*I*NFORME*R*

★ CEPIS ★

It could be you...

...leading the IRSG into the new Millenium. At this year's AGM (to be held at the colloquium) elections will be held for the new committee. All committee posts will be considered vacant, although serving members may stand for re-election.

Current IRSG Chair, Mark Dunlop, will not be standing for re-election. After six eventful years in the hot seat, Mark has decided to hand the keys of the inner sanctum over to someone else. And, in case he feels that he might be persuaded to stay on, Mark will also be leaving the UK in the summer for a new research position in Denmark.

Nominations for the post of Chair or any committee post, including ordinary member, can be made in person at the colloquium, or by email to Mark *<mark@dcs.gla.ac.uk>* (*see overleaf for a list of positions and current committee members*). Mark can also offer advice on what the various jobs entail.

Ian and Jon

Contents

Who's who

IRSG Committee Contact List 1998 - 1999

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Wondering who you should contact about what? Well, here's the current list of contacts.

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Tony Kent Strix Award

Nominations for the 1999 Award are now invited, and should be sent with full supporting documentation to: Alan Gilchrist, Editor, Journal of Information Science, 32 Friar Road, Brighton BN1 6NH, U.K.

The closing date for nominations is Friday 18th June 1999.

The Strix Award is in memory of Dr Tony Kent, a past fellow of the U.K. Institute of Information Scientists, who died in 1997. Tony made a major contribution to the development of information science and information services in the U.K. and internationally, particularly in the field of chemistry.

The Award is given to an information worker in recognition of an outstanding practical innovation or achievement in the field of information retrieval. This could take the form of an application or service, or overall past achievements from which significant advances have emanated. The Award is open to individuals or groups from anywhere in the world. Nominations will be judged by a panel of experts, including the recipient of the 1998 Award, and the statuette of an owl will be pesented to the winner after the Institute's AGM in September.

The name Strix was chosen to reflect both Tony's interest in ornithology, and the name of one of the last and most successful information retrieval packages which he created. A small booklet, containing some contributions from colleagues is available from the Institute Office (price £4.50, profits to the Strix Award Fund): 44 - 45 Museum Street, London WC1A 1LY <lis@dial.pipex.com>

Stephen Robertson

CIR '99 Report

Report on CIR '99, the 2nd UK Conference on "The Challenge of Image Retrieval",

Newcastle upon Tyne, 25-26 February 1999.

by *Professor David J. Harper*

School of Computer and Mathematical Sciences, The Robert Gordon University, Aberdeen.

(co-chair of CIR '99 with Dr. John Eakins, University of Northumbria at Newcastle)

Image (including video) storage and retrieval is arguably one of the most exciting and fastest-growing research areas in the field of multimedia technology. The First Challenge of Image Retrieval Conference held in February 1998 was the first UK forum set up specifically to bridge the gap between the different research and practitioner communities with an interest in image storage and retrieval. The second Conference in the series again brought together researchers and practitioners, in order to exchange information and ideas on significant developments in related disciplines and the challenges facing the user communities.

This short article provides a personal view on the Second Challenge of Image Retrieval Conference, based on a final summary presented by the author at the conference. It is by necessity partial due to space and time constraints, and you are referred to additional sources of information at the end of this article.

The conference got off to a flying start with a session on "Content-based Image Retrieval technology: can we make it deliver?" presented by John Eakins and Margaret Graham of the Institute of Image Data Research, University of Northumbria.

They presented the initial findings of a JISC* funded study on the state-of-the-art of Content-based Image Retrieval (CBIR) technology, and this was followed by discussion based on short position statements by representatives drawn from the user communities. Three main messages emerged from this session. First, there is a considerable gulf between what CBIR can deliver, which is mainly low-level feature based retrieval, and what users "really, really want", which is retrieval based on semantic features. Second, that there is considerable scope for progress in hybrid and cross-media IR, and that the (structured) text and image hybrid system is of continuing interest and importance to the end users, e.g. stock photograph archives. Third, that the short-term impact of CBIR is likely to be in specialist application areas such as fingerprint, trademark and face image retrieval.

Michael Swain of Cambridge Research Laboratory, Compaq (Cambridge, Mass.) presented an excellent keynote on the research and practical challenges of searching for (still) image and video on the Web. He described the challenges in developing Alta Vista's Photo Finder, and an earlier image search engine, WebSeer. Interestingly, much of the image retrieval functionality in Photo Finder is based on text retrieval techniques. Less surprisingly, perhaps, is that scaleability and performance are major issues, and that possible CBIR solutions may be rejected on this basis. The speaker stressed the end user/ customer focus of his research, and

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*Joint Information Systems Committee, organisation responsible for provision of a national network infrastructure and exploitation of information systems for the UK Higher Education and research council communities.

highlighted the research benefits of this applied research approach, namely that interesting and relevant research problems emerge. One example was the identification of "near duplicate" images for assisting users in identifying copyright violations, an application incidentally that makes extensive use of CBIR techniques.

Three sessions of the conference were devoted to the presentation of research papers, where the themes of these sessions were "CBIR applications", "CBIR techniques" and "New approaches to Image Data Management". You are referred to the Electronic Proceedings (see below) for the abstracts and papers. A number of clear trends emerged from the presentations, and from discussions throughout the conference, these being:

• The challenge of bridging the gap between low-level feature indexing and matching techniques, and the actual user need for high-level semantic retrieval (a long standing problem for text in the IR community too!), and the role for various techniques in meeting this challenge, namely:

• the role of "text" (automatic indexing, keyword and thesaurus approaches) in hybrid text/image systems, which was referred to by one speaker as "the complementarity of CBIR and text (metadata)";

• the role of browsing and visualisation as alternatives to querying, where browsing by users "supplies" the semantic interpretation; and

• the role of "whole image" approaches to image indexing and retrieval, e.g. the use of power spectra and machine learning for classification of images.

• The (continuing) need for customer and end user orientation and focus in order to inform and make relevant the research we do, and this through:

• establishing end user and customer requirements and needs through ethnographic studies, requirements analysis, etc.;

• identifying "real world" problems, which require fundamental research, e.g. the "near duplicate" problem, scaleability, support for hybrid indexing approaches, etc;

• emphasis on good user interface design, possibly in tandem with HCI experts; and

• developing and employing sound and appropriate techniques for evaluating CBIR- based tools and systems, where evaluation is built organically into the projects we undertake

• A developing interest in video indexing and retrieval, based on the need to manage and access large, video archives and repositories, where much of this demand stems from consumer products, e.g. video-on-demand, broadband TV, and so on. Naturally, the research trends identified above hold as much, if not more, for video IR applications, in which the needs of users are even less well understood.

The final session of the conference concerned emerging standards for image retrieval. Alan Lock of the Technical Advisory Service for Images (TASI) presented a thought-provoking talk on the "Importance of Standards", a message which I am sure would not be lost on figures in public life. He highlighted both the benefits of standards, which include underpinning for developing product markets, but at the same time indicated some of the pitfalls, namely premature choices of technological solutions. Michael Day of the UK Office for Library and Information Networking presented a talk on "Metadata for Images", in which he mainly concentrated on the metadata formats developed under the Dublin Core initiative and the Consortium for the Interchange of Museum Information (CIMI) standard. This work highlights, again, the

importance of text (in this case structured metadata) in multimedia retrieval, and indeed indicates the appropriateness of the expression "a picture is worth a 1000 words". Indeed, image libraries are prepared to provide this metadata, using skilled, human indexers. Finally, Edward Hartley of the University of Lancaster, gave an excellent overview of the work on the new MPEG-7 standard, and the likely impact of this standard. The standard is intended to "provide a framework within which to progress the evolution of media objects from undifferentiated BLOBs to *fully searchable, retrievable and indexed* content items with the same flexible access capability that we *expect from text*" (my emphasis). Potentially, this is a far-reaching standard, and the speaker encouraged the CBIR community to get involved in this standards work. These presentations were followed by wide-ranging question-and-answer and discussion session, ably chaired by Peter Enser, in which Edward Hartley fielded some challenging questions on MPEG-7. So, the conference came full circle, and ended with a challenge!

In addition to the formal plenary sessions, there was also an opportunity to view systems demonstrations, both research prototypes and products, and to view posters. Typically, much of the conference activity centred on informal discussions at dinner and afterwards, and from a social perspective, the conference was also undoubtedly a success. The Challenge of Image Retrieval Conference was organised by the Institute for Image Data Research, University of Northumbria at Newcastle, on behalf of its sponsors , and the Institute staff should be congratulated on the excellence of the local arrangements.

Professor David J Harper

Additional Sources of Information

"*Challenge of Image Retrieval*" Conference website at *http://*

www.unn.ac.uk/iidr/conference.html has details of CIR98 and CIR99, including for each conference, the call for papers, programme, and abstracts of the keynote, invited speaker and posters.

Electronic proceedings of CIR98 (and CIR99 when approved by eWiC Editor) at the BCS *electronic Workshops in Computing* website (projected launch date: 22nd March 1999) at *http://www.ewic.org.uk/*

Details on obtaining copies of the JISC-funded study on the state-of-the-art of CBIR by Eakins and Graham, will be posted on *http://www.unn.ac.uk/iidr/*

Further information and documents on MPEG-7 at *http://drogo.cselt.stet.it/mpeg/*

The Conference was co-sponsored by: the Institute for Image Data Research, University of Northumbria at Newcastle; The British Computer Society Information Retrieval Specialist Group; The British Library Research and Innovation Centre; The Institute of Information Scientists; and The Robert Gordon University, Aberdeen. The event was also supported by the British Machine Vision Association and The Institution of Electrical Engineers.

Museums and the Web

March 11-14, 1999
New Orleans, Louisiana
http://www.archimuse.com/mw99/

The majority of the papers to be presented at Museums and the Web 99 --over 40 presentations from speakers in 18 countries -- are now available on the conference web site http://www.archimuse.com/mw99/ This collection offers an unique overview of the issues and opportunities facing museums and museology as we move our programs and projects online.

J. Trant and D. Bearman mw99@archimuse.com

Chair's report ━━━

Annual Chair's Report

In 1998 the IRSG held its annual colloquium, one workshop and was involved in the organisation of one very successful conference: CIR98.

For the first time in the history of the IRSG, the annual colloquium, IRSG98, was held outside the UK. Partly to celebrate the 20th anniversary of the group and partly to acknowledge the increasing European dimension to IR research and colloquium attendance the colloquium was held in Grenoble, France. Attracting 76 participants from 14 countries, the colloquium was a great success with a very high quality of paper presentation and discussion (not to mention the skiing, which was often of poorer quality!). The colloquium was chaired by Prof Yves Chiaramella of CLIPS-IMAG and the Joseph Fourier University in Grenoble, with considerable support from Dr Catherine Berrut and other 'locals' to whom the group are very grateful. The programme was chaired by myself and organised from Glasgow University. Considerable financial support for the colloquium was received from CEPIS, under the chairmanship of Prof Keith van Rijsbergen, in order to help young researchers from throughout the EU attend. Plans are now well underway for IRSG99 being held in Glasgow and hosted by Prof Forbes Gibb and Dr Monica Landoni from The University of Strathclyde. Offers to host future IRSG colloquia have been received from Cambridge and Darmstadt Universities.

In February saw the running of "The Challenge of Information Retrieval" at The University of Northumbria in Newcastle, which the IRSG was heavily involved in the organisation of together with UNN,

The Robert Gordon University in Aberdeen and The British Library. This event focussed on attracting a spread of researchers and practitioners in the area of image retrieval and succeeded in attracting 102 delegates from a wide background ranging from University researchers to major content providers. Particular thanks for the success of the conference are due to Dr John Eakins and Margaret Graham of UNN for local chairing and organisation and Prof David Harper of RGU who was programme chair. The conference has recently been re-run, as CIR99, again hosted by The University of Northumbria in Newcastle but this sponsored by IRSG, The British Library Innovation Centre, The Institute of Information Scientists, Robert Gordon University and The University of Northumbria at Newcastle. (*see Dave Harper's report on the conference on page 3*).

In September Glasgow hosted the second HCI&IR workshop again jointly organised by Prof Chris Johnson and Dr Mark Dunlop. Earlier in the year the group also published the results of the first workshop as two special editions of Interacting with Computers.

The group continued to publish its newsletter, The Informer. Under the editorship of Ian Ruthven and Jon Ritchie in Glasgow the newsletter has gone from strength to strength and now regularly receives sponsorship to partly subsidies its distribution.

Changes in the committee are most noticeably a change of treasurer from Jonathan Furner to Margaret Graham. This transition went very smoothly, with credit due to both Jonathan and Margaret for ensuring this. Jonathan was our treasurer for many years and did an excellent, and to the chair, transparent job of running the books. He is now at UCLA. The committee has increased its industrial

representation with Jan IJdens move from Robert Gordon University to Sharp.

In 1999 the group will host the 21st annual colloquium and at least two one-day meetings (AI&IR and Relevance Feedback in IR) and will also see a new chair as I will not be standing for re-election at our forthcoming AGM. Like many organisations we are facing the challenges of an increasingly close European Union, so I see the main challenges facing the group over the next years are to continue to strengthen its support of the IR community in the UK, both researches and practitioners, and to continue in its role of supporting young and fresh research in IR throughout Europe through the annual colloquia.

Mark Dunlop

(IRSG Chair 1993 -1999)

ASIS 1999 Annual Conference

Knowledge: Creation, Organization, Use

Washington, D.C

November 1-4, 1999

This conference will look at current (and imminent) knowledge creation, acquisition, navigation, correlation, retrieval, management and dissemination practicalities and potentialities, their implementation and impact, and the theories behind developments. We will review the processes, technologies and tools. We will also look at the appropriate or necessary operational policies, relevant legal issues (laws, legislation and the EU Directive), and international and domestic policies and regulations.

Meetings

21st Annual Colloquium on IR Research

19-20 April 1999, Glasgow, Scotland

http://www.dis.strath.ac.uk/irsg/

Monday 19 APRIL 1999

0900 - 0930   Registration

0930 - 1030   Welcome from Local Chair and Keynote Speaker (Ab Helderman)

1030 - 1100   COFFEE BREAK AND POSTERS

1100 - 1130   *Regions of relevance: approaches to measurement for enhanced precision.* H. Greisdorf and A. Spink, University of North Texas

1130 - 1200   *An empirical study of memory and information retrieval with a spatial user interface* . C. Chennawasin, J. Cole and C. Chen, Brunel University

1200 - 1230   *IR and the dialectic of meaning.* Clare Thornley, Information Science, Strathclyde

1230 - 1400   LUNCH BREAK

1400 - 1430   *Normalisation and matching in the DORO system.* C.H.A. Koster. University of Nijmegen

1430 - 1500   *The Automatic Generation of Templates for Automatic Abstracting.* M. P. Oakes and C. D. Paice, Lancaster

1500 - 1530   *Sequence Models for automatic highlighting and surface information extraction.* M. Amini, H. Zaragoza and P. Gallinari, University of Paris

1530 - 1600   COFFEE BREAK & POSTERS

1600 - 1630   *Document clustering for mediated information access.* Gheorghe Muresan, D.J. Harper and M. Mechkour, Robert Gordon Univeristy, Aberdeen

1630 - 1700   *Clustering information retrieval search outputs.* Y. Kural, S. Robertson, S. Jones, City University

19.00   COLLOQUIUM DINNER at HOTEL SCHOOL

Tuesday 20 April

0930 - 1000   *User Interface Issues for Browsing Digital Video.* H. Lee and A. Smeaton, Dublin

1000 - 1030   *How do people organise their photographs?* K. Rodden, University of Cambridge

1030 - 1100   COFFEE BREAK AND POSTERS

1100 - 1130   *Improving index structures for structured document retrieval.* H. Meuss and C. Strohmaier, Centre for Information and Language Processing, Munich

1130 - 1200   *A two-time model for video content representation and retrieval.* N. Fatemi and P Mulhem, Clips, Grenoble and School of Computing, Singapore

1200 - 12.30   *Using metadata to extract context and organizations around WWW pages.* B. Doan and M. Beigbeder, Ecole des Mines de Saint-Etienne

1230 - 1400   LUNCH BREAK

1400 - 1500   AGM meeting (tbc)

1500 - 1600   BCS Committee meeting (tbc)

Mira '99

Glasgow - 14-16 April 1999

http://www.dcs.gla.ac.uk/mira99
mira99@dcs.gla.ac.uk

Mira is a European Union funded working group looking at how information retrieval should accommodate interactivity and multimedia, and what the implications of these are for the evaluation of IR systems.

The conference will be designed to explore and exchange the best current thinking and opinion on the Mira theme. With this in mind the programme plans an approximately equal mix of participatory demonstrations and exercises, discussion panels or debates on key questions, and selected invited papers and keynote presentations.

The conference starts at 1600 on Wednesday 14 April with Registration and a panel session on different types of relevance and will finish with dinner on Friday evening (with the formal sessions finishing at 1730 with a keynote presentation from Steve Robertson).

Keynotes

Giorgio Brajnik, Università degli Studi di Udine: Title to be confirmed.

Annelise Mark Pejtersen, Risø, and Raya Fidel, University of Washington: Workplace studies of engineering design.

Stephen Robertson, Microsoft Cambridge: Title to be confirmed.

Demonstrations

Demonstrations or exercises are currently planned on the following topics:

Degrees of and assumptions behind consensus in relevance judgments;

Collaborative filtering;

Applying a multi-level evaluation framework to IR.

Panels

Panels are currently planned on the following topics:

The worth of the TREC programme;

Different senses and types of relevance.

Papers

The following papers have been submitted for the conference and will be distributed at the conference.

The application of work tasks in connection with the evaluation of interactive information retrieval systems: empirical results. P Borlund and P Ingwersen*

Meetings

Negotiating a multidimensional framework for relevance space. S Gabrielli and S Mizzaro

Time to Dump P and R? M H Heine

The word association methodology - a gateway to work task-based retrieval. M Nielsen and P Ingwersen

Measuring Agreement Among Relevance Judges. S Mizzaro

The perceived similarity of photos - seeking a solid basis for the evaluation of content-based retrieval algorithms. E Sormunen, M Markkula and K. Jarvelin**

Toward a Theoretical Framework for Information Retrieval (IR) Evaluation in an

Information Seeking Context. A Spink and T Wilson**

Can rule-based indexing support concept-based multimedia retrieval in digital libraries? Some experimental results. U Thiel, A Everts B Lutes and A Stein

These authors have also been invited to revise their content for the proceeings which are expected to be published in the Electronic Workshops in Computing series. Due to timetabling pressures only those papers marked * will be given presentation time at the conference, these were chosen to balance the content of the conference given the panel and demonstration content.

Venues

The conference will be based in The IEE Teacher's Building in Glasgow City Centre with accommodation reserved in Glasgow University's research hotel in the west-end of the city. The conference will open in The Hunterian Art Gallery on Glasgow University's main campus in Hillhead in the west-end of Glasgow.

Registration

This conference is organised and underwritten by the Mira working group on evaluation in information retrieval. Unlike previous meetings of Mira this conference is open to attendees without invitation, but a small registration fee of £100 will be charged.

Program chair: Professor Keith van Rijsbergen

Program committee: Dr Steve Draper, Dr Mark Dunlop

Local organisers: Fiona Nixon, Ian Ruthven, Anne Sinclair

THE 9th EUROPEAN - JAPANESE CONFERENCE ON INFORMATION MODELLING AND KNOWLEDGE BASES

May 24-28, 1999, Iwate Prefectural University, JAPAN

http://www.pori.tut.fi/~hj/ejc99.html

OBJECTIVE: The aim of the conference is to bring together experts from different areas of computer science and other disciplines, who have a common interest in understanding and solving problems on information modelling and knowledge bases. We also aim to recognise and analyse new areas on modelling and knowledge bases to which more attention should be paid. Therefore cognitive science, philosophy and logic, as well as linguistics are relevant areas, too.

ED-MEDIA 99--World Conference on Educational Multimedia, Hypermedia & Telecommunications

June 19-24, 1999 Seattle, Washington USA

http://www.aace.org/conf/edmedia/

This annual conference serves as a multi-disciplinary forum for the discussion and exchange of information on the research, development, and applications on all topics related to multimedia/hypermedia and distance education.

ROPAs

Applications are invited for the Realising Out potential Awards - ROPAs.

The scheme rewards researchers who receive substantial financial support from industry for basic/strategic research through the award of grants to support curiosity-driven research of their own choosing. Proposals must satisfy originality and feasibility criteria. Applications are invited from researchers in Universities and in Research Councils' institutes, units and establishments. Other researchers may apply if their establishments are currently eligible for Research Councils' responsive mode grants. ROPAs are available in all the research areas of all the Research Councils.

Application forms, and full information on the scheme, including eligibility requirements, will be available very shortly on the appropriate Research Council's World Wide Web Home Page.

BBSRC:	http://www.bbsrc.ac.uk
MRC:	http://www.mrc.ac.uk
EPSRC:	http://www.epsre.ac.uk
NERC:	http://www.nerc.ac.uk
ESRC:	http://www.esrc.ac.uk
PPARC:	http://www.pparc.ac.uk

Specific queries relating to the ROPA activities of particular Research Councils can be addressed to:
BBSRC: Mrs Meg Wilson. Tel: 01793 413263. **EPSRC**: Mr John Farrow. Tel: 01793 444111. **ESRC**: Ms Naorni Beaumont. Tel: 01793 413064. **MRC**: Mr Keith Brennan. Tel: 0171 636 5412. **NERC**: Dr Elaine Thorpe Tel: 01793 411751 . **PPARC**: Mrs Pat Bewley Tel: 01793 442016

CLOSING DATE:*BBSRC*: 7/5/99. *ESRC*: 7/5/99. *MRC*: 30 July 1999. *NERC*: 1/9/99. *EPSRC*: NO CLOSING DATE. *PPARC*: NO CLOSING DATE

Book review

Intelligent Hypertext. Advanced Techniques for the World Wide Web.

Charles Nicholas and James Mayfield (editors) Springer Verlag. 1997. ISBN 3-540-63637-4. £19.00. 182pp. Softbound.

Hypertext has been a hot topic for quite sometime now and there is a large number of books on such topic on every library bookshelf. Because of that it has become more and more difficult to write (or compile) new books on hypertext. Even adding the keyword "World Wide Web" in the title or talking about "hypermedia" (multimedia is another hot topic) does not help much anymore. Authors (or editors) have to resort to other keywords to make their books more attractive to a more general public than the relatively small community of researchers in the field. This, from my point of view, explains why we recently have a proliferation of books on "adaptive", "interactive", "dynamic", and finally "intelligent" hypertext. Unfortunately, few books then deliver what they promise in the title.

Having said that, this book, edited by Nicholas and Mayfield, does deliver what it promises. This is due, in my opinion, not only to the high quality of the contributions, but also to the good work done by the editors in selecting them. In fact, the book grew out of contributions and discussions at the Workshops on Intelligent Hypertext, which were held in conjunction with the 1993 and 1994 Conferences on Information and Knowledge Management (CIKM). The purpose of these workshops was to present research results on intelligent systems for managing information using the hypertext metaphor. The adjective "intelligent" refers here to the interaction between the fields of artificial intelligence, database management and information retrieval.

The book comprises nine chapter-length papers presenting a wide selection of research on hypertext, whose results apply to the World Wide Web now, or might apply to future versions of the World Wide Web. Some of the papers present work that is mainly theoretical in nature, like for example, the work reported by Kent and Neuss on a conceptual analysis of hypertext, or the work reported by Mayfield on the advantages of two-levels models of hypertext. Some papers presents prototype systems that are trying to enhance hypertext using information structure and information agents, as in the work by Rus and Subramanian, or annotated 3D environments, as in the work by Gobbetti and Turner. Some other papers address issues that are affecting hypertext in the World Wide Web, such as, for example, information comprehension, the paper by Bieber, user models, the paper by Kay and Kummerfeld, collaborative authoring, the paper by Wang, Ghaoui and Rada, or scalability, the paper by Pearce and Miller.

In summary, the book presents a well balanced and comprehensive selection of work on the new problems hypertext systems are facing since the explosion of the World Wide Web phenomenon. Research in this direction is very important and long overdue.

F. Crestani

Department of Computing Science, University of Glasgow

The Informer gratefully acknowledges the support of *The Computer Journal* in supplying our book reviews

In the next issue....

Reports on Mira '99 and IRSG '99, more info on the one day workshops planned for this year (Artificial Intelligence and IR, Relevance Feedback), and the usual mish-mash of IR-related stuff...

Seeya

Ian and Jon