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average 1 hour per response, including the time for reviewing instructions, searching existing data sources, the collection of information. Send comments regarding this burden estimate or any other aspect of this Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE May 1991	3. REPORT TYPE AND DATES COVERED Final Report	
4. TITLE AND SUBTITLE Artificial Intelligence Information Sources for the Beginner and Expert			5. FUNDING NUMBERS N/A	
6. AUTHOR(S) Mott Given			Accession For DTIC GRA&I DTIC TAB ☒ ☐ ☐	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Defense Logistics Agency DSAC-TMP Bldg. 27-1 P.O. Box 1605 Columbus, OH 43216-5002			DTIC COPY SPECIFIED 8 PERFORMING ORGANIZATION REPORT NUMBER N/A By Distribution/ Availability Codes	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A			10. SPONSORING/MONITORING AGENCY REPORT NUMBER and/or Dist Special A-1	
11. SUPPLEMENTARY NOTES To be published in "Artificial Intelligence Applications for Military Logistics" conference, Williamsburg, VA, 25-27 March 1991.				
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.			12b. DISTRIBUTION CODE	
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14. SUBJECT TERMS Artificial Intelligence Expert Systems Neural Networks			15. NUMBER OF PAGES 8	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL	

Artificial Intelligence Information Sources for the Beginner and Expert

Mott Given

Mott Given, Defense Logistics Agency, DSAC-TMP, P.O. Box 1605, Bldg. 27, Section 1, Columbus, OH 43216-5002
Electronic mail on INTERNET: mgiven@dsac.dia.mil UUCP: {...}.osu-cisidsac!mgiven

ABSTRACT

A tremendous amount of information on artificial intelligence is available via different journals and organizations. But the beginner in AI may not know about many of the sources, while the expert may have difficulty finding the exact information wanted in the shortest time. The best sources of information for answering particular categories of recurring questions will be discussed. This paper will list around 200 journals, serials, and newsletters, and discuss special features of some of them. Indexes, literature guides, and bibliographies to the AI literature will be presented. A variety of AI professional organizations will be listed which facilitate keeping track of new developments.

INTRODUCTION

When I began working in AI a few years ago, I had no idea where to look for information or what was available. The truth is there is a tremendous amount of information available -- I wish that I had known then what I know now about what is out there. I did not know what AI organizations existed, what journals were available, how the AI literature is indexed, etc. What I would have liked when I started out in AI is a roadmap to beginners for the world of AI. This is what this paper endeavors to do.

NOTE: The ideas expressed in this paper are solely mine and do not represent the official ideas or policies of my employer or any other government agency.

USENET

USENET is a network news service running under the UNIX operating system that has hundreds of special interest groups, including many related to artificial intelligence. Each newsgroup allows questions to be posted which can be seen and answered by anyone else in the world with access to USENET. The newsgroups are passed via electronic mail from computer to computer by sites that agree to participate in USENET. USENET is not a computer network in the sense that the INTERNET is. The USENET newsgroups are analogous to, although not exactly the same as, the conference or message sections of electronic bulletin boards.

USENET is an incredibly powerful tool. As it is carried throughout the world, it allows you to ask questions and have them seen by many experts in the area. Sometimes many people will answer and/or discuss a topic with widespread interest. Generally, USENET is best for posing very particular questions; general questions often get no response because nobody who knew the answer would want to spend the time writing a term paper answering a very broad question. USENET also allows discussions to take place by making it easy for people to post responses to a point made by someone else, using whatever software the person uses to read the newsgroups. The software removes worries about how to format an electronic reply to that person, by taking care of those details for you automatically. Anyway, your reply goes back to the whole newsgroup, not just that individual.

USENET also allows information to be more rapidly disseminated in a large organization. For example, we have a newsgroup called dia.ai that serves our organization's needs very well, as our organization has thousands of employees distributed throughout the world.

USENET is used for questions and answers, to announce upcoming conferences and calls for papers, to announce new books or magazines, or announce organizations that are forming. Generally research results are not posted to USENET as researchers do not get formal credit for their contributions here, as opposed to publishing a work in a journal or presenting results at a conference.

A list of USENET newsgroups related to AI is shown in Appendix A. Some of the newsgroups are only carried internally within a company or university. Some of the newsgroups are mailing lists which are distributed through a newsgroup, to reduce the amount of electronic mail traffic by sending only one copy of a mailing list to a site instead of many separate copies to individuals.

FREQUENT AI QUESTIONS

A number of questions occur on a frequent basis. These questions and the best sources of information will be discussed. One of the most frequent questions is "Where can I find out about a particular shell?". The best information sources are past issues of AI Expert or PC AI, or posting to the USENET newsgroups comp.ai and comp.ai.shells, or looking in InfoTrak. InfoTrak is a computerized index of hundreds of

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magazines that is distributed on CD-ROM and which is found in an increasing number of public libraries. InfoTrak does not index AI magazines like AI Expert or PC AI, but it indexes a number of other computer-related journals. InfoTrak often has long abstracts of articles which may contain the information you are looking for, eg. the price of an expert system shell.

If you are wondering what AI conferences are coming up in the next few months, the best sources are the RAID database or the calendar in IEEE Expert magazine.

If you are looking for public domain code to do a particular type of AI work, the best place to look is by posting a query to one of the USENET AI groups.

JOURNALS

AI Magazine has lengthy, very detailed articles that are indepth discussions of a topic, presented by some of the leading people in the field. The articles usually discuss research instead of how to actually build a useable application. The journal also includes news about AAAI (American Association for Artificial Intelligence), books received and book reviews, AI events calendar, new products, and workshop reports.

AI Expert is more oriented toward the person trying to build useable applications, instead of the AI researcher. Many of its articles have code showing how the techniques discussed were actually implemented. The programming code is available free of charge on a number of electronic bulletin boards which are listed in each issue on the page following the masthead. This is the only AI journal which offers this feature and is probably the magazine's most valuable feature. It is a good magazine for the beginner to AI, with many articles on practical aspects of developing applications such as knowledge engineering. Occasionally, it has excellent reviews comparing a particular type of AI tool, eg. PROLOG tools, rule-based expert system shells, etc. AI Expert primarily covers AI tools for personal computers, and does not cover those available for true workstations. In addition, it has coverage of trends and events in AI industry. It has an annual index in December issue.

Expert Systems: Planning/Implementation/Integration has an emphasis is on very practical how to articles for commercial applications. The articles are good, but the magazine is expensive for an individual subscription as it is \$98 for a quarterly.

IEEE Expert: Intelligent Systems and their Applications has many articles on AI applications, but its applications more often come from academia while those of AI Expert are more often from industry. The applications profiled in IEEE Expert are often more advanced in AI capabilities and the platforms they run on than those described in AI Expert. It has an annual subject index in the December issue.

Neural Network Review has articles, call for papers, recent books, proceedings, videotapes, new journals, and listings of recent papers. Its articles are very readable and do not overwhelm you with mathematical symbols as some of the journals in this field do.

PC AI: Intelligent Solutions for Desktop Computers is another good magazine for the AI beginner. Many of its articles have computer code showing how the techniques were implemented. It has many reviews of AI products, including the most coverage of any magazine of Macintosh AI tools.

SIGART Bulletin has feature articles, book reviews, upcoming events, calls for papers, bibliographies, and selected AI-related dissertations. The feature articles are rather technical and are above the beginner level.

An extensive list of artificial intelligence journals can be found in Appendix B.

ULRICH'S

To find the information necessary to order any of the previously mentioned journals, consult Ulrich's International Periodicals Directory, published annually by R. R. Bowker in New York. Ulrich's gives the subscription cost, publisher and their address, and tells which sources index the journal. Ulrich's is updated with quarterly supplements. If a serial is so new that you cannot find it in Ulrich's, then ask a librarian to search for it on an online cataloging system called OCLC.

AI ORGANIZATIONS

AAAI (American Association for Artificial Intelligence) is the major organization to join if you could just join one. It publishes AI Magazine every month, sponsors the National Conference on Artificial Intelligence annually (more commonly known as AAAI 91 or whatever the year is). AAAI membership also allows you to access Project Mercury, an online database of AI information. AAAI also sponsors the annual Innovative Applications of Artificial Intelligence conference, sponsors the annual Spring Symposium Series conference, and publishes an annual directory of its members which can be very handy in locating people.

ACM (Association for Computing Machinery) Special Interest Group on Artificial Intelligence has a

number of local chapters throughout the U.S. Some of the chapters concentrate on a particular interest, for example the Dayton SIGART chapter has many talks on neural networks. Some chapters, such as the Dayton SIGART, sponsor local AI conferences. Dayton SIGART sponsors the Annual Aerospace Applications of Artificial Intelligence Conference.

DPMA (Data Processing Management Association) has a Special Interest Group on Artificial Intelligence, which publishes a newsletter. For the amount of information one obtains from the newsletter, which is not many pages, this is a very expensive group to join.

IEEE (Institute of Electrical and Electronics Engineers) sponsors a number of artificial intelligence conferences, including the Conference on Artificial Intelligence Applications and the AI Systems in Government Conference. Membership in IEEE entitles one to a substantial discount on IEEE publications such as IEEE Expert. IEEE does not have any special interest groups concerned with the entire area of artificial intelligence, but it does have a group, the Robotics and Automation Society, which studies part of AI.

International Association of Knowledge Engineers (IAKE) sponsors an annual conference and is trying to turn knowledge engineering into a true profession. IAKE offers a course and an examination to certify people as a Systems-Oriented Knowledge Engineer or a Domain-Oriented Knowledge Engineer. Membership in IAKE entitles one to a bimonthly subscription to the newsletter Knowledgebase and a subscription to the magazine Heuristics.

An list of addresses for AI organizations is shown in Appendix C.

LITERATURE GUIDES AND ENCYCLOPEDIAS

A list of encyclopedias and literature guides to AI is shown below. One of the most useful books is the Encyclopedia of Artificial Intelligence, as a source of good overview articles which also have lists of further references. The Scientific Datalink Index to Artificial Intelligence, 1954-1984 has abstracts of technical reports from leading universities and research centers, along with a microfiche collection which has the full text of the actual reports. The International M-A-P Directory is a useful guide listing commercial companies, consulting firms, recruiting firms, research centers, professional and trade associations, and a calendar of events for the subjects such as machine vision and artificial intelligence.

Annotated bibliography on the foundations of AI. (In The foundations of artificial intelligence: a source-book, edited by Derek Partridge and Yorick Wilks, Cambridge, Univ. Press, 1990, pages 441-491, by Imre Balogh and Brian M. Slator.)

Applied Artificial Intelligence in Japan: Current Status, Key Research and Development Performers, Strategic Focus, by Bruce Rubinger, Hemisphere Publishing Corp., New York, 1988.

Artificial intelligence abstracts annual, New York, Bowker, edited by Glenn Schaefer and others.

Artificial intelligence and expert systems sourcebook, by V. Daniel Hunt, Chapman and Hall, 1986, New York.

Artificial intelligence : bibliographic summaries of the select literature, Report Store, Lawrence, Kansas, c1984-c1985, by Henry M. Ryko.

Artificial intelligence: index of modern information. Abbe Publishers Assn., Washington, D.C., 1988, by Dr. Kurt L. Reichert.

Artificial intelligence, 1986-1989; a select bibliography. (Public administration series, bibliography P-2848), by Lutishoor Salisbury, Vance Bibliographies, 1990.

Catalogue of artificial intelligence tools, edited by Allen Bundy, Springer-Verlag, 1984, New York, NY.

Computing information directory: a comprehensive guide to the computing literature. Federal Way, Washington, Pedaro, 1985, 557 pages, by Darlene Myers Hildebrandt.

Cumulative author, subject, and program indexes to Artificial intelligence, Report Store, Lawrence, Kan., 1985, by Henry M. Ryko.

Encyclopedia of artificial intelligence, edited by Stuart C. Shapiro, John Wiley and Sons, 1987, New York.

Expert systems and related topics: selected bibliography and guide to information sources, Idea Group Publishing, 1990, 156 pages, by Marlene A. Palmer

Expert systems: a bibliography. Institution of Electrical Engineers, London, 1983, by C. J. Bigger and J. W. Coupland.

Handbook of Artificial Intelligence, edited by Avron Barr, 1982-89, William Kaufmann Inc., Los Altos, CA.

International M-A-P Directory, edited by Len Munley, published semiannually by L. J. Munley & Associates, (6584 Bayberry St., Agoura, CA 91031).

MIT Catalog of Computer Science and Artificial Intelligence, Boston, G. K. Hall, 1988, 930 pages.

NeuralSource: the bibliographic guide to artificial neural networks. Van Nostrand Reinhold, 1990, 1014 pages, by Philip D. Wasserman and Roberta M. Oetzel.

Neuro-Computing Bibliography, 1989. Cambridge, Mass., MIT Press, 1989, 624 pages, by Casimir C. Klimasaukas

Robomatrix Reporter Annual, New York, R. R. Bowker, edited by Glenn Schaefer and others.

Scientific Datalink Index to Artificial Intelligence Research, 1954-1984, Scientific DataLink, 1985, New York, New York.

Sourcebook on Artificial Intelligence, Products and Vendors, Graeme Publishing Corp., 1986, Wilbraham, Massachusetts.

OTHER SOURCES

Project Mercury is a database of AI information accessible to members of AAAI, either online via the INTERNET computer network or via an electronic mail request. It can be searched by subject to locate pertinent journal articles or technical reports. For more information, send electronic mail to Kimberly Ginther-Webster at Carnegie Mellon University at the INTERNET address: kg18@andrew.cmu.edu or telephone 412-268-6107.

The RAID (Robotics and Artificial Intelligence Database) is a database of projects which is available to government employees or contractors. It can be used to identify other organizations doing similar projects, which can then share "lessons learned" to save time and money. The RAID database also has an AI conference calendar, occasional reports on AI conferences, and contact information on principal investigators of projects. For further information call Mike Dwyer at 619-553-5308.

Many mailing lists related to artificial intelligence are distributed on the INTERNET, such as:

AI applications to Human-Computer interface design	wiley!ai-chi@111-1cc.11n1.gov
AI in education	ai-ed@sumex-aim.stanford.edu
AI in medicine	aim-request@vuse.vanderbilt.edu
AI in United Kingdom	ikbsbb-request@informatics.rutherford.ac.uk
AI Vision research	vision-list@ads.com
Artificial Life	alife-mailing-list@iuvax.cs.indiana.edu
Cellular Automata	ca-think@com
CLUE	clue-review-request@dsg.csc.ti.com
Connectionism	connectionists@cs.cmu.edu
Concurrent logic programming	clp.x@xerox.com
COSMIC (technology transfer organization)	service@cosack.cosmic.uga.edu
Distributed artificial intelligence	dai-list@mcc.com
Expert Systems Environment users	ese-1@sbccvm.bitnet
Genetic algorithms	ga-list-request@aic.nrl.navy.mil
Japanese AI	fj-ai%et1.jp@relay.cs.net
Lambda Prolog	elp@cs.cmu.edu
Natural language	nl-kr@cs.rochester.edu
Navy Center for Applied Research in AI	symposia@aic.nrl.navy.mil
Neural nets	neuron%cs1.ti.com@relay.cs.net
Neural network benchmark mailing list	nn-bench-request@cs.cmu.edu
Nexpert users	nexpert-users-request@cam.edrc.cmu.edu
Rochester Connectionist Simulator users	simulator-users@cs.rochester.edu
SUNY/Stony Brook Prolog users	sbrplg-1@sbccvm.bitnet

CONCLUSION

A large amount of specialized AI information exists which the beginner in the field may not know about. This paper has surveyed online information sources (USENET, Project Mercury, RAID), journals, indexes and guides to the AI literature, and professional organizations. By being more aware of what is available, an organization can most effectively use its time and money.

There are many sources of online information besides those mentioned in this paper, but space does not allow going into them. For more information, the interested reader is directed to the paper "Advanced Methods of Online Searching for Artificial Intelligence Information" by Mott Given, to be published in the NAECON (National Aerospace and Electronics Conference) conference proceedings in May 1991.

Appendix A. USENET

USENET newsgroups related to AI:

alt.hypertext	Hypertext
aus.ai	Australian AI
can.ai	Canadian AI
comp.ai	AI in general
comp.ai.edu	AI for education
comp.ai.neural-nets	Neural nets
comp.ai.nlang-know-rep	Natural language representation
comp.ai.philosophy	AI and philosophy
comp.ai.shells	Shell software for AI
comp.cog-eng	Cognitive engineering
comp.lang.clos	CLOS
comp.lang.eiffel	Eiffel language
comp.lang.lisp	LISP
comp.lang.lisp.franz	Franz Lisp
comp.lang.lisp.x	X-Lisp
comp.lang.prolog	Prolog
comp.lang.scheme	Scheme (a dialect of LISP)
comp.lang.scheme.c	Scheme implemented in C language
comp.lang.smalltalk	Smalltalk
dla.ai	Defense Logistics Agency internal AI group
eunet.esprit	European Esprit project
fj.ai	Japanese AI
gnu.emacs.lisp.manual	LISP-related
gnu.smalltalk.bug	Smalltalk dialect from GNU
sci.logic	logic
uk.ikbs	United Kingdom AI

This shows how the USENET newsgroup comp.ai appears using the "vn" package to read it:

```

comp.ai (page 1 of 3):
7581) Re: NEXPERT: Its Use In Larger System Development - 21 (Paul Algran)
7583) Re: CLIPS - 51 killen@cimqt.marquette.Mi.
7584) AI reference sought. - 15 (Andy Horsfall)
7600) Nexpert version 2 - info please - 20 mpradhan@f.adelaide.edu.au
... more article titles ...

```

This is an example of an article posted to the newsgroup comp.ai:

```

From news Thu Jun 28 08:04:57 1990
Path: dsac.dla.militut.cis.ohio-state.edu!ukma!rex!samsung!cs.utexas.edu!helios!daughter
From: daughter@cs.tamu.edu (Dr. Walter C. Daugherty)
Newsgroups: comp.ai
Subject: Re: Parallel CLIPS
Summary: try parallel OPSS
Keywords: parallel CLIPS, OPSS
Message-ID: <61710helios.TAMU.EDU>
Date: 26 Jun 90 23:33:52 GMT
References: <Jun.26.14.38.31.1990.27649@paul.rutgers.edu>
Sender: usenet@helios.TAMU.EDU
Organization: Texas A&M University
Lines: 12

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In article <Jun.26.14.38.31.1990.27649@paul.rutgers.edu
> moskowitz@paul.rutgers.edu (Len Moskowitz) writes:
>We have the need for speed. Has anyone built a parallel version of
>CLIPS (NASA's production system language)?

```

CMU has a parallel version of OPSS, which uses the same Rete algorithm as CLIPS.

```

Walter C. Daugherty          Internet, NeXTmail: daughter@cs.tamu.edu
Knowledge Systems Research Center  uucp: uunet!cs.tamu.edu!daughter
Texas A & M University        BITNET: DAUGHER@TAMVENU
College Station, TX 77843-3112  CSNET: daughter@cs.tamu.edu@RELAY.CS.NET
---Not an official document of Texas A&M---

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Appendix B. Serial titles in AI.

Advanced Robotics
 AERA AI & ED SIG
 AFRI (Association Francaise de Robotique Industrielle)
 AI & Society: The Jour. of Human and Machine Intelligence
 AI Applications in Natural Resource Management
 AI Communications
 (AI EDAM) Artificial Intelligence for Engineering Design, Analysis and Manufacturing
 AI Expert
 AI Jour. (Japanese language)
 AI Magazine
 AI Spectrum
 AI Today
 AI Trends
 AIWeek (now ISR: Intelligent Systems Report)
 AIWeek Directory
 AISB quarterly.
 American Association for Artificial Intelligence. Membership directory
 American Association for Artificial Intelligence. Special Interest Group in Manufacturing. Newsletter.
 Annales Societatis Mathematicae Polonae. Series IV.
 Annual Review of Computer science.
 Applied Artificial Intelligence
 Applied Artificial Intelligence Reporter
 Applied Computer Translation
 Applied Intelligence
 Artificial Intelligence.
 Artificial Intelligence Abstracts.
 Artificial Intelligence and Legal Reasoning
 Artificial Intelligence Applications for Military Logistics (Proceedings).
 Artificial Intelligence: Bibliographic Summaries of the Select Literature.
 Artificial Intelligence Communications
 Artificial Intelligence Current Reports.
 Artificial Intelligence in Engineering.
 Artificial Intelligence in Medicine
 Artificial Intelligence Markets.
 Artificial Intelligence Report.
 Artificial Intelligence Research Reports. Current Reports.
 Artificial Intelligence Review.
 Artificial Intelligence Series
 Artificial Intelligence Texts
 Australian Robot Association. Newsletter.
 BYTE (occasional Articles)
 CAIA Newsletter (Miami Valley Research Inst)
 Canadian Artificial Intelligence.
 Canadian Society for Computational Studies of Intelligence. Conference.
 Cognitive science.
 Cognition
 Cognition and Instruction
 Communications of the ACM
 Computational Intelligence
 Computational linguistics
 Computers & Artificial Intelligence
 Conference on Artificial Intelligence Applications.
 Connection Science
 Current Reports/AI.
 Data and Knowledge Engineering.
 Decision Support Systems
 Expert Systems (London)
 Expert Systems (Ottawa, Ontario: Office of Industrial Innovation)
 Expert Systems for Information Management
 Expert Systems in Government Symposium. Proceedings
 Expert Systems: Planning/Implementation/Integration
 Expert Systems: the International Jour. of Knowledge Engineering
 Expert Systems Strategies
 Expert Systems With Applications
 Future Generation Computing Systems (FGCS)
 Fuzzy Sets and Systems
 Genie Logiciel et Systems Experts
 Heuristics
 IEEE Expert
 IEEE Transactions on Knowledge and Data Engineering
 IEEE Transactions on Pattern Analysis and Machine Intelligence.
 IEEE Transactions on Systems, Man and Cybernetics
 IEEE Western Conference on Knowledge-Based Engineering and Expert Systems.
 IEEE Workshop on Principles of Knowledge-based Systems. Proceedings.
 IFIP World Computer Congress.
 Industrial Robot
 Inference Engine
 Information Processing.
 Intelligence: the Future of Computing
 Intelligent Software Strategies
 Intelligent Systems Analyst
 Intelligent Systems Review
 Intelligent Tutoring Systems
 Technologies
 International Directory of Artificial Intelligence Companies
 International Joint Conference on Neural Networks (Proceedings)
 International Jour. for Artificial Intelligence in Engineering.
 International Jour. of Approximate Reasoning.
 International Jour. of Expert Systems
 International Jour. of Intelligent Systems.
 International Jour. of Man-machine Studies
 International Jour. of Neural Networks
 International Jour. of Neural Systems
 International Jour. of Pattern Recognition and Artificial Intelligence.
 International Jour. of Robotic Research
 International Jour. of Robotics & Automation.
 International Joint Conference on Artificial Intelligence. Proceedings
 International Symposium on New Directions in Computing.
 ISR: Intelligent Systems Report
 Jinkou Chino Gakkaishi
 Jour. of Artificial Intelligence in education
 Jour. of automated reasoning.
 Jour. of experimental and theoretical Artificial Intelligence
 Jour. of Intelligent Systems.
 Jour. of Japanese Society for Artificial Intelligence
 Jour. of logic programming
 Jour. of Neural Network Computing
 Jour. of object-oriented programming
 Jour. of Pragmatics

Knowledge Acquisition
 Knowledge Acquisition for Knowledge-Based
 Systems Newsletter (from Boeing Corp.)
 Knowledge Engineering Review.
 Knowledgebase (International Assn. of Knowl-
 edge Engineers)
 Knowledge-based Systems
 Language and Cognitive Processes.
 Lettre de L'Intelligence Artificielle
 LISP and Symbolic Computation
 Machine Intelligence.
 Machine Intelligence and Pattern Recognition
 Machine Intelligence News.
 Machine Learning.
 Machine-mediated Learning
 Minds and Machines
 NEC Research & Development
 National Aerospace and Electronics Conference
 Proceedings.
 National Conference on Artificial Intelli-
 gence. Proceedings. (AAAI)
 Neural Computation
 Neural Network Modeling and Connectionism
 Neural Network News (ceased)
 Neural Network Review
 Neural Networks
 NeuroComputers
 NeuroComputing
 New Generation Computing
 Nikkei Artificial Intelligence
 Nikkei Sangyou Shinbun (Newspaper column eve-
 ry Friday on Industrial AI).
 NTT Review
 OEGAI Jour.
 PC AI
 Pocitace a Umela Inteligencia
 Precision Machinery, Incorporating Life Sup-
 port Technology.

Research Report of the Information Processing
 Society of Japan.
 Robotica.
 Robotics Age
 Robotics and Autonomous Systems
 Robotics and Computer-Integrated Manufacturi-
 ing.
 Robotics and Expert Systems
 Robotics World
 Robotronics Age Newsletter
 Robots: Jour. de la Robotique Industrielle et
 de la Productique.
 Sensors: the Jour. of Machine Perception
 Shingaku Giho
 SIGART Bulletin (formerly SIGART Newsletter)
 SIG-AI Newsletter for Special Interest Group
 for AI (from DPMA)
 SIGIR Forum (ACM Special Interest Group on
 Information Retrieval).
 Soviet Jour. of Computer and Systems Sciences
 Spang Robinson Report.
 Speech Communication
 Systems Research and Information Science.
 Synapse Connections
 Trudy Po Iskusstvennomu Intellektu.
 Turing Institute Abstracts in Artificial In-
 telligence.
 User Modeling and User-Adapted Interaction.
 Vivek (National Center for Software Technol-
 ogy, Bombay, India).

Vendor newsletters:
 ?-consult(user). (Quintus Corp.)
 ARTLines (Inference Corp.)
 AI Interactions (Texas Instruments)
 LUCID Moments (Lucid Inc.)
 NeuralWorks Connection (NeuralWare)
 Software AE Bulletin (Software A & E)

Appendix C. Professional associations for AI.

ACM SIGART
 11 West 42nd St.
 New York, NY 10036
 212-869-7440

AERA AI & ED SIG
 c/o Joseph Psotka, Ph.D.
 Army Research Institute
 5001 Eisenhower Ave.
 Alexandria, Virginia 22333-5600

Boston Computer Society Arti-
 ficial Intelligence SIG
 The Boston Computer Society
 One Center Plaza
 Boston, MA 02018

DPMA Special Interest Group on AI
 505 Busse Highway
 Park Ridge, IL 60068-3191
 312-825-8124

IEEE
 Service Center Development
 Membership Services Dept.
 Piscataway, NJ 08855-1331
 800-678-IEEE

AI Association of Japan
 Hoko Nishi-shinjuku Bld., 3F
 3-7-28 Nishi-shinjuku, Shinjuku-ku
 Tokyo 160, Japan Telephone: (03) 346-1765

American Assn. for Artificial Intelligence (AAAI)
 445 Burgess Drive
 Menlo Park, CA 94025-3496

CSCSI/SCEIO
 (Canadian Society for Computational Studies of Intelligence)
 430 King St. West, Suite 205
 Toronto, Ontario M5V 1L5, Canada Telephone: 416-593-4040

FNNTIG (Federal Neural Network Technical Interchange Group)
 Call Mr. Lockwood W. Reed, 201-544-2559. Membership may not
 be available to people outside the U.S. Dept. of Defense.

IPSJ (Information Processing Society of Japan)
 3-5-9 Shiba Koen
 Minato-ku, Tokyo 105
 Japan
 Telephone: 03-431-2808

Int'l Assn. of Knowledge Engineers
Georgetown P.O. Box 25461
Washington, D.C. 20007

Inst. of Electronics, Information
and Communication Engineers (IEICE)
Kikai-Shinko-Kaikan Bldg., 5-8,
Shibakoen, Minato-ku, Tokyo 105, Japan

MIND (Metroplex Inst. for Neural
Dynamics)
100 Allentown Parkway
Suite 211
Allen, TX 75002
214-422-4570

NTAAI (North Texas Assn. for
Artificial Intelligence)
Dr. Lynn Peterson
Computer Science Engineering Dept.
Univ. of Texas at Arlington
Arlington, TX 76019
817-273-3609

Int'l Neural Network Society
Naval Research Laboratory, Code 5756
Washington, DC 20375

Japanese Society for Artificial Intelligence
1-32-19-201 Uehara
Shibuya-ku, Tokyo 151, Japan
Telephone: 03-485-6641

NAFIPS (North American Fuzzy Information
Processing Society)
B. Schott, Decision Sciences Dept.
Georgia State Univ.
Box 316, University Plaza Station
Atlanta, GA 30303
404-651-4070

Washington Neural Network Society
P.O. Box 427
Dunn Loring, VA 22027

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Huffman, Robert J. and John Krol, Newsletters in Print Fifth Edition 1991-1992, Gale Research, New York, 1990.

Sheehy, Eugene Paul, Guide to Reference Books, American Library Association, Chicago, 1986.

Stern, David. "Artificial Intelligence Databases: A Survey and Comparison," Database, August 1990, pages 19-24.