

0 Form divisions

- 01 Bibliographies
- 02 Literature reviews
- 02 Dictionaries, terminologies
- 04 Classification systems & thesauri
- 05 Periodicals and serials
- 06 Conference reports, proceedings
- 07 Text books (whole field)*
- 08 Other monographs (whole field)*
- 09 Standards, guidelines

1 Theoretical foundations

- 11 General theory of order
- 12 Conceptual basis of class.
- 13 Mathematics of classification
- 14 Systemology and classification
- 15 Psychol. & epistemol. of class.
- 16 Development of science and class.
- 17 Classification problems
- 18 Classification research
- 19 History of classification

2 Structure and construction of CS**

- 21 General questions of structure
- 22 Elements and special structures
- 23 Construction of CS
- 24 Relationships
- 25 Sequencing of concepts/classes
- 26 Notation, codes
- 27 Compilation, updating, storage & maintenance of CS
- 28 Compatibility and concordances of CS
- 29 Evaluation of CS

3 Classing and indexing (methodology)

- 31 Theory of classing & indexing
- 32 Subject analysis
- 33 Classing and indexing techniques
- 34 Automatic classing and indexing
- 35 Automatic ordering
- 36 Coding
- 37 Reclassification
- 38 Index generation programming
- 39 Evaluation of indexing

4 On universal systems

- 41 On universal systems in general
- 42 On the UDC
- 43 On the DDC
- 44 On the LCC
- 45 On the Bliss Classification, BC
- 46 On the Colon Classification, CC
- 47 On the Libr.-Bibliogr. Class., LBC (BDK)
- 48 On other universal CS (alph.)
- 49 On CS for special user groups

* Monographs on special topics at spec. subdivisions

** CS stands for *Classification Systems* including thesauri

5 On special objects CS (taxonomies)

- 51 Numerical taxonomy***
- 52 On taxonomies and nomenclature for chem.
- 53 On taxonomies for minerals and materials
- 54 On taxonomies for plants and animals
- 55 On taxonomies in the human area
- 56 On taxonomies in the socio area
- 57 On commodity CS
- 58 On CS for kinds of documents
- 59 On CS for objects in humanities area

6 On special subjects CS

- 61 On CS for mathematics and area 1 fields
- 62 On CS for physics and chemistry, incl. el.
- 63 On CS for the astro- and geosciences
- 64 On CS in the bio-area
- 65 On CS in the human area
- 66 On CS in the socio-area
- 67 On CS in the economics and technol. area
- 68 On CS in the information area
- 69 On CS in the culture and humanities area

7 Classification and language

- 71 Gen. probl. of nat. languages, semiotics
- 72 Semantics
- 73 Automatic language processing
- 74 Grammar problems
- 75 Question-answering systems
- 76 Lexicon, dictionary problems
- 77 General problems of terminology
- 78 Special terminology problems
- 79 Problems of translation (incl. multiling. CS)

8 Applied classing and indexing

- 81 General problems of indexes and indexing rules
- 82 Data indexing
- 83 Indexing of and by titles, phrases
- 84 Indexing of texts
- 85 Book indexing
- 86 Indexing and indexes of CS
- 87 Indexing of secondary literature
- 88 Indexing of primary literature
- 89 Classing and indexing of pictures, etc.

9 Classification "milieu" (Org. & Econ.)

- 91 General probl. of organisation of class.
- 92 Persons and institutions in class.
- 93 Org. of class. on the national level
- 94 Org. of class. on the intern. level
- 95 Education and training in class. & index.
- 97 Economic aspects
- 98 User studies
- 99 Standardization in classification

*** Except for 51 outline follows under 5 and 6 the main divisions in scheme of subject fields as given in I.C.2 (1975) No. 1, p. 36

0 Form Divisions

01 Bibliographies

5477 Laureilhe, M.-Th.: *Bibliographie courante des thesauri et index par matières* (au 31 Déc. 1979). In: *Bull. Bibl. France* 25 (1980) No. 3, p. 111–114
This is the tenth supplement to the bibliography which appeared 1969 for the first time. It lists 62 thesauri in systematic arrangement plus some thesauri still being elaborated.

5478 Leube, K.: *Kleine Bibliographie fachsprachlicher Untersuchungen*. (Short bibliography of terminological investigations) (In German). In: *Fachsprache* 1 (1979) No. 3, p. 99–115

Reprint of a manuscript printing of the Karl-Marx-University, Leipzig 1978. Lists some 350 titles in alphabetical order within some subject groups. 3rd continuation of the bibliography in the monograph by L. Hoffmann: „*Kommunikationsmittel Fachsprache. Eine Einführung*“.

02 Literature Reviews

5479 Gupta, B. M., Nagpal, M. P. K.: *Citation analysis and its applications: a review*. In: *Herald Libr. Sci.* 18 (1979) No. 1–2, p. 86–93, 17 refs.
Origin and development of the concept and method of citation analysis.

5480 Mordovčenko, P. G., Sacharnyj, L. V.: *IR language evolution phases and trends*. (In Russian). In: *Probl. nauč. upr. soc. obščestvom*. Riga 1978. p. 94–109, 14 refs.

Summary of the development of descriptor languages using thesauri and examination of descriptor languages with an open vocabulary.

03 Dictionaries, Terminologies

5481 Frey, C., Köhler, C., Kracht-Helbig, G. et al: *Deutsche Fachsprache der Technik. Ein Ratgeber für die Sprachpraxis*. (German special language for engineering. A guide to language practice). (In German). Leipzig: VEB Verlag Enzyklopädie 1979. 214 p.

5482 BS 3527, Pt. 10: 1979. *Glossary of terms used in data processing*, Pt. 10. *Operating techniques and facilities*. London: British Standards Institution 1979. 8 p., £ 4.50

5483 Data Base Systems, Inc.: *Glossary of computer terms*. In: *Inform. Repts. & Bibliogr.* 8 (1979) No. 1, p. 21–37

5484 Instytut Informacji Naukowej, Technicznej i Ekonomicznej: *Terminological dictionary for information science* (In Polish). Wrocław, Warszawa: Zakład Narodowy imienia Ossolinskich-Wydawnictwo 1979. 240 p.

04 Classification Systems and Thesauri

General Classification Systems

5485 Berliner Zentralbibliothek. AGB — Amerika-Gedenkbibliothek: *Systematik der Amerika-Gedenkbibliothek, Berliner Zentralbibliothek*. (Classification scheme of the American Memorial Library and the Berlin Central Library), 2nd rev. ed. Pt. 1 (In German). München: K.G. Saur 1979.
Vol. 1 contains the subject fields: political science, public administration, history, military science, social sciences, economics, agriculture, sports and games.

5486 DDC Retrieval and Indexing Terminology Posting Terms with Hierarchy and KWOC. Alexandria, Va.: De-

fense Documentation Center 1979. 376 p. AD-068 500
This second edition of the Defense Documentation Center's Retrieval and Indexing Terminology (DRIT) is supplemented by assigned identifiers and open-ended terms. It has been revised to exclude some 250000 natural language Use References which are presently undergoing extensive revision. (Acc. orig. abstr.)

5487 Deutsche Bibliothek: *Schlagwortverweisungs-Pool, Kumulationsperiode 1977/I–1979/I*. Teil 1: Alphabetische Liste der genormten Schlagwörter mit dazugehörigen Verweisungen, Teil 2: Alphabetische Liste der Verweisungen mit dazugehörigen genormten Schlagwörtern. (Subject headings reference pool, cumulation period 1977/I–1979/I). (In German). Frankfurt: Buchhändler-Vereinigung 1979: 282 p. = *Arbeitshilfen der Deutschen Bibliothek* 3.

5488 WIPO World Intellectual Property Organization: *International Patent Classification*. 3rd ed. München: C. Heymanns Verlag KG 1979. 9 vols. DM 537,—
Vol. 1: A Human Necessities, 124 p.; Vol. 2: B Performing Operations, Transporting, 290 p.; Vol. 3: C Chemistry and Metallurgy, 191 p.; Vol. 4: D Textiles and Paper, 56 p.; Vol. 5: E Fixed Constructions, 70 p.; Vol. 6: F Mechanical Engineering, Lighting, Heating, Weapons, Blasting, 163 p.; Vol. 7: G Physics, 136 p.; Vol. 8: H Electricity, 130 p.; Vol. 9: Guide, Survey of Classes and Summary of Main Groups, 240 p.

Special Classification Systems

5489 Lexique U3: *physique, informatique, électricité*. (Lexicon U3: physics, computer science and electricity) (In French). Paris: Centre National de la Recherche Scientifique. Informascience. Centre de Documentation Scientifique et technique. 1980. 178 p.

List includes the controlled descriptors and their relationships for information science, computer science, physical sciences, astronomy and astrophysics, geophysics, meteorology, oceanography, electricity, electronics and electrical engineering.

5490 Lexique U6: *chimie pure et chimie appliquée*. (Lexicon U6: pure and applied chemistry). (In French). Paris: Centre National de la Recherche Scientifique. Centre de Documentation Scientifique et Technique 1980. 99 p.

Controlled descriptor list for general and physical chemistry analytical, organic and inorganic chemistry and chemical and industrial engineering.

5491 ZDE Thesaurus Elektrotechnik. (Thesaurus for electrical engineering terms) (In German). 5th ed. Offenbach: Zentralstelle Dokumentation Elektrotechnik im Fachinformationszentrum Technik (ZDE) 1979. 432 p.
The 5th edition contains approx. 7120 concepts with 9300 descriptors arranged in alphabetical order.

5492 Information retrieval thesaurus in electrical engineering. (In Russian). 2nd ed. rev. and enl. Moskva: Kemerov. mezotrasl. territ. centr. naučn.-techn. inform. i propagandy, 1979. 594 p.

The thesaurus contains 7200 descriptors and 800 non-descriptors. It consists of an introduction, a lexicosemantic list of descriptors and non-descriptors, a systematic listing of descriptors, descriptor fields, and descriptor list by groups. It contains also a direct and a reverse keyword index, an alphabetical list of function descriptors and a direct and reverse index of function keywords.

5493 Lexique U2: *sciences de la terre*. (Lexicon 2: earth sciences). (In French and English). Paris: Centre National de la Recherche Scientifique. Centre de Documentation Scientifique et Technique/Orléans: BRGM 1980. 73 p.

5494 Bokij, G. B., Kočanova, N. N. et al: *Minerals thesaurus: Russian/German, German/Russian*, Vol. 3. Moskva: VINITI 1979. 562 p.

The thesaurus contains 3045 terms. It lists alphabetically mineral names in Russian and German, a formula index and an index of structural types.

5495 **Lexique U1: biologie végétale, sciences agricoles.** (Lexicon U1: plant biology and agriculture) (In French). Paris: Centre Nationale de la Recherche Scientifique. Centre de Documentation Scientifique et Technique 1980. 27 p.

List of controlled descriptors and their relationships from the following fields: biology and physiology of plants, forestry, agriculture, phytopathology, plant ecology and foods.

5496 **Lexique U5: sciences de la vie.** (Lexicon U5: life sciences). (In French). Paris: Centre National de la Recherche Scientifique. Centre de Documentation Scientifique et Technique 1980. 222 p.

Contains the controlled descriptors and their relationships in the fields of fundamental biology, animal biology and medicine.

5497 **Information retrieval thesaurus in agriculture.** 2nd rev. and enl. ed. (In Russian). Moskva: GOSINTI 1978. 372 p.

The thesaurus contains 4500 terms and consists of the following parts: alphabetical list of descriptors and non-descriptors, systematic list of descriptors, descriptor fields and list of descriptors by groups. Several keyword indexes provide access to the descriptors.

5498 Nakamura, S.: **A Japanese thesaurus for the agricultural sciences.** (In Japanese). In: Daj 15 kaj zyoho kagaku gizyutsu kenkyu syukaj happyo rombunshu (1978) p. 241–249, 276–277

The vocabulary consists of approx. 8500 terms, all of them carry use frequency data. It was derived from some 50000 agricultural articles.

5499 **Basic tabulation list with alphabetical index: international classification of diseases.** 9th rev. Geneva: World Health Organization 1978. 331 p., ISBN 92-4-1541334

The index is in two sections: (1) includes diseases, syndromes, pathological conditions, injuries, signs, symptoms, problems etc., (2) indexes the external causes of injury, e.g. fire, explosion, fall, assault, collision, submersion etc.)

5500 **Medical Subject Headings. Annotated alphabetical list.** Bethesda, Md.: National Library of Medicine 1979. 807 p., PB-300 500

Alphabetical list of all subject descriptors used by indexers and catalogers at the National Library of Medicine. Includes: Subject Headings, Cross References, Geographic Headings, Non-MeSH Terms, Check Tags, Tree Numbers, and Notes for indexers, catalogers, and online searchers (Orig. abstr.)

5501 **Information retrieval thesaurus in phthisiology: Tuberculosis of respiratory organs.** (In Russian). Moskva: Mosk. NII tuberkuleza 1978. 123 p.

The thesaurus contains 768 descriptors and 1120 keywords. It consists of three parts: introduction, systematic index of semantic fields, subfields and associated descriptors and alphabetical index. It was designed at the All-Union Medical Information Research Institute.

5502 **International classification of impairments, disabilities, and handicaps. A manual of classification relating to the consequences of disease.** Geneva: World Health Organization 1980. 207 p., Sw. fr. 15.— ISBN 92 4 154126 1.

In addition to its opening chapter on the consequences of disease, the manual contains three independent classifications: *Impairments* (I code), concerned with abnormalities of body structure and appearance and with organ or system function, resulting from any cause; *Disabilities* (D code), reflecting the consequences of impairment in terms of functional performance and activity by the individual; *Handicaps* (H code), concerned with the disadvantages experienced by the individual as a result of impairments and disabilities.

5503 Linares, M. et al: **Tesauro de la formacion profesional.** (Thesaurus of professional education) (In Spanish and English). Montevideo, UY: Centro Interamericano de Investigacion y Documentacion sobre Formacion Profesional (CINTERFOR) 1979. 325 p., 2 vols.

Vol. 1 contains the introduction and a classification system of 19 classes according to the thesaurus of the International Labour Office. Within every group the descriptors are arranged in facets and within these in alphabetical order. Vol. 2 contains a Spanish and an English KWOC index.

5504 **National Criminal Justice Thesaurus.** Descriptors for Indexing Law Enforcement and Criminal Justice Information. Germantown, Md.: Aspen Systems Corp. 1978. 347 p. = PB 281 137, NCJ-45887

Contains about 4000 descriptors in 3 sections, "substantive", "organizational" and "geographic" which are listed alphabetically in each section with a five digit numeric code assigned to each term.

5505 Wolley, R. D.: **A thesaurus of land use and resources management terminology.** 2nd ed. Arlington, Va.: Computer Microfilm Intern. Corp. 1976. 575 p. = ED-139 392

5506 Burrell, J. P.: **Source header list. Supplement 2.** Alexandria, Va.: Defense Documentation Center 1979. 208 p. NTIS Report, AD-A069 900

Alphabetical compilation of source names used by the Defense Documentation Center in the Research and Technology Work Unit Information System, and the Technical Report, Program Planning, and Independent Research and Development Data Banks. (Orig. abstr.)

5507 Kolesnikov, L. V. et al: **Information retrieval thesaurus in economics.** Pt. I: Lexico-semantic index. Pt. 2: Systematic index. (In Russian). Moskva: INION 1979. 348 + 105 p.

The thesaurus contains approx. 2500 descriptors and 870 keywords.

5508 **Tesauro de Informacion Industrial Centroamerica y Republica Dominicana.** (Industrial Information Thesaurus for Central America and the Dominican Republic) (In Spanish). Guatemala: Instituto Centroamericano de Investigacion y Tecnologia Industrial (ICAITI) 1979. 301 p., ca. \$ 15.—

This thesaurus represents an effort of subregional standardization of indexing and retrieval languages in the SIATES countries (Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Dominican Republic). It contains some 4000 descriptors.

5509 Viet, J.: **Macrothesaurus for information processing in the field of economic and social development.** Paris: Organisation for Economic Co-operation and Development 1978. XIII, 438 p., ISBN 92-64-11882-9, \$ 30.—

5510 **Management Contents data base thesaurus.** Skokie, Ill.: Management Contents 1979. 74 p.

Section 1 contains an alphabetical list of approx. 1100 terms, section 2 is a numerical listing, grouping together closely related terms by number, section 3 lists all terms alphabetically under 20 major subject headings.

5511 **Lexique U8: Sciences de l'ingénieur.** (Lexicon U8: Engineering sciences.) (In French). Paris: Centre National de la Recherche Scientifique. Centre de Documentation Scientifique et Technique 1980. 88 p.

Concerns the controlled descriptors for mechanical engineering, building and transport.

5512 **Information retrieval thesaurus in mechanical engineering technology.** 2nd ed., rev. and enl. (In Russian) Moskva: GOSINTI 1979. 639 p.

The thesaurus contains 9000 descriptors and 500 non-descriptors and consists of several parts, according to the USSR State Standard GOST 18383-73.

5513 **Thesaurus Maschinenbau.** (Thesaurus for mechanical engineering). (In German). 5th ed. Frankfurt: Dokumentation Maschinenbau im Fachinformationszentrum Technik (DOMA) 1979. 671 S.

The thesaurus contains about 18000 concepts with some 23000 terms in alphabetical arrangement.

5514 Izjumskaja, K. M., Sinicina, N. I. (Eds.): **Information retrieval thesaurus for instrument making, automation facilities and control systems.** (In Russian). Moskva: CNII Inform. i techn. ekon. issled. priborostr., sredstv. avtomatiz. i sistem upr. 1978. 252 p.

5515 Saryčeva, N. V. (Comp.) **Information retrieval thesaurus in construction and architecture.** List of additions and corrections. Fasc. 1. (In Russian). Moskva: 1978. 52 p.

5516 **Register of Terms (for Textile Information).** Manchester, England: Shirley Institute 1979. V, 122 + 39 p. 2 vols.

Vol. 1 contains all the key terms currently authorized for indexing, vol. 2 contains "advisory lists", of terms grouped in broad subject fields.

5517 Semenova, T. M., Jakuševa, D. A., Krotova, L. A. (Comp.): **Shipbuilding thesaurus.** (In Russian). Leningrad: CNII "Rumb" 1978. 59 p.

Contains in the alphabetical part 1526 descriptors and 145 key-words with scope notes and cross references. The semantic part consists of sets of hierarchically ordered descriptor groups.

5518 **Berlin-Thesaurus.** Sonderausgabe des Teilbereiches Archive, Bibliotheken, Museen. 1. Arbeitsfassung. (Special edition for the parts archives, libraries and museums, 1st ed.) (In German). Berlin: Landesbildstelle Berlin. Zentrum für audio-visuelle Medien 1979. 47 p.

5519 Lavrik, V. V.: **Information retrieval thesaurus in informatics.** (In Russian). Moskva: Centr. ekon.-mat. institut AN SSSR 1979. 112 p.

The thesaurus was produced with the help of an application software package designed for multi-aspect manipulation of specialised terminologies on the Minsk-22 computer. Its development involved the use of second-generation permuted title indexes, an index of generic and associative relations and an index of super-ordinated terms. (Author, abbr.)

5520 Chennall, R. G.: **Nomenclature for museum cataloging.** A system for classifying man-made objects. Nashville, Tenn.: Amer. Assoc. for State and Local Hist. 1978. 520 p., 137 refs., ISBN 0-910050-30-9

A system for the naming of artifacts is presented. It includes an expandable, standardized word list and provides a set of structured terms of artifacts with definitions and scopenotes.

5521 **Klassifikation Tonträger-Musik, auch für Kinderbibliotheken** (Classification of music carrying documents also for children's libraries.) (In German). In: Bibliothekar, DDR 33 (1979) No. 5, p. 456-457

5522 Harvard University Library: **Archaeology.** Classification schedules, classified listing by call number, chronological listing, author and title listing. Cambridge, Mass.: Harvard Univ. Press 1979. 442 p., ISBN 0-674-04318-9

5523 Bljumkin, V. A.: **Information retrieval thesaurus in ethics.** (In Russian). Moskva: INION 1979. 268 p., 16 refs.

Main part in alphabetical arrangement including more than 400 terms and a systematic listing with notations and a hierarchical listing without any additional information.

5524 Hochwald, K. H., Homann, M., Welte, N.: **Thesaurus Religionspädagogik.** (Thesaurus for religious education). (In German). Verzeichnis zur Literaturdokumentation für Forschung, Lehre, Verwaltung, Fortbildung. 2. v. neub. Aufl. München: Institut für Katechetik und Homiletik 1979. 170 p.

Comprises about 2000 descriptors in alphabetical and in systematic order (faceted order).

05 Periodicals and Serials

5525 **American Journal of Computational Linguistics.**

Publ. by Assoc. for Computational Linguistics. Editor: G. E. Heidorn, Managing Editor: Donald E. Walker. Vol 6 (1980) No. 1-4/ann. Subscriptions only through membership.

The first issue of this journal in phototypeset, printed version appeared in February 1980. From 1974-1978 the journal was published on microfiche only, 1979 no issues appeared. Besides articles and book reviews the journal includes The Finite String Newsletter with abstracts on current literature (34). A microfiche version of the entire issue was added too. It contains two additional pieces of information (an appendix to the article by M. C. McCord on "Slot Grammars" and the cover letter and questionnaire from the 1978 survey).

2526 **Dictionaries. Journal of the Dictionary Society of North America.** Ed. by R. W. Bailey, University of Michigan. Terre Haute, Ind.: Indiana State University 1 (1979) No. 1-

The first number of this new journal in almost A5 format fills 164 pages and contains 10 articles and 6 book reviews. The journal is intended to be published annually, it accepts essays, notes and reviews concerned with mono- and bilingual lexicography from members of the Dictionary Society of North America. The following two contributions may be of interest to our readers: 5527 Cummings, P. W.: Dictionaries of philosophy: a survey and a proposal. 5528 Gaul, K.: A comprehensive listing of dictionaries published in the United States and Great Britain during 1977.

06 Conference Reports, Proceedings

5529 Rondeau, G. (Ed.): **Colloque Canadien sur les fondements d'une méthodologie générale de la recherche et de la normalisation et terminologie et en documentation.** Ottawa, 16-18 Fév. 1976. Tom 1, Version française. (Canadian Colloquy on the foundations of a general methodology for research, standardization and terminology as well as documentation.) (In French). Québec: GIRSTERM/Université Laval 1979. 343 p.

5530 **The 1st Polish Conference on "Scientific, Technological, and Professional Terminology".** (In Polish). In: Zagad. naukozn. 14 (1978) No. 4, p. 503-512

Report on this conference which took place in Warsaw, 5-6 June 1978. Six general reports and 10 special theses were given. In the article the titles of the papers are listed as well as the resolutions adopted by the Conference.

5531 Taylor, P. J. (Ed.): **New Trends in Documentation and Information.** Proc. 39th FID Congress. University of Edinburgh, 25-28 Sept. 1978. London: Aslib 1980. 521 p. = FID Publ. 455

At this congress a special section was devoted to "New developments in classification and other systems for information retrieval". The following papers of this section are included in this volume: 5532 Neelameghan, A.: Information-for-Action systems: challenge to classification and indexing. 5533 Dahlberg, I.: New trends in classification. 5534 Lancaster, F. W.: Trends in indexing from 1957-2000. 5535 Lobova, L. V.: Main principles of building a linguistic software for large automated information retrieval systems for science and technology. 5536 Sydler, J. P.: CDU et la mécanisation. 5537 Scibor, E.: UDC in relation to thesauri: a state-of-the-art report. 5538 Coates, E.: The Broad System of Ordering. 5539 Delgado, R. R.: Towards the integration of decimal classification and thesauri concepts. 5540 Doszkocs, T. E.: Implementing an associative search interface in a large on-line bibliographic data base environment. 5541 Slype, G. van: Les langages documentaires dans la perspective de l'utilisation des réseaux internationaux d'IDST. 5542 Vilenskaya, S. K.: On the compatibility of different information retrieval languages within the integrated information system.

Besides these papers some three of session 2 should also be of interest to the field of classification, namely: 5543 Sparck Jones, K.: The role of automatic indexing in operational online retrieval systems. 5544 Noel, J.: Syntax, semantics and pragmatics in the automatic analysis of texts. 5545 Bivins, K. T.: An approach to an atomic theory of indexing. - The volume concludes with a list of delegates and an author index. There are no discussions included and there is no subject index.

5546 Böllmann, E.: **Expertengespräch zur Sachbeschreibung.** (Panel on problems of subject cataloguing).

(In German). In: *Mitt. Ver. Oesterr. Bibl.* 32 (1979) No. 1–2, p. 47–55

Report on the meeting on problems of subject cataloguing held on Nov. 14–15, 1978 in München. Short summaries of the reports submitted are given.

5547 (Subject access to information). In: *Cataloguing Australia* 5 (1979) No. 1, p. 11–24

This issue contains the texts of the following four papers, presented at a meeting on 'Subject access to information', of the Library Association of Australia, Nov. 4, 1978. 5548 Davison, K.: Classification. 5549 Hall, E. N.: Traditional subject catalogues. 5550 Walker, A.: User's approaches to information by subject. 5551 Sexton, M.: The subject approach: a practitioner's view: access through periodical indexes.

5552 Report of a Meeting of the European Branch, 30 April 1979, on Classification of Abnormal Behaviour. In: *Classificat. Soc. Bull.* 4 (1979) No. 3, p. 46

Report on the paper of Dr. Harvey A. Skinner of the Addiction Research Foundation, Toronto, on "Classification of abnormal behaviour: critical issues, a model and some empirical evidence", presented at the 30 April 1979 meeting in London of the Classification Society.

5553 Eschbach, A., Nadin, M.: *Zwei Kongresse zur Semiotik*. Budapest, 28.6.–1.7.1979, Wien, 2.7.–6.7. 1979. (Two congresses on semiotics). (In German). In: *Z. f. german. Linguistik* 7 (1979) No. 3, p. 354–359

Report on the 2 congresses, the first under the title "Semiotic terminology and its historical development", the second under "2nd Congress of the International Association for Semiotics" (IASS).

5554 Program of the 1979 ACL Meeting. In: *Amer. J. Computat. Linguistics* 6 (1980) No. 1, p. 50

The 17th Annual Meeting of the Association for Computational Linguistics was held at the University of California at San Diego, in La Jolla, Aug. 11–12, 1979. 24 papers were presented in four sessions. Session II dealt with Knowledge organization and application. The following papers were given: 5555 Brachman, R.J.: Taxonomy, descriptions, and individuals in natural language understanding. 5556 Sowa, J. F.: Semantics of conceptual graphs. 5557 Sangster, B.: On the automatic transformation of class membership criteria. 5558 Moore, J. A., Mann, W. C.: A snapshot of KDS, a knowledge delivery system. 5559 Burstein, M. H.: The use of object-specific knowledge in natural language processing. 5560 Lebowitz, M.: Reading with a purpose. – The proceedings are available from Prof. D. Walker, SRI International, 333 Ravenswood Ave. Menlo Park, CA 94025, USA.

5561 Knowledge representation and reasoning in the humanities and social sciences. In: *SIGART Newsletter* (1980) No. 71, p. 24–26

Report on a conference at Saint-Maximin de Provence, 17–19 Sept. 1979, organized by l'Institut de Recherche en Informatique et Automatique and le Laboratoire d'Informatique pour les Sciences de l'Homme du CNRS, France. Computer people and logicians were confronted with linguists, psychologists and jurists from ten countries. The dialogue revolved around four panels: Knowledge representation and natural language analysis; "Natural" logic and scientific discourse; Logic and knowledge representation; Cognitive processes and the modelisation reasoning. The list of 42 manuscripts received is presented. The proceedings will be published by IRIA.

5562 Second Meeting of ISO/TC37, WG2 "Layout of vocabularies". In: *Intern. Classificat.* 7 (1970) No. 1, p. 32

Report on this meeting and its results which took place in Québec, Sept. 25–27, 1979, hosted by the Office de la Langue Française.

5563 Zabrodin, V. Ju.: Classification problems. (Review) (In Russian). In: *Nauč.-techn. inform. Ser. 2* (1980) No. 2, p. 36–38

Presentation of the problems discussed at the 1st All-Union Seminar on the Theory of Classification, Oct. 21–31, 1979, Institute of Water Conservation Biology, USSR Academy of Sciences.

5564 Krommer-Benz, M.: International Symposium on Theoretical and Methodological Problems of Terminology. In: *Intern. Classificat.* 7 (1980) No. 1, p. 29–32

Report on the topics and the papers in detail of this symposium which took place in Moscow, Nov. 27–30, 1979. The recommendations of this symposium are reprinted in *Intern. Classificat.* 7 (1980) No. 1, p. 25–26.

5565 Vandamme, F.: *Theory of Knowledge and Science Policy: CC79*. In: *Intern. Classificat.* 7 (1980) No. 1, p. 25 Report on the symposium in Gent, Belgium, 13–16 Dec. 1979, organized by Communication and Cognition, University of Gent.

5566 4th Annual Conference: *Knowledge Structures and Order Patterns*. In: *Intern. Classificat.* 7 (1980) No. 1, p. 26–27
Introduction in and program of this conference which took place in Salzburg, Austria, 16–19 April 1980.

07 Textbooks

5567 Bakewell, K. G. B.: *Book review of NFAIS/Unesco indexing in perspective kit*. Philadelphia and Paris 1979. In: *The Indexer* 12 (1980) No. 1, p. 48–49

5568 Hunter, E. J., Bakewell, K. G. B.: *Cataloguing*. London: C. Binley 1979. 197 p., ISBN 0-85157-267-7
Textbook on cataloguing and indexing.

5569 Piggott, M.: *Book Review of G. N. Knight: Indexing, the art of: a guide to the indexing of books and periodicals*. London: Allen & Unwin 1979. In: *The Indexer* 12 (1980) No. 1, p. 45

5570 Wellisch, H. H.: *Book Review of H. Borko / Ch. L. Bernier: Indexing concepts and methods*. New York: Academic Press 1978. In: *J. Amer. Soc. Inform. Sci.* 31 (1980) No. 1, p. 126–127

08 Other Monographs

5571 Bruhns, S. et al (Eds.); *Danish Assoc. of Music Libraries (DAIBM): Handbook of music library work*. København: Bibliotekscentralen 1979. 224 p.
The 14 chapters of this handbook describe all facets of work in music libraries and departments. Chapter 6 concerns classification and cataloguing with the following contents: Ordering systems for music. Two types of ordering systems (for shelving and subject indexing). Principles of classified ordering. Construction of classification systems for music. Faceting. Thesauri and indexes. Comparison of thesauri and classification systems. Notation. Categories and facets in some classification systems for music: DK5, DDC, LCC and BCMC.

5572 Dabrowski, M., Laus-Maczyńska, K.: *Information retrieval and classification: a survey of methods*. (In Polish). Warszawa: WNT 1978. 140 p.

The emphasis of this book is on methods and algorithms designed for automation of information retrieval and classification procedures. The first part outlines some methods for identification of the vocabulary of a given field of knowledge, methods of thesaurus (glossary) construction and text analysis. A presentation of well-known classification methods for objects such as documents or terms is preceded by a discussion of problems which are common to those methods, e.g. similarity functions for objects, classes and profiles, etc. (from orig. abstr.)

5573 Fligge, J.: *Book review of R. Alsheimer (Ed.): Bestandserschließung und Bibliotheksstruktur: Rolf Kluth zum 10.2.1979*. Wiesbaden: Harrassowitz 1979. In: *Z. Bibliothekswes. u. Bibliogr.* 26 (1979) No. 6, p. 494–498
Detailed review especially also of the contributions to the fields of classification and subject indexing.

09 Standards, guidelines

5574 Deutsche Bibliothek: *Regeln für die Ansetzung und Verwendung der Schlagwörter*. (Rules for arrangement and use of subject headings). (In German). Frankfurt: Buchhändler-Vereinigung 1979. 128 p. = *Arbeitshilfen der Deutschen Bibliothek* 1. ISBN 3-7657-0902-9.

5575 Z 47–101: *Principes directeurs pour l'établisse-*

ment des thesaurus multilingues. (Guidelines for the establishment of multilingual thesauri.) (In French). Paris: AFNOR 1980.

Standard still in experimental phase, depending on the acceptance of the corresponding international standard. Description of standard by E. Sutter in Documentaliste 17 (1980) No. 2, p. 77

5576 Z 47-103: Thesaurus monolingues et multilingues: symbolisation des relations. (Monolingual and multilingual thesauri: symbols for relationship indications). (In French). Paris: AFNOR 1980.

Standard still in experimental phase, depending on the acceptance of the corresponding international standard. Description by E. Sutter in Documentaliste 17 (1980) No. 2, p. 77.

1 Theoretical Foundations of Classification

11 General Theory of Order

See also 5554, 5566

5577 Bagrad, M. V.: Underlying principles of the management of information classification functioning and improvement. (In Russian). In: Probl. nauč. upr. soc. obščestvom. Riga 1978. p. 110-126, 12 refs.

Among others the following major principles are discussed: The principle of information classification according to forms of movement and the associated discrete kinds of matter. The principle of information classification according to main properties of matter. The principle of systemic organisation-structuredness-functionality. The principle of information classification on the basis of interaction of main forms of movement and main properties of matter. The principle of compatibility between IR languages of one type and of different types. The principle of subordination of specifics to general patterns.

6678 Campos, A.: The classification process as a foundation of indexing languages. (In Portuguese). In: Rev. bibl. Brasil. 6 (1978) No. 1, p. 1-8, 12 refs.

Discussion of the views of many specialists in the field of classification; recommendation to establish a common indexing language theory, which should cover the problems of subject indexing, classification, coordinate indexing, etc. It should be based on the achievements of modern logic and linguistics.

5579 Kumar, K.: Theory of classification. New Dehli: Vikas Publ. House 1979. XII, 510 p., ISBN 0-7069-0797-3

5580 Lang, F. H.: Klassifikation. (In German). In: DK-Mitt. 23 (1979) No. 5-6, p. 11-13, 24 (1980) No. 1/2, p. I-5

This article appeared originally in "Terminologie als angewandte Sprachwissenschaft. Gedenkschrift für Univ.-Prof. Dr. Eugen Wüster. München etc. Saur 1979. p. 208-225. It covers all aspects of classification in the following 3 chapters: (1) Thinking and organizing, (2) Concepts and themes, (3) Classing and representing (by notation). The contributions of E. Wüster in these regards are pointed out especially also his work for the UDC. The last chapter is a description of the Austrian Standard A 2700 which supplies rules for the application of the UDC and clarifies many of its intuitively developed features.

5581 Šarov, A. A.: The meaningfulness of characteristics and classification theory. (In Russian). In: Semiotika i informatika (1979) No. 11, p. 37-51, 6 refs.

12 Conceptual Basis of Classification

See also 5598

5582 Cocchiarella, N.: On the logic of nominalized predicates and its philosophical interpretations. In: Erkenntnis 13 (1978) No. 3, p. 339-369

5583 Cresswell, M. J.: Categorical languages. In: Studia Logica 36 (1977) No. 4, p. 257-269

5584 Kleefstra, W.J.: Data base description with a single name category data model. In: Proc. 4th Intern.

Conf. Very Large Data Bases. New York, N.Y. 1978. p. 177-185, 17 refs.

A single name category data model has been developed in order to eliminate the need for distinctions between names denoting individuals and those denoting predicates. More insight into data models with multiple name categories is needed. The main problem is one of lack of structure. (acc. orig. abstr.)

5585 Krymskij, S. B.: The philosophic and concrete-scientific aspects of universal categories. (In Ukrainian). In: Filos. Dumka (1978) No. 6, p. 64-75, 17 refs.

Categories do not coincide with universal concepts as such, but represent (in thinking) a universal form of reflexion, particularly a concept on a concept. Conceptual systems include the special logical languages of categories' functioning, but may not be reduced to them. Also that subject-generic reality rubrication, that "network of natural phenomena" which is characteristic of the historical premises for singling man out of nature, is not identical to categories. The proper categories are the states in this singling out, accordingly to the social-historic reproduction of the objective-generic rubrication in the objective forms of culture. (Author, abbr.)

5586 Kusmarov, B. V.: On stating the problem of initial concepts. (In Russian). In: Probl. filos. (1979) No. 4, p. 46-51, 12 refs.

The most effective initial or basic concepts are simple, consistent, clear and universal.

5587 Lorenz, Kuno: On the relation between the partition of a whole into parts and the attribution of properties to an object. In: Studia Logica 36 (1977) No. 4, p. 351-362

5588 Nowaczyk, A.: Categorial languages and variable-binding operators. In: Studia Logica 37 (1978) No. 1, p. 27-39

5589 Otte, M.: On the question of the development of theoretical concepts. In: Communication & Cognition 13 (1980) No. 1, p. 63-76, 22 refs.

5590 Solt, K.: Über einige epistemische Typen der deskriptiven Definitionen. (On some epistemic types of descriptive definitions). (In German). In: Logique et Analyse 21 (1978) No. 82-83, p. 317-328

5591 Stock, W. G.: Book Review of Weinberger, O., Weinberger, C.: Logik, Semantik, Hermeneutik. München: C. H. Beck 1979. In: Intern. Classificat. 7 (1980) No. 1, p. 33-36

Critical review (in German) from the point of view of general scientific methodology.

5592 Tokarz, M.: Definitions by context in propositional logics. In: Studia Logica 37 (1978) No. 2, p. 135-147

13 Mathematics of Classification

See also category 51 and No. 5665

5593 Gabrieljan, R. A.: A formal measure of documents' semantic proximity. (In Russian). In: Tez. dokl. 9-go Nauč. seminara po sistem. issled. GASNTI, č. 2. Moskva 1979. p. 112

5594 Il'jušenko, V. P.: Algebraic-logical and informational aspects of mathematical classification theory. (In Russian). In: Vopr. inform. teorii i prakt. (1978) No. 36, p. 109-117, 12 refs.

5595 Schüler, W., Tänzer, K.-H., Siegel, K.: Anwendung informationswissenschaftlicher Erkenntnisse in den Fachwissenschaften. T. 2: Zusammenhänge zwischen Indexierung und Recherche in Informationssystemen mit großem Speicher. (Application of information science recognitions in special sciences) (In German). In: Wiss. Z. Techn. Hochsch. Ilmenau 25 (1979) No. 2, p. 141-167, 15 refs.

A mathematical classification theory is described used for the representation of inter-concept relationships in associative storage. Proposal for a thesaurus organisation which optimises retrieval output. Stochastic search strategies should be used, their possibilities are described including those based on Bayesian and Markovian approaches regarding different storage organisations.

14 Systemology and classification

5596 Bazenov, L. B.: **The systems principle as a methodological regulative of a scientific theory.** (In Russian). In: *Vopr. filosofii* (1979) No. 6, p. 81–89, 23 refs.

It is inferred that the methodological regulatives and particularly the systemic principle possess a selection function in scientific cognition.

5597 Foskett, D. J.: **Systems theory and its relevance to documentary classification.** In: *Intern. Classificat.* 7 (1980) No. 1, p. 2–5, 15 refs.

In view of the impact of systems theory for the construction of classification systems the two major contributions of Dewey are summarized as well as the new methods of facet analysis and organization brought into classification by Ranganathan. With the latter's 'canonical' solution for the contents and arrangement of main classes, however, contemporary philosophical thought regarding the organization of knowledge seems to have been neglected. The work of the Classification Research Group and elsewhere considering integrative level theory will improve the science of classification systems construction. Besides this the influence from psychology and linguistics on the recognition of relationships between concepts is outlined as well as some practical implications of the systems approach on classification. I.C.

16 Development of Science and Classification

See also 5565

5598 Abramov, Ju. F., Konoplev, N. S., Kuznecov, B. N.: **On the place occupied by the general-scientific concepts in the scientific world picture.** (In Russian). In: *Metodol. konkret. sfer poznaniya*. Irkutsk 1978. p. 25–28

5599 Bliokov, E. N.: **A classification of methods for R&D planning.** (In Russian). In: *Izv. AN SSSR. Ser. ekon.* (1979) No. 2, p. 5–23

The process of perfecting science management is shown to consist in increasing the conceptual (normative) element in R&D planning which mainly must follow the lines of the functional structures typification; of unifying forms and concepts; of classifying and systematising the most general complexes of knowledge about the world. (Author)

5600 Cechmistro, V. Z.: **Current scientific knowledge and concept development.** (In Russian). In: *Vestn. Char'kov. politechn. inst.* 1979. No. 149, p. 79–85, 8 refs.

The concepts of plural and singular form the basis of a whole series of current methodological issues. Proposal to distinguish the aspect of 'descriptive' (describing a plurality of elements as an integrity of items with common characteristics) and 'dialectico-logical' (constructing integrities consisting of a plurality of differing elements).

5601 Kazar'jan, A. S.: **Intertheoretical relations and the systemic nature of science: a gnosiological and methodological analysis.** (In Russian). Erevan: Izd. AN Arm. SSR 1978. 113 p.

Analysis of relations between and within systems of scientific knowledge and of the specifics of metatheoretical research. Consideration of systems approach in scientific methodology and of the definition of the characteristic features invariant to scientific knowledge systems.

5602 Čchenkeli, T. I.: **An axiomatic approach to the description of descriptor IR languages.** (In Russian). In: *Semiotika i informatika* (1979) No. 12, p. 208–210, 8 refs.

With the help of the language of many-sorted predicate logic the logical structure of descriptor IR languages can be described. The paper introduces also a number of definitions from the theory of multiple-basis models.

5603 Chmielewska-Gorczyca, E.: **Problems of pre- and postcoordination in the theory of IR languages.** (In Polish). In: *Zag. inform. nauk.* (1978) No. 2, p. 11–33, 11 refs.

Natural language words and phrases are compared with elementary and composed units of an IR language. A characterisation is made of the coordination phases of lexical elements when processing documents and the positional grammar of the IR language, as well as the search function of the lexical units of a document representation. It is suggested that pre-coordination should be treated as a variable feature of the search strategy and not as a feature of the information language. (Author, abbr.)

5604 Finn, V. K., Čchenkeli, T. I.: **On the logical structure of a class of descriptor IR systems.** (In Russian). In: *Semiotika i informatika* (1979) No. 12, p. 205–207, 2 refs.

Description of an approach to the study of the logical structure of descriptor retrieval systems which facilitates possibilities of IR system comparison principles. It was found that relational data base models are also suitable for descriptor IR systems.

5605 Lejcik, V. M.: **Classification as a structural type of sublanguages of science and technology.** (In Russian). In: *Nauč.-techn. inform. Ser. 2* (1979) No. 8, p. 1–6, 28 refs.

Questions concerning the structure and lexical composition of sublanguages of science and technology are raised. It is shown, how classification systems, especially of the faceted kind can be used as retrieval languages and as a sublanguage of science and engineering as well.

5606 Nocetti, M. A., Figueiredo, R. C.: **Natural languages and documentary languages: inherent features and cases of interaction.** (In Portuguese). In: *Rev. bibl. Brasil.* 6 (1978) No. 1, p. 23–37, 18 refs.

A comparison of IR and natural languages is made by 20 characteristics. Only one single characteristic (the capacity for development) is present in both languages, although the realisation of this capacity is essentially different in the two classes of languages.

5607 Reball, S.: **Redundante Indexierungssprachen als Abbild natürlicher Sprache** (Redundant indexing languages patterned after the natural language). In: *Intern. Classificat.* 7 (1980) No. 1, p. 10–12, 7 refs.

The proposal to raise indexing language convenience at the expense of specificity calls for closer orientation to the natural language, which combines utmost convenience with variability, semantic universality, vagueness, redundancy and other, at first sight negative properties. Document titles are cited for comparison to show that these titles adhere more closely in the required sense, to the natural language than customary indexations and may well show the way toward more natural language indexations. Automatic translation of document titles already being common practice, the prospects for automatic processing of the proposed more convenient indexations are good. (Author, transl.)

5608 Romenskaja, V. F.: **On the classification scheme of the concept "dictionary type" in an information thesaurus.** (In Russian). In: *Struktur. i prikl. lingv.* (1978) No. 1, p. 181–187, 13 refs.

A classification is presented which is based on the identification of essential elementary characteristics in the broad concept "dictionary". The main classification characteristics for describing the concept "dictionary type" are as follows: (1) the principle for defining the meanings of the vocabulary units, (2) the method for organising the dictionary vocabulary, (3) the vocabulary size, (4) the relation to the language communication type, (5) the relation to the language norm, (6) the method of presentation of the lexical meaning of the word, (7) the relation to synchrony and diachrony, and (8) the purpose.

2 Structure & Construction of CS

21 General Questions of Structure

See also 5480, 5481, 5572

22 Elements and Special Structures of CS

See also 5766–7

5609 Imielinski, T.: **On some extension of the query language for incomplete information systems.** (In Polish). Warszawa: Pr. IPI PAN 1979. 32 p.

The properties of extension of a query language for incomplete information systems by a new descriptor "known (i)" are examined. The introduction of this new descriptor allows to distinguish the objects about which our knowledge is complete and increases the descriptive power of the language. It is shown that every query term is equivalent to a term in a simpler canonical form, however, only the examination of an extension on the "special terms" language has an evident application as illustrated by an example. The completeness results are presented. (Author)

5610 Morozov, V. P., Partyka, T. L., Chozin, N. P.: **Higher level information languages: an analysis and projected evolution.** (In Russian). In: Techn. obespeč. ASU. Moskva 1978. p. 16–27, 24 refs.

Need is stressed on identifying external parameters of an information language which make it more suitable for its users. Structural components of the information language are defined which have been developed at the USSR Central Statistical Administration, USSR State Planning Committee and other organizations.

5611 Skolek, J.: **The subject authority list – a new type of STI retrieval language.** (In Czech). In: Metod. stud. UVTEI (1979) No. 131, 64 p.

Consideration of the methodological principles of compiling a subject authority list, headings and formulations, structure and references.

23 Construction of CS

See also 5575, 5611

5612 Barraud, A., Grozel, G.: **Elaboration d'un thesaurus dans le cadre de la mise en place d'un reseau sectoriel de traitement de la documentation. Un exemple: Le Thesaurus AGRIDOC.** In: Velasques, P., Nadurille, R. (Eds.): Memoria del V congreso Mundial de la Asociación Internacional de Bibliotecarios y Documentalistas Agricolas. Mexico, D. F., 14–18 Apr. 1975. Mexico City: Instituto Nacional de Investigaciones Agricolas 1978. p. 441–452

Describes the development of a thesaurus for agricultural sciences by the Reseau National de Documentation Agricole (AGRIDOC). The final thesaurus will be obtained by merging and harmonising the different subject thesauri compiled by members of the network. (Orig. abstr.)

5613 Bellioni, A., Cecchetti, L., Vito-Colonna, M.: **Application of computers in developing and introducing a thesaurus for paper production and the system of indexing the bulletin.** (In Italian). In: Cellul. et carta 29 (1978) No. 10, p. 25–30, 14 refs.

A thesaurus of terms relating to paper and paper converting was constructed in order to index the abstracts of the monthly bulletin Indicatore Cartotechico. The criteria used in elaborating the thesaurus and selecting the more suitable hardware are described. The bibliographic material was stored in the Olivetti microcomputer TES 501. (Acc. orig. abstr.)

5614 Bulkin, G. A. et al: **A predicate information language and its importance for data searching and processing in the geological field.** (In Russian). In: Tr. Vses. in. i. geol. instituta 1978. No. 291, p. 124–132

Sets forth the special characteristics of design of a predicate information language, its vocabulary and syntax. Cites an example illustrating the translation of a geological text into a sequence of elementary syntagmas. (Orig. abstr.)

5615 Crawford, R. G.: **Automatic thesaurus construction based on term centroids.** In: Can. J. of Inform. Sci. 4 (1979) p. 124–136, 13 refs.

After a review of previous research in automatic thesaurus construction, the problem of what properties of terms are to be used to group terms is discussed at length and the notion of term centroids is examined. Clustering is discussed briefly with par-

ticular regard to the single-pass approach. Retrieval results achieved using fully automatically constructed thesauri are presented. (Orig. abstr.)

5616 Curras, E.: **Confección de un thesauru estructurado para química.** (Elaboration of a structured thesaurus for chemistry.) (In Spanish). In: Reuniber-78. Conf. iberoamer. sobre inform. y document. cient. y tecnol. 11 Sept. 1978. Madrid: Instituto Informacion Documentación Ciencia Tecnología 1979. p. 119–126, 10 refs.

5617 Czerwosz, M.: **On some experience from specialist drilling thesaurus construction.** (In Polish). In: Akt. Probl. Inf. Dokum. 24 (1979) No. 3, p. 35–37, 2 refs. Describes experience acquired in the Information Centre at the Research and Development Centre for Geological Technology. Discusses organisation of work in the editing team, collection of key words, types of documents scanned for key words and division of vocabulary as well as defining descriptors and their mutual relationships. (Orig. abstr.)

5618 Dietze, J.: **Der Einsatz der EDVA bei der Erarbeitung von Thesauri.** (Using computers for the elaboration of thesauri). (In German). In: Informatik 26 (1979) No. 4, p. 16–19, 3 refs.

Frequency statistics, distribution and co-occurrence of words were used for a computer supported construction of thesauri.

5619 Dillon, M., Caplan, P.: **A technique for evaluating automatic term clustering.** In: J. Amer. Soc. Inform. Sci. 31 (1980) No. 2, p. 89–96, 3 figs., 7 tables, 14 refs. This study reexamines the feasibility of automatic thesaurus generation by establishing a framework for analyzing the degree of correspondence between automatically generated thesauri and a thesaurus of the same terms constructed by a team of subject specialists. In order to test the evaluative procedure, a series of thesauri are generated using the same clustering algorithm and three different measures of association. By comparing the relative effectiveness of the generated thesauri to the human standard, it is determined that substantial differences exist among them. (Author)

5620 Drijanskij, V. M., Kolesnikov, N. G.: **On the feasibility of computer-assisted interactive thesaurus construction using relatheme algebra techniques.** (In Russian). Kiev: Institut Kibernet. AN USSR 1978. 14 p., 6 refs.

Description of a semi-automatic method of thesaurus construction, based on relatheme algebra techniques by which concept relationships are established by deduction from already existing ones.

5621 Egorova, N. A., Ševčenko, V. V.: **Realisation of a model language in an automated information system.** (In Russian). In: Naučno-techn. inform. Ser. 2 (1979) No. 5, p. 10–17, 9 refs.

The model language (based on natural language) enables the non-expert user to address queries in natural language to the automatic information system. Ways of communicating with a database containing information on a broader range of relationships as well as on property relations are discussed. (Orig. abstr., abbr.)

5622 Kolodjažnaja, L. I.: **Investigating the properties of an automatic classification algorithm.** (In Russian). In: Issled. v obl. vyčisl. lingvist. i lingvostat. Moskva 1978. p. 171–190, 7 refs.

Consideration of a heuristic "union" algorithm designed for thesaurus compilation.

5623 Leont'eva, T. M. et al: **The general IR language construction methodology in the "Chimija" Common STI System.** (In Russian). Moskva: VINITI 1978. 45 p. "Chimija" (Chemistry) is a multifunctional system designed to search for documentary and factographic (structural) information, prepare and produce information publications, duplicate information files, etc. In keeping with the different retrieval tasks handled by the system, it provides for the use of not one but a set of IR languages, including a descriptor type language, the Structural Formulae Information Language, the VINITI Subject Authority List, the UDC, IPC and the National Patent Classification. The methodological part formulates the requirements for the language set chosen and defines the makeup, structure and functions of each language. (Orig. abstr.)

5624 Medvedev, A. A.: **Linguistic support of documentary IRS on the basis of applied program packages.** (In Russian). In: Naučno-techn. inform. Ser. 2 (1980) No. 5, p. 9–13, 4 refs.

Consideration of general possibilities of projecting documentary IRS with the use of standard software based on an abstract system of control of documentary files. Languages of document and request entry, principles of vocabulary formation and maintenance, as well as ways of presenting the main information languages through a documentary files control system are described. (Acc. orig. abstr.)

5625 Seguin, G.: **Generation automatique du vocabulaire représentatif d'un domaine; essais d'indexation automatique.** (Automatic generation of a representative vocabulary of a field; attempts at automatic indexing.) (In French). Lyon: Th. 3ème cycle 1/1977. 626, 153 p., 13 refs.

5626 Smirnova, A. S.: **Two information language types.** (In Russian). In: Nov. metody izuč. usloviy formir. i zakonomernostej raspredelenija gorn. porod. mineralov i rud. Elista 1978. p. 25–35, 14 refs.

The paper looks at the similarities and dissimilarities between two specialised information languages being officially introduced in the field of geology, namely a thesaurus and a classification scheme. The languages have the same vocabulary. It is suggested that the classification codes be standardized and made mnemonic and the check digit be recorded separately and used at the user's discretion. (Orig. abstr.)

5627 **Use of novel approaches to the development of an IR language for oil and gas field geology.** (In Russian). Leningrad: Vsesojuznogo neftjanogo naučno-issl. i geologo-razvedočnogo instituta 1978. 128 p. Problem of developing an STI language using computer techniques.

24 Relationships

See also 5576

5628 Asis, M.: **Universal symbols for use in thesauri.** (In Spanish). In: Rev. esp. doc. cient. 2 (1979) No. 1, p. 39–47, 9 refs.

The symbols proposed have been employed in the Tesauro parapsicologico de busqueda informativa, Cuba 1977.

5629 Beleckij, M. I.: **An information-algorithmic language for the design of computerized data processing systems.** (In Russian). In: Naučno-techn. inform. Ser. 2 (1979) No. 3, p. 16–25, 10 refs.

Presents a language to describe information processing algorithms in computer-based data processing systems. Characterises the syntactic classes of the language lexemes. Describes the syntax and semantics of the data representation expressions and the operators. The proposed apparatus is based on a conceptual framework closely related to that of relational models. (Orig. abstr.)

5630 Belonogov, G. G.: **On syntactic invariants in formalized information languages.** (In Russian). In: Semiotika i informatika (1979) No. 12, p. 107–109

5631 Gerd, A. S.: **Association relations in information retrieval thesauri and ways of their definition.** (In Russian). In: Naučno-techn. inform. Ser. 2 (1980) No. 5, p. 14–16, 7 refs.

On the basis of thesaurus examples in biology, navigation a.o. the problem of defining association relations in thesauri is considered. Three ways of defining are: text analysis, use of encyclopedias and handbooks and direct contacts with specialists. (Acc. orig. abstr.)

5632 Giannoni, R., Novaresio, P.: **Semantic and syntactic relations and their importance for the construction of thesauri.** (In Italian). In: Informatica e diritto, Florenz 4 (1978) No. 1, p. 20–44

5633 Grohmann, W., Protz, A.: **Zur Darstellung von Begriffsbeziehungen in Thesauri.** (On the presentation

of inter-concept relationships in thesauri.) (In German). In: Informatik 26 (1979) No. 3, p. 38–42, 12 refs.

5634 Jones, S., Mason, P., Stamper, R.: **LEGOL 2.0: a relational specification language for complex rules.** In: Inform. Syst. 4 (1979) No. 4, p. 293–305, 8 refs.

5635 Korolova, L. I., Mesenjašin, I. A.: **The use of syndetics in library subject catalogues.** (In Russian). In: Sostojanie predmet. katalogov v bibliotekach SSSR. Leningrad 1978. p. 113–130

The Problem Committee on Subject Indexing and Subject Catalogue analysed the state of subject catalogue syndetics in different libraries. The results of the questionnaire survey showed that all syndetic elements were used in subject catalogues. The necessity of unification of references was noted.

5636 Seymour, R. J., Yates-Mercer, P. A.: **The structure of relationally indexed titles and abstracts.** In: Inform. Proc. & Management 16 (1980) No. 2, p. 49–71, 8 figs., 5 tabs., 14 refs.

Farradane's system of relational indexing has been used to index abstracts in several, mainly scientific subject areas, and provides two-dimensional displays of concepts and explicit relations. Ten of these collections have been examined to compare (a) the use of relations, (b) the use of concept types, (c) the cross sections (or shape) of abstracts, and (d) the properties of "nodes". Whilst differences between the collections were noted in several instances, there were no obvious correlations between these differences. However, some points arose which could warrant more detailed study with larger collections. (Author)

26 Notation, Codes

5637 Craven, T. C.: **Salient node notation.** In: Can. J. of Inform. Sci. 4 (1979) p. 115–123, 9 refs.

A revised version of a paper originally presented at the Conference of the Canadian Classification Research Group, Melrose, Ontario, 5–7 May 78. Salient node notation is a technique for decreasing the average length of notation in a classification scheme without sacrificing expressiveness or disturbing the succession of characteristics or the filing order. Assignment of notation begins at a node of the classificatory tree other than the root. This salient node may be determined algorithmically, given data on the bias of the collection to be classified. A dummy value is reserved to indicate upward movement in the tree. The technique is particularly applicable to classification schemes for specialised collections and to facets such as space in which the biases of human existence are particularly prominent. (Orig. abstr.)

5638 Hendrickson, J. B.: **A systematic organization of synthetic reactions.** In: J. Chem. Inform. Comp. Sci. 19 (1979) No. 3, p. 129–136, 12 refs.

Proposal for a new way of describing the different ways of a synthetic reaction by a logical and concise notation of partial structures. The basic parent reactions are developed first, then a set of ways to modify these to more complex variants. The reactions can be presented in a compact graphical form, and the system can be utilised to describe and find all possible pathways for multistep reaction sequences between specified generalised substrates and products. (Orig. abstr.)

27 Compilation, Updating, Storage & Maintenance of CS

5639 Diaconescu, G., Magda, M., Ionescu, C.: **An algorithm for dynamic modification of a thesaurus used in a statistical data base.** (In Romanian). In: Stud. si cerc. calc. econ. si cibern. econ. 12 (1978) No. 3, p. 79–84, 3 refs.

Description of the characteristics of the MUSCEL software used in a statistical data bank, designed for quick sorting of large data files, their searching for minimal and maximum values of attributes, and dynamic generation of a thesaurus from the master information file.

5640 Maslova, G. S., Romanova, A. P.: **The computer organisation of an IR system thesaurus.** (In Russian). In: Sb. nauč. tr. Centr. n.-i. i proekt.-technol. institut org. i techn. upr. (1978) No. 3/33, p. 148–154, 2 refs.

Looks into the choice of a rational organisational structure for dictionaries and thesauri and their handling by a third-generation computer. Examines the entire range of factors that affect the organisational pattern of the machine thesaurus. (Orig. abstr.)

5641 Medvedev, A. A., Michnovskij, S. D.: Possibilities for using standard mathematical software to interpret information languages. (In Russian). In: *Struktur. i mat. lingv.* (1979) No. 7, p. 41–52, 5 refs.

5642 Mello, J. F., Woodbury, M.: Computerization of synonymy data from biological systematics. Museum Data Bank Committee 1977. 21 p. ERIC Report. ED-161 426

Systematics consist of descriptions of species, names applied to these species, and supportive field data such a geographic distribution. Historically, knowledge about plant and animal species is systematized through conventionalised descriptive terminology and the establishment of hierarchical relationships between species and other taxes. This study concentrates on developing efficient methods of data entry and computer processing for synonymous data, making these data increasingly useful as a source of information on research questions. (Orig. abstr.)

28 Compatibility & Concordances of CS

See also 5542, 5835

5644 Bojko, N. V., Položenceva, G. I.: Structural and semantic compatibility of bibliographical data record formats. (In Russian). In: *Naučno-techn. inform. Ser. 2* (1980) No. 5, p. 17–25, 9 refs.

The record formats of INIS and INSPEC are analyzed in order that a domestic data bank on thermophysical properties of matter may be supplemented by bibliographical data provided by these two systems. (Acc. orig. abstr.)

5645 Delgado, R. R.: Unification of documentary languages. Basis for the creation of common thesauri in Spanish. (In Spanish) In: *Reuniber-78. Conf. iberoamer. sobre inform. y doc. cient. y tecnol.*, 11.9.1978. Madrid: Instituto Inform. Document. Cienc. Tecnol. 1978. p. 99–111, 22 refs.

The necessity of elaborating a documentary metalanguage which is universal and international is pointed out. Modalities for the generation of Spanish thesauri for many subject fields are proposed.

5646 Fontalina, M. N.: Convergence and compatibility analysis of the All-Union Book Chamber and medical libraries subject indexing. (In Russian). In: *Sostojanie predmet. katalogov v bibliotekach SSSR*. Leningrad 1978. p. 35–52

The subject headings of the Book Chamber and of four medical libraries were compared. Three degrees of convergence are distinguished: full, partial and zero. The greatest number of subject headings had partial main convergence (up to 70%), full convergence was found in 25.7–51.7% and zero in 2.8–4.3% of the cases.

5647 Murinson, E. A., Šenderov, V. Z., Kočetova, S. M.: Reconciling a classificatory and a descriptor language. (In Russian). In: *Vopr. inform. teorii i prakt.* (1978) No. 36, p. 31–50, 11 refs.

It was the purpose of this work to study experimentally the process of reconciling the IPC vocabulary and that of the TEST (Thesaurus of Scientific and Technical Terms). For this an algorithmic procedure for IR language reconciliation should be worked out as well as guidelines in order to minimize the subject indexer's subjectivity.

5648 Panov, A. A., Suchmaneva, E. G.: Efficiency of information systems interaction and the linguistic support of the BAN SSSR computer-based information retrieval system. (In Russian). In: *Sbor. nauč. tr. Biblioteki AN SSSR i AN sojuz. resp.* (1978) No. 5, p. 190–199, 9 refs.

The USSR Academy of Sciences Library Automated System Project (AS-BAN) envisages the use of machine-readable data bases from VINITI, the All-Union Book Chamber, INION, GPNTB and the Lenin Library. IR language components are listed which must match to a specified extent to make languages compatible. The conception of linguistic support for the Network of Automated STI Centres visualises the development of conversion tables for going from the All-Union Information Classification and the All-Union Information Retrieval Thesaurus to other lan-

guages, such as UDC and LBC. A proposal for posting UDC and LBC numbers on machine-readable media by a central agency is examined as an alternative solution.

5649 Ustimenko, A. I., Grinina, R. F.: Toward the problems of compatibility between the descriptor language and the subject heading language. (In Russian). In: *Sostojanie predmet. katalogov v bibliotekach SSSR*. Leningrad 1978. p. 193–211, 18 refs.

The project aimed at ascertaining the feasibility of using a descriptor language vocabulary in order to prepare document representations in the subject headings language by choosing grammatical devices for descriptor articulation as subject headings without additional reference to the document contents. Description of an experiment to test this methodology.

5650 Wall, R. A.: Intelligent indexing and retrieval: A man-machine partnership. In: *Inform. Proc. & Management* 16 (1980) No. 2, p. 73–90, 2 figs., 40 refs.

The designation of overlapping hierarchies in thesauri, first outlined in 1973, is suggested as a key element in progress towards a successful man-machine partnership. An updating, expansion and theoretical background of the 1973 proposal are given. The use of the UDC, both as a matrix and a searching aid, is postulated but is not essential. Means of distinguishing overlapping terms from other "related terms" are suggested, in order to make possible the accurate representation of all hierarchical relationships. At its largest, the result could be a "Universal Reference Vocabulary", maintained on-line only and used to construct profiles before searching via natural language and/or class numbers. It is suggested that a computer program package for a small model area within Social Sciences should be given priority. (Author)

29 Evaluation of CS

5651 Bazarnova, S. V.: A comparative analysis of different types of information retrieval languages, with special reference to linguistics. (In Russian). In: *Sb. nauč. tr. Biblioteki AN SSSR i AN sojuz. resp.* (1978) No. 5, p. 226–231

Description of a study of the actually used as well as possible indexing languages and the document representatives formulated with them in the INION IR system.

5652 Bonnici, N.: PRECIS and LCSH in the British Library: Problems of consistency and equivalence. In: *Cat. & Index* (1980) No. 56, p. 9–11, 9 refs.

This article attempts to summarise personal observations on the reasons why "LCSH is a mess", why LCSH fails to satisfy an indexer's expectations on what a subject indexing system should provide, and why LCSH virtually forces a non-American indexer to create new headings or alter existing headings. It also considers the need for LC to formulate policies, based on clearly defined principles, to guide the indexer and user in the creation and application of LCSH. Where appropriate, comparisons between PRECIS and LCSH are made with respect to terminology and spelling. (Author)

5653 Saraeva, G. A.: Description and comparison of document representations in different IR languages based on concepts of level, with special reference to the LBC and the State Public Library Subject Catalogue languages. (In Russian). In: *Sov. Bibl.-bibliogr. klassifik.* Leningrad 1978. p. 155–190

The paper aimed at making a list of patterns of document representations based on the LBC and the language of the State Public Library Subject Catalogue and at characterising and comparing document representations based on these languages.

5654 Smirnova, A. S.: A comparison of two information language types with special reference to geology. (In Russian). In: *Vopr. inform. teorii i prakt.* (1978) No. 36, p. 51–60, 13 refs.

Comparison of a geological descriptor vocabulary with specialised classification schemes regarding purpose, applications, structure and composition.

5655 Žižemokij, O. E., Krivolapčuk, N. D.: Total evaluation of an IR system implementation language. (In Russian). In: *Sb. nauč. tr. Centr. n.-i. i proekt.-technol. institut org. i techn. upr.* 1978. No. 3/33, p. 80–86, 4 refs.

Presents a total approach to the evaluation of a data retrieval system implementation language by its formal description, a Chomskian generative grammar. Describes a version of an information system classification. (Orig. abstr.)

3 Classing and Indexing (Methodology)

31 Theory of Classing and Indexing

See also 5534, 5545, 5546, 5547, 5568, 5574, 5607

5656 Fugmann, R.: **On the practice of indexing and its theoretical foundations.** In: Intern. Classificat. 7 (1980) No. 1, p. 13–20, 41 refs.

This article introduces a series of eight papers giving a survey of the decisions to be made in the choice of the most expedient indexing method and presenting a short description of the contents of each of the papers, namely: The definability of the requested information, – Individual vs. generic concepts: The predictability of their mode of expression. – The fidelity of concept representation: The indexing language vocabulary. – The indexing language grammar. – The category-controlled interplay between vocabulary and grammar in an indexing language. – The practice of information supply: the personal file. – The employment of a large indexing language vocabulary. – The employment of an indexing language syntax. I.C.

5657 Kihara, M.: **Secondary headings in the classified catalogue.** (In Japanese). In: Libr. & Inform. Sci. (1978) No. 16, p. 322–323

Two main changes in the arrangement of the Japanese catalogue are described: They comprise (1) transition from the principle of standard description to the one of united descriptive card (the main point of the description becomes the subject of the publication, not the author) and (2) new rules for the arrangement in the classified catalogue.

5658 Manevič, S. I.: **Combination of classification and subject indexing of printed documents.** (In Russian). In: Sostojanie predmet. katalogov v bibliotekach SSSR. Leningrad 1978. p. 161–192

Analysis of the role of subjective factors in classification and subject indexing. Its peculiarities are pinpointed based on questionnaires filled in by subject indexers. Document analyses should always be edited.

5659 Schreiber, H.: **Quantitative Beschreibung des Indexierens.** (Quantitative description of the indexing process.) (In German). In: Informatik 26 (1979) No. 4, p. 24–40, 5 refs.

A mathematical method was developed for the determination of the quality and exactness of indexing.

5660 Steensgard, D.: **The problem of subject cataloguing in public libraries.** (In Danish). In: Bibliotek 10 (1979) No. 3, p. 73–74

Comments on the report of the Library Centre's Committee on Classification Systems and Subject Catalogues for Public and School Libraries regarding the most suitable form of computer-produced subject catalogues. The Committee had decided to retain DK5 for the arrangement of books. The pros and cons of alphabetical and systematic subject catalogues are discussed.

5661 Suvorova, V. P.: **The subject catalogue in the libraries of the Leningrad technical institutes.** (In Russian). In: Sostojanie predmet. katalogov v bibliotekach SSSR. Leningrad 1978. p. 88–98

8 out of 18 libraries of Leningrad's technical colleges have subject catalogues. Regarding indexing depth it was found that these libraries use an average of 2–3.5 subject headings. All subject catalogues possess reference aids.

5662 **The status of the subject catalogue in the USSR libraries.** (In Russian). Sb. tr.-Gos. publ. biblioteka im. Saltykova-Ščedrina, Leningrad 1978. 212 p.

Collection of articles based on research materials of the Problem Committee on Subject Indexing and Subject Catalogue.

32 Subject Analysis

See also 5479

5663 Bychovskij, A. V.: **Elaboration of informative formulae of the document as a means for information condensation.** (In Russian) In: Naučno-techn. inform. Ser. 1 (1979) No. 10, p. 15

The informative formula should replace the abstract of documents. Their use in the primary documents would improve considerably the quality of secondary documents.

5664 Fournial, C.: **L'analyse documentaire des films. Exemple: méthodes utilisées à la télévision française.** (Documentary analysis of films. Example of the methods used at the French television (material)). (In French). Paris: C.N.A.M. 1978. 104 f.-pl., 4 p refs. = Mém. I.N.T.D. Sci. Techn. Inform. et Doc.

5665 Löhr, H.: **Verfahren zur Inhaltserschließung von Dokumenten als Realisierung mathematischer Abbildungen.** (Procedures for subject indexing of documents as a realisation of mathematical models.) (In German). In: Informatik 26 (1979) No. 4, p. 20–23, 5 refs.

Investigation of the procedures of classing, abstracting and indexing and other transformation methods showed that only a limited precision of mapping the original contents is possible. Advantages and disadvantages of the three procedures are discussed with this aspect in mind.

33 Classing and Indexing Techniques

5666 Blais, R., Courier, Y.: **Vocabulaire libre en indexation.** (Free indexing vocabulary). (In l'Avancement Montréal: ASTED – Assoc. Québécoise pour l'Avancement des Sciences et Techniques de la Documentation 1978. 180 p.

Advocates indexing with a free vocabulary and retrieval with a thesaurus "post-indexation".

5667 Tafalla, A. D., Herrera, G. C.: **The thesauri of the Institute of Fats and its Derivatives, Sevilla, at the disposal of Spanish speaking countries.** (In Spanish). In: Reuniber-78. Conf. iberoamer. sobre inform. y doc. cient. y tecnol. 11.9.1978 Madrid: Instituto Information Documentation Ciencia Tecnología 1979. p. 113–117

Description of the use of the thesauri at the Institut and its practice of indexing.

34 Automatic Classing and Indexing

See also 5543

5668 Arhan, P., Borione, J., Euve, F. et al: **Methods of automated classification and bibliographic searching in a psychology laboratory.** (In French). In: Bull. Bibl. France 24 (1979) No. 1, p. 7–11

The classification and the search procedure of the computer-based IR system described rely on a list of 98 keywords. Cassette-held tape and punched cards are used as information carriers.

5669 Bernhard, P.: **Traitemet automatique des langues et documentation.** (Automatic treatment of languages and documentation). (In French). Villeurbanne: Université Cl. Bernard Lyon 1 1979. 62 p., 6 p. refs. = Note synthèse DESS Lyon 1979.

Three kinds of methods and their languages are distinguished: (1) systems that create automatically permuted indexes, as OLPI, NEPHIS, PRECIS, (2) systems which need a more elaborate description of information (use of a metalanguage) as e.g. SATIN 1, TITUS II, (3) systems which treat the text in natural language, as e.g. SYNTAXEME, the system of INSTN/CEA and of CEDIJ, PIAFDOC, and CONDOR. In the latter group are still some in an experimental stage.

5670 Binder, W.: **COWOCOR: Das COnputer WOrt CODierungs- und Recherche-Dokumentationssystem der Anwendungstechnik der Hoechst AG.** (The COnputer WOrd CODing and Retrieval System of the Hoechst AG). (In German). In: Nachr. Dok. 31 (1980) No. 1, p. 2–10

The essential part of the COWOCOR-System is the mechanical coding of all technical and chemical terms by means of an extensive and dynamic thesaurus-classification with hierachic structure. A classified filing system, a sequential storage was chosen

for the electronic data processing. The thesaurus comprises about 75 000 coded terms. Approx 150 000 documents are stored at present.
(Acc. author abstr.)

5671 Caplan, P.: **Thesaurus-based automatic indexing: a study of indexing failure.** Chapel Hill, NC: School of Library Science, University of North Carolina 1978. M.S. in L. S. Thesis.

5672 Dobronranov, I. S., Lachuti, D. G., Prizment, E. L.: **Automatic subject indexing of books.** (In Russian). In: Sov. bibliogr. (1979) No. 4, p. 9–19

Description of an experiment of an algorithmic method of subject indexing of books based on the Skobki IRS developed by the Informelektro Institute. The stages of the experiment are regarded, the results are analysed. For an adequate book indexing a whole complex of reference aids is needed, such as title, list of contents and annotations.

5673 Hamill, K. A., Zamora, A.: **An automatic document classification system using pattern recognition techniques.** In: The Information Age in Perspective. Proc. ASIS Ann. Meet. 1978. Vol. 15. White Plains, N.Y.: Knowledge Industry Publ. 1978. p. 152–155, 6 refs. The procedure at Chemical Abstracts Service consists of 3 phases: the training, feature selection and classification phases, and the methodology employed in the CA experiment. Results of the automatic classification were compared with the corresponding manual one. Only a small proportion of difficult titles could not be classed by the computer.

5674 Kirschbaum, J., Williamson, R. E.: **NASA automatic subject analysis technique for extracting retrievable multi-terms (NASA TERM) system.** In: Management of Inform. Syst. ASIS Mid-year Meeting 7/1978, Houston TX. Dallas: Xerox Corp. 1978. p. 41

5675 Kirschner, Z.: **On automated text processing: The MOSAIC method.** (In Czech). In: Cs. Inform. 21 (1979) No. 3, p. 67–73, 5 refs.

The MOSAIC method collects the most informative elements of a text (title, subtitle, summary, introduction, conclusion, drawings, etc.) and produces word strings in lexical form reflecting the themes of a text. It includes also a simplified syntactic analysis.

5676 Klingbiel, P. H.: **Machine-aided indexing in practice: An encounter with automatic indexing of the third kind.** In: ASIS, SIG Techn. Publ. Ser. No. CR-1, May 1980. 6 p.

The presentation falls into three distinct parts. First, a brief history of Defense Documentation Center (DDC), a description of the DDC collections, and a statement of collection accessibility; second, a categorization of automatic indexing into three kinds with a brief description of the DDC system of machine-aided indexing; and third an indication of some operational experiences with the system. (Author)

5677 Maeda, T., Momouchi, Y., Sawamura, H.: **An automatic method for extracting significant phrases in scientific or technical documents.** In: Inform. Proc. & Management 16 (1980) No. 3, p. 119–127, 5 figs., 2 tabl., 13 refs.

The method is based upon a text structure analysis and uses a relatively small dictionary. The dictionary has been constructed based on the knowledge about concepts in the field of science or technology and some lexical knowledge, for significant phrases and their component items may be used in different meanings among the fields. A text analysis approach has been applied to select significant phrases as substantial and semantic information carriers of the contents of the abstract. The results of the experiment for five sets of documents have shown that the significant phrases are effectively extracted in all cases, and the number of them for every document and the processing time is fairly satisfactory. The information representation of the document, partly using the method, is discussed with relation to the construction of the document information retrieval system. (Author)

5678 Morgan, N. H.: **A computer-assisted dynamic indexing system: CADIS.** In: Management of Inform. Syst. ASIS Mid-year Meeting, 7/1978, Houston TX. Dallas:

Xerox Corp. 1978. p. 83–84

From the titles of relatively interdisciplinary documents a list of keywords was generated. The products of the system are: an author index and a catalogue of authors, a topographical list and lists of permuted keywords.

5679 Salton, G.: **Automatic term class construction using relevance – A summary of work in automatic pseudo-classification.** In: Inform. Proc. & Management 16 (1980) No. 1, p. 1–15, 6 figs., 30 refs.

Term classifications and thesauri can be used for many purposes in automatic information retrieval. Normally a thesaurus is generated manually by subject experts: alternatively, the associations between the terms can be obtained automatically by using the occurrence characteristics of the terms across the documents of a collection. A third possibility consists in taking into account user relevance assessments of certain documents with respect to certain queries in order to build term classes designed to retrieve the relevant documents and simultaneously to reject the non-relevant documents. This last strategy, known as pseudoclassification, produces a user-dependent term classification. A number of pseudoclassification studies are summarized in the present report, and conclusions are reached concerning the effectiveness and feasibility of constructing term classifications based on human relevance assessments. (Author)

5680 Trubkin, L.: **Auto-indexing of the 1971–77 ABI/INFORM database.** In: Database 2 (1979) No. 2, p. 56–61

Description of the development and method of autoindexing, using a "bridge vocabulary" to post terms in order to index a database which was searchable until 1978 only through free text.

5681 Zubov, A. V., Čaplja, A. I., Čaplja, S. G.: **Automatic extraction of keywords.** (In Russian). In: Struktur. i prikl. lingv. (1978) No. 1, p. 198–204

Description of a procedure for automatic keyword extraction on the basis of French texts in the field of oil and gas. A general frequency list and a distribution alphabetical-frequency list were obtained. The program is run on the Minsk-22 computer.

37 Reclassification

5682 Marmor, A. C.: **Besondere Merkmale und Umfang der Patentliteratur.** (Special characteristics and extent of the patent literature). (In German). In: Intern. Symp. Patentinformation und -dokumentation. Proceedings. München 16.–18.5.77. München: K.G. Saur 1978. p. 152–164

Report on the problems of the American Patent Office with some 22 million documents and the annual reclassification task of adapting 4% of the collection to the newest version of the US classification system.

5684 Stoddard, H.: **Reclassification by Bliss.** In: Catalogue & Index (1979) No. 55, p. 4–5

Report on the reclassification activities at Chester College, England, changing from Dewey Decimal Classification to Bliss classification according to the new schedules of the second edition as far as available.

39 Evaluation of Indexing

5685 Atherton, P.: **BOOKS are for use – evaluation of MARC records in online subject retrieval systems.** In: The information age in perspective: Proc. ASIS Ann. Meeting 1978, vol. 15. White Plains, N.Y.: Knowledge Industry Publ. 1978. p. 17–20, 2 refs.

Presentation of the subject access system BOOKS and comparison of its retrieval performance with that of MARC. Results of experiments showed that searches conducted with BOOKS yielded many more documents and took only half as long as those with MARC, also that there was no significant difference in precision between the systems.

5686 Burress, E. P.: **Automated indexing versus KWOC: a performance comparison.** In: J. ASIS 31 (1980) No. 1, p. 60–61, 2 refs.

The retrieval performance of a technique for automated indexing using a controlled vocabulary (machine-aided indexing) is compared with that of a Key Word Out of Context Index (KWOC). Twenty subject searches were performed using a data base of

635 summaries of Defense Management data. Results show an average recall measurement of 0.73 for machine-aided indexing and 0.79 for the KWOC index. The average relevance measurements were 0.62 for machine-aided indexing and 0.60 for the KWOC index. (Author)

ly selected and extended form of the UDC after the first medium edition of 1967.

5695 Primo y Medina, M. de los A.: Correlation between the UDC and the semantic fields of a list of descriptors in the fields of economics, social and political science at the Institute of Spanish Culture. (In Spanish). In: Reuniber-78. Conf. iberoamer. sobre inform. y doc. cient. y tecnol. 11.9.1978. Madrid: Instituto Inform. Document. Cienc. Tecnol. 1979. p. 127–143

Lists of semantic fields are given together with their UDC numbers.

5696 Regt, W. F. de: UDC: from classification system to information retrieval language. (In Dutch). In: Open 11 (1979) No. 5, p. 241–247

Paper contains the proposal that a postcoordinate notation based on a thesaurus of permitted terms would allow more specific classification according to the UDC.

5697 Tomimatsu, H.: The application of the UDC in a small library. (In Japanese). In: Dokumentesyon kenkyu 29 (1979) No. 2, p. 55–59, 1 ref.

The following examples show how UDC numbers were adapted to serve more conveniently the purposes of a small library. (1) for the sake of convenience one writes 3A.1 instead of 347.771 and (2) for the sake of changing the filing order one writes 3(41)A instead of 347.77(41) intercalating by this a place number.

5698 Traissac, E.: Utilisation of UDC in the libraries of different countries. (In French). In: Bull. Inform. Assoc. Bibl. Franc. (1979) No. 102, p. 11–15

Review of the utilisation of the UDC in Poland and in the university libraries of Britain, France and Switzerland.

5699 Zyo, K.: The KDD classification table. (In Japanese). In: Semmon tosyokan (1978) No. 75, p. 17–19

The Kokusai Denshin Denwa Col. Inc. (KDD) uses its own classification which is a modified version of UDC. It has a fixed range of numbers and can be used as a shelf classification; it has a separate index which makes possible access through words.

(Author, abbr.)

43 On the Dewey Decimal Classification, DDC

5700 Bavakutty, M.: Classification of 'Bilingual Dictionaries' according to Dewey Decimal Classification. In: Herald Libr. Sci. 18 (1979) No. 4, p. 341–343, 5 refs. Explains the concept of a dictionary. States the rules for construction of Class numbers for bilingual dictionaries as provided by Berwick Sayers. Discusses the provision for bilingual dictionaries in DDC in its Editions 14, 16, 17 and 18. Points out their inconsistency and unhelpfulness. Highlights the helpfulness and simplicity of provisions of the *Colon Classification* in this regard. (Author)

5701 Brown, D. R.: Retention of Dewey Decimal Classification at DePaul University Library. Chicago, Ill.: De Paul University 1977. 17 p., ED-160 057

5702 Butcher, P.: Dewey? We sure do! A review of Dewey Decimal Classification, Edition 19. In: Catalogue & Index (1979) No. 55, p. 1, 7–8

A "series of impressions" on DDC19, regarding Layout and guidance, Synthesis and citation order, Tables, Schedules and Index.

44 On the Library of Congress Classification, LCC and LC Subject Headings

See also 5843

5703 Allen, L.: The subject catalogue of the University of Western Australia: some problems and solutions in relation to subject heading practice using LCSH as a base. In: Catalog. Australia 5 (1979) No. 1, p. 38–49, 9 refs.

5704 Hine, J. D.: LASH: an exploration. In: Catalog. Australia 5 (1979) No. 1, p. 25–37

4 On Universal Systems

42 On the Universal Decimal Classification, UDC

See also 5536, 6637, 5539, 5580, 5650

5687 Babiczky, B.: New phase in the development of the UDC. (In Hungarian). In: Könyvtari Figyelő 24 (1978) No. 6, p. 659–671, 18 refs.

Discusses structural changes in the UDC during the past 15 years and recent development trends (introduction of new common subdivisions, modernisation of existing ones, introduction of new notation methods) as well as problems of the computerised production of the master version of UDC and the work and achievements of the UDC international committees. (Orig.abstr.)

5688 Babiczky, B.: The evolution and the new abridged Hungarian edition of the UDC. (In Hungarian). In: Könyvtaros 28 (1978) No. 12, p. 709–713

The Hungarian Full UDC edition, in 42 volumes, appeared between 1968 and 1972. In 1977 a new Hungarian abridged edition was published, incorporating all recent changes.

5689 Fetisova, N. N., Pančenkova, I. T., Orlikova, O. L.: Indexing by UDC in the production quality field. (In Russian). In: Nauč. i techn. Biblioteki SSSR (1979) No. 6, p. 19–20

Discussion of indexing methods using UDC numbers. Numerous examples are given and analysed.

5690 Földi, T., Nagy, L.: Twenty years of revision of UDC social sciences classification. (In Hungarian). In: Könyvtari Figyelő 25 (1979) No. 4, p. 341–350, 8 refs. Classification experts from many countries have participated in the FID Social Science Classification Committee (FID C/3) since its inception in 1959. The Committee has revised Tables 30 Sociology, 32 Politics, 33 Economics, 34 Law, 36 Welfare, and 37 Education. It is now working on 93/99 History. The work faces many difficulties: there are ideological, professional and methodological divergences. Total international agreement is needed for every step. Thus progress is slow. (Author, abbr.)

5691 Kautto, V.: UDC as the medium for information retrieval in the automated network of university and research libraries. (In Finnish). In: Signum 12 (1979) No. 6, p. 103–108, 7 refs.

Discussion of several classification systems and subject indexing methods and their relevance for use in Finnish university and research libraries.

5692 Kucianová, A.: Problems connected with the processing of the Slovak National Bibliography Series C. Maps. (In Slovak). In: Knižnice a Vedecké Informacie 11 (1979) No. 4, p. 159–163, 5 refs.

The classification system used is the UDC, the area represented is used as the subject heading.

5693 Lüth, E.: Grundsätze der DK-Entwicklung. (Principles for UDC development). (In German). Bericht über die Arbeit des DIN-NAK 4.1. In: DK-Mitt. 24 (1980) No. 3, p. 10

Brief review of the problems identified and the program envisaged regarding the work of a subcommittee of the DIN Classification Committee.

5694 Müller, Clara E.: Book Review of Dezimalklassifikation. Internationale Mittlere Ausgabe. 2. Aufl. d. DK-Handausgabe. Bd. I: Systematische Tafeln. Berlin, Köln: Beuth-Verlag 1978. (In German). In: DK-Mitt. 24 (1980) No. 3, p. 9

Book review of the German version of the Basic Medium Edition of the UDC (BME) which is the first one of the three versions to appear (in English, French and German) in a somewhat different-

LASH (List of Australian Subject Headings) is designed to 'supplement and to be used in conjunction with the 8th edition of Library of Congress Subject Headings (LCSH)'.

5705 Janke, R. V.: **Time for an alternative.** In: *Ont. Libr. Rev.* 63 (1979) No. 3, p. 200–205, 12 refs. Discussion of problems involved in the conversion of LCSH to machine-readable form caused by its inherent lack of logical structure. Recommendation to use PRECIS as an alternative. List of applications of PRECIS in North America.

5706 Seavey, C. A.: **Visual indexes to the LC "G" schedule (maps).** In: *SLA Geogr. & Map Div. Bull.* (1978) No. 114, p. 17–23

46 On the Colon Classification, CC

5707 Satija, M.: **Extension of two-phased subjects in the Colon Classification.** In: *Herald Libr. Sci.* 18 (1979) No. 4, p. 344–348, 8 refs.

States that inter-disciplinary studies have made the multi-phased subjects inevitable. Deals with their provision in several classification schemes but not exhaustively. Describes that the *Colon Classification* (CC) is fully equipped through its Phase Relation to deal precisely with such subject but the number of phases in a complex class is restricted to two only. Proves that by the logical extension of the Phase Relation rules, the class number for complex class of any order can be synthesised in the CC. (Author)

5708 Šilarová, L.: **Ranganathan's faceted classification and its impact on subject ordering.** (In Czech). In: *Techn. Knih.* 23 (1979) No. 5, p. 143–151, 15 refs. Presentation of Ranganathan's classification theory and the specialties of his Colon Classification.

47 On the Library-Bibliographical Classification, LBC (BBK)

5709 Alekseeva, E. I., Genin, L. E. (Eds.): **The Soviet Library-Bibliographical Classification.** (In Russian). Leningrad 1978, 209 p.

Contains papers on classification theory and the use of LBC schedules in the classified catalogue, written by staff members of the Classification Department, M. E. Saltykov-Shchedrin State Public Library in Leningrad. The first three papers are as follows: 5710 Knovalova, M. N., Naumenko, G. F.: The process of classifying by the LBC schedules, p. 7–61. 5711 Kostrikij, L. L.: Toward a comparative analysis of the LBC schedules for "BI Mathematics", p. 62–77. 5712 Feofanova, E. I.: Work experience with two Physics divisions "B31 Theoretical physics" and "B382 Elementary particles", p. 78–96.

5713 Fröschner, G.: **Zur Weiterentwicklung der Bibliothekarisch-Bibliographischen Klassifikation (BBK) in der Sowjetunion.** (Regarding the further development of the Library Bibliographical Classification in the Soviet Union). (In German). In: *Zbl. Bibl.-Wes.* 93 (1979) No. 7, p. 293–302, 34 refs.

The development of the LBC in the Soviet Union during the 70ies is seen under the following four aspects: (1) establishment of an edition for mass libraries and children's libraries, (2) optimization of the system, (3) experimental investigations of applying the classification in automatic retrieval, (4) conception of the 2nd edition of the LBC.

5714 Miežiniene, A.: **LBC: achievements and problems.** (In Lithuanian). In: *Biblioteku darbas* (1979) No. 5, p. 17–22, 17 refs.

Survey on the LBC development which came to be used by libraries 15 years ago, which was used by 100 libraries in 1967 and by as many as 500 in 1977, especially in the Russian federation and the Ukraine. Work is underway in Lithuania on translating the schedules into Lithuanian.

5715 Poljanov, V. P.: **Problems of introducing the BBK into public and regional libraries.** (In Russian). In: *Sov. Bibliotekoved.* (1979) No. 1, p. 80–92

5716 Poljanov, V. P.: **Conception of a variant of the BBK (LBC) for regional libraries.** (In Russian). In: *Sov. Bibliotekoved.* (1979) No. 4, p. 89–97

The application of an abridged LBC edition is discussed for use

in public regional libraries as well as the difficulties encountered regarding the notation and its possible use.

5717 Žuržalina, N. P.: **The Soviet Bibliothecal-Bibliographical Classification (BBK).** In: *Intern. Cataloguing* 9 (1980) No. 2, p. 21–23, 20 refs (= main series of the BBK), table of general common divisions. Text outlines the basic structure and concentrates on the future developments of BBK, its use and application.

48 On Other Universal CS (alph.)

See also 5538

5718 Delgado, R. R.: **Book review of Coates, E., Lloyd, G., Simandl, D.: BSO. Broad System of Ordering – Schedule and Index.** The Hague 1978. In: *Rev. esp. doc. cient.* 2 (1979) No. 2, p. 171–173

5719 Kawano, K.: **Unique classification systems in special libraries.** (In Japanese) In: *Semmon tosyukan* (1978) No. 75, p. 20–23

The Library of the Tokyo Chamber of Commerce and Industry uses its own classification based on C. A. Cutter's system, with its own unique author marks. This classification lays emphasis on economics and management, and is a combination of the subject classification and pattern classification. Three examples are cited to explain how the classification and the author marks are used. The problem of copying with newly emerging subjects and terms, and in revising the classification systems, is also discussed. (Orig. abstr.)

5720 **Macrothésaurus des sciences et techniques.** In: *Banque des Mots* (1979) No. 17, p. 15–24

Presentation of the Macrothesaurus conceived and realized by the service de documentation de l'Institut Gustave Roussy and published by CILF and BNIST.

5721 Nikolaev, P. P.: **Classification of material objects of the world as a part of scientific and technical reference data retrieval system.** (In Russian). In: *Naučno-techn. inform. Ser. 2* (1980) No. 4, p. 9–16, 31 refs.

The described IRS is based on the "Classification of material objects of the world", which makes it possible to expose the main system-making characteristics of these objects, relations between them and also to place them in a classification field in the order emphasizing their main natural relationships. After final elaboration the system may be used in institutional libraries and information reference services at a number of levels of national economy, as well as for research purposes. (Author)

5722 Šidák, J.: **Use of patent information and the International Patent Classification at industrial enterprises.** (In Czech). In: *Čs. inform.* 21 (1979) No. 3, p. 72–78, 7 refs.

A general outline of IPC is given and its use in organising patent information at Czechoslovakia's industrial enterprises is described. (Author, abbr.)

5723 Takano, F.: **Thesaurofacet.** (In Japanese). In: *Zyoho kanri* 22 (1979) No. 1, p. 15–33, 15 refs.

Thesaurofacet, which features the advantages of both the facet classification system and the thesaurus, is presented with respect to the following aspects: (1) traditional subject classes and application of facet analysis techniques; (2) the structure of the classificatory part and its coordination with the thesaurus part; (3) introduction of compound terms and the classification system stability; and (4) the notation. (Orig. abstr.)

5724 **Le Répertoire de vedettes-matière de Laval (huitième édition): analyse critique.** (Critical analysis of the subject-headings list of Laval). (In French). In: *Document. et Bibl., Canada* 25 (1979) No. 3, p. 151–156

5 On Special Objects CS (Taxonomies)

51 Numerical Taxonomy

See also category 13

5725 Bayne, Ch. K. et al: **Monte Carlo comparisons of selected clustering procedures.** In: *Pattern Recognition* 12 (1980) No. 2, p. 51–62, 3 figs., 4 tabs., 2 append., 18 refs.

Monte Carlo methods were used to estimate the percent misclassification of 13 clustering methods for six types of parameterizations of two bivariate normal populations. The clustering methods were compared by using the probabilities of misclassification and incidence matrices. It was determined that correlations and differences in population sizes adversely influenced all clustering methods, where differences in the variance structure did not appreciably affect the results. The k -means partitioning method was the overall best method. Considering only agglomerative methods, the sum of squares, variance, furthest neighbor and rank score methods were generally superior to the other non-partitioning methods considered. The overall poorest methods were judged to be nearest neighbor and maximum likelihood. However, as the complexity of the distributions increased, the differences between all of the methods decreased. (Author)

5726 Cabral, J. M. P.: **Effect of the scaling method on the classification of archaeological ceramics by numerical taxonomy.** In: *Classificat. Soc. Bull.* 4 (1979) No. 3, p. 14–30, 7 figs., 4 tabs., 7 refs.

A study of the effect of scaling method on the classification of 59 sherds of Aegean ceramics, analysed by neutron activation, was made. Three scaling methods were applied to the crude data: logarithmic transformation, standardization of attributes and ranging. The transformed data were subjected to numerical taxonomic analysis based on matrices of mean Euclidean distances. Two methods of cluster analysis were employed: a hierarchical method (UPGMA) and a nonhierarchical one (k -centroids). Ordination of OTU's in A-space by principal components analysis was also carried out. No major differences due to the three methods of scaling were observed. However, some minor differences were found, which are related to the fine structure of the data. (Author)

5727 Castillo-Morales, A.: **The least squares tree for a four points distance matrix.** In: *Classificat. Soc. Bull.* 4 (1979) No. 3, p. 5–13, 2 figs., 14 refs.

Given a distance matrix D of order $r = 4$, it is possible to find H , a new distance matrix, which is tree-realizable and has a minimum sum of squares of differences with respect to D . (Author)

5728 Colter, M. A.: **A combined hierarchical and steepest-descent clustering algorithm.** In: *Inform. sciences* 18 (1979) No. 2, p. 95–112

A clustering procedure is developed, using a combined hierarchical and steepest-descent search procedure in a stepwise algorithm. The trace of the within-group scatter matrices is used in a global criterion function. The procedure is tested on a series of small data sets and compared with previously published results on a 96-point data set. The algorithm is shown to be rapidly convergent, and the results are both intuitively and comparatively appealing. (Author)

5729 Duerr, B., Haettich, W., Tropf, H., Winkler, G.: **A combination of statistical and syntactical pattern recognition applied to classification of unconstrained handwritten numerals.** In: *Pattern Recognition* 12 (1980) No. 3, p. 189–199, 14 figs., 17 refs.

This paper describes a combination of statistical and syntactical pattern recognition methods. The hierarchically structures recognition system consists of a conventional statistical classifier, a structural classifier analysing the topological composition of the patterns, a stage reducing the number of hypotheses made by the first two stages, and a mixed stage based on a search for maximum similarity between syntactically generated prototypes and patterns. The stages work on different principles to avoid mistakes made in one stage by the others. This concept is applied to the recognition of numerals written without constraints. If no samples are rejected a recognition rate of 99.5% is obtained. (Author)

5730 El-Sheikh, T. S., Wacker, A. G.: **Effect of dimensionality and estimation on the performance of Gaussian classifiers.** In: *Pattern Recognition* 12 (1980) No. 3, p. 115–126, 7 figs., 1 table, 2 expls., 23 refs.

The measurement dimensionality, which maximizes the average (over possible training sets) probability of correct classification (P_{cr}), is investigated for the equiprobable two-class Gaussian problem with known common covariance matrix. The Bayes

minimum error classification rule, in which the estimated (sample) mean vectors are used in place of the true mean vectors, is the classification rule considered. A basic question investigated is the variation, with dimensionality, in the Mahalanobis distance (between the underlying distributions) required to keep P_{cr} constant. Numerical results are plotted for several cases. Analytical results are obtained which relate the rate of variation of the Mahalanobis distance with dimensionality and the corresponding asymptotic behaviour of P_{cr} . Results for more highly structured problems, involving specific covariance matrices, show that in some cases increasing correlation between the measurements yields higher values of P_{cr} . Approximate expressions are derived relating P_{cr} , dimensionality, training sample size and the structure of the underlying probability density. (Author)

5731 Gelsema, E. S., Eden, G.: **Mapping algorithms in Isphan.** In: *Pattern Recognition* 12 (1980) No. 3, p. 127–136, 7 figs., 8 refs.

A number of mapping operations in pattern recognition is reviewed. Two families of new mapping algorithms are defined. The performance of all algorithms is illustrated using a collection of 100 feature vectors obtained from images of two classes of white blood cells. It is emphasized that the interactive pattern recognition system ISPHAN is well suited to find optimal decision functions based on such mappings. (Author)

5732 Jambu, M.: **Classification automatique pour l'analyse des données. 1. Méthodes et algorithmes.** (Automatic classification for data analysis). (In French). Paris: Dunod 1978. 310 p., ISBN 2-04-010425-9

5733 Jambu, M., Lebeaux, M.-O.: **Classification automatique pour l'analyse des données. 2. Logiciels.** (Automatic classification for data analysis. 2. Programs.) (In French). Paris: Dunod 1978. 399 p., ISBN 2-04-010451-8

5734 Landgrebe, D. A.: **The development of a spectral-spatial classifier for earth observational data.** In: *Pattern Recognition* 12 (1980) No. 3, p. 165–175, 3 figs., 2 tabs., 27 refs.

Over the last several years a classifier for earth observational image data has been under development which is intended to achieve improved performance by utilizing spatial characteristics of the data as an adjunct to multispectral ones. This paper provides an overview of the conception, development, evaluation and documentation of this spectral-spatial classifier. The research program leading to this classifier is described, the algorithms of the current implementation called ECHO are outlined, and results on its performance are summarized. These results show it to have improved accuracy, with greater computation efficiency, and only slightly increased operator complexity. (Author)

5735 Milligan, G. W., Isaac, P. D.: **The validation of four ultrametric clustering algorithms.** In: *Pattern Recognition* 12 (1980) No. 2, p. 41–50, 1 fig., 5 tabs., 23 refs.

The present simulation study examined the ability of four hierarchical clustering algorithms to recover the true structure in data sets which satisfied both the ultrametric inequality and the structural model of the clustering procedures. The results indicated that the rank order performance of the four methods differed markedly from the rank order generally found in multivariate normal mixture model studies. The differing rank orders demonstrates a lack of robustness of the algorithms over alternative conceptualizations of cluster structure. (Author)

5736 Mirčev, B.: **On a problem arising when establishing a document classification automatically.** (In Russian). Naučno-techn. inform. Ser. 2 (1980) No. 2, p. 31–35, 13 refs.

Discussion of two algorithms forming an automatic document classification based on the calculation of quality functionals and the procedure of iterative optimization of these functionals. Results of a computer experiment with a real document file on computer technology are reported. (Author, amended)

5737 Narasimha Murty, M., Krishna, G.: **A computationally efficient technique for data-clustering.** In: *Pattern Recognition* 12 (1980) No. 3, p. 153–158, 3 figs., 2 tabs., 6 refs.

A computationally efficient agglomerative clustering algorithm based on multilevel theory is presented. Here, the data set is divided randomly into a number of partitions. The samples of

each such partition are clustered separately using hierarchical agglomerative clustering algorithm to form sub-clusters. These are merged at higher levels to get the final classification. This algorithm leads to the same classification as that of hierarchical agglomerative clustering algorithm when the clusters are well separated. The advantages of this algorithm are short run time and small storage requirement. It is observed that the savings, in storage space and computation time, increase nonlinearly with the sample size. (Author)

5738 Rasmussen, G. T. et al: **Fisher discriminant functions for a multilevel mass spectral filter network.** In: *J. Chem. Infor. & Comp. Sci.* 19 (1979) No. 4, p. 255-259, 15 refs.

Fisher linear discriminants are described and applied to classification problems using mass spectral data. A two-level network of discriminants is used to improve classification. These discriminants provide a useful basis for two-dimensional projections of multidimensional pattern. (Author)

5739 Romanovskaja, F. A.: **Classifying the questions in the technique of heuristic forecasting.** (In Russian). In: *Sozdanie sistem nepreryvnyh, prognosir. razvitiya nauki i techn.* Leningrad 1979. p. 61-66

Suggestion of a method for long-term heuristic forecasting of the rational use of water at enterprises of heavy engineering.

5740 Sargent, V. M.: **Cycles and the equal society.** In: *Classificat. Soc. Bull.* 4 (1979) No. 3, p. 31-45, 11 figs., 16 refs.

Having observed the performance of various clustering techniques as applied to a large corpus of natural data, the author experimented with two sets of artificial data in order to investigate the effects of those clustering methods on data whose structure is completely unknown. The artificial data consisted of two absolutely undclassifiable populations, a regular cycle and an equidistantly spaced set of points. Four combinations of clustering options were applied to these data sets. (Author)

5741 Sinith, St. P., Dubes, R.: **Stability of a hierarchical clustering.** In: *Pattern Recognition* 12 (1980) No. 3, p. 177-187, 10 tabs., 3 figs., 23 refs.

Clustering algorithms have the annoying habit of finding clusters even when the data are generated randomly. Verifying that potential clusterings are real in some objective sense is receiving more attention as the number of new clustering algorithms and their applications grow. We consider one aspect of this question and study the stability of a hierarchical structure with a variation on a measure of stability proposed in the literature. - Our measure of stability is appropriate for proximity matrices whose entries are on an ordinal scale. We randomly split the data set, cluster the two halves, and compare the two hierarchical clusterings with the clustering achieved on the entire data set. Two stability statistics, based on the Goodman-Kruskal rank correlation coefficient, are defined. The distributions of these statistics are estimated with Monte Carlo techniques for two clustering methods (single-link and complete-link) and under two conditions (randomly selected proximity matrices and proximity measures are applied to some real data sets). (Author)

5743 Tou, J. T.: **Dynoc — a dynamic optimal cluster-seeking technique.** In: *Intern. J. of Comp. & Inform. Sci.* 8 (1979) No. 6, p. 541-547

A new technique for automatic clustering of multivariate data is proposed. In this approach a performance index for determining optimal clusters is introduced. This performance index is expressed in terms of the ratio of the minimum interset distance to maximum intraset distance. The optimal clusters are found when the performance index reaches a global maximum. If there are alternative groupings with equal number of clusters, the one with the largest performance index is chosen. (Author)

5744 Vanderheydt, L., Oosterlinck, A., Van Daele, J., Van den Berghe, H.: **Design of a graph-representation and a fuzzy-classifier for human chromosomes.** In: *Pattern Recognition* 12 (1980) No. 3, p. 201-210, 10 figs., 3 tabs., 9 refs.

The subject of this paper is to set up some flexible subsystems for the automated karyotyping of human chromosomes. An algorithm based on a split and merge procedure is used to describe the chromosome profile in a tree structure. By defining supplementary branches between the tree nodes, nodes which correspond with the black and bright intervals of the profile, a graphical description of the chromosome can be generated. -

In order to interpret this graph, especially the features and relation assignments to the nodes and branches, some operators based on fuzzy set theory are studied. An operators aggregation structure is applied for the interpretation of chromosomes. (Author)

5745 Wexler, P. J., Fremlin, D. H.: **The number of classifications of up to classificanda.** In: *Classificat. Soc. Bull.* 4 (1979) No. 3, p. 2-4, 1 fig., 1 ref.

5746 Yosiharu, K.: **Information science study on medical supplies. Cluster analysis of keywords of patent information.** (In Japanese). In: *Zyoho kanri* 21 (1978) No. 9, p. 663-680, 14 refs.

An experiment in ascertaining research trends in specific subject fields was carried out by clustering keywords of Ringdoc or CPI databases. The Complete Linkage Method was selected. With this method topics on penicillins, cephalosporins, beta-blockers, and benzodiazepines were subjected to cluster analysis. The experiment showed that regarding the first two topics research on compounds with new chemical structures has started; regarding benzodiazepines one searches for compounds to replace 1,4-benzodiazepine and for the beta-blockers it was found that they expand their fields of application even to psychiatry. (Acc. orig. abstr.)

58 On CS for Kinds of Documents

5747 Kara-Murza, S. G.: **On approaches to classifying investigations on the level of a research institution.** (In Russian). In: *Probl. dejat. učenogo i nauč. kollektivov* (1979) No. 7, p. 145-151, 3 refs.

Suggestion to classify the investigations fulfilled in a research institute according to their relation to their main objective, and to the immediate and predictable nature of their output.

5748 Dyki, J.: **Classification system for multi-concept slide collection.** Arlington, Va.: ERIC Documentation Reproduction Service 1979 = ERIC Report, ED-158 754 A classification system for a 40,000 slide collection of Wayne State University campus architecture, activities, people, and events and the surrounding Detroit area is described. Classification categories are defined and a primary code is assigned for architecture, people, events, themes, and special presentations. secondary code indicating division (i.e. Wayne State University, Detroit, out-of-state) and a tertiary code for all architecture slides of the campus to indicate their specific location may also be assigned. (Orig. abstr.)

6 On Special Subject CS

61 On CS for Mathematics and Area 1 Fields

5749 Dovbenko, M. A., Umanskij, A. N.: **Standardisation thesaurus — an information retrieval language for automated systems.** (In Russian). In: *Standarty i kachestvo* (1979) No. 5, p. 30-32

Describes the main features of the thesaurus, which is designed for indexing and searching of normative-technical documents. (Orig. abstr., abbr.)

62 On CS for Physics and Chemistry (incl. Electr.)

See also 5616, 5623, 5670, 5673.

5750 Yamaguti, G.: **The use of Current Bibliography and JICST Classification.** (In Japanese). In: *Semmon tosyukan* (1978) No. 175, p. 11-16

The two aspects of the JICST Classification is explained as a unified system for physics and engineering and a system conforming to the Current Bibliography divisions of the Japan Information Centre for Science and Technology (JICST).

5751 Senf, W.: **Der IDC-Thesaurus und seine Reorganisation.** (The IDC-Thesaurus and its reorganization). (In German). Frankfurt: IDC. Intern. Dok. Ges. f. Chemie mbH, FIZ Chemie 1979, 69 p., DM 14,30;= Forschungsbericht BMFT-FB ID 79-04.

Description of the contents and characteristics of the IDC-Thesaurus, its establishment and structure. The reorganization implied a limitation of the number of terms, the abolition of preferred terms, a semantic factoring of the terms in the abstraction and in the partition system and a testing of the results of these measures. Thus, of a starting vocabulary of some 12 096 concepts with 37 400 terms some 2 294 concepts with 10 345 terms were deleted. Next to the already existing version of the IDC thesaurus as a retrieval thesaurus which may be organized alphabetically as well as hierarchically a thesaurus dictionary was established which contains the compound terms and differing spellings.

5752 Golubeva, N. E., Ibragimova, M. B., Kalinina, G. R., Miščenko, G. L.: **On the thesaurus of organic compounds classes.** (In Russian). In: Naučno-techn. inform. Ser. 2 (1980) No. 5, p. 6–8, 2 refs.

A thesaurus of organic compounds classes containing about 700 lexical units is compiled at VINITI. It is formed with a lexical and semantic vocabulary of descriptors and nondescriptors, with a systematic index and a list of structure fragments of organic compounds classes. To take care of synonyms as well as conceptual relationships and in order to join lexical units within equivalence groups, gross formulas of compounds' bonds were used as codes of organic compounds classes. (Authors, abbr.)

63 On CS for the Astro- and Geosciences

See also 5617, 5626, 5627, 5654

5753 Moskalenko, Z. D. et al.: **A multilingual thesaurus in geology.** (In Russian). In: Tr. Vses. n.-i. geol. instituta (1978) No. 291, p. 132–141, 6 refs.

Description of the organisational and methodological aspects of the construction of the Russian part of a geological thesaurus in English, French, German, Spanish and Italian on the basis of an American geological dictionary. The entire vocabulary is divided into terms and nomens. The term list is structured according to 26 subject fields. The nomens are divided into 8 classified lists. The Russian part is envisaged to be ready for print in 1981.

64 On CS in the Bio-Area

See also 5612, 5667

5754 Haendler, H.: **Relationship to INFIC: Feed data documentation and standardized methods.** In: Standardization of Analytical Methodology for Feeds. Proc. Workshop Ottawa, 12–14 March 1979. Ottawa: Intern. Development Research Centre 1979. p. 114–119

One section of this article is devoted to "Systematic feed description" and deals with the theory and practice of concept analysis and structuring of feed data.

65 On CS in the Human Area (5)

See also 5668

5755 Kazakova, L. M.: **The place of medicine in the system of knowledge and in library and bibliographic classifications: a historical overview.** (In Russian). In: Sov. Bibl.-Bibliogr. Klassifik. Leningrad 1978. p. 97–129

Survey is limited to the late 19th and 20th century.

5756 **The first Cuban thesaurus of psychology.** (In Spanish). Habana: Ministerio de Salud Pública. Hospital Psiquiátrico 1979. 23 p.

Presentation of the principles of this thesaurus, its construction methods and its structure.

5757 Stadler-Richter, H.: **Thesaurus und neues Indexsystem für Fragen der Universitätsorganisation.** Thesaurus and indexing system for problems of university organization. (In German). In: Off. Verw. u. Datenverarb. (ÖVD) (1979) No. 7/8, p. 11–12

Preparatory work in order to document adequately the Austrian law for university organization.

66 On CS in the Socio-Area

See also 5695

5758 Vilenskaja, S. K.: **Linguistic support for the social sciences information system.** (In Russian). In: Sov. bibliotekoved. (1979) No. 2, p. 36–49

Presentation of the conception underlying the design of the linguistic support for AISON ("Automated Social Sciences Information System") as well as details on the IR language in general and the linguistic component of INION and other centres.

67 On CS in the Economics and Technology Area

See also 5613, 5643

5759 Miller, P., Roberts, M.: **Let your keywords do the walking.** In: Building 237 (1979) No. 39, p. 59–60

The indexing system described is based on the Construction Industry Thesaurus (CIT). The thesaurus is searchable online using keywords as a search base.

68 On CS in the Science and Information Area

5760 Freytag, J.: **Typisierung von Informationsquellenkategorien.** (Typification of information source categories.) (In German). In: Wiss. Z. Humboldt-Univ., Ges. Sprachwiss. R. 27 (1978) No. 4, p. 379–384

A new classification of information sources categories is described and "the way of an information" through several information source categories is shown.

5761 Gol'ceva, E. V., Aleksandrova, A. A.: **Typology of reference publications.** (In Russian). In: Kniga (1979) No. 39, p. 18–36

Report on research carried out by the All-Union Book Chamber. Five type-forming principles were found: (1) purpose, (2) reader's address, (3) character of information (level of scientific character, degree of material normativeness, style of presenting the material, system of graphic signs, (4) publication structure and (5) peculiarities or arrangement connected with the type of publications.

5762 Bunova, M. A.: **Information retrieval language for patent retrieval.** (In Russian). In: Naučno-techn. inform. Ser. 2 (1980) No. 3, p. 8–14, 27 refs.

Description of research on lexic, structure and paradigmatics of the artificial language used in patent retrieval.

5764 Frumin, I. M.: **Term-building and library typology: tradition and innovation.** (In Russian). In: Nauč. i techn. biblioteki SSSR (1979) No. 5, p. 30–37, 13 refs. Outlines problems of library typology and proposes the following classification of Soviet libraries: (1) public libraries (state libraries), (2) mass libraries, (3) school libraries, and (4) special libraries.

69 On CS in the Culture Area

See also 5572, 5651, 5726

5765 Sweeney, W. D.: **Subject headings for Zambia, 1: languages and peoples.** In: Zambia Libr. Assoc. J. 10 (1978) No. 4, refs.

The work was compiled as a supplement to a classification research project on African History initiated in 1977 by the Nigerian Library Association.

7 Classification and Language

73 Automatic Language Processing

See also 5525, 5544, 5554

5766 Butorov, V. D., Pavlova, I. V.: **Recognition of multicomponent terms in thesaurus-based document**

indexing. (In Russian). In: *Struktur. i priklad. lingv.* (1978) No. 1, p. 188–193

Analysis of disadvantages of term recognition with the help of special dictionaries of word-combinations.

5767 Pacak, M. G., Norton, L. M., Dunham, G. S.: **Morphosemantic analysis of -itis forms in medical language.** In: *Meth. Inform. Med.* 19 (1980) No. 2, p. 99–105, 26 refs.

The requirements for morphosemantic analysis of -itis forms include: a) semantic classification of morphosemantic constituents forming -itis word forms, b) establishment of morphosemantic distribution patterns occurring in -itis forms, c) preparation of paraphrasing rules.

5768 Pair, C.; Mairchary, M., Neel, D.: **Correctness proofs of syntax-directed processing descriptions by attributes.** In: *J. Comp. Syst. Sciences* 19 (1979) p. 1–17

Presentation of a method of proving that an attributed description effectively carries out its assigned role. The method is modular and the semantics is descriptive (rather than algorithmic) and independent of any parsing scheme.

74 Grammar problems

See also 5544

5769 Anno, E. I.: **On the typology of syntax analysis algorithms (concerning formal models of natural language).** (In Russian). In: *Naučno-techn. inform. Ser. 2* (1980) No. 3, p. 15–22

It is proposed to classify syntax analysis algorithms according to the type of language formal model, the ways of looking through the analysis variants (variant or table analysis), of analyzing syntax structure (ascending or descending analysis), of sentence processing (from the left to the right, from the right to the left). Some known algorithms are analyzed according to the suggested classification and generalized for the case of a neighbourhood grammar. Recommendations for practical creation of syntax analysis algorithms for texts in natural language are given.

(Author, amended)

5770 Karlgren, H.: **Categorial grammar – a basis for a natural language calculus?** In: *Studia Logica* 37 (1978) No. 1, p. 65–78

5771 Sager, N., Hirschman, L.: **Information structures in the language of science: theory and implementation.** New York: NY University. (251 Mercer Street) Linguistic String Project. = String Program Reports No.12, Sept. 1978

5772 Skorochod'ko, E. F.: **Distribution of interphrase connections in the text.** (In Russian). In: *Naučno-techn. inform. Ser. 2* (1980) No. 4, p. 23–30, 5 refs.

The elaboration of efficient methods of automated text processing presupposes the establishment of the regularities of text structure. The mechanism of interphrase connections is the main text-building factor. An approach to the investigation of this mechanism is suggested; some parameters of the distribution of interphrase connections, such as evenness factor and extent, are considered. The application of such parameters as linear coefficient and sentence functional weight is shown. Results of experimental analysis of eight texts are given.

(Author)

5773 Wolff, J. G.: **The discovery of syntagmatic and paradigmatic classes.** In: *ALLC-Bull.* 6 (1978) No. 2, p. 141–158, 23 refs.

A grammar discovery procedure is presented which is composed of a syntagmatic clustering program (MK10H) and a paradigmatic clustering program (GRAM 15). It develops non-recursive context-free phrase structure grammars. The procedure is intended as a step towards a model of natural language acquisition by children. Consequently it has been designed to work without the need for segmented data, for positive samples, or for a teacher. The procedure effects a compression of the input data in accordance with the principle of economy in cognition. This compression is achieved in part by the systematic selection of high frequency linguistic elements. GRAM 15 and the complete procedure seem also to model certain aspects of natural classification systems.

(Author)

75 Question-answering Systems

5774 Gering, E.: **Zur Entwicklung eines Frage-Antwort-Systems und seine Nutzung in der wissenschaftlichen Informationstätigkeit.** (Regarding development of a question-answering system and its use in scientific information activities.) (In German). In: *Informatik* 26 (1979) No. 3, p. 17–20, 4 refs.

Presentation of the question-answering system FAS'80 which processes sentences in natural language, permits to include many relationships between verbal expressions and manages simple logical operations.

5775 Saracevic, T.: **Problems of question analysis in information retrieval.** In: *The information age in perspective. Proc. ASIS Ann. Meeting 1978.* White Plains, N.Y.: Knowledge Industry Publ. 1978. p. 281–283, 3 refs.

Discussion of the possible theoretical background and proposal of possible experiments.

76 Lexicon/Dictionary Problems

See also 5526, 5562, 5608, 5700, 5794

5776 Algotsson, L.: **Technical terminology, a means in documentation** (In Swedish). In: *T. Dokument.* 35 (1979) No. 4, p. 63–65

Description of the work in establishing a glossary in its principle stages: collection, classing, study, comparison, unification and presentation.

5777 Doszkocs, T. E.: **An Associative Interactive Dictionary (AID) for on-line bibliographic searching.** In: *The information age in perspective: Proc. ASIS Ann. Meeting 1978.* White Plains, N.Y.: Knowledge Ind. Publ. 1978. p. 105–109, 3 refs.

Natural language retrieval systems confront searchers with the problem of semantic scattering. The use of a highly compressed hash table of inverted file search keys and their postings enables the retrieval software to automatically identify conceptual text associations. The on-line interactive implementation employs an association measure based upon the difference between observed and expected term (string) frequencies in retrieved sets of text segments. The prototype Associative Interactive Dictionary (AID) system has been implemented at the National Library of Medicine with a direct interface to the ELHILL retrieval software. The AID system is currently available in-house only for experimental work.

(Orig. abstr.)

5778 Gerd, A. S. et al: **The information retrieval thesaurus as an object of lexicography.** (In Russian). In: *Struktur. i prikl. lingv.* (1978) No. 1, p. 160–171, 37 refs.

Description of the features of an information retrieval thesaurus in general and of a special IRT on steels in particular. A large scale development of thesauri is advocated, possible as a special branch of lexicography, namely "thesaurus lexicography" to deal with ideographic dictionaries.

5779 Kiselevskij, A. I.: **On definitions as given by encyclopaedias and explanatory dictionaries.** (In Russian). In: *Vopr. Jazykozn.* (1979) No. 2, p. 91–100

A certain unification of descriptions in explanatory dictionaries can be noticed, however, the methods related to this area are not as yet clarified.

77 General Problems of Terminology

See also 5529, 5530, 5564, 5829

5780 Dubuc, R.: **Terminologie – traduction – rédaction et normalisation.** (In French). In: *Meta* 24 (1979) No. 3, p. 349–354

Evolution of terminology, its definition as a discipline. Application fields are translation, editorial work and standardization.

5781 Felber, H.: **Concept and term documentation card.** (In Polish). In: *Prasa techn.* 9 (1979) No. 2, p. 16–18

Form and content of a concept and term documentation card as a basic information document are discussed. Its function is to supply documentation for automatic processing of terminological data.

5782 Felber, H.: **The development of national and international terminology work and documentation.** In: Intern. Seminar on the Application of Standards in Information. Budapest 1979. 21 p. 127 refs.

5783 Handelshochschule Kopenhagen: **Vorträge, Ergebnisse und Vorschläge des Seminars über terminologische Diplomarbeiten, abgehalten am 19. Sept. 1979 an der Handelshochschule in Kopenhagen.** (Papers, results and proposals of the seminar on terminological theses held Sept. 19, 1979 at the School of Economics in Copenhagen). København: Handelshøjskolen 1980. 60 p.

5784 Jadacka, H.: **On the form, meaning and designation of a term.** (In Polish). In: Zag. naukozn. 14 (1978). No. 4, p. 552–557

5785 Losev, A. F.: **Terminological polysemanticity in the existing theories of sign and symbol.** (In Russian). In: Jasykov. prakt. i teorija jas. (1978) No. 2, p. 3–26

5786 Niementowski, St. J.: **The methodological principles for building the terminology of scientific, technical and economical information.** (In Polish). In: Aktual. probl. inform. i dok. 24 (1979) No. 1, p. 19–22, 14 refs. Principles for constructing a system of terms are exemplified by building a fragment of a terms system relating to information document descriptor analysis, including definition of the terms and their synoptic table.

5787 Rondeau, G. (Ed.): **Travaux de terminologie.** (Works in terminology.) (In French). Quebec: GIRSTEM 1979. 153 p.

5788 Rubin, J.: **Directory of language planning organizations.** Honolulu, Hi.: University Press of Hawaii 1979. 8. 3.50

The directory lists over 100 organizations from over 50 areas. Its main purposes are (1) to help practitioners discover how rich and varied the world of language planning is, (2) to encourage exchange of experiences between organizations and (3) to provide empirical data for language planning theorizing.

5789 Sager, J. C. (Ed.): **Standardization of nomenclature.** S'Gravenhage–Paris–New York: Mouton Publishers 1979. 104 p. = Intern. J. of the Sociology of Language, N. 23

5790 Skowronski, J. I.: **On the integration of the scientific and professional languages.** (In Polish). In: Nauka pol. 27 (1979) No. 1, p. 95–100

Summary of a number of drawbacks in terminological work despite the efforts of numerous linguistic and professional international commissions and committees so that terminological disintegration and the implicit threat of chaos in this area are beginning to be very real in a number of disciplines. Points to the recommendations of the 1st Polish Conference on Scientific Terminology, June 1978.

5791 Szymczak, M.: **the role and place of terminology in the allnational language.** (In Polish). In: Zag. naukozn. 14 (1978) No. 4, p. 513–521

5792 Vasarhelyi, P.: **The relevance of INTERCONCEPT for classification and indexing.** In: Intern. Classificat. 7 (1980) No. 1, p. 6–9, 6 refs.

Presentation of the ideas and aims of the Unesco Interconcept Project also intended to become a programme of either the Unesco or any other institution interested in the promotion of international understanding by means of conceptual control and analysis in the fields of the social sciences. The article outlines some of the problems yet to be solved, the solution under study, and the organizational matters. It reports also on some of the findings of the Pilot Project. I. C.

78 Special Terminology Problems

See also 5478, 5786

5793 Le Guern, M., Raymondis, L. M., Archerot, D., Sallam, S.: **Le langage du code civil.** (The language of private law). (In French). Lyon: University. Centre d'Etudes des Methodes Objectives en Science Humaine 1978. 100 f., 2 p. refs.

Terminological and linguistic study of the language of law. Study of certain terms, of lexical properties and grammatical ones of legal discourse.

5794 Knauss, E.: **Zu einigen Problemen bei der Ausarbeitung eines mehrsprachigen Fachwörterbuchs.** (Regarding problems in elaborating a multilingual glossary.) (In German). In: Informatik 26 (1979) No. 1, p. 13–14 The research institut of the Office for Prices of the DDR contributes in international cooperation to the elaboration of a dictionary concerning prices, which is meant to be published in all the Comecon-languages as well as in English and French.

5796 Barsuk, A. I.: **Importance of terminology standardization for bibliographical work.** (In Russian). In: Sovet. Bibliotekoved. (1979) No. 5, p. 42–54, 19 refs.

5797 Volkova, U. N.: **The activities of ISO and other international bodies to standardise terminology in librarianship, information and documentation.** (In Russian). In: Probl. uporjadočenija i standartiz. terminologii bibliotekoved. i smježn. nauk. Moskva 1979. p. 65–71 Report on the activities of ISO/TC46 SC3 and ISO/TC 37 WGI. The Russian version of the "Dictionary of Information and Documentation" is foreseen.

5798 Rovette, L.: **Begriffliche Festlegungen über Datenstrukturen und Speicherorganisationen.** (Conceptual determinations on data structures and storage organisation.) (In German). In: Angew. Informatik 21 (1979) No. 9, p. 391–400 Report on results of a DIN committee on a partial area of data processing.

5799 Schuck, H.-J.: **Terminologische Normung in der Datenverarbeitung.** (Terminological standardization in data processing.) (In German). In: Sprachmittler (1979) No. 4, p. 87–99

Account of the activities of the German Standardization Institute concerning terminology standardization in general and in the field of data processing in particular with a critical appraisal of the correlation of national versus international efforts in this field.

8 Applied Classing and Indexing

81 General Problems and Indexing Rules

See also 5553, 5567, 5569, 5570, 5574

5800 Anderson, J. D.: **Structure in database indexing.** In: Indexer 12 (1980) No. 1, p. 3–13, 4 figs., 3 refs. Structure in database indexing provides the capacity for flexible organization in printed indexes and focused access in on-line searching. As part of its Bibliography Revision Project, the Modern Language Association's Revision Team has designed prototype indexing systems incorporating varying levels of structure. The highly structured CIFT system (Contextual Indexing and Faceted Taxonomic Access System) permits the production of both classified arrays based on various taxonomies and alphabetic indexes with contextual modifiers in which the order of index elements can be matched to particular needs. Similar flexibility is provided for on-line searching. Searches can be focused on one or a number of categories or classes of terms. CIFT prototypes are contrasted with the less structured indexing system currently used for the MLA International Bibliography and even less structured keyword indexing approaches. The work described here is still in progress. (Author)

5801 Hoey, P. O. N.: **Guidelines to setting up an expertise index**. London: The British Library 1978. 37 p. (Report 5519)

The guidelines are divided into two main sections: one dealing with the pros and cons for expertise indexes and the other examining in detail the mechanics of setting one up.

82 Data Indexing

5802 Ageeva, L. N., Sevjakova, L. A.: **Methods of defining and coding of organic chemistry word classes aiming at the retrieval in structure files**. (In Russian). In: Naučno-techn. inform. Ser. 2 (1980) No. 4, p. 17–22, 4 refs.

Description of the use of a three-letter structure term for the retrieval in organic chemistry structure files on the basis of the example of the automated IRS "Chiminform".

5803 Arens, I. F.: **A formalism for the classification and design of organic reactions. I: The class of $(-+)_n$ reactions**. In: Rec. Trav. chim., Nederland 98 (1979) No. 4, p. 155–161, 45 refs.

5804 Hummel, K.: **Zur Materialkatalogisierung in der Bundesverwaltung der Bundesrepublik Deutschland – Beispiel Bundeswehr**. (Material cataloguing at the Federal Administration of the Fed. Rep. of Germany – example Armed Forces) (In German). In: Forum Ware 8 (1980) No. 1, p. 13–18

Survey on the procedures of the "Einheitliche Materialkatalogisierung" (Uniform Material Cataloguing) of the Federal Administration of the F.R.G. within the defense area. Outline of the structure and contents of the data files kept by this agency. Overview on the occurrence of cataloguing data in specialized information systems of the Federal Armed Forces.

(Author, abbr.)

5805 Mutuhiko, M.: **Personalia indexes**. (In Japanese) In: Dokumentesyon kenkyu 29 (1979) No. 1, p. 29–34

Description of Japanese personalia indexes and consideration of characteristic features of these and ways of retrieval. Review of different Japanese indexes, including firm indexes.

5806 Panne, I. Ja., Archangel'skaja, N. V.: **Index of structural components of chemical compounds for an abstract journal in chemistry**. (In Russian). In: Naučno-techn. inform. Ser. 2 (1979) No. 5, p. 19–22, 5 refs.

Describes a permuted index of structural components of organic compounds developed for an abstract journal in chemistry and serving to retrieve compounds that contain definite cyclic systems, characteristic groups, chemical elements and multiple carbon-carbon bonds in open chains. The index is oriented towards computerised preparation.

(Orig. abstr.)

5807 Willet, P.: **Computer techniques for the indexing of chemical reaction information**. In: J. Chem. Inf. Comp. Sci. 19 (1979) No. 3, p. 156–158, 24 refs.

Two methods of automatic analysis of chemical reactions are compared. The connection table approach involves analysis at the individual atom and bond level, and WLN analysis is useful for reactions involving ring changes and for the production of printed indexes.

(Acc. orig. abstr.)

83 Indexing of and by Titles, Phrases

See also 5636

5808 Craven, T. C.: **Microcomputer-generated graphic displays as an aid in string indexing**. In: J. Amer. Soc. Inform. Sci. 31 (1980) No. 1, p. 123–124, 2 figs., 6 refs. Error rates in indexing using string index languages such as NEPHIS might be reduced at relatively low cost by having the indexer enter strings via a microcomputer system which could provide simple validation, and feedback in the form of graphic displays of concept links.

(Author)

5809 Craven, T. C.: **Simulation of visually displayed indexes**. In: Intern. Classificat. 7 (1980) No. 1, p. 21–24, 15 refs.

Potential applications of simulated visually displayed indexes

include training of indexers and testing, evaluation, and selection of indexing systems; control of index simulator parameters could be valuable in experimental observation of index use; index simulators might aid on-line users in selecting browsing display formats. Simulation has certain advantages over the use of real indexes for these purposes. – A pilot NEPHIS index simulator, written in PET BASIC, generates "pseudostrings" (hypothetical subject descriptions) from a user-supplied input string and permutes and sorts the pseudostrings to produce a simulated index, or "pseudoindex". More sophisticated systems for the extrapolation of subject descriptions might be developed in future.

(Author)

5810 Fanter, D., Schreiber, H., Teichgräber, M.: **Permutiertes Deskriptorenregister mit KRS 4200**. (Permuted descriptor list using the KRS 4200). (In German). In: Informatik 26 (1979) No. 2, p. 29–31, 5 refs.

Description of the program for automatic generation of permuted descriptor lists at the Institute of Polymer Chemistry, Academy of Sciences of the GDR using a microcomputer.

5811 Scardellato, K. A. D.: **Articulated subject indexing and current awareness services: a comparison with KWOC and PRECIS indexing in library studies**. (MLS Dissertation). Loughborough: Loughborough University of Technology 1979. 86 p., refs.

Description of the methodology of producing on a mini computer a printed articulated subject index of a collection of 150–200 documents. Includes performance test results.

5812 Soerensen, J.: **PRECIS as a search system**. (In Danish). In: Bogens Verden 61 (1979) No. 7, p. 325–342, 11 refs.

Description of the PRECIS on-line searching in connection with the MERLIN programs and off-line search tests carried out in Australia, Britain and Denmark.

5813 Schek, H.-J.: **The reference string indexing method**. In: Lect. Notes. Comp. Sci. (1978) No. 65, p. 432–459

The motivation for the reference string indexing method may be derived from the intention to retrieve any piece of information by specifying arbitrary parts of it. It may be applied as a new adapted index in information retrieval systems as well as in formatted files as a single or multi-attribute index. In addition it can be applied to phonetic and general record similarity search.

(Author, abbr.)

5814 Takamatsu, S., Fujita, Y., Nishida, F.: **Normalization of titles and their retrieval**. In: Inform. Proc. & Management 16 (1980) No. 3, p. 155–167, 4 tabs., 1 figure, 11 refs.

This paper presents a method of normalizations of English titles and their retrieval. The title expressed by a noun phrase or a noun clause is converted to a function-expression by parsing. For the retrieval with a reasonable recall rate as well as a high precision rate, the function-expression is transformed to a predicate-governor form, and then normalized to a standard form. Therefrom, various items are extracted and recorded in a hierarchical tree-like inverted file. In order to keep the recall rate in a reasonable value, several retrieval stages are implemented based on the key-term and case-label matching. The retrieval is controlled by the preciseness of the specification of case-labels for each key-term.

(Author)

85 Book Indexing

See also 5672

5815 Inoue, H.: **Book indexing as a tool for reading – report of an indexing experiment on 'Butsuzo-kokoro to katachi' as a text**. (In Japanese). In: Libr. Inform. Sci. (1978) No. 16, p. 197–215, 3 refs.

Description of an indexing experiment of the book "Buddhist Statues: Mind and Form" by Mochizuki, Sawa and Umebara which had the aim to recognize how much indexing supported the understanding of the text. It is suggested to standardize the book indexing techniques.

5816 Miller, B.: **Indexes of children's books in Australia: a second look**. In: The Indexer 12 (1980) No. 1, p. 29–33

Strong criticisms regarding form and contents or complete lack of indexes to children's books. Children "have a right to expect that the indexes they consult should be accurate, comprehensive and simple".

88 Indexing of Primary Literatur and Documents

See also 5551

5817 Antonova, M. V., Filippova, G. G.: **Abstract index to inventor's certificates and patents.** (In Russian). In: Naučno-techn. inform. Ser. I (1979) No. 4, p. 29
A review of the index to the inventor's certificates and patents issued to workers of the Leningrad Research Institute of Haematology and Blood Transfusion in 1950–77. The merits of the tool are indicated: a good classification of the material, clear and full abstracts of patent specifications, the availability of a numerical index, an alphabetical index of applicants' names, and an index of inventors' names. (Orig. abstr.)

5818 Belen'kaja, M. V., Baskina, I. A., L'vov, N. P.: **Compiling an index to the literature of nitrogen fixation biochemistry.** (In Russian). In: Sov. bibliogr. (1979) No. 4, p. 22–27

Description of the experience to develop rapid bibliographic information in one biological problem area. Its information lag is 2.5–3 months only.

5819 Burger, R. H.: **General retrospective indexes to pre-revolutionary Russian periodicals: a brief historical survey.** In: Libri 29 (1979) p. 144–157

5820 Dufour, G., Perrin, R.: **Thesindex dentaire: index alphabétique des sujets traités dans les thèses de sciences odontologiques et de chirurgie dentaire soutenues en France et dans certains pays de langue française, 1977–1978.** (Alphabetical index to the subjects treated in theses of odontological sciences and dental surgery in France and in certain French-speaking countries) (In French). Clermont-Ferrand: Bibliothèque Interuniversitaire (Sect. méd.-pharmacie-odontologie) 1979. IX, 137p.

5821 Henry, A.: **Hawaiian/Pacific indexing.** In: Hawaii Libr. Assoc. J. 35 (1978) p. 25–34

5822 Kronick, D. A.: **Indexing of early scientific periodicals in the index catalogue.** In: Serials Librarian 4 (1979) p. 49–59

5823 McMullin, B. J.: **Indexing the periodical literature of Anglo-American bibliography.** In: Bibliographical Society of the University of Virginia. Studies in Bibliography, Vol. 33. Univ. Press of Virginia 1980. p. 1–17

89 Indexing of pictures, maps, etc.

5824 Vartanova, M. G.: **Peculiarities of subject catalogues in art libraries and their unification possibilities.** (In Russian). In: Sostojanie predmet. katalogov v bibliotekach SSSR. Leningrad 1978. p. 63–87

The variety of methods used by art libraries and divergences between their indexing methods and the ones of the All-Union Book Chamber are shown.

5825 Miller, R.: **KWOC index for maps.** In: Western Assoc. of Map Libr. Inform. Bull. (1978) No. 10, p. 34–39

9 Classification "Milieu" (Org.& Econ.)

92 Persons and Institutions in Classification

See also 5693, 5788

5826 Beriman, S. G.: **Homage to Bernard I. Palmer. (Obituary).** In: Herald Libr. Sci. 18 (1979) No. 4, p. 362–364.

Contacts with Ranganathan and India – Architect of Library Science Education in Britain – Recognition and awards.

5827 Stridsberg, A.: **Einar Öhman** In: DK-Mitt. 24 (1980) No. 3, p. 7

Obituary in honor of the earthly life of the Swede Einar Öhman who has contributed so much to the UDC and who was the director of the FID Classification Department from 1961–66.

5828 Prizment, E. L.: **The All-Union Book Chamber subject catalogue and centralised indexing of books.** (In Russian). In: Sostojanie predmet. katalogov v bibliotekach SSSR. Leningrad 1978. p. 26–34
Description of the All-Union Book Chamber subject catalogue which contains more than one million cards.

5829 Smirnov, J., Lejchik, V. M.: **Soviet centers of scientific and technical terminology.** In: Babel 25 (1979) No. 1, p. 15–18, 10 refs.

Scope and structure of the following institutions are described: Committee for Scientific and Technical Terminology; All-Union Research Institute of Technical Information, Classification and Coding; Central Research Institute of Patent Information and Technical and Economic Investigation.

93 Organisation of Class. on the National and Intern. Level

See also 5541, 5828, 5845–6

5830 Kelm, B., Maassen, B.: **Zentrale Dienstleistungen der Deutschen Bibliothek im Bereich der Sacherschließung.** (The central services of the Deutsche Bibliothek in the area of subject indexing) (In German). In: Z. f. Bibliothekswes. u. Bibliogr. 27 (1980) No. 1, p. 39–46
Principles, tools and solutions of the Deutsche Bibliothek (German Library) for subject indexing are presented, namely the newly published indexing rules, the synthesis of indexing and classification, the combination of controlled and free indexing, the subject-headings reference pool and the subject-headings pool.

5831 Kofnovec, L.: **Information retrieval languages in the Czechoslovak STI system.** (In Czech). In: Čs. inform. 21 (1979) No. 6, p. 161–164, 14 refs.

Characterization of the development of IR languages used in the Czechoslovak STI system and endeavours to coordination and regulation of this development.

5833 Martynova, I. N., Zorina, E. P.: **Use of the centralized subject indexing performed by the Library of the Social Sciences Academy, Central Committee of the CPSU: analysis of subject indexing convergence.** (In Russian). In: Sostojanie predmet. katalogov v bibliotekach SSSR. Leningrad 1978. p. 53–62

5834 Parijskij, V. L.: **The state of the art in subject cataloguing in the USSR libraries: towards research into the problem.** (In Russian). In: Sostojanie predmet. katalogov v bibliotekach SSSR. Leningrad 1978. p. 10–25
Recommendations after two stages of investigations (1969–1970 and 1974–1975) were formulated as follows: (1) to solve the typification problem, (2) to study the peculiarities of subject headings in connection with the problem of duplication, (3) to use wider reference aids in subject catalogue, (4) to raise the quality of centralized subject indexing and to cover more libraries using the All-Union Book Chamber subject headings, and (5) to coordinate the library efforts in developing theoretical, methodological and organisational problems of subject indexing and subject catalogues.

5835 Skolek, J.: **The collection of retrieval languages of the International System for STI (MSNTI) – 3.** (In Czech). In: Československa Informatika 21 (1979) No. 5, p. 136–141, 9 refs.

A team of experts has evaluated documents and projects necessary for the creation of an automated centralized service which would deal with the management and maintenance of the whole set of retrieval languages used by the MSNTI. The "Concept of the Construction of the MSNTI Macrothesaurus" has been prepared. (From orig. abstr.)

95 Education and Training in Classification and Indexing

See also 5783, 5809

5836 Fröschner, G.: **Die Vermittlung von Kenntnissen, Fähigkeiten und Fertigkeiten auf dem Gebiet der Sachkatalogisierung für Direktstudenten. Einige einführende Bemerkungen zur Darbietung der Sachkatalogisierung im Unterricht.** (The mediation of knowledge, capabilities and skills in the field of subject cataloguing for students) (In German). In: *Zbl. Bibl.wes.* 93 (1979) No. 6, p. 409–414, 2 refs.

Summarizes the educational aims in the fields of library classification and subject cataloguing of a university course in the German Democratic Republic.

5837 Gavryck, J. A.: **Teaching concept identification through the use of the thesaurus of ERIC descriptors.** In: *Online* 4 (1980) No. 1, p. 31–34, 5 refs.

5838 Wilkinson, E. H.: **The use of a university library's subject catalogue.** North Ryde, Australia: Macquarie University Library 1977.

Result of a research project intended to develop and evaluate methods of teaching students how to use a subject catalogue.

97 Economic Aspects in Classification and Indexing

5839 Balent, M. Z., Lotz, J. W.: **Polymers and patents don't mix easily.** In: *J. Chem. Inform. Comp. Sci.* 19 (1979) No. 2, p. 80–83, 4 refs.

Polymer references in the patent literature pose a unique challenge to the indexing-retrieval process. A polymer indexing/retrieval system designed to meet the challenge and including an optimizing combination of generic, specific and monomer/role indexing techniques to produce a favorable indexing cost/search cost relationship is discussed. (Author, abbr.)

5840 Rettig, J.: **Costly to index local paper?** (Letter in reply to S.S.Cherry.) In: *Amer. Libr.* 11 (1980) p. 86

98 User Studies

See also 5550, 5697–8, 5837

5841 Clever, E. C.: **Using indexes as memory assists.** In: *Coll. & Res. Libr.* 40 (1979) p. 444–449

5842 Garrow, C.: **A survey of Australian Indexing: some observations.** In: *Indexer* 12 (1980) No. 1, p. 22–25, 1 tabl., 4 append., 8 refs.

Recently the Australian Society of Indexers decided to attempt to determine the state of the art of indexing in Australia. Table 1 summarizes the results of the survey. Briefly some 162 libraries and three individuals replied. Of these 92 bodies indicated that they were involved in operating 132 indexing services. The returns indicated that the subjects being indexed cover almost all the major classes of the Dewey Classification. However, indexing in the scientific and technological fields appears to dominate the Australian scene as measured by the survey, with more than 50% of the indexes falling into these areas. Historical, newspaper,

social welfare, education, economics, business and criminology all were well supported. (Author)

5843 Kohl, D. F.: **Examining the Library of Congress Subject Catalog.** In: *Libr. Resources & Techn. Serv.* 23 (1979) No. 1, p. 69–74, 2 refs.

The developing role of automation in the Library of Congress necessitated the estimation of its book catalogue publishing programme. With the possibility of substantial changes in sight, the Catalogue Use Committee of the Reference and Adult Services Division of the American Library Association (RASD), in conjunction with the library, undertook a survey of the LC Subject Catalogue. The A questionnaire was sent to survey a group of 84 libraries – 64 domestic and 20 foreign. The survey was to determine how purchasing libraries used the catalogue and what changes in format, content, and cost would be most desirable. Among the findings the survey has revealed that the catalogue is used primarily by technical service personnel, that the non-English listings are substantially more important to users than the listings requiring special subject headings, and that there is considerable opposition to a microfilm version of the catalogue. (Orig. abstr.)

5844 Kumar, K., Vyas, S. D.: **Classification practice in Delhi University College Libraries.** In: *J. Libr. Inform. Sci., India* 4 (1979) No. 1, p. 41–76, 21 tabls., Appendix 2, p. 72–76: Questionnaire classification practice in Delhi University College Libraries.

The study is based on information collected through a questionnaire circulated among 66 librarians of colleges (out of whom 65 responded) during October 1976 to October 1977. Enumerates the various schemes of classification adopted by college libraries. Describes modifications carried out in the schemes. Discusses the problems faced in classifying the documents. Enumerates the subjects which are in urgent need of revision in *Colon classification*, *Dewey decimal classification* and *Universal decimal classification*. Describes the extent of satisfaction achieved on the part of college librarians regarding schemes of classification being used by them. Discusses the future of *Colon classification* and *Dewey decimal classification* schemes in India.

99 Standardization in Classification

See also 5789, 5797–9, 5814

5845 Kravčenko, N. D.: **Problems of coordinate indexing unification in the network of automated STI centres.** (In Russian). In: *Tez. dokl. 9-go Nauč. Seminara po sistem. issled. GASNTI. Č. 2. Moskva 1979.* p. 132–135 The most important problems are those of vocabulary control including the rules of recording word-combinations, and the problems of singling out the necessary and sufficient set of grammatical means.

5846 Volgar', L. G.: **The typification method and its application in subject cataloguing in Soviet libraries.** (In Russian). In: *Sostojanie predmet. katalogov v bibliotekach SSSR. Leningrad 1978.* p. 99–112

The typification of subject catalogues means the introduction of uniform catalogue elements and links between them, viz. typified subject heading complexes arranged according to typified schemes.