

Classification, Language, and Concept Representation

IMIA WG 6

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<http://www.cmt.org/WG6>

1. Introduction

Formed in 1981 by the IMIA General Assembly, WG 6 was charged: (1) to review health data nomenclature and classification needs for the world community; (2) to evaluate information processing technology in meeting these defined needs; (3) to recommend methods for future classification and nomenclature systems. Dr. Roger A. Cote, the primary author of SNOMED, was founder and first chair.

Natural language processing and medical concept representation were added to the working group's domain under the leadership of Professor Jean-Raoul Scherrer. These traditions are continued under the present chair, as affirmed by the last working meeting in Vancouver. WG 6 presently focuses upon being a forum for the international discussion of: (1) health care classification systems; (2) language and terminology issues; (3) concept representation models; and (4) the cognitive issues surrounding the navigation, presentation, and selection of terminology elements in the course of patient care.

The forum seeks to draw together the works ongoing by its member countries and regions, and to identify the commonalities and differences within them. The overall goal is to serve as a catalyst toward the cooperative evolution to common and similar representations within the biomedical information processing community.

2. Past International Working Conferences

1. Ottawa, Canada - September, 1984
2. Geneva, Switzerland - September, 1988
3. Vevey, Switzerland - May, 1994

Members of the working group have published important summaries of these conferences, cited below. These works represent state of the art descriptions about methods, techniques, developments, and evaluations of classifications, medical concepts, language, and cognitive challenges.

Planning sessions of working group committees have met more frequently, notably at the 1993 SCAMC, 1995 MedInfo, and will gather at the 1996 TEPR.

3. Next International Working Conference/Plans

Arrangements have been finalized for a working meeting of the committee during January 19-22, 1997, at the Ponte Vedra Inn and Club, Jacksonville, FL (in proximity to Mayo Clinic, Jacksonville). The planning committee members include:

Christopher G. Chute (USA)	Chair
Robert Baud (Switzerland)	Natural Language
James Cimino (USA)	Classifications
Vimla Patel (Canada)	Cognitive Psychology
Alan Rector (UK)	Concept Models

Meeting details, agenda, registration, and follow-up publications will be variously available on:

<http://www.cmt.org/WG6/conf>

or from the conference Secretariat:

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Additionally, a closed mailing list for working group members has been established:

imia-wg6@mayo.edu

4. Proceedings and Publications (IMIA WG6)

Cote RA, Protti DJ, Scherrer J-R, eds. *The Role of Informatics in Health Data Coding and Classification Systems*. Amsterdam: Elsevier Science Publications, 1985.

Scherrer J-R, Cote RA, Mandil SH, eds. *Computerized Natural Medical Language Processing for Knowledge Representation*. Elsevier Science Publications, 1989.

McCray AT, Safran C, Chute C, Scherrer J-R, eds. *Natural Language and Medical Concept Representation*. *Methods of Information in Medicine* 1995 (Special Issue).

5. Relationships With Other Working Groups

During the first meeting of Working Group 14 (Clinical Workstations) in Washington during June of 1993, the natural relationship between Working Group 6 and the Clinical Workstation challenge was commonly assented. Since that time, the chairs have kept in careful contact, and there is some cross membership.

The creation of a new working group on clinical information standards, chaired by Georg De Moor, will also provide a strong, natural liaison with the final products of Working Group 6.

The interest of the Primary Care Working (WG5) on the problems of clinical classification in primary care, also provide a natural association for working group challenges.

Finally, the Nursing Informatics Working Group (WG8) can make important contributions in this area of concept representation.

6. List of Members

A current list of membership is available from the WG6 web site:

<http://www.cmt.org/WG6>

Language Concept Representation & Classification

CODING AND CLASSIFICATION OF HEALTH DATA (IMIA WG 6)

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(Update: July 1996)

1. Introduction

Formed in 1981 by the IMIA General Assembly, IMIA WG 6 was charged:

- 1) To review health data nomenclature and classification needs for the world community.
- 2) To evaluate information processing technology in meeting these defined needs.
- 3) To recommend methods for future classification and nomenclature systems.

Roger A. Côté, the primary author of SNOMED, was the founder and first Chair.

Natural language processing and medical concept representation were added to the Working Group's domain under the leadership of past IMIA WG 6 chair, Jean-Raoul Scherrer. These traditions are continued under the present chair. The Working Group presently focuses upon being a forum for the international discussion of:

- i) healthcare classification systems;
- ii) language and terminology issues;
- iii) concept representation models;
- iv) the cognitive issues surrounding the navigation, presentation and selection of terminology elements, in the course of patient care.

The forum seeks to draw together the works ongoing by its member countries and regions, and to identify the commonalities and differences within them. The overall goal is to serve as a catalyst towards the cooperative evolution

to common and similar representations within the biomedical information processing community.

Chairmanship of IMIA WG 6 was officially handed over by Jean-Raoul Scherrer to Christopher Chute during the IMIA Board and AGM at MEDINFO 95.

2. Past International Working Conferences
1. Ottawa, Canada - September 1984
2. Geneva, Switzerland - September 1988
3. Mount Pelerin/Vevey, Switzerland - May 1994

Several members of WG 6 met at SCAMC 93 in Washington in November 93 primarily to set up the next working conference which took place in May 1994.

As a follow up to the previous conferences organised by IMIA WG 6 in Ottawa and Geneva, this third international working conference, entitled Natural Language and Medical Concept Representation, took place at the Hotel Mirador, Mont Pelerin/Vevey on Lake Geneva, Switzerland in May 1994.

Since 1988, emerging computer based medical records have become of paramount importance and, hence, require more automatic encoding tools and facilities towards medical knowledge representation for the processing of medical natural language for patient records.

The WG 6 working conference in 1994 sought to evaluate the current status and future direction of the following:

- the identification and description of the various approaches to automatic encoding and natural language processing in medicine;
- the assessment of the role, the state-of-the-art and the future trends of natural language interfaces in healthcare information systems;
- the descriptions and comparisons between concept structure and concept models in various patient information systems servicing different health areas: tumour and other disease registers, regional medical information, ambulatory care and hospital information systems;
- the assessment of the impact of natural language encoding tools on the quality of medical scientific

documentation databases and on the user's input/output on these.

Members of the Working Group have published important summaries of these conference, cited below. These works represent state-of-the-art descriptions about methods, techniques, developments and evaluations of classifications, medical concepts, language and cognitive challenges. Planning sessions of Working Group Committees have met more frequently, notably at the 1993 SCAMC, MEDINFO 95 and will gather at TEPR in 1996.

A Proceedings of the WG 6 1994 working conference were published in *Methods of Information in Medicine* in the form of a Special Issue in early 1995.

3. Next International Working Conference/Activities

Arrangements have been finalised for a working meeting of the committee during January 19-22, 1997 at the Ponte Vedra Inn and Club, Jacksonville, Florida (in proximity to Mayo Clinic, Jacksonville).

Meeting details, agenda, registration and follow-up publications will be available on:

<http://www.mayo.edu/research/papers/chute/imia.wg6>. A closed mailing list for Working Group members has been established on: imia-wg6@mayo.edu.

4. Proceedings and Publication (IMIA WG 6)

Côté RA, Protti DJ, Scherrer J-R, eds. *The Role of Informatics in Health Data Coding and Classification Systems*. Amsterdam: Elsevier Science Publishers, 1985.

Scherrer J-R, Côté RA, Mandil SH, eds. *Computerised Natural Medical Language Processing for Knowledge Representation*. Elsevier Science Publishers, 1989.

McCray AT, Safran C, Chute C, Scherrer J-R, eds. *Natural Language and Medical Concept Representation*. *Meth Inform Med* Jan. 1995

5. Other involvements and relationships

During the first meeting of IMIA WG 14 (Health Professional Work Stations) in Washington during June 1993, the natural relationship between the IMIA WG 6 and WG 14 challenge was

commonly assented. Since that time, the chairs have kept in careful contact and there is some cross membership.

The creation of the new IMIA WG 16, Standards in Healthcare Informatics, chaired by Georges de Moor, will also provide a strong, natural liaison with the final products of WG 6.

The interest of IMIA WG 5, Primary Health Care Informatics, on the problems of clinical classification in primary care, also provide a natural association for Working Group challenges.

The new IMIA Special Interest Group - SIG N1 on Nursing Informatics can make important contributions in this area of concept representation.

There are also relationships with "Artificial Intelligence in Medicine in Europe", as well as with some of IFIP TC's.

6. List of Members

Can be obtained directly from WG 6 Chair.
