

News and Notes

1. Knowledge acquisition for knowledge-based systems workshop

Location and date: Banff, Canada, 3–7 November, 1986.

The bottleneck in the process of building knowledge-based systems is usually acquiring the appropriate problem-solving knowledge. The objective of this workshop is to assemble theoreticians and practitioners of AI who recognize the need for developing systems that assist the knowledge acquisition process.

To encourage vigorous interaction and exchange of ideas, the workshop will be kept small — about 30 participants. There will be individual presentations and ample time for technical discussions. An attempt will be made to define the state-of-the-art and future research needs.

Papers will focus on all aspects of knowledge acquisition for knowledge-based systems including (but not restricted to):

- Transfer of expertise — systems that interview experts to obtain and structure knowledge.
- Transfer of expertise — manual knowledge engineering interviewing methods and techniques.
- Induction of knowledge from examples.
- Knowledge acquisition methodology.

Co-chairmen: John Boose, Boeing Artificial Intelligence Center, Boeing Computer Services, M/S 7A-03, PO Box 24346, Seattle, Washington, 98124, USA; and Brian Gaines, Department of Computer Science, University of Calgary, 2500 University Drive NW, Calgary, Alberta T2N 1N4, Canada.

Program and local arrangements committee: Jeff Bradshaw (Boeing Computer Services), William Clancey (Stanford University), Cathy Kitto (Boeing Computer Services), Janusz Kowalik (Boeing Computer Services), John McDermott (Carnegie-Mellon University), Ryszard Michalski (University of Illinois), Art Nagai (Boeing Computer Services), and Mildred Shaw (University of Calgary).

2. Knowledge acquisition and machine learning within COST-13

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COST-13 is a European research project on artificial intelligence and pattern recognition. Bernard Meltzer will take charge of the scientific coordination of the whole COST-13 project in mid-1986. The project unites EEC countries and some other Europeans who agree to pay their share of the expenses. It is not intended to develop European research but rather to increase European collaboration among already existing research teams. This is why its funds — which are mostly restricted to travel expenses and are not huge — can bring about significant changes in European research.

The project on knowledge acquisition and machine learning, which is a subpart of COST-13, should receive a total amount of 300,000 ecu (an 'ecu' is now a bit less than a US dollar) over two years. Since it is required that this be spent on travel expenses among the researchers, its impact on research cooperation should be significant. Special funds from COST-13 (15,000 ecu) were also used to sponsor the first European Working Session on Learning (EWSL-86), which took place in Orsay, France, in February 1986 (see below).

The members of the project on knowledge acquisition and machine learning are:

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2. Department of Artificial Intelligence, University of Edinburgh, 80 South Bridge, Edinburgh, EH1 1HN, Scotland. Contact person: Alan Bundy.
3. Projekt KIT, Technische Universität Berlin, Franklinstrasse 28/29, 1000 Berlin 10, RFA. Contact person: Hans-J. Schneider.
4. Jozef Stefan Institute, Jamova 39, 61000 Ljubljana, Yugoslavia. Contact person: Nada Lavrac. Project manager: Ivan Bratko.
5. Austrian Research Institute for Artificial Intelligence, Schottengasse 3, A-1010 Vienna, Austria. Contact person: Robert Trappl.
6. SYSLAB, Department of Information Processing, University of Stockholm, S-10691 Stockholm, Sweden. Contact person: Carl-Gustaf Jansson.
7. University of Porto, Faculdade de Economia Rua, Dr. R. Frias, 4200 Porto, Portugal. Contact person: Pavel Brazdil.
8. University of Coimbra, Department de Engenharia Electrotecnica, Largo Marques de Pampal, 3000 Coimbra, Portugal. Contact person: Ernesto Costa.
9. Brunel University, Department of Electrical Engineering and Electronics, Uxbridge UB8 3PH, England. Contact person: Robert C. Holte.
10. University Brussels, AI Laboratory, Pleinlaan 2, Building K2, 1050

Brussels, Belgium. Contact person: Walter Van de Velde.

11. The Turing Institute, George House, 36 North Hanover Street, Glasgow, Scotland. Contact person: Judith M. Richards. Project manager: Donald Michie.

The project coordinator is Yves Kodratoff.

The principal activities of the project are:

1. Organization of the next EWSL.

Yugoslavia will organize the next EWSL meeting. The local chair will be Nada Lavrac. The program chair will be Ivan Bratko. It will last three days and be held in May 1987. Deadline for paper submission is 1 February 1987. Three copies of a full paper should be sent to Ivan Bratko. The next COST-13 meeting on Knowledge Acquisition and Machine Learning will be held at this EWSL meeting.

2. European summer school on machine learning.

It is proposed to create a summer school. It seems that the Turing Institute is the best candidate to organize such a school. J. Richards will submit this proposal to the Turing Institute and come back with a proposal.

3. Cooperation with other COST-13 projects.

Walter van de Velde has been put in charge of a special COST-13 subgroup interested in modal logics. It will work with the learning and knowledge acquisition group.

4. Links with ESPRIT-AIP.

Marco Valtorta (from ESPRIT-AIP) and Clive Smallman (from GEC Research Laboratories) presented the ESPRIT project INSTIL, whose topic is an application of machine learning. INSTIL is an application-oriented project that attempts to cope with noisy data by merging numerical and symbolic approaches to automatic rule generation. The learning system will be tested against a real-world problem: European plant pathology.

5. Cooperation within the knowledge acquisition project.

(a) Software and database sharing.

Research groups within the project will develop short descriptions of their learning software and databases, and these will be shared (to the extent possible) among research groups in the project.

(b) Common effort at knowledge representation transparency.

A subgroup will attempt to understand the role of representation methods in machine learning.

(c) Unifying topic: customs rules.

After a great deal of discussion, we all felt that the problem of learning regulation rules, and more precisely customs rules, is both ambitious and of EEC interest. We should like to test our ideas against this problem using both similarity-based learning and explanation-based learning.

3. European working session on learning, 1986

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As part of an increased European effort to develop inductive machine learning, the first European Working Session on Learning (EWSL-86) took place in Orsay, France, 3–4 February 1986. Its goal was the presentation of the current state of the art of and main European projects in machine learning. More than 60 people were present, among them 50 nonlocal participants. It was followed by a meeting of the COST-13 project on machine learning described above. Participants were surprised at the unexpected richness of European research in machine learning, which is still very young, but rapidly blooming.

Twenty-three papers were presented, covering most of machine learning including theoretical foundations, methodological aspects, expert systems with learning abilities, several learning techniques, and links with human knowledge acquisition.

The next EWSL will take place in Yugoslavia in 1987. Program chairman: Ivan Bratko. Local chairperson: Nada Lavrac.

4. Fourth International Workshop on Machine Learning

The Fourth International Workshop on Machine Learning will be held at the University of California, Irvine during June 22–25, 1987. In order to maximize interaction at the workshop, attendance will be limited and participation will be through invitation only. If you are active in machine learning and if you are interested in receiving an invitation, you should submit a one-page summary of your recent work in the area. If you would like to present a paper at the meeting, include a title and extended abstract. You may supplement this information with recent papers on machine learning.

Invitations will be based on an informal review of the research summaries by the organizing committee. Based on their abstracts, some attendees will be invited to speak at the workshop and to contribute a paper to the workshop proceedings. Each participant will receive a copy of the proceedings. The organizing committee consists of: J.G. Carbonell (C-MU), R.H. Granger (UCI), D.F. Kibler (UCI), P. Langley (UCI), T.M. Mitchell (C-MU), and R.S. Michalski (Illinois).

The deadline for submission of research summaries is *February 1, 1987*. Please send summaries, along with abstracts and optional papers, to: *Pat Langley, Program in Computation and Learning, Department of Information & Computer Science, University of California, Irvine, CA 92717 USA*. Applicants will be informed of their status two weeks after submission.