. N. Advan. Chem. Ser. N. 30. 1961. p. 102.
for suggestions on the identification of less common abbreviations of chemical titles used in citing references to the periodicals.
(MMG - CPTNU (1965). p. 23n (footnote 15)):

BIBLIOGRAPHICAL EQUATION OF THE ENTRY

BIBLIOGRAPHICAL LOCATOR (INDEX TERM) = AUTHOR CODE + TITLE CODE - YEAR OF PUBLICATION CODE + PAGE LOCATION CODE + FOOTNOTE REMARK + BIBLIO-GRAPHICAL REFERENCE

CASE EXAMPLE OF PERSONAL NAME WITH DIRECT-CONNECTEDLY CITED BIO-BIBLIO-GRAPHICAL REFERENCE -- (bib.) ---

Frome, J., bib.

VBC - RST (1965). p. 70 (bibliography):

Frome, J., et alii. A system of retrieval: compounds, compositions, processes, and polymers. Washington, D.C. U.S. Patent Office. 1958.
(VBC - RST (1965). p. 70 (bibliography)):

BIBLIOGRAPHICAL EQUATION OF THE ENTRY

BIBLIOGRAPHICAL LOCATOR (INDEX TERM [PERSONAL NAME + BIO - BIBLIOGRAPHICAL ABBREVIATION]) = AUTHOR CODE + TITLE CODE + YEAR OF PUBLICATION CODE + PAGE LOCATION CODE + BIO - BIBLIOGRAPHICAL REMARK + BIBLIOGRAPHICAL ENTRY

ARRANGEMENT OF INDEX TERM

All index terms are not only in alphabetical order either in spoken, i.e. natural or inverted word order, but also in letter by letter regularly compounded with word by word arrangement; viz.

Mc --- not Mac --- file in alphabetical letter position --- m --- c

US --- not United States of America --- file in alphabetical letter position --- u --- s

U. S. --- same as US

use --- comes next to US

The arrangement of inverted index term is in alphabetical order of the inverted index term, as follows:

abstracts, indicative

KA - TMIR (1966). p. 131;
= descriptive abstracts. KA - TMIR (1966). p. 131; CLF - NDHSST (1967). p. 329;
= annotative abstracts. KA - TMIR (1966). p. 131;
CLF - NDHSST (1967). p. 89 - 90; WW F - PAIR (1968). p. 431;

indicative abstracts

KA - TMIR (1966). p. 131 - 132;
= descriptive abstracts. KA - TMIR (1966). p. 131; CLF - NDHSST (1967). p. 329;
= annotative abstracts. KA - TMIR (1966). p. 131;
CLF - NDHSST (1967). p. 89 - 90; WW F - PAIR (1968). p. 431;

Two words hyphonized each other are treated like independent two words, viz.:

edge - punched cards

CCA - ARIST (1966). p. 259;

punched cards, edge-

CCA - ARIST (1966). p. 259;

cards, edge - punched

CCA - ARIST (1966). p. 259;

INDEX TERM AND ITS CONTEXT

From context which is addedly entered to index term, definition, or use example, or semantical nuance can be clarified, On adding, from reference cited therein, definition, use example or semantical nuance of the index term is retraceable with solid reliability.

INDEX TERM AND ITS REFERENCE

Reference pertaining to the index term is entered with reference remark (reference) posted behind the index code. Definition, way of use and nuance can be understood conventionally from the date of publication code entered abide with. Birth and death of the index term also be discernible therefrom firmly.

INDEXING FREQUENCIES

Indexing frequencies of the index term can be obtained by counting the number of bibliographical code added to the index term as shown in the case examples above. "Citation index" shown above tells the indexing frequencies are 4.

INFORMATION REGARDING AGE OF APPEARANCE OF INDEX TERM

In the example "citation index" cited above, the bibliographical codes entered thereto furnish us information that index term "citation index" appeared before 1963 and is still existing in 1966 as significant index term.

NUMBER OF CARD OF INDEX TERMS PREPARED

More than ten thousand words are picked up from the literatures listed, and are permutedly rearranged into index terms which constitute the main text of the union inded. (58 literatures

(books) put under union indexing, among which 28 literatures (marked with *sign in the list attached were completely union indexed).

LANGUAGE OF INDEX TERM ADOPTED

All sentences and words in the main text of the union index are written in English with quite few words in French, German, Dutch, Danish, Swedish, Russian, etc. Separation of English from American is strictly kept basing upon the index words from literatures cited. Between indexed term and its synonymous, related, relative, etc., "see" and "see also" reference are provided so that semantical cross connection between those are clarified as far as possible.

INDEX TERM UNITED ENTERED CARD FORM - NEW PROPOSAL -

Card size: - 3" x 5" (75 mm x 125 mm)
Entry item on card surface (or first and second card surfaces): -

(Card - 1)

citation index

BCP-MIH (1963). p.33: 36: 131: 151: 153 (with figures):
KA-SIC (1965). p.115-116:
MMG-CPTNU (1665). p.205:
KA-TMIR (1966). p.156-187:

(card-2) (citation index)

All references cited in the literature are brought together in a directory, each reference accompanied by a list of citing source documents. The primary arrangement of the index may be by author of the reference, creating an author citation index; by publication in which the reference appeared, creating a journal citation index; or by date of publication of the reference, creating a chronological citation index. (KA-TMIR (1966). p.186-187):

When (card - 1) -- index term cards are arranged in alphabetical order and then print them by offset printing (reprographic processing), union index can be prepared naturally, while, when (card - 2) -- context, annotation, definition, or bibliographical citation (reference) entered card - is rearranged in alphabetical order respectively, and then print them by offset printing (reprographic processing), underwritten bibliographical literatures including literatures shown by other added remarks may be prepared. By preparation of minimum number of an index term card, variety of bibliographical literatures differing in bibliographical characteristics (discernible from their bibliographical equation) can be prepared with minimum economy, time waste, and human labour.

LIST OF LITERATURES UNION INDEXED
IN THE FIELD OF DOCUMENTATION

in an alphabetical order of the
code prepared

(* signed literature is completely union indexed in the text)

	CODE YEAR	BIBLIOGRAPHICAL ENTRY OF THE LITERATURE
1.	*AP - CR (1965)	Altherton, Pauline, ed. Classification research: proceedings of the second international study conference held at Hotel Prince Hamlet, Elsinore, Denmark, 14th to 18th September, 1964, a publication of the FID/CR Committee on classification research in cooperation with the Danish center for documentation. Copenhagen. Munksgaard. 1965.
2	* AS - ICIS (1968)	Artandi, Susan. A introduction to computers in information science. Metuchen, N. J. Scarecrow. 1968.

Table of Contents: -
Chapter 1. Information science and technology -- a discipline: Capter 2. Theoretical aspect of document organization: Capter 3. Computer hardware and software (the digital computer; the binary concept; input/output; storage; programming languages; computer time - sharing); Chapter 4. Representative machine applications; production of printed indexes - computer composition: automatic indexing; mechanical translation. Index.

3	ASIS -AM (1968)	ASIS (American Society for Information Science). Proceedings of the American society for information science, annual meeting. Volume 5. Information transfer. Columbus, Ohio, October 20 - 24, 1968. New York. Greenwood. 1968.
4	* BCP - MIH (1963)	Bourne, Charles P. Methods of information handling. New York. John Wiley. 1963.

Contents: -
1. The nature of the problem: 2. Classification and indexing; the organization of information: 3. Coding; the indexing shorthand: 4. Machine language representation: 5. Manual card systems: 6. Punched card systems: 7. Computer systems: 8. Other paper tape and magnetic media equipment: 9. Microfilm and image handling equipment: + List of acronyms and abbreviations: =Index to names of persons and organizations: # Subject index:

5	BJ - ISRTET (1965)	Becker, Joseph, et alii. Information storage and retrieval: tools, elements, theories. Fourth print. New York. John Wiley. 1965.

Contents: -
Section I: Tools: Chapter 1. Introduction: Chapter 2. The librarian and recorded knowledge: Chapter 3. The documentalist and the development of new technics: Chapter 4. The information framework and the user: Chapter 5. Printed data and the creation of a machine language: Chapter 6. Analysis, logical processing and the computer: Chapter 7. Indexes, documents, and the storage of data:

Section II: Elements: Chapter 8. Interdisciplinary character of information systems: Chapter 9. Elements of usage: Chapter 10. Elements of organization: Chapter 11. Elements of equipments: Chapter 12. Parameters and implementation:
Section III: Theories: Chapter 13. Role of a theory: Chapter 14. Theories of file organization: Chapter 15. Theories of system design: + Periodicals and journals relating to information storage and retrieval: = Index.

6. BKGB - CIR (1968) — Bakewell, K. G. B. Classification for information retrieval, papers presented to an intensive courses held in September 1967 at the school of librarianship, Liverpool college of commerce. London. Clive Bingley. 1968.

7 * BM - MTD (1959) — Boaz, Martha, ed. Modern trends in documentation: proceedings of a symposium held at the university of Southern California, April 1958. London. New York. Paris. Los Angeles. Pergamon. 1959.

Contents: -
Foreword: Specialized planning for information retrieval: The nature of information retrieval: Information needs of applied research: Linguistic analysis in machine - translation research: Automatic computers in machine-translation research: Auto-encoding of documents for information retrieval systems: Application of high speed computers to information retrieval: An application of an electronic computer to information retrieval: Data retrieval with especial application to use of film library instantaneous presentation (FLIP) in literature searching: Magnavox activities in data proceeding: etc. : Index:

8 * BSC - D (1953) — Bradford, S. C. Documentation. London. Crosby Lockwood. 1923.

Contents: -
A review of the present state of librarianship and documentation, by J. H. Shera and Margaret E. Egan: Introduction by S. C. Bradford: Chapter 1. The origin and purpose of documentation: 2. Alphabetical subject indexing: 3. The Universal Decimal Classification: 4. The preparation of subject indexes to volumes of periodicals: 5. General abstracting services: 6. The organisation of a library service in science and technology: 7. Special libraries and special information services: 8. Fifth years of documentation: 9. The documentation chaos: 10. A plan for complete scientific documentation: 11. Some general principles of a bibliographical classification scheme, with some suggestions for eventually improving the Universal Decimal Classification: 12. For and against the decimal classification: Bibliography: Index.

9 *CBF - CTPRCO (1965) — Cheydleur, Benjamin F. Colloquium on technical preconditions for retrieval center operation, April 24-25, 1964. Philadelphia, Pennsylvania. Washington, D. C. Spartan. 1965.

Contents: -
Preface: Introduction: I. Towards reactivity within a retrieval complex: II. Considerations enate of applications: III. Information structure: theory and presentation: Appendix I. Program: Appendix II. List of attendees: Index:

10 CCA - ARIST (1966) — Cuadra, Carlos A., ed. Annual review of information science and technology. Volume 1, 1966. New York. Interscience. 1966.

11. CCA - ARIST (1967) — Cuadra, Carlos A., ed. Annual review of information science and technology. Volume 2, 1967. New York. Interscience. 1967

Contents: -
1. Information needs and uses in science and technology: 2. Design of information systems and services: 3. Evaluation of information systems and services: 4. Content analysis, specification, and control: 5. File organization and data management: 6. Automated language proceessing: 7. Hardware developments and product announcements: 8. Man-machine communication and problem solving: 9. Automation in libraries and information centers: 10. Handling chemical compounds in information systems: 11. Applications in medicine: 12. Techniques for publication and distribution of information: 13. National information issues and trends: 14. Professional aspects of information science and technology: + Index: = Key to periodical literature:

12. CCA - ARIST (1968) — Cuadra, Carlos A., ed. Annual review of information science and technology. Volume 3, 1968. Chicago. Encyclopaedia Britannica. 1968.

Contents: -
1. Information needs and uses: 2. Publication and distribution of information: 3. Design and evaluation of information systems: 4. Content analysis, specification, and control: 5. Organization, maintenance and search of machine files: 6. Automated language processing: 7. Man - computer communication: 8. Automation of technical process in libraries: 9. Document retrieval and dissemination in libraries and information centers: 10. Information networks: 11. Professional aspects of information science and technology: 12. Information systems applications in education: 13. Information systems applications in medicine: Index:

13. CLF - NDHSST (1967) — Carter, Launor, F., et alii. National document-handling systems for science and technology. New York. John Wiley. 1967.

14. CRIP - FUTI (1966) — Carey, R. J. P. Finding and using technical information. London. Edward Arnold. 1966.

15. CRS - PC (1958) — Casey, Robert S. Punched cards, their applications to science and industry. Second edition. New York. Reinhold. 1958.

16. DJL - CLC (1969) — Dolby, J. L., et alii. Computerized library catalogs: their growth, cost, and utility. Cambridge, Massachusetts. M. I. T. Press. 1969.

Table of Contents: -
Preface: Chapter 1. Introduction: computerized library catalog; their growth, cost and utility: Part I. Cost. Chapter 2. An analysis of cost factors in the automation of library catalog: Chapter 3. The influence of typography on the cost of printed catalog: Chapter 4. Efficient automatic error detection in processing bibliographic records: Part II. Utility. Chapter 5. The structure of the shelf list of the Fondren Library at Rice University: Chapter 6. On economic growth of nations and archival acquisition rates: Chapter 7. The use of machine - readable catalog: ...

17. * DMP - IRE (1955) — Doss, M. P. Information processing equipment. New York. Reinhold. 1955.

18. * EAW - TICA3 (1967) — Elias, Arthur W., ed. Third conference technical information center administration: TICA3, Philadelphia, Pennsylvania, August 29 - September 1, 1966.

New York. Spartan. 1967. (Drexel information science series. V. 4)

Contents: -
Preface: 1. Library resources for the technical information center: 2. Conventional files for information centers: 3. Abstracting for technical information centers: 4. Indexing in and for technical information centers: 5. Composition, copying and semi-mecahnized filing and searching devices: 6. Use of tabulating equipment in information centers: 7. Computer roles in information centers: 8. The anaysis and design of information systems: Index:

19. FAC - GPI (1967) — Foskett, A.C. A guide to personal indexes. London. Clive Bingley. 1967.

Contents: -
Introduction: Part one. Edge-notched cards; general descriptions, coding; a practical file; manipulating the file; systems for the small information service: Part two. Optical coincidence cards (Peek-a-boo); general description; a practical file: Part three: Choice of system: + Some useful reference books: = Definitions: # Appendix one: Name-number coding: # Appendix two: Random numbers: Index.

20. FID - RI - TPI (1969) — International Federation for Documentation, Study Committee "Research on Theoretical Basis of Information". On theoretical problems of informatics. , oscow. All-Union Institute for Scientific and Technical Information. 1969.

21. * HJ - DPPUL (1966) — Harvey, John., ed. Data processing in public and university libraries. Washington, D.C. Spartan. 1966. (Drexel information science series. V. 3)

22. * HLH - AEP (1965) — Hattery, Lowell H. Automation and electronics in publishing. Washington, D.C. Spartan. 1965.

23. ICSA - FR - U (1951) — International Conference on Science Abstracting, convented by the Unesco in Paris, from 20 to 25 June 1949. Final report. Paris. UNESCO. 1951: 2nd impression October 1953.

Table of Contents: -
Chapter 0. Organization of the conference: Chapter 1. Introduction to the preliminary report: Chapter 2. Types of abstracts; Chapter 3. Authorship of abstracts: Chapter 4. Methods of publication: Chapter 5. Methods of distribution: Chapter 6. Selection of abstracts: Chapter 7. Language problems: Chapter 8. Subject distribution of articles and abstracts: Chapter 9. Co-ordination of abstracting services: Chapter 10. Future organization of science abstracting: Chapter 11. Close of the conference: Appendices: - Alphabetical author and subject index; Postscript:

24. ISW - DRM (1962) — Information systems workshop: the designer's responsibility and his methodology, based on a conference sponsored by the American documentation institute and the university of California at Los Angeles under support of a grant national science foundation and the national aeronautical and space administration, May 29-June 1, 1962. Washington, D.C. Spartan. 1962.

25. JG - CISCRR (1960) — Johoda, G. Correlative indexing systems for the control of research records. 1960. (Columbia University, D. L. S. thesis: University Microfilm, Mic 60 - 3082):

26. JK - IRAPS (1968) — Janda, Kenneth. Information retrieval, applications to politcal science. Indianapolis and New York. The Bobbs-Merrill. 1968.

Contents: -
List of figures: List of tables: Part 1. Techniques: 1. Indexing by alphabetizing keywords: 2. Searching for relationship among keywords: 3. Retrieving information form microfilm: Part II. Research applications: 4. Indexing the American Political Science Review: 5. Preparing bibliographies on international and comparative politics: 6. Selectively disseminating information to scholars: 7. Selecting roll call votes for analysis: 8. Conducting research on comparative politics: Part III. Administrative and decision-making applications: 9. Preparing the biographical directory of the APSA: 10. Providing information to state legislator's: 11. Providing information to congressman: Index. (JK - IRAPS (1968). p. xv - xvii):

27. KA - EHITE (1967) — Kent, Allen & Taulbee, Orrin E. Electronic handling of information: testing and evaluation. Washington, D.C. Thomson Book, 1967.

Preface: -
I. Introduction: II. Man - machine information interaction: III. Information handling - research in progress: V. Hindsight, foresight, oversight on information systems: Index.

28. KA - IRMT (1960) — Kent, Allen. Information retrieval and machine translation. New York. Interscience. 1960.

29. KA - SIC (1965) — Kent, Allen. Specialized information centers. Washington, D.C. Spartan. 1965.

30. * KA - TMIR (1966) — Kent, Allen. Textbook on mechanized information retrieval. 2nd ed. New York. Interscience. 1966.

31. KM - SPIS (1965) — Kochen, Manfred. Some problems in information science. New York. Scarecrow. 1965.

Table of Contents: -
Preface: Table of contents: Chapter 1. Introduction: IA. An adaptive systems for directly recording and retrieving information in sample, formal, English-like sentences: IB. Total information systems in planning and alerting: IC. Toward information systems science: ID. Preliminary operational analysis of computer-based, on-demand document retrieval system using coordinate indexing: Chapter II. The knowledge subsystem: Chapter III: The storage/recall subsystem: Chapter IV. The data processing subsystem: Chapter V. Conclusion: Index:

32. * KRT - AL (1968) — Kimber, Richard T. Automation in library. Oxford. Pergamon. 1968.

Contents: -
1. Libraries and automation: 2. Introduction to computers: 3. Ordering and acquisitions: 4. Circulation control: 5. Periodicals listing and accessioning: 6. Catalogues and bibliographies: 7. The present state of automation in libraries: References: Index:

33. LC - CRCRMF (1969) Library of Congress. Conversion of retrospective catalog records to machine-readable form: a study of the feasibility of a national bibliographic service. Washington, D.C. 1969.

34. LC - PM (1967). Project MARC, an experiment in automating Library of Congress catalog data. Washington, D.C. Library of Congress. June 1967. 17p.

35. * LFW - IRS (1968) Lancaster, F.M. Information retrieval systems, characteristics, testing and evaluation. New York. John Wiley. 1968.

Contents: -
The basic activities of information retrieval: Subject indexing, index terms, and controlled vocabularies. Part 1. Traditional retrieval tools: Part 2. Concept coordination: Search files and searching mechanisms: The current awareness function: Performance criteria for information retrieval system: Index languages, their components and characteristics: Towards completely mechanized information system: Evaluating the operating efficiency of an information retrieval system: Analysis of the test data: Evaluating the economic efficiency of an information retrieval system: Interaction between retrieval system and its users: searching strategoies: Conclusion: Index;

36. * LJ - PCDP (1967). Levy, Joseph. Punched card data processing. New York. McGraw-Hill. 1967.

Contents: -
Forward: Preface: Section 1. The IBM punched card: Section 2. The key punch: Section 3. The 82 sorter: Section 4. Basic principles of wiring: Section 5. The 548 interpreter: Section 6. The 514 reproducing punch: Section 7. The 85 collator: Section 8. The 402 accounting machine: Section 9. The 557 alphabetic interpreter: Section 10. The 519 document-originating machine: + Glossary: #Index: °Blank wiring diagrams for use with problems:

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Part 1. Getting started, choosing application: Part 2. Fundamental training course for information retrieval specialists; Part 3. Selecting techniques and equipment; Part 4. System examples and future compatibility: Part 5. Theory, logic, measurement and mathematics: Glossary: Bibliography: Index:

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LMA - USODDR (1966) — Libbey, Miles A. The use of second order descriptors for document retrieval. Bedford, Mass. MITRE. Corp. February 1966. 41p. (see also: American documentation. V. 18. N. 1. January 1967. p. 10 - 20).

MV - AD (1956) — Mostecky, V. Study of the see also reference structure. in: American documentation. V. 7. 1956. p. 294 - 314. (VBC - CIS (1959). p. 111 (bibliography)).

VS - AL (1967) — Slamecka, Vladimar. Information science or is it? in: Alabama librarian. V. 18. N. 1. January 1967. p. 3 - 6.

A

NLM Medical Subject Heading List
HJ - DPPUL (1966). p. 83:

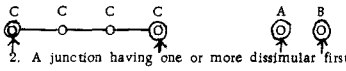
nodal headings.
AP - CR (1965). p. 131:

NODC
= National Oceanographic Data Center.
. SK - MISRD (1968). p. 142:

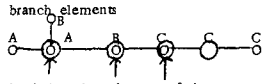
node.
= first order significant words.
= first order words. BM - MTD (1959). p. 52 - 57:

node (first order).
SCK - HPL (1968). p. 61 - 62 (definition):

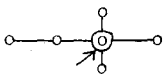
Node (first order): –
A reference element and its associated first order branch element or elements, provided the reference element is:
1. A terminal element of a chain 1a. of similar elements throughout, 1b. of any two elements only:



2. A junction having one or more dissimular first order branch elements



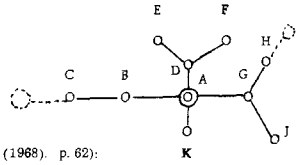
3. A junction element of three or more branches.



(A node is here identified by placing a dot into the circle standing for the affected reference element, thus: O).
(SCK - HPL (1968). p. 62):

node (second order)
SCK - HPL (1968). p. 62 (definition):

Node (second order): – A first order node enlarged by including second order branch elements, where present.



(SCK - HPL (1968). p. 62):

node, extended (first order).
SCK - HPL (1968). p. 62:

node, extended (second order).
SCK - HPL (1968). p. 62:

nodes, terminal.
SCK - HPL (1968). p. 113a:

nodal index.
BM - MTD (1959). p. 55 (Figure 5)(example):

Document Pattern – Nodal index:
075 –154/374/E01, 154 –036/075/171/374/E01, 315 –B01/C01, 316 –007/357/514/535/, 366 –171/527/662/691/(03, ...
(The serial form of the notation as shown above the table is then stored appropriately on cards, punched or magnetic tape, or the like, the notations about which table of word pairs explains item indexed (node) respectively).

Table of word pairs ordered according to thesaurus family number

Nodes	Branches
075 (sex)	- 154 (effect), 374 (female), E01 (hormones)
154 (effect)	- 036 (reduce), 075 (sex), 171 (stimulate), 344 (female), 374 (feminizing), E01 (hormones),
374 (female)	-075(sex), 154 (effect), 171 (stimulate), 514 (suggest), E01 (hormones)
E01 (hormones)	- 036(lowering), 075 (sex), 154 (effect), 170 (action), 373 (men), 374 (female), 662 (treatment).

(BM - MTD (1959). p. 55):

nodal index(es).
BM - MTD (1959). p. 52:
SJR - SFIR (1965). p. 172 - 173:

A method is described of recording the fact that two significant terms are found in immediate proximity to each other (discounting the existence of common words such as articles, conjunctions, prepositions, etc.) and marshalling such word pairs to form the indexing terms. Two groups of significant terms are taken, the first being those of highest significance rating (say the first sixteen words), and the second being a group of the following words down to a suitable significance rating. The first group terms are referred to as "nodes" and for this reason the resulting index is referred to as a "nodal" index. (SJR - SFIR (1965). p. 172):

nodal index for branches structures.
BM - MTD (1968). p. 52 (reference):

Since certain words of such pairs (immediate physical proximity of a pair of words of given significance) may in turn be found to be paired with other words or word pairs, these overall relationships may be viewed as branched structures and the principles of the Nodal Index for branched structures be applied to the development of an encoding scheme for verbal information. Such a system would best be arranged by assigning the status of nodes to words of a first order set composed of highest ranking words such as selected for the one-dimensional pattern previously described. While a nodal index may be developed at the level of this selection, the system will described here on a level which includes asecond order set of words, in this case a predetermined range of frequencies adjacent to the range of the first set (first order significant words), namely, the words of frequency 2, 3, and 4 (second order significant words). The automatic process would proceed to extract from the sentences all word pairs consisting either of two adjoining first order words (word frequencies of 5 and over) or of a first order word coupled to a second order word. The result is a listing, stored in the machine, as shown in Fig. 3 (p. 52).

nodes in thesaurus graph, distance between.
KM - SPIS (1965). p. 135; 267:

noise
. PJW - DIR (1957). p. 145 (definition):
. BJ - ISRTET (1965). p. 128; 173; 351:
. BKGB - CIR (1968). p. 77; 82:
. WWF - PAIR (1968). p. 450 (definition):

In the Shannon - Weaver information theory spurious, and extraneous signals, introduced randomly. See also False drops. (PJW - DIR (1957). p. 145 (definition)):

An undesirable signal which disturbs the desired signal in a communication network. See False - Drop. (WWF - PAIR (1968). p. 45) (definition)):

noise, engineering.
VBC - RST. (1965). p. 162:
In principle, every retrieval system based upon a given matrix should have the same retrieval efficiency. Any variation should be introduced only as engineering noise, e.g., mistakes in coding by human agents, errors in machine operation, or false combinations deliberately allowed in the design of the system. (VBC - RST (1965). p. 162:

noise, methods of extracting information from.
SG - IR (1967). p. 29:

noise and question analysis.
. KA - SIC (1965). p. 201:

noise factor.
. PJW - DIR (1957). p. 27; 145 (definition):
. BJ - ISRTET (1965). p. 253:

Value of the noise factor, fn: –

$$fn = \frac{m - w}{m}$$

(m = selected items from the file; w = number of items within m that are of pertinent interest).
(PJW - dir 91957). p. 27):

The fraction of documents to which attention is directed which are found, on inspection, to be not pertinent. (M-W)/M, where M = number of documents which use of a given literature searching system indicates to be of possible pertinent interest, and W = number of documents found to be of actual pertinent interest, upon inspection of the M documents. See also Pertinency Factor. (PJW - DIR (1957). p. 145).

structural file.
MCT - AIS (1967). p. 236:

structural formulas.
SM - PMRD (1961). p. 257:

structural information.
MCT - AIS (1967). p. 165 - 166; 203 - 224; 236:

structural linguistics.
. AP - CR (1965). p. 467; 481:

structural notation.
VBC - FC (1960). p. 48:

Notation may, if required, reflect and demonstrate structural feature of the subject classified. There are two aspects of structure. The first concerns the structure of an individual compound heading: a class number may be designed to show the points at which combination of terms has occurred. ... The second aspect concerns the hierarchical structure in a facet: class numbers may be designed to show that two terms are in the same array, or same chain, or the same hierarchy, or the same facet. ...
(VBC - FC (1960). p. 48):

structural relations.
. AP - CR (1965). p. 173:

structural reorganization and computers.
KA - TMIR (1966). p. 17:

structural scheme
. AP - CR (1965). p. 131; 426:

structure, analysis of -.
BJ - ISRTET (1965). p. 332:

structure, branched.
SCK - HPL (1968). p. 60b:

structure, change.
SHM - HIP (1967). p. 29:

structure, chemical, and biological activity.
SJR - SFIR (1965). p. 159 - 162:

structure, classification.
VBC - RST (1965). p. 72:

structure, classification by.
WWF - PAIR (1968). p. 116 - 118:

structure, descriptor file.
VBC - RST (1965). p. 72ff:

structure, individual differences in.
SHM - HIP (1967). p. 109 - 125:

structure and academic examinations.
SHM - HIP (1967). p. 124 - 125:

"structure" as a category.
. VBC - CIS (1959). p. 41:

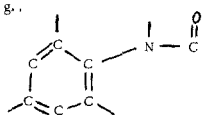
structure files.
MCT - AIS (1967). p. 228:

These serve to speed the search of other files by providing information on the location or structure of data therein. There can be a structure file for a structure file, as shown in method 6 of our example in Section 7. 4. 3 (p. 220). Structure files differ from index record files only in regard to their referents.
The examples that we use in this chapter are based on contiguously placed file structures and fixed - or repeating - field records. However, the principles apply to any file organization. (MCT - AIS (1967). p. 228):

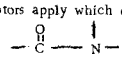
structure for the flow of scientific and technical information.
PIST - PADI (1966). p. 283 - 298:

structure fragments.
CBF - CTPRCO (1965). p. 75:

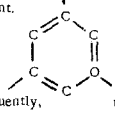
A frangmentation method of representing structures is essentially a coordinate indexing scheme in which the structure fragments chosen are the indexing terms. As with any set of indexing terms the terms may be made orthogonal - by Procrustean means - or else overlap may be permitted and generic-specific relationships be built in. In any case the terms may be chosen arbitrarily, but must be chosen beforehand. A change in the list of indexing terms for an existing file requires that the file be reworked. Thus if, because of reevaluation of the file or because of shifting interest of the organization being served, it should become apparent that, e. g.,



is a useful fragment, then all structures would have to be retreived to which any of the earlier fragments chosen as descriptors apply which encompass a fragment and a



fragment.



Subsequently, these structures would have to be reexamined and a decision made in each case whether the new descriptor applies. (CBF - CTPRCO (1965). p. 75 - 76):

structure information.
CBF - CTPRCO (1965). p. 97:

structure of an index
MCT - AIS (1967). p. 67:

structure of chemical compounds.
. BJ - ISRTET (1965). p. 129:

structure of documents.
MCT - AIS (1967). p. 65 - 67; 77 - 86:

structure of file.
MCT - AIS (1967). p. 203; 210:

structure of files.
MCY - AIS (1967). p. 174; 203:

structure of index language.
JF - ITIMSD (1964). p. 23:

structure (of information).
WWF - PAIR (1968). p. 32:

Structure (of information), a reference to the format or organization of the information and its logical relationship between statements. (WWF - PAIR (1968). p. 32):

structure of language.
MCT - AIS (1967). p. 18 - 20; 160:

structure of records.
MCT - AIS (1967). p. 159 - 172; 203:
AS - ICIS (1968). p. 45:

structure of subjects.
. VBC - CIS (1959). p. 2:

structure tables, structuring, abstract.
WWF - PAIR (1968). p. 98 - 107:

structure tables, structuring, abstracting.
WWF - PAIR (1968). p. 98 - 107:

structure versus content.
SHM - HIP (1967). p. 46:

structured core journals.
. BS - CMJ (1956). V. 3. N. 7/8. 178 - 182.

structured territorial analysis, (soshiki ryoiki bunseki).
BS - IS (IV)(1957). V. 11. N. 1. p. 9:

structuring.
WWF - PAIR (1968). p. 95:

Structuring is a generic technique often used in the origination phase of a document in order to record the major classes, arrays, or points which are to be made. It is also a technique to provide an array of data which otherwise would be spread throughout the document itself. A product structure is an array or pattern of information showing relationships of components of product to each other and to the product. A product structure also can compare similarities and differences between various models of a product line.