NEWSLETTER

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Amsterdam hosts BNAIS 2003

Alife Trends

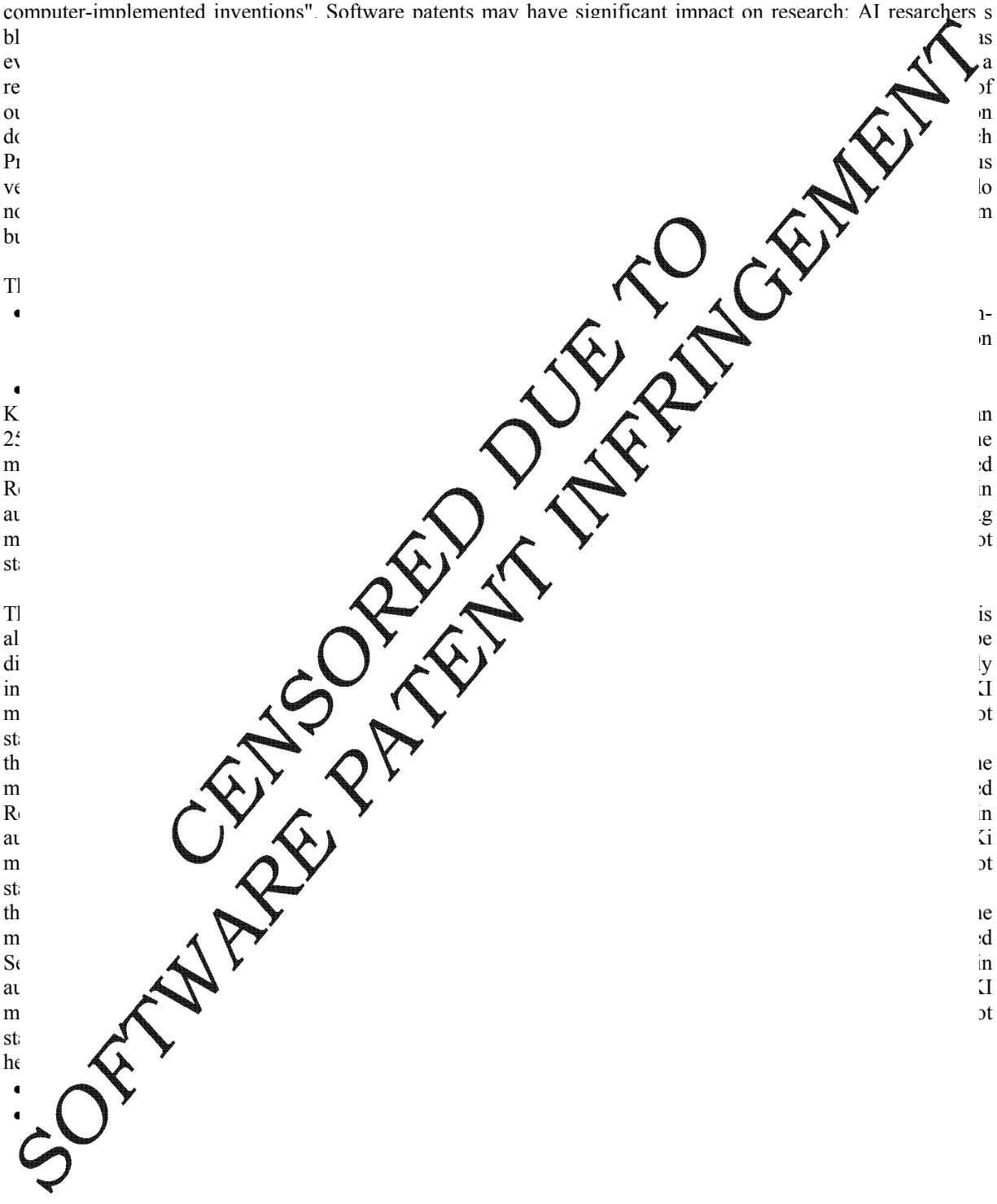
Agents in Oz

News from the Belgium-Netherlands Association for Artificial Intelligence

Software Patents in Europe: All Problems Solved?

Editor-in-chief

On the 24th of September 2003, the European parliament approved the proposed directive on "patentability of computer-implemented inventions". Software patents may have significant impact on research: AI researchers s



Directive of the European Parlement: http://europa.eu.int/comm/internal_market/en/indprop/comp/com02-92en.pdf
Petition of 30 eminent computer scientists: http://swpat.ffii.org/papers/eubsa-swpat0202/komp0305/

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Photos by Ork de Rooij (cover and pages 114, 115 and 116) and Floris Wiesman (page 113)

BNVKI-Board News

Han La Poutré

We have just experienced the second BNAIS, the student conference of the BNVKI: the Belgium/Netherlands AI Symposium for Students. It was organised by the students of the UvA (Universiteit van Amsterdam), and took place on 9 October at the CWI. I must say that it was a great success, and that the attendance of the students was overwhelming. This was probably due to both this year's theme of the BNAIS (*Playing God: Creation and Control*) and the success of the first BNAIS.

About 200 students came to Amsterdam to participate in the BNAIS. The student's interest in this day was of such an enormous size, that the preregistration had to be closed early, due to capacity constraints. Otherwise, at least 50 more students would have participated. After the already very successful first BNAIS in Utrecht last year, we had not expected this even much bigger interest. We will take this into account in the organisation of the next BNAIS. Apparently, the BNAIS is answering to a need for a student symposium, and it is currently in the process of getting a stable position in the student community. The next step will be the BNAIS 2004, which will probably take place in the spring of 2004, in Maastricht. A report on this year's BNAIS can be found in the *AI Education* section.

When you read this, the BNAIC 2003 has already finished, but I am writing this before the BNAIC occurs. At the BNAIC, our annual BNVKI members meeting will take place. We present our ideas and plans about the future, and especially the finance of the BNVKI. The latter is important in order to keep up our activities in the BNVKI. Hopefully, the BNAIC as well as the BNVKI members meeting is as successful as the BNAIS this year. I do not have many doubts about this.

In October, Rineke Verbrugge stepped down from the Board, because of the ending of her five-year term as member of the Board. In this period, Rineke has contributed substantially to the activities of the Board and the BNVKI in general. In the last years, she was the secretary of the Board. We want to thank Rineke for all the good that she has done for the BNVKI, and we like to wish her the best of luck with her future activities, in AI research and hopefully for the BNVKI too.

Agenda for the BNVKI General Assembly

October 24, 2003, Nijmegen

During the BNAIC 2003 the General Assembly of the BNVKI will take place on October 24, 2003. Below you can find the agenda for the General Assembly.

1. Opening
2. Minutes of the previous general assembly (see BNVKI Newsletter 19.6, December 2002)
3. Annual Report by Han La Poutré
4. Board Changes
5. Financial Report and Establishment of Accounts Committee
6. Future for the BNVKI
7. Plans for Next Year
8. Location of BNAIC 2004
9. Any other Business

Agents in Oz: AAMAS'03

Report by Birna van Riemsdijk
ICS, Universiteit Utrecht

The Second International Joint Conference on Autonomous Agents and Multi-Agent Systems was held in Melbourne, Australia in July 2003. Thanks to a scholarship provided by AgentLink, I could attend the conference to present a paper of mine. I am doing a Ph.D. at the Universiteit Utrecht under supervision of prof.dr. J.-J. Ch. Meyer. The topic of my research is the relation between agent programming languages and agent logics.

The friendly and hospitable nature of the Australian people makes one feel very welcome and one quickly forgets the long journey of 30 hours. The city of Melbourne is located in the state of Victoria on the south coast of Australia. It offers a unique blend of art, culture, sports activities and great outdoors. The hotel at which the conference was held, is located in the heart of the Central Business District, amongst historical buildings and elegant boutiques. With its extensive first floor lobby and lounge and big conference halls, it was an excellent location for the conference. The conference was attended by 471 participants from 29 countries across all five continents. The AAMAS conference series was initiated in 2002, with the goal of providing a single, high profile, internationally respected and recognised forum for research in the theory and practice of autonomous agents and

multi-agent systems. The conference is a merger of three highly successful related events: the International Conference on Autonomous Agents (AGENTS), the International Conference on Multi-Agent Systems (ICMAS) and the International Workshop on Agent Theories, Architectures and Languages (ATAL). AAMAS'03 received 466 submissions and the acceptance rate for full papers was 24.7 percent.

THEMES IN AGENT RESEARCH

The general theme of the conference is usually dominated by two perspectives on agent research: a practical software engineering perspective and a more theoretical and philosophical perspective. On the practical side, agents can be used as a metaphor to facilitate the process of software engineering and system design. When analysing a software system that is to be built, it can be useful and intuitive to do this in terms of a number of autonomous entities or agents that can cooperate and communicate. This can be a way to manage the complexity of large systems that have to behave flexibly and have to be able to adapt to changing circumstances. Viewed in this way, agents can be put on a par with objects, in the sense that both paradigms offer a set of high-level concepts in terms of which to analyse (and build) a system. Central notions often used within the agent paradigm can be divided into those concerning structure and dynamics between agents (i.e. inter-agent) and those concerning the internal structure and dynamics of an individual agent (i.e. intra-agent). Examples of important concepts of the first category that are used to describe structure are role, group, permissions, norms and acquaintance/trust. Concepts related to the dynamics of the multiagent system are for example message, coordination/cooperation, negotiation and mobility. Concepts used to describe the structure of an individual agent are for example knowledge, belief, percept, action, plan, intention and goal.

Intelligent agents should be able to reason with these concepts. An agent should for instance be able to formulate a plan to achieve a goal and update its beliefs according to received percepts. Different reasoning strategies will yield different behaviours or intra-agent dynamics. Although the set of important notions is quite large, usually only subsets of these concepts will be used in any concrete case.

Now, most people probably have an intuitive idea of what these concepts mean. Making these ideas more precise, however, is not a trivial task. It has been and still is the topic of much research in philosophy and AI. Several mostly modal logics have resulted from this research. There is for example epistemic logic, in which properties of knowledge and belief can be specified. Another example are BDI logics in which properties of and relations between beliefs, desires and intentions are investigated. As a final example, I will name deontic logic, in which properties of norms and obligations are studied. Agents can thus be viewed from a practical as well as from a theoretical perspective. The question of how these two relate or how to bridge the gap between theory and practice is one of the big issues to be resolved in the field of agent technology. These issues were reflected in the research presented at AAMAS'03.

The conference was preceded by two days of workshops and tutorials. In total, 9 tutorials and 22 workshops were organised. Topics of tutorials were for example rational action in autonomous agents, web service composition and service composition techniques and theory and practice of agent communication in the semantic web era. The workshop program included for example workshops on agent-oriented software engineering, multi-agent based simulation, programming multi-agent systems and declarative agent languages and technologies.

FIRST DAY

The conference itself encompassed a wide variety of topics and consisted of three days of talks, panel discussions, invited talks and poster sessions. On each day, three slots were scheduled, with every slot consisting of three to four parallel sessions of four talks each.

On the first day of the conference, four sessions were scheduled about inter-agent structure and dynamics, i.e. sessions on coalition formation, cooperation in multi-agent systems, social networks and trust and planning in multi-agent systems. Also three more theoretical sessions were held, i.e. two sessions on game-theory and one on logic and learning. Furthermore, the topics of agent-oriented software engineering, robotics and emotions were discussed. The invited speaker of the first day was Hugh Durrant-Whyte (University of Sydney). His research focuses on autonomous vehicle navigation and decentralised data fusion methods. His work in applications includes automation in cargo handling, surface and underground mining, defence, unmanned flight vehicles and autonomous sub-sea vehicles. He talked about an information-theoretic approach to problems of control in decentralised sensor networks.

SECOND DAY

The second day program again contained many sessions on issues in multi-agent systems, i.e. sessions on groups and organizations, teamwork, semantics and pragmatics of interaction, role and resource allocation in multi-agent systems, ontologies and dialogue. The application oriented topics were simulation, auctions and trading agents and there was a session on applications of multi-agent systems. Furthermore, a session on intra-agent dynamics with the title agent decision making was scheduled. The first keynote speaker of the day was Nick Jennings (Southampton University). Examples of areas to which Jennings has contributed are agent-oriented software engineering, automated negotiation and auctions and socially rational decision making. In his talk, he discussed various negotiation technologies.

The second invited speaker was David Parkes (Harvard University). He carries out research on topics at the interface between computer science and economics and in particular in areas of mechanisms design, e-commerce, multi-agent systems and game theory. The title of his talk was *computational mechanism design: taming the strategic dragon without invoking the complexity monster*. On this day, also a mentor-student lunch was organised. The goal of the lunch was to welcome students to the agents research community and encourage them to be productive and prolific contributors to the community. The lunch was delicious and it furthermore offered a good opportunity to get to know people. At the end of the day, a conference dinner was organised at the Melbourne Museum. Although the idea of attending the dinner was tempting, I decided with some colleagues to discover the famous Melbourne music scene together.

THIRD DAY

The last conference day featured two sessions on inter-agent dynamics, encompassing the topics of coordination in multi-agent systems and distributed awareness in multi-agent systems. Also three practically oriented sessions were scheduled, i.e. sessions on web technologies, tools and platforms and on interfaces between artifical agents and human users and between agents. Furthermore, the program contained a theoretical session on temporal issues and sessions on multi-agent reinforcement learning, adaptation and load balancing and learning, self-organization and argumentation. The invited speaker was Lewis Johnson (University of Southern California). Johnson's work involves the application of artificial intelligence and human-computer interaction to education and training. The issue he addressed in his talk was social interaction with agents.

The AAMAS'03 experience has been very inspiring and instructive and I am very grateful that I was given the opportunity to attend this conference. As for next year, the AAMAS'04 conference will be held in New York City.

More information can be found on the AAMAS website: www.aamas-conference.org.

ECAL 2003: Spotting the Trends

Report by Joris Van Looveren
AI-Lab, VU Brussel

Artificial Life is a branch of artificial intelligence that is especially concerned with looking at living beings for inspiration. The start of the field was marked by the creation by biologist Thomas Ray of the digital ecosystem called Tierra: digital organisms made up of code for a virtual processor evolved and interacted in a digital environment. After a while one could witness the emergence of parasite organisms and other parallels to phenomena observed "in the wild".

Since then ALife has diversified to studying other systems. This year's European Conference on Artificial Life, which is held bi-annually alternating with the ALife conference, provided a peek into the field of ALife as it currently stands. One thing is sure: the ALife community is very much alive: due to the high number of submissions, the conference had two parallel tracks, compared to a single track in previous editions.

Compared to the previous edition, this ECAL conference showed some interesting shifts in the contributions. One of the topics that gained in prominence were artificial chemistries: not only was there a half day's track specifically devoted to it, but a number of related subjcets such as regulatory gene networks were covered by papers in other tracks as well.

Especially pleasing for myself and my colleagues for the AI-lab was the fact that Language and Communication research -only barely present in the previous issue of ECAL- got a whole day's track for itself. Apart from contributions by the "usual suspects", there were also talks by people new to the Origins of Language research theme. What was not clear, however, is whether these new contributors will remain in the Origins of Language

community: was their contribution the beginning of a related, longer-term research project? Or was it just a side-step, a finger exercise in implementing a computational model and extracting results from it?

A third major theme at the conference remained robotics: a large share of ALife people remains convinced that embodiment (the embedding of an artificial system in the real world using sensors and actuators in an actual body) is essential to good research. Themes within robotics ranged from low-level tasks such as homing to multi-agent research using real robots.

There weren't really any themes for which there were less contributions: the fact that the conference became two-track allows it to sustain the traditional subjects while allowing new ones at the same time. It thus seems that the ALife community is still expanding. I am curious to see if this trend continues into the next edition.

Searching Multimedia Content Using Spoken Audio

Colloquium on spoken document retrieval
October 10, 2003

Report by Roeland Ordelman
CS, TU Twente

As data storage capacities grow to nearly unlimited sizes thanks to ever ongoing hardware and software improvements, an increasing amount of information is being stored in multimedia and spoken-word collections. Assuming that the intention of data storage is to use (portions of) it some later time, these collections must also be searchable in one way or another. For multimedia and spoken-word collections, traditional text-oriented information retrieval (IR) strategies inevitably fall short, as the amount of textual information included with these types of documents is usually very limited. However, when automatic speech recognition (ASR) can be used to convert the speech occurring in these documents into text, textual representations can be created that in turn can be searched using the traditional text-based search strategies. As ASR systems label recognized words with exact time information as a standard accessory, detailed searching within multimedia and spoken-word collections can be enabled. This type of retrieval is commonly referred to as Spoken Document Retrieval (SDR).

On Friday October 10th 2003, the TU Twente organised a colloquium on spoken document retrieval. After the colloquium, Roeland Ordelman defended his thesis on Dutch spoken document retrieval research carried out at the TU Twente (http://www.cs.utwente.nl/~ordelman/). The first speaker at the colloquium, Professor Renals from the University of Edinburgh, discussed the usability of speech recognition systems with high error rates for the application in a retrieval framework. He showed that research for the English language has made clear that ASR systems with a relatively low performance (30-40% word error rate) can still effectively be deployed for spoken document retrieval. Typically, function words such as prepositions and determinators are the most difficult words to recognise correctly for a speech recognition system. These words are small and bear little acoustic information. However, as function words are usually insignificant for searching, misrecognising these words does not harm retrieval performance. For information retrieval, a correct recognition of content words is more important. As these are typically longer (hence bear more acoustic information) they can more easily be recognised correctly by a recognition system.

Professor Martens of the Universiteit Gent discussed the importance of obtaining and using all kinds of information about the audio signal before it is sent to a speech recognition system. Evidently, it is for instance very useful to know that some piece of audio does not contain any speech at all. A speech recogniser does not "know" by itself whether something is speech or music and it will try to recognise words in the audio stream. Given that the audio stream contains music only, the result will be that a bunch of meaningless sentences are produced by the system. Speech/non-speech detection algorithms can be very helpful under these circumstances. Other examples of useful information about the audio signal are speaker information (male or female), speaker changes, speech type (read speech or spontaneous speech) and bandwidth (studio or telephone). This information, obtained using detection algorithms, can be deployed to improve speech recognition performance. For instance, different speech recognition systems could be developed, each specifically tailored to perform a recognition task for some speech or audio type.

The colloquium was organised by the Human Media Interaction group of the Faculty of Electrical Engineering, Mathematics and Computer Science of the TU Twente. Information about current research projects can be found on http://parlevink.cs.utwente.nl/. Research on speech recognition and retrieval is coordinated by Prof. Dr. F.M.G. de Jong.

A Wealth of Theses

Jaap van den Herik
IKAT, Universiteit Maastricht

Wealth and wisdom are simultaneously companions and opponents. They are complementary, although they cover two different dimensions. Reading the list of Ph.D. announcements your Editor is impressed by their large number. Browsing through the titles and taking into account the context as given by the names of the supervisors it feels like "consuming wealth without producing it". This statement by Bernard Shaw once prompted my alertness on quotations. Since then I know that the essence of a quotation is not only in the words, but also in the context. Drifting apart from the contents of the theses, I was wondering how the Ph.D. students had handled topics as "related research" and "previous investigations". How had they quoted their colleagues? A well-known challenge to many Ph.D. students is to give sufficient credits to fellow researchers. Here, an obvious task for the supervisors is to guide their pupils, and to educate them where necessary. However, even when doing so, it remains a difficult area. Progress of science takes place upon the shoulders of previous scientists. That should be the message and it should be an intensive part of the education by the various research schools. In analogy, this holds true for literary citations, too. So, I went back to Shaw and saw that the full citation should read: "We have no more right to consume happiness without producing it than to consume wealth without producing it". From this statement, it is clear that the recipients of the Ph.D. titles may be happy (our congratulations) and may be considered as substantial contributors to the wealth of theses. Thank you for doing so.

A brief analysis reveals that the research school SIKS contributes to the list with five theses, the research domain Law and Computer Science with two. The other five theses are from related research areas. They are: language, vision (2x), lipreading (a combination of vision and language), and multi-agent systems.

PH.D. THESES

R.J.F. Ordelman (October 10, 2003). *Dutch speech recognition in multimedia information retrieval*. TU Twente. Promotor: Prof.dr. F.M.G. de Jong.

S.F. Portegies Zwart (October 15, 2003). *Aircraft Recognition from Features Extracted from Measured and Simulated Radar Range Profiles*. Universiteit van Amsterdam. Promotor: Prof.dr.ir. F.C.A. Groen. Co-promotores: Dr.ir. B.J.A. Kröse, Dr.ir. S.J. Gelsema, and Dr. R. van der Heiden.

D.N. Jansen (October 29, 2003). Extensions of Statecharts with Probability, Time, and Stochastic Timing. TU Twente. Promotor: Prof.dr. R.J. Wieringa. Co-promotor: Dr. J.P. Katoen.

M. Windhouwer (November 6, 2003). *Feature Grammar Systems - Incremental Maintenance of Indexes to Digital Media Warehouses*. CWI Amsterdam. Promotor: Prof.dr. M. Kersten.

J.C. Wojdel (November 11, 2003). *Automatic Lipreading in the Dutch Language.* TU Delft. Promotor: Prof.dr. H. Koppelaar. Assistant promotor: Dr. L.J.M. Rothkrantz.

R. Bunschoten (November 14, 2003). *Mapping and Localization from a Panoramic Vision Sensor*. Universiteit van Amsterdam. Promotor: Prof.dr.ir. F.C.A. Groen. Co-promotor: Dr.ir. B.J.A. Kröse.

A.C. Roth (November 26, 2003). *Case-based reasoning in the law*. Universiteit Maastricht. Promotor: Prof.dr. H.F.M. Crombag. Co-promotor: Dr. H.B. Verheij.

C.A.F.M. Grütters (December 2, 2003). *Asieldynamiek - een systeemdynamische analyse van de Nederlandse asielprocedure (1980 - 2002).* KU Nijmegen. Promotores: Prof.mr. A. Oskamp, Prof.mr. J. Berkvens and Prof. J. Vennix.

H.H.L.M. Donkers (December 5, 2003). *Nosce Hostem – Searching with Opponent Models*. Universiteit Maastricht. Promotor: Prof.dr. H.J. van den Herik. Co-promotor: Dr.ir. J.W.H.M. Uiterwijk.

S. Hoppenbrouwers (December 10, 2003). *Freezing Language: Conceptualisation Processes across ICT-Supported Organisations*. KU Nijmegen. Promotores: Prof.dr. H.A. Proper, Prof.dr. M.P. Papazoglou. Co-promotor: Dr. H. Weigand.

L. Kocsis (December 11, 2003). *Learning Search Decisions*. Universiteit Maastricht. December 18, 2003. Promotor: Prof.dr. H.J. van den Herik. Co-promotor: Dr.ir. J.W.H.M. Uiterwijk.

M. de Weerdt (December 15, 2003). *Plan Merging in Multi-Agent Systems*. TU Delft. Promotores: Prof.dr.ir. H.J. Sips, Prof.dr. J-J.Ch. Meyer. Co-promotor: Dr. C. Witteveen.

Next to the abundance of Ph.D. defences, the stream of new fresh professors is continuing

growing. It is with much pleasure that we announce three inaugural addresses. In particular, I would like to recommend the address by the chairman of the BNVKI, professor Han La Poutré. We are curious to learn how he sees the future of Intelligent Agents, Artificial Intelligence, and the position of the Dutch researchers in this domain.

INAUGURAL ADDRESSES

Prof.dr. **T.W.C. Huibers** (October 2, 2003). *Information Retrieval*. TU Twente.

Prof.dr. **E. Proper** (November 10, 2003). *Informatiekunde; Exacte vaagheid*. KU Nijmegen.

Prof.dr.ir. **H. La Poutré** (March 26, 2004). No title available. TU Eindhoven.

Finally, we would like to encourage readers of Ph.D. theses to write down their opinion in the form of a review and send it to us. The same applies for the inaugural addresses. Previously, I once recommended the Research School Directors to request from each Ph.D. student two reviews over the four-year period of research. It gives the student more wisdom and it secures our wealth of research information.

AI EDUCATION

Section Editor
Evert van de Vrie

BNAIS 2003 – Playing God? AI in Creation and Control

Report by Henriette Cramer and Joram Rafalowicz
Studievereniging VIA, Universiteit van Amsterdam

This year's edition of BNAIS illustrated the great interest of students in current research and issues surrounding the field of AI. Over 200 attendees from all over Belgium and The Netherlands visited this second edition of the Belgian-Dutch AI symposium for students, held the 9th of October in Amsterdam's Science Park at CWI. Students from the Universiteit van Amsterdam's student association for information sciences VIA organized this year's event under auspices of the BNVKI and SIKS.

The goal of BNAIS is to give students a platform to present their research projects, as well as to familiarize students with current AI courses in Belgium and The Netherlands.

This year's theme *Playing God? AI in creation and control* attempted to highlight issues from the creation of AI entities and control over these entities to Big Brother type control in current society using AI techniques. The theme inspired discussions of a wide array of AI-related topics in three plenary sessions, eleven shorter talks and a closing panel discussion on ethics of AI use. Talks on topics such as artificial life, evolutionary and genetic algorithms, artificial art, adaptive game AI and the access to and coupling of sensitive personal information all illustrated the broadness of the field. Various universities fought for student attention at the information market promoting their research and educational programmes on AI, alongside a number of students who presented their own research on posters.

ARTIFICIAL SOCIETIES

Professor Guszti Eiben, head of the VU Amsterdam's computational intelligence group, coupled science with science fiction in his lecture on artificial societies. Such systems mimic some features of existing animal or human societies thus providing a way to investigate social phenomena. However, there are two problems, or challenges if you wish, with such simulations. On the one hand, the complexity of current systems is far lower than the complexity of real societies. This raises serious concerns about what exactly we are studying: real life or artefacts.

Guszti Eiben.

On the other hand, these systems are often too complex for thorough analysis and understanding. The experimenter might be playing God, but the intrinsic dynamic of the system often goes beyond his/her comprehension.

The lecture consisted of three parts. First professor Eiben explained the idea of artificial societies and his philosophical image of the future. Second, he took everybody back to reality by showing current work, which included very interesting behaviour of simple artificial societies that have been given a simple language. These societies showed behaviour of exploration, not only of the environment itself, but also the borders. This leads to some very interesting questions about the nature of those societies and our own ones. To finish the lecture everybody was treated to a short story. The story, in the form of some kind of interrogation of a scientist, brought us 'back to the future'. In this future a scientist had created an artificial society so advanced the inhabitants realised they were just some creation living in a computer. They were nothing more than an experiment; their god was a computer scientist. The entire society collapsed in some kind of mass depression, and the only humane thing to do was to pull the plug.

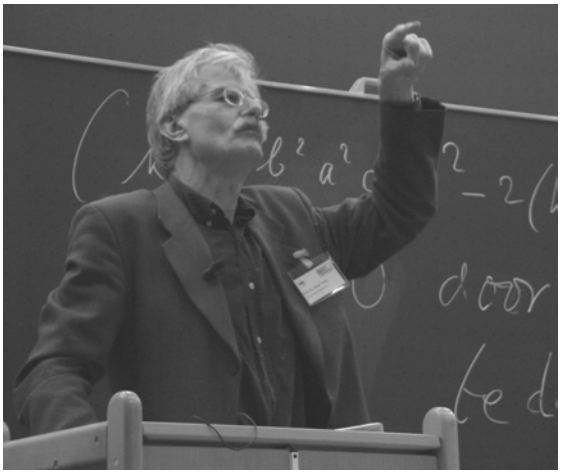
PARALLEL SESSIONS AND THE KION AWARD

On a happier note, the visitors were then offered a choice of lectures, while students of the various student associations present discussed their plans for future collaborations. Dr. Maarten van Someren of the Universiteit van Amsterdam offered his views of the possibilities and dangers of web mining. Ph.D. student Enrico Gerding of the Centrum voor Wiskunde en Informatica elaborated on his research into automated negotiations on the information market. Enno Peters, student at the RU Groningen proposed an extension of the actor-critic method.

The KION award for the best AI master thesis was handed out by the chairman of KION, Paul Kamsteeg to Jelle Kok and Remco de Boer of the Universiteit van Amsterdam for their thesis on soccer simulation for RoboCup. Jelle Kok then proceeded to a presentation of his work as Ph.D. student which led to his current status as world champion RoboCup simulation. The previous issue of the BNVKI Newsletter reported on Jelle Kok's RoboCup experience; see page 115 of this issue for the KION jury report.

After raiding the lunch buffet down to the last crumb, the attendees again had the option of choosing from a wide array of subjects in he following two workshop sessions. IBM's Extreme Blue student team presented work on user profiling, Pieter Spronck of the Universiteit Maastricht introduced Adaptive Game Opponent AI by applying machine learning in virtual world games. Erik Borra (student of the Universiteit van Amsterdam) attracted considerable interest with his talk on current activities of various authorities to 'log our lives' and whether these are useful and/or acceptable. Wouter Teepe (Ph.D. student RU Groningen) presented research on coupling and use of sensitive information.

The colourful presentation and demonstrations of computer generated art by Remko Scha (Institute of Artificial Art Amsterdam, Universiteit van Amsterdam's Institute of Language and Computation) provided both information and entertainment in the third session. Femke de Jonge en Steven de Jong (Universiteit Maastricht) discussed ProAnita - a multiagent solution for legitimate information retrieval. David de Goot (RU Groningen) talked about generative cross-platform migration of compositional agents. Valentin Robu elaborated on his endeavours to improve the outcome of cooperative negotiations in incomplete information environments aspect.



Henk Visser.

COMPUTERS MAKE US STUPID

All assembled to attend the final lecture by professor Henk Visser; as professor of humanistic views on man and computer at the Universiteit Maastricht he shed a completely different light on the day's theme. Not only the content differed, even his presentation. In contrast to the predominant use of flashy PowerPoint presentations, he turned to the basics and most fail-safe method: the blackboard. In his lecture Henk Visser raised the issue that with use of readily available new technology people are losing certain capabilities. Who needs to be able to calculate

difficult multiplications when there is a calculator in almost every digital device imaginable? Who needs to be able to write with pen and paper when you can use a keyboard or voice recognition?

Professor Visser's main concern was that using all kinds of these innovations in education does not necessarily improve and might even impair education. These inventions may seem to make it unnecessary to learn the basics, while this makes building up knowledge in certain areas very difficult.

While all this sounds very anti-technology and anti-artificial intelligence, Henk Visser despite his rant did not want the audience to reject technology. His main concern is the use of technology and how easily people let computers take over their lives; perhaps in the process turning us all into dumb slaves. He wants to warn us and make us aware of a problem that is very real. In the discussion about computers getting smarter and smarter, we shouldn't forget contemplating our own capabilities.

The panel in action.

ETHICS AND AI

A panel discussion on ethics and AI provided a suitable ending to BNAIS. The discussion was led by dr. Bern Martens of the KU Leuven with a panel consisting of Henk Visser, Guzsti Eiben, Remko Scha and Han La Poutré. Both panel and audience were very willing to voice their (often pretty strong) opinions. Of course discussion strayed from the topics set from the beginning, with a variety of subjects ranging from AI and its implications on the job market (who will be dispensable?), AI and the end of mankind, to AI and legislation (could it ever keep up?). Some were mainly optimistic about the effects of AI, but a number of risks still were clear. The end of mankind was not foreseen in the near future, but changes in human identity and possibly human-AI hybrids were deemed very possible with some observations that cyborgs in certain ways already exist. In the end one thing was clear: progress can be positive and may be inevitable, but everybody has to keep their eyes open and keep up. With this conclusion most BNAIS visitors could commence on their journey back home, while others successfully took on the challenge of organising a last-minute symposium dinner.

Next year's event is to be organized by students of the universities of Maastricht and Leuven; actual dates and locations will be announced as soon as they are available. Over 200 visitors attended BNAIS 2003, and a considerable number of aspiring attendees even had to be turned down; this provides great hopes for the future editions of the event. BNAIS 2003 pictures and descriptions of all lectures can be found at bnais.via.uvastudent.org.

KION Thesis Award 2001-2002 Presented at BNAIS

Report by Paul Kamsteeg
AI, KU Nijmegen

At October 9, 2003, the annual award for best Dutch Artificial Intelligence M.Sc. thesis was presented at the BNAIS (Belgian-Netherlands AI Students) conference in Amsterdam. The prize-winning thesis was a joint effort this time, so there were actually two winners: Remco de Boer and Jelle Kok (Universiteit van Amsterdam), for their thesis *The incremental development of a synthetic multi-agent system: The UvA trilearn 2001 robotic soccer simulation team*.

The award was founded by the KION, the joint AI university colleges in the Netherlands, and consists of a certificate and an amount of 500 euro. This was the second time the award was granted, but the first time it was presented at the BNAIS. The previous (and first) presentation was held at the BNAIC, but, being a student award, the BNAIS seemed more appropriate. Unfortunately, as this year the BNAIS was delayed for about six months due to organisational problems, the thesis award for the academic year 2001-02 was now in fact presented only within the academic year 2003-04.

A somewhat awkward situation, which even led some people in the audience to think that the mention of the academic year 2001-2002 was a mistake.

The other nominees were:

- Sander Bruggink (Universiteit Utrecht): *Discourse representation by hypergraphs*;

- Patrick Hensgens (Universiteit Maastricht): *A knowledge-based approach of the game of amazons*;
- Desirée Houkema (RU Groningen): *The coherent perception of speech within cognitive science*;
- Kai van Lopik (KU Nijmegen): *Generating complex nominal queries for concept-based information filtering*;
- Bas Vermeulen (VU Amsterdam): *Deliberate evolution agents: Comparing evolution strategies*.

The jury, consisting of Bert Bredeweg (Universiteit van Amsterdam), Herman Hendriks (Universiteit Utrecht), Paul Kamsteeg (KU Nijmegen), Lambert Schomaker (RU Groningen), Martijn Schut (VU Amsterdam) and Jos Uiterwijk (Universiteit Maastricht), had a tough job comparing six very diverse theses which expectedly were all of good quality. But, in the end, there was considerate agreement on the orderings of the nominees, and virtual consensus about the winner.

The winners: Jelle Kok and Remco de Boer receive their award from Paul Kamsteeg.

The jury had the following to say about the winning thesis: The thesis describes the design and implementation of the Trilearn multi-agent system: a Robocup soccer simulation team which has competed in (at least) two Robocup competitions. It discusses the components making up the Trilearn systeem in a multi-threaded three-layered agent architecture. Considerable attention is devoted to agent-environment synchronisation, methods for object localisation, using particle filters for velocity estimations; a hierarchy of player skill levels, and agent scoring policies. In addition a multi-agent team strategy is developed, based on the active and passive roles which agents can play witihin a team.

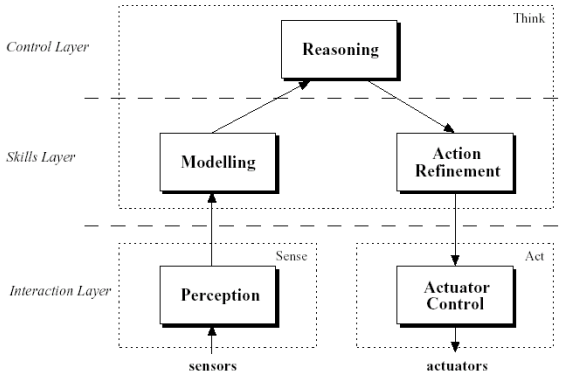
This is an excellent and extensive thesis based on an impressive amount of work. Admittedly, the product has been achieved by two authors, but its extent is at least double that of an average thesis. The scientific import of the thesis is shown by the accepted articles based on it.

The document is well-structured, shows a very good command of English, and has a clear and pleasant style. There is an adequate use of mathematical notation where needed, but sometimes a bit too much pseudo-code. A good balance is reached between theory and practice, although the work is not very profound theoretically: the focus is more on system realisation than on fundamental solutions to theoretical problems. This is apparent right from the introduction, in which the software engineering aspect is emphasized (somewhat too) strongly.

The technical approach is quite good, making adequate and well-founded design choices, each of which is verified empirically. The evaluation problem is approached thoroughly, both formative within the design process and summative regarding integrated system performance.

The emphasis in the thesis is mainly on generic single-agent aspects. In that respect the work is very successful. However, its presentation as being about a multi-agent system is not entirely justified.

KION would like to congratulate the award winners and wishes them well in their further career.



The UvA Trilearn 2001 agent architecture.

M.Sc. Theses in Section AI Education

Supervisors of remarkable M.Sc. work are invited to ask their student for a short article, to be submitted to the editor of the Section AI Education.

Section Editor
Richard Starmans

SIKS/BNVKI Workshop Learning Solutions

October 22, 2003, Nijmegen

The 15th Belgian-Dutch Conference on Artificial Intelligence (BNAIC'03) is organised by SNN/KUN under auspices of the BNVKI and SIKS. BNAIC'03 will be held on Thursday October 23 and Friday October 24, 2003 in the Radboud Auditorium and Kasteel Heyendael, Nijmegen, The Netherlands. The event will be collocated with the workshop *Learning Solutions* on Wednesday October 22, 2003. This collocation aims to promote interaction between researchers in AI and industry. BNAIC papers addressing industrial applications will be offered a poster at the workshop. On Wednesday morning, Prof. Michael Kearns will give a tutorial on computational game theory. This event is offered free of charge for BNAIC participants with support from SIKS and NICI.

The event is part of the advanced components stage of SIKS educational program. Therefore, SIKS Ph.D. students are strongly encouraged to participate.

The 'Learning Solutions' Workshop will be held on Wednesday October 22, 2003 from 10.00 to 16.30 in the Radboud Auditorium, Nijmegen, The Netherlands. Participation is free but an early registration is required.

More information see: http://www.snn.kun.nl/bnaic/

LEARNING SOLUTIONS

Industrial processes are becoming more and more complex, and staying competitive demands continuous optimization and adjustment. On the other hand, the knowledge of such processes has tremendously increased, since companies are now more able to register and store important process data than they were before. Optimal use of this data, however, is not a simple matter and requires advanced techniques, such as neural networks and Bayesian statistics. Neural networks are computer programs that are able to learn. Their functioning is inspired by the function of the brain. The value added by neural networks is strongest for those problems that lack explicit knowledge. A large number of neural network aided applications has already been realized. Well-known applications are pattern recognition, time series prediction, and process control. Neural networks do not always produce the best solution, however. Better solutions are therefore often obtained through a combination with explicit domain knowledge. Bayesian statistics offers an elegant formalism to combine learning and explicit modeling. Furthermore, statistical methods for quantification of reliability are of great importance. A modern trend is therefore marked by an integrated approach that combines neural networks with methods from statistics and artificial intelligence. The symposium *Learning Solutions 2003* offers an up-to-date overview of Dutch research in this area.

Conference on Information Science 2003

November 20, 2003, Eindhoven

On November 20, 2003 the TU Eindhoven organizes, in association with the Werkgemeenschap Informatiewetenschap and under auspices of SIKS, the ninth Interdisciplinary Conference on Information Science. Participation is free for all SIKS Ph.D. students.

The purpose of the conference on Information Science is to bring together researchers, experts, problem owners and other interested people in the area of Information Science. The conference is the meeting place for members of the "werkgemeenschap" (and other interested people) because it is a unique forum where both researchers in information and researchers in technology that supports working with information present and discuss their work.

09.30-10:15	Pre-conference coffee/tea (auditorium)
10:15-11:00	Opening, and Keynote speech by Prof.dr. Theo Huibers (auditorium, lecture hall 4)
11:00-12:15	Session 1, theme *Presentatie en Interactie* • *Sequence and Emphasis in Automated Domain-Independent Discourse Generation* Martin Alberink, Lloyd

Rutledge and Mettina Veenstra
- *User Interaction in Modern Web Information Systems* Peter Barna and Geert-Jan Houben
- *CHIME: Service-oriented Framework for Adaptive Web-based Systems* Vadim Chepegin, Lora Aroyo, Paul De Bra and Geert-Jan Houben

12:15-13:30 Lunch

13:30-15:10 Session 2, theme *Documenten Informatie en Bedrijfsprocessen*
- *Design criteria for preservation repositories* Frans Dondorp and Kees van der Meer
- *Information modelling by formalizing vague representations* Sander Bosman and Theo van der Weide
- *Interorganizational Systems From Different Perspectives* Mohammed Ibrahim
- *What you measure is what you get* Bernd Wondergem

15:10-15:30 Koffie/Theepauze

15.30-17:10 Session 3, theme *Methods to find Information*
- *Metadata in Science Publishing* Anita de Waard and Joost Kircz
- *Federating Resources of Information Systems: Browsing Interface (FRISBI)* Andrei Malchanau, Paul van der Vet and Hans Roosendaal
- *Profile-based retrieval on the World Wide Web* Bas van Gils, Erik Proper, Patrick van Bommel and Eric Schabell
- *Managing a portal of digital web resources by content syndication* Paul van der Vet, Martin Hofmann, Theo Huibers and Hans Roosendaal

17:10-17:45 Social drink

Information about registration as participant can be found at :
http://wwwis.win.tue.nl/infwet03/index.html

The registration fee for other groups than SIKS Ph.D. students will be low (as for INFWET97 and INFWET99).

Advanced Course Architecture-Driven System Development

November 24-25, 2003, Zeist

On November 24 and 25, 2003, the School for Information and Knowledge Systems (SIKS) will organize an Advanced Course on "Architecture-driven System Development". The course takes two days, will be given in English and is part of the so-called Advanced Components Stage of the Educational Program for SIKS Ph.D. students. Although these courses are primarily intended for SIKS Ph.D. students, other participants are not excluded. However, their number of passes will be restricted and depends on the number of students taking the course. The course is given by experienced lecturers, actively involved in the research areas related to the topics of the course.

Architecture-driven System Development is one of the eight research foci of SIKS' new scientific research program.

Location: conference center Woudschoten in Zeist.

Scientific director: Prof.dr. E. Proper (KUN).

PRELIMINARY PROGRAM

Monday, November 24 2003
- Welcome by Daan Rijsenbrij
- Business Architecture, Prof.dr.ir. Jan Dietz, TUD
- Process Architecture, Prof.dr Stef Joosten, Ordina/OU
- Distributed Systems Architectures, Dr. Willem-Jan van den Heuvel, UvT
- Business-ICT Alignment, Prof.dr. Roel Wieringa, UT

Tuesday, November 25 2003
- Integration Architecture, Drs. Hans Bot, CIBIT
- Architecture integration, Dr.ir. Marc Lankhorst, Telematica Instituut
- Architecture from a system theoretical perspective, Prof.dr. Erik Proper, KUN

- Software Architecture and Usability, Dr. Len Bass, Software Engineering Institute Carnegie Mellon University

REGISTRATION

In the conference center there is a limited number of places and there is interest from groups outside SIKS in the topic as well. Therefore, an early registration is required.

Deadline for registration for SIKS Ph.D. students: November 1, 2003. After that date, applications to participate will be honoured in a first-come first-serve manner. Of course, applications to participate from other interested groups are welcome already. They will receive a notification whether they can participate as soon as possible.

INFORMATION FOR NON SIKS PH.D. STUDENTS

SIKS needs a confirmation from your supervisor/office that they agree with the arrangement and paying conditions.

For registration you are kindly requested to fill in the registration form.

Cancellation regulation: If registration is cancelled before November 10 2003 the course fee may be refunded. After that date, no reimbursement is possible. For all questions regarding the content of the course and the educational program, please contact the manager of SIKS.

NWO - SIKS Workshop Opponent Models in Games

December 4, 2003, Maastricht

Playing games is a challenging task. It is even more interesting when a player anticipates the behaviour of the opponent. An important task of playing games is to detect and employ weaknesses in the opponent's strategy. For human players, it is a part of psychology to anticipate the opponent's move. For computers such things belong to the domain of artificial intelligence. Obviously, most of the current game-playing computer programs do not take the peculiarities of the opponent into account. This holds especially for computer programs that play the classical board games such as chess, go, and checkers. In other areas of computer game-playing, opponent-modelling is an integral part of the strategy, for instance in repeated games such as Roshambo and Poker. This workshop deals with the use of opponent models by computers in classical board games, repeated games, and in modern action games. The workshop is organized by IKAT (Universiteit Maastricht).

PROGRAMME

14.30 - 15.00	Coffee and Tea
15.00 - 15.15	Welcome by professor dr. Jaap van den Herik
15.15 - 16.00	Professor dr. Aviezri Fraenkel (Weizman Institute, Rehovot, Israel). Keynote speaker: *JFK: Ask not how computers can model your opponent's psychology; ask how they can boost your own capabilities!*
16.00 - 16.15	Coffee break
16.15 - 17.00	Professor dr. Hiroyuki Iida (Shizuoka University and PRESTO, Japan Science and Technology Agency, Hamamatsu, Japan) Keynote speaker: *The Art of Opponent Models: Uncertainty and Games*
17.00 - 17.45	Pieter Spronck M.Sc. (IKAT, Maastricht). *Online Adaptation of Game Opponent AI*
17.45 - 19.15	Pizza break
19.15 - 20.00	Dr. Shaul Markovitch (Technion Institute, Haiffa, Israel). Keynote speaker: *Learning and Exploiting Relative Weaknesses of Opponent Agents*.
20.00 - 20.45	Jeroen Donkers M.Sc. (IKAT, Maastricht). *Probabilistic Opponent-Model Search in Bao*
20.45 - 21.00	coffee break
21.00 - 21.45	Professor dr. Arie de Bruin (Erasmus Universiteit, Rotterdam). *From Mathematics to AI and Opponent Modelling*
21.45 - 22.00	Closing by professor dr. Jaap van den Herik

REGISTRATION

Participation is free of charge, but registration is requested. If you want to participate in the workshop, please send an email before November 15 to h.denhoed@cs.unimaas.nl containing your name and affiliation.

ACKNOWLEDGEMENT

The workshop is organized by IKAT (Institute for Knowledge and Agent Technology) in co-operation with SIKS (Dutch research School for Information

and Knowledge Systems) and is kindly sponsored by NWO (Dutch organization for Scientific Research).

SIKS/JURIX Masterclass on Normatics

December 10, 2003, Utrecht

On Wednesday December 10, a masterclass on "Normatics" will be held at the Universiteit Utrecht, jointly organised by JURIX and SIKS. The speakers will be Marek Sergot on normative institutions, Trevor Bench Capon on models of legal argumentation, Giovanni Sartor on law and intelligent agents, and Tom van Engers on large-scale applications of legal knowledge-based systems. Attendance (including lunch) is free for SIKS Ph.D. students and for SIKS and JURIX members, while other attendees will be asked to pay a modest fee.

Location: Faculty of Law, CIM, Kromme Nieuwegracht 80 (entrance on Herenstraat 24), Room 0.06. How to reach CIM: http://www2.let.uu.nl/solis/cim/ciminfo/adres.htm.

ABSTRACTS

Tom van Engers (Faculty of Law, Universiteit van Amsterdam / Dutch Tax and Customs Office): *Normative Systems Design, Dealing with Complexity: A Design Methodology for Large-scale Applications of Legal Knowledge-based Systems.*

Designing and implementing normative systems within governments and their public administrations is a complex issue. The complexity is first of all due to the intrinsic complexity of the legal basis for governmental actions and this consequently reflects in the governmental processes and supporting systems. Another causing factor is the overwhelming number of stakeholders that are involved when new or changed legislation has to be implemented. I will present an approach that was inspired by knowledge engineering that supports the design and implementation of complex normative systems. Important practical issues addressed are: improved legal quality, reduction of time to market and reduction of total cost of ownership.

Trevor Bench-Capon (Department of Computer Science, The University of Liverpool): *Models of legal Argumentation*.
Giovanni Sartor (Faculty of Law, University of Bologna): *Cognitive Automota and the Law*.
Marek Sergot (Department of Computing, Imperial College London): to be announced.

REGISTRATION

For SIKS and JURIX members: please register before December 5th, 2003 by email with jurix03@jurix.nl or by telephone with Henry Prakken, tel. +31-30-2532313.

Basic Courses: Formal Methods for IKS and Agent Technology

December 8-12, 2003, Zeist

From December 8-12 2003, the School for Information and Knowledge Systems (SIKS) organizes two basic courses *Formal methods for IKS* and *Agent Technology*. Both courses will be given in English and are part of the obligatory Basic Course Program for SIKS Ph.D. students. Although these courses are primarily intended for SIKS Ph.D. students, other participants are not excluded. However, their number of passes will be restricted and depends on the number of SIKS Ph.D. students taking the course.

Scientific directors:
- prof.dr. J.-J.Ch. Meyer (UU), prof.dr. E.O.Postma (UM): Formal methods for IKS
- prof.dr. J.-J.Ch. Meyer (UU), dr. C. Jonker (VU): Agent technology

SECTION KNOWLEDGE SYSTEMS IN LAW AND COMPUTER SCIENCE

Section Editor
Marie-Francine Moens

The 16th Annual Conference on Legal Knowledge and Information Systems

December 11-12, 2003, Utrecht

Organised under the auspices of the JURIX foundation, Co-sponsored by Centre national de la recherche scientifique, Pluridisciplinary Network (RTP) on Law and Information Systems, France,

and in collaboration with Leibniz Centre for Law (Universiteit van Amsterdam) and SIKS, the Dutch research school for information and knowledge systems.

The sixteenth JURIX conference will be held in Utrecht, the fourth largest city of the Netherlands, jointly organised by the Faculty of Law and the Institute of Information and Computing of Utrecht University. The conference venue is located at the heart of Utrecht's attractive historic centre.

INVITED SPEAKERS

- D.J. van Dijk, member of the Dutch Council for the Judiciary (Raad voor de Rechtspraak).
- Giovanni Sartor, CIRSFID and Faculty of Law, University of Bologna.
- Willem Wagenaar, Dean, University College Utrecht (dinner speaker)

More information can be found on http:/www.cs.uu.nl/jurix03/

JURIX Workshop on E-Government

December 9, 2003, Amsterdam

Organised in conjunction with JURIX 2003: the 16th Annual International Conference on Legal Knowledge and Information Systems

Citizens and enterprises demand a more efficient and service directed government. Public administrations want to meet this demand, but are also confronted with a growing quantity of rules, regulations and case law, from various sources at international, European, national and local level. ICT may prove helpful in this development. New areas of research and development evolve that go by names like electronic' or smart' government, e-government and e-democracy. This workshop intends to bring together researchers and developers from various backgrounds and organisations involved in this field: academics, legal practitioners, public administrations, software developers, etc.

PRELIMINARY PROGRAM

9:00-9.30	Registration and opening
9.30-10.30	Session 1 - Strategies and policies e-Government and e-Democracy *The Italian Prospect* Roberta Nannucci, Maria Angela Biasiotti, Italy
	Public Accountability in the Information Age Mark Boven, Albert Jacob Meijer, The Netherlands
	Some social aspects on the introduction of e-government: Problems and possible solutions Andreas Rapp, Austria
10.30-11.00	Coffee break
11.00-12.20	Session 2 - Knowledge assets and legal standardization *Knowledge assets in the public sector* Maria Wimmer, Roland Traunmüller, Austria
	METALex : Jurisdiction and Language Alexander Boer, Rinke Hoekstra, Radboud Winkels, Tom van Engers, The Netherlands
	Norma-Editor: XML editor for managing law in force Monica Palmirani, Italy
	Structural Preparations Ensuring the Circulation of Accurate Emergency Information Akira Ide, Naoki Kaneta, Japan
12.20-12.30	Discussion
12.30-13.30	Lunch
13.30-15.00	Session 4: Technologies and security issues *eJustice: Towards a global security and visibility framework for Justice in Europe* Michel Frenkiel, France
	Data-protection compatible identification - the model followed in Austrian e-Government initiatives Herbert Leitold, Reinhard Posch, Austria
	Two-stage Internet Voting: Advantages and Difficulties Robert Kofler, Robert Krimmer, Martin Karl Unger, Alexander Prosser, Austria
	Transmitting Video to Handheld Devices Maurice Danaher, Australia
14.50-15.00	Discussion
15.00-15.30	Coffee break
15.30-16.20	Session 5 - Applications and law documentation *Electronic Birth Registration in Rajshahi, Bangladesh* Moshtaq Ahmed, India
	Islington Link, the networking and information site for the Voluntary Sector in Islington

Frank Wilson, United Kingdom
XML Standards for Integrated Justice Information Sharing: A Review and Discussion of Current Activities
David Roberts, USA
Law Enforcement and the Search for new Data Reporting Concepts: an Empirical Study on Critical Success Factors for Efficient Data Reporting
Rex Arendsen, The Netherlands

16.20-16.30 Discussion

ANNOUNCEMENTS

Research and Events at the DECIS Lab

Stijn Oomes
DECIS

There is a new lab in the Netherlands where you can find a buzz of research activity in artificial intelligence and related fields. It is the Delft Cooperation on Intelligent Systems (DECIS) that was founded a year ago by Thales Research & Technology Netherlands, the TU Delft, the Netherlands Organisation for Applied Scientific Research (TNO), and the Universiteit van Amsterdam.

The research focuses on developing the next generation of management support systems. You may think of applications in crisis management, traffic control, financial services, medical care, or any other sector in which people need support in ordering information, making decisions, and forming plans. This involves fundamental understanding in a wide range of fields: from hardcore information and communication technologies to human cognition and sociology. Just think of this basic question; how much control does a human team want to delegate to an artificial intelligent system?

There are plenty of opportunities at the DECIS Lab for internships and research positions. We also encourage you to contact us to discuss potential collaborative projects. Finally, we would like to invite everyone to attend the DECIS Colloquium that is (usually) held at the last Thursday of the month. Below is the abstract for the presentation of Manuela Viezzer on concept formation which will take place on Thursday 20 November.

DECIS COLLOQUIUM

Autonomous concept formation: an architecture-based analysis. Manuela Viezzer M.Sc. (University of Birmingham)

Our work addresses the problem of autonomous concept formation from a design point of view, providing an initial answer to the question: What are the design features of an architecture supporting the acquisition of different types of concepts by an autonomous agent?

During the talk, I will present the design and implementation of a prototype system, in which an agent is able to learn autonomously a set of affordance concepts, capturing some of the causal laws of the environment inhabited by the agent. More precisely, I will follow a path through a series of adaptive architectures, as initial steps towards a more comprehensive solution.

I will also discuss, more generally, our ideas on a design-based methodology to study a cognitive phenomenon, focusing on the issues involved in the study of concept formation.

You can find out more about the DECIS Lab at our web site www.decis.nl.

The 10th Advances in Computer Games Conference

24-27 November 2003, Graz, Austria

Sponsored by IFIP, Organized by ICGA

The 10th Advances in Computer Games Conference is to be held in the attractive and historic city of Graz, European Capital of Culture

in 2003. It is taking place alongside the 11th World Computer Chess Championship and the 8th Computer Olympiad. The Conference commences on Monday November 24 and will take place on four consecutive days. The Conference aims first to provide an international forum for computer-games researchers to present the new results of their ongoing work. Secondly, the organisers invite contributions on all aspects of computers and games.

Monday, November 24, 2003

08.00-08.30	Registration
08.30-08.50	Opening
08.50-09.00	Announcements Prof. K. Jungwirth Prof. H.J. van den Herik
09.00-09.20	*Static recognition of potential wins in KNNKB and KNNKN*. E. A. Heinz
09.25-09.45	*Evaluation function tuning via ordinal correlation*. D. Gomboc, T.A. Marsland and M. Buro
09.45-10.05	Coffee break
10.10-10.30	*First experimental results of ProbCut applied to chess*. A.X. Jiang and M. Buro
10.35-10.55	*Building the Checkers 10-piece endgame databases*. J. Schaeffer *et al.*
11.00-11.20	*The 7-piece perfect play lookup database for the game of Checkers*. E. Trice and G. Dodgen
11.20-11.40	Coffee break
11.45-12.05	*Computer programming of Kriegspiel endings: the case of KR versus K*. A. Bolognesi and P. Ciancarini
12.10-12.30	*Opponent-model search in Bao: conditions of a successful application*. H.H.L.M. Donkers, H.J. van den Herik and J.W.H.M. Uiterwijk

Tuesday, November 25, 2003

08.30-08.50	*Solving the Oshi-Zumo game*. M. Buro
08.55-09.15	*New games related to old and new sequences*. A. Fraenkel
09.20-09.50	*Searching with analysis of dependencies in a solitaire card game*. B. Helmstetter and T. Cazenave
09.50-10.10	Coffee break
10.15-10.35	*DF-PN in Go: An application to the one-eye problem*. A. Kishimoto and M. Mueller
10.40-11.00	*When one eye is enough*. R. Vila and T. Cazenave
11.05-11.25	*Monte-Carlo Go Development*. B. Bouzy and B. Helmstetter
11.25-11.45	Coffee break
11.50-12.10	*Model endgame analysis*. G.McC. Haworth and R.B. Andrist
12.15-12.35	*Search versus knowledge: An empirical study of minimax on KRK*. A. Sadikov, I. Bratko and I. Kononenko
12.40-13.00	*Chess endgames: data and strategy*. J. Tamplin and G.McC. Haworth

Thursday November 27, 2003

08.30-08.50	*Evaluation in Go by a neural network using soft segmentation*. M. Enzenberger
08.55-09.15	*Learning to score final positions in the game of Go*. E. van den Werf, H.J. van den Herik and J.W.H.M. Uiterwijk
09.20-09.50	*Static analysis by incremental computation in Go programming*. K. Nakamura
09.50-10.10	Coffee break
10.15-10.35	*Solving 7x7 Hex: virtual connections and game-state reduction*. R. Hayward *et al.*
10.40-11.00	*Automated identification of patters in evaluation functions*. T. Kaneko, K. Yamaguchi and S. Kawai
11.05-11.25	*An evaluation function for the game of Amazons*. J. Lieberum
11.25-11.40	Coffee break
11.45-12.05	*Search and knowledge in Lines of Action*. D. Billings and Y. Bjornsson
12.10-12.30	*An evaluation function for Lines of Action*. M.H.M. Winands, H.J. van den Herik and J.W.H.M. Uiterwijk

Case-Based Reasoning in the Law
An International Workshop

November 25, 2003, Maastricht

On November 25th 2003, a workshop on legal case-based reasoning will be held at the Law Faculty of the Universiteit Maastricht.

The primary aim of the workshop is to discuss the subject of legal case-based reasoning both from an Artificial Intelligence perspective and from a legal theoretical stance. A number of experts have been

invited to come and speak about legal case-based reasoning from their own professional background. Three of the speakers are already known: Kevin Ashley, Henry Prakken and Jaap Hage.

A secondary aim of the workshop is to be a meeting place for members of the special interest group on Law and Logic. After a successful series of meetings in Utrecht in the nineties, the interest group has been revived recently at the occasion of the IVR conference in Lund. At the workshop the members of the interest group will have the opportunity to make plans for the future of the group.

You are warmly invited to participate in the workshop.

The workshop is scheduled one day before the Ph.D. defence of Bram Roth, who has developed a formal model of case-based reasoning in the law. All participants of the workshop are of course welcome to attend the defence.

The latest information on the program of the workshop can be found on the workshop's web site: www.rechten.unimaas.nl/metajuridica/verheij/cbr2003/

DIR-2003
4th Dutch-Belgian Workshop on Information Retrieval

December 8-9, 2003, Amsterdam

The fourth Dutch-Belgian Workshop on Information Retrieval (DIR-2003) will take place on 8 and 9 December 2003 in Amsterdam. DIR-2003 is organized by CWI in cooperation with ILLC, SIKS and NWO.

The primary aim of the workshop is to provide a meeting place where researchers from the Netherlands and Belgium (and neighboring countries) who are working in the domain of information retrieval and related disciplines can exchange information and present new research developments. The event is part of the advanced components stage of SIKS educational program. Therefore, SIKS Ph.D. students are strongly encouraged to participate.

The keynote speakers will be

- Charlie Clarke (University of Waterloo) on *Robust and Reliable Information Retrieval*
- Aleksander Øhrn (FAST Search & Transfer) on *Search engines: What they do and how they work*,
- Bonnie Webber (University of Edinburgh) on *QA Research at the University of Edinburgh*

The final program is not available yet, but includes topics like:

- Retrieval models, language models
- Text representation, information extraction, text summarization, text categorization, topic tracking and event detection
- Query processing, thesaurus construction, user models
- Cross-language IR
- IR for the Web, XML and metadata, link analysis
- Multimedia IR, video retrieval, audio retrieval
- Question answering systems
- Domain-specific IR applications
- IR evaluation

Participation (lunch included) is free for SIKS Ph.D. students. More details can be found at http://lit.science.uva.nl/DIR/

For all questions regarding SIKS' educational program, please contact: office@siks.nl

International Seminar
IT opening up New Horizons in Life Sciences?

December 10, 2003, Heerlen

Organized by IngenieursNetwerk Hogeschool Zuyd, Alumni-vereniging van het Platform Techniek

In the present-day society IT plays a very important role. This also goes for the applications of IT in biotechnology, medical technology and the pharmaceutical and food industries. The application of IT in Life Sciences does not only result in faster and better data processing, but also in a confrontation with new possibilities. Computer models open the possibility to overview and simulate the concerted action of large quantities of macromolecules in a living cell. The question that presents itself here is whether the increasing insight into the many reactions will ultimately lead to the understanding of "Life". Formulated differently: Can we calculate Life?. The integration of computer science and biology results in bio-informatics. Bio-informatics projects range from genome analysis, through sequence alignment,

database design and data mining to macromolecular structure validation.

The digitalization of medical technology finds ever more applications. Thus, by learning to recognize the distinctive shapes of defects in digital medical images with the help of computer-aided search engines, we can develop computer-aided diagnosis systems. Will the increasing possibilities of digitalising medical analysis techniques ultimately lead to the glass patient?

IT is also important in production processes and quality assurance in the pharmaceutical industry. It should be noted that the validation of computerised systems is of crucial importance to the pharmaceutical industry.

The application of IT in life sciences offers many possibilities for new developments. But to what extent are these developments limited and can IT form a bottleneck, too? The developments described above, which are the focus of the international seminar IT opening up new horizons in life sciences?, are crucial for the Netherlands considering their position in the IT – and life sciences – market.

PROGRAMME

13.00	Registration, coffee and tea
13.45	Opening Prof.dr.ir. Harry Dieteren, IngenieursNetwerk, Hogeschool Zuyd
13.50	*Can we Calculate Life?,* Prof.dr. Roel van Driel, Swammerdam Institute for Life Sciences, Universiteit van Amsterdam
14.20	*Genes, Diseases and Silicon,* Ing. Marc van Driel, CMBI, KU Nijmegen
14.50	*IT, a Bottleneck in Life Sciences?,* Ir. Niels van Namen, IBM, Life Sciences
15.20	Break
15.50	*Beyond Watson and Crick: IT in Genomics*, Prof.dr. Paul Borm, Hogeschool Zuyd
16.00	*A Business Point of View on IT-quality Within a Pharmaceutical Company*, Piet Vervoort, RE, CISA Global Manufacturing Services, NV Organon
16.30	*The Glass Patient*, Prof.dr.ir. Bart ter Haar Romeny, Department of Biomedical engineering, TU Eindhoven
17.00	Get-together party
18.00	End

ORGANISATION, REGISTRATION AND COSTS

The seminar is organised by the IngenieursNetwerk of the Hogeschool Zuyd (Heerlen, the Netherlands). The IngenieursNetwerk is a meeting place for alumni of the Platform of Technology, for companies, for institutions and for the Hogeschool Zuyd.

The seminar is not only open to members of the IngenieursNetwerk but also to all others interested in an orientation into the possibilities of IT in life sciences. The official language during the seminar will be English.

Please register as soon as possible, but not later than November 24, 2003, by sending, faxing or e-mailing the filled-out registration form to the IngenieursNetwerk secretary's office. Admission is determined by the order of registration.

The costs, including beverages and documentation are € 65,- per person; former students of the Platform of Technology of Hogeschool Zuyd enjoy a reduction of € 10,-. After registration you will be sent an invoice.

DATE AND PLACE

The seminar takes place on Wednesday, December 10, 2003 from 13.00 h. to 18.00 h. in the Hogeschool Zuyd facility in Heerlen, the Netherlands. After registration you will be sent travel directions.

FURTHER INFORMATION

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CONFERENCES, SYMPOSIA WORKSHOPS

Below, the reader finds a list of conferences and websites or addresses for further information.

NOVEMBER 3-5, 2003
Eighteenth International Symposium on Computer and Information Sciences (ISCIS'03). Antalya, Turkey.
http://www.iscis03.metu.edu.tr/

NOVEMBER 4-7, 2003
The Second International Symposium on Formal Methods for Components and Objects (FMCO 2003). Leiden, The Netherlands.
http://fmco.liacs.nl/fmco03.html

NOVEMBER 19-22, 2003
The Third IEEE International Conference on Data Mining (ICDM '03). Melbourne, Florida, USA
http://www.cs.uvm.edu/~xwu/icdm-03.html

NOVEMBER 20, 2003
Conference on Information Science 2003. TU Eindhoven, The Netherlands.
http://wwwis.win.tue.nl/infwet03/index-en.html

NOVEMBER 22-30, 2003
The 11th World Computer Chess Championship 2003 (WCCC). Graz, Austria.
http://www.graz03.at

NOVEMBER 23-27, 2003
The 8th Computer Olympiad. Graz, Austria.
http://www.cs.unimaas.nl/olympiad2003/

NOVEMBER 24-27, 2003
The 10th Advances in Computer Games Conference (ACG10). Graz, Austria.
http://www.cs.unimaas.nl/ICGA/acg10/

DECEMBER 4-7, 2003
11th Portuguese Conference on Artificial Intelligence (EPIA'03). Beja, Portugal.
http://www.di.uevora.pt/epia03/

DECEMBER 8-13, 2003
Neural Information Processing Systems, Natural and Synthetic. Vancouver, Canada.
http://www.nips.cc

DECEMBER 10-12, 2003
The 8th Australian and New Zealand Intelligent Information Systems Conference (ANZIIS2003). Sydney, Australia
http://www.eese.bee.qut.edu.au/anziis2003

DECEMBER 15-17, 2003
The Twenty-third SGAI International Conference on Innovative Techniques and Applications of Artificial Intelligence (AI-2003). Cambridge, UK.
http://www.bcs-sgai.org/ai2003/

DECEMBER 18-19, 2003
The 1st European Workshop on Multi-Agent Systems. University of Oxford, UK.
www.eumas.org

JANUARY 12-15, 2004
GI/Dagstuhl Research Seminar. Model-based Testing of Reactive Systems. Schloss Dagstuhl, Sweden.
http://www.it.uu.se/research/project/motres/

FEBRUARY 11-13, 2003
International Conference on Computational Intelligence (ICCI 2004). Çanakkale, Turkey.
http://icci.ijci.org/

FEBRUARY 29-MARCH 3, 2004
Fourth International ICSC Symposium on Engineering of Intelligent Systems (EIS 2004). Island of Madeira, Portugal.
http://www.icsc-naiso.org/conferences/eis2004/eis-cfp.html

MARCH 14-17, 2004
The 19th ACM Symposium on Applied Computing (SAC 2004). Nicosia, Cyprus.
http://www.acm.org/conferences/sac/sac2004

MARCH 17-18, 2004
Action in Language, Organisations and Information Systems. The 2nd International Conference-ALOIS 2004. Linköping, Sweden.
http://www.vits.org/konferenser/alois2004/

APRIL 5-7, 2003
International Conference on Information Technology: Coding and Computing (ITCC 2004). Las Vegas, USA.
http://www.cs.okstate.edu/~aa/itcc04/itcc04.html

APRIL 5-7, 2004
evoMUSART 2004 - 2nd European Workshop on Evolutionary Music and Art. Coimbra, Portugal.
http://evonet.dcs.napier.ac.uk/eurogp2004/

APRIL 14-16, 2004
IEEE International Conference on Engineering of Complex Computer Systems, IEEE ICECCS. Florence, Italy.
http://www.dsi.unifi.it/iceccs04

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business rules

Under the name 'the business rules approach' the use of declarative logical statements to guide, declare and execute business behavior is gaining more attention. The business rules approach uses traditional expert system technology and technologies in the semantic web but, more importantly, it emphasizes the role of the business in defining and updating the rules that guide the business behavior.

librt

LibRT offers products and services to assess the quality of business rules by offering automated rule verification, support for rule visualization and rule validation. We want to become a certification authority for business rules. Our technology is integrated in environments for (business) rule specification and legislation modeling.

offer

We offer students (bachelor and master) a chance to contribute to the new tools that companies need for specifying and executing high quality business rules. At this moment we are researching:

- translation of formal logic rules to any natural language
- improved visualization of complex logic
- automatic repair of logic based on verification and validation results
- generation of different rule types from one 'common logic' based on usage of the logic
- for someone with interest in robotics we are looking for help to create an unmanned sales booth that can be used at conferences to demonstrate and sell our technology

Our tools are written in the .Net environment, programming experience is not necessary but can be an advantage.

tip

More on business rules? Visit our website or the European business rules conference to be held in Amsterdam, June 2004, see www.eurobizzrules.org. More information? Call us and ask for Silvie Spreeuwenberg or mail to: Silvie@librt.com

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