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Panel Session: The future of IR research in a European Context

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Panel members:

- **Keith van Rijsbergen**, University of Glasgow, United Kingdom – Chair
- **Maristella Agosti**, University of Padova, Italy
- **Ayse Goker**, Robert Gordon University, United Kingdom,
- **Kees Koster**, University of Nijmegen, The Netherlands
- **Peter Ingwersen**, Royal School of Library and Information Science, Denmark
- **Alan Smeaton**, Dublin City University, Ireland

The chair (Keith van Rijsbergen) introduced the session by setting a number of questions to be tackled by the panel and to obtain responses from the floor. The overall aim of the panel was to discuss what direction research in Europe on IR should go. It was stated that ECIR is an excellent forum to discuss the issues of:

1. **ECIR** – what is the nature of this conference given that it is becoming stronger year by year, and is gradually becoming more formal. The traditional focus has been on PhD students – what is the impact on students and new researchers of the colloquium becoming a conference and being more formal?
2. **RIAO** – this is a major bi-annual information retrieval conference, due to be held this year, but has been cancelled. What can the IR community in Europe do, in order to resurrect this important conference?
3. **COLIS** – this is a major library and information science conference. What is the relationship of the European IR community to this conference?
4. **ESSIR** – this is a tri-annual summer school aimed at students and new entrants to the world of information retrieval. This has been a very successful dissemination method – should ESSIR be run more frequently?
5. **IRiX** – this is a proposed new network of excellence (NoE) which will hopefully enhance the European IR community by setting up more and stronger links between all of its members. The specific aims of the network are as follows: to fund activities, to build tools to share, encourage student exchanges, and to set up new joint research projects. IRiX will reach out to all members of the IR community in Europe and the World – it will not just be a club for members only.
6. **FMIR** – this is a formal methods workshop, which has been running for three years at SIGIR, which may result in a separate conference on information retrieval theory.

The chair then asked for members of the panel to make their comments on these and other issues.

Ayse Goker posed number of questions. As IRSG would like to be more European, how do we go about doing this? What are we good at? Should we focus in one direction? How would we like to use and access information? How should we view the information environment? Ayse invited the panel members and the audience to 'be like children again' to wipe the slate clean (tabula rasa) and address these questions with a new frame of mind.

Maristella Agosti underlined an important point – we are open to young people and others coming from different disciplines, who come with new ideas and suggestions. This new blood is positive for information retrieval research. We are a much larger community now, and so we need a forum/conference for students to present their research results in a relaxed environment with senior researchers offering help and mentoring. We need to fight against ignorance of our area. We need a European IR conference, but need to maintain good relations with other IR communities e.g. North America, Asia. A number of conferences with IR content were mentioned e.g. CIKM, SPIRE, ECDL.

Alan Smeaton underlined the fact that European researchers are as active as others in the world and can match them in quality. However, web search engines are based mostly in the U.S.A – IR is a big interest thanks to the Web. Some of our ideas have been taken over by U.S. researchers and there is a track record of European companies being leapfrogged their U.S. counterparts. We in Europe need to find a way of exploiting the ideas that we generate. In the U.S., many IR researchers have moved into the commercial world from academia – this happens less frequently in Europe. Though, we in Europe are much better at networking, which we do at all levels, unlike the U.S. where networking is only done at a high level by senior academics. Framework 6 is an ideal opportunity to improve our track record in this area and improve the integration of European IR research. We need more outlets for our research as the number of papers submitted to SIGIR, CIVR and ECIR is growing at an explosive rate.

Peter Ingwersen agreed with Alan Smeaton on many issues, but focused on content. He suggested that the trend in IR research is going away from what Karen Sparck Jones talked about in her keynote speech and moving towards context. It was stated that we in different areas of IR need work much more together to integrate our different approaches. We need to consider the user more – only one talk in the interactive IR session actually focused on user issues. We need to focus more on people and get away from laboratory based experiments. It was stated, theory is not just formal methods. In the future, presentations at conferences could be more relaxed and flexible moving the focus away from just posters and paper presentations. It was asserted that the library and information science community is under significant pressure and the best submissions to COLIS are typically from the IR community. It was mentioned that the next COLIS conference would be held at Strathclyde University in 2005.

Kees Koster stated that IR is coming alive in Europe, not just in research but also in applications and teaching. It was asserted that IR is at the heart of computer science/informatics – the discipline is core to understanding the manipulation of

information. Text is not dead as a research problem – there are still many issues to be investigated. There is a vast amount of text becoming available e.g. the Web and a Patent application data set from the European Patent Office. We are drowning under 100's of gigabytes of text. We have more languages and are much more aware of issues in cross lingual IR than our partners in the U.S. IR should become part of the curriculum in more courses in Europe – IR in education is an important issue.

The chair then passed the discussion passed to the floor.

Sandor Dominch raised a number of points with regard to the formal methods workshop at SIGIR. The number of submissions to the workshop increases year on year – 1st workshop received twelve submissions, the 2nd year received sixteen submissions, and last year's received twenty submissions. Due to the increase, it is becoming impossible to accept all entries to the workshop. These entries are being published in journals e.g. 2000/2001 submissions were published in JASIST, last years submissions will be published in the Information Retrieval journal. Attendance at the workshop is increasing as a consequence and the event is becoming quite popular. The formal theories in this workshop vary widely e.g. submissions in set theory, logic, probability and statistics have been received. Three advantages were stated: models help focus on ideas, the concepts become clearer and it is easier to teach IR. In summary, it was stated that it is worth considering a conference or forum on IR theory.

Karen Sparck Jones stated that TREC has made real inroads into understand problems in IR. The IR community has now obtained a lot of good test data through this conference. Karen outlined four policy directions for the European IR community:

1. Take part in international conferences/competitions such as TREC
2. Do our own version of TREC
3. Build on TREC by undertaking collaborative activity
4. Do nothing – we don't have the resources

Are there specific European concerns in a TREC context?

Alan Smeaton agreed with Karen on the impact of TREC, but pointed out that numbers (precision/recall, F1, etc) drives TREC and the community has lost sight of interactive issues. As a result of the competitive nature very few attempt to try “whacky” ideas. The Europe Commission rejected the notion to fund an activity similar to TREC.

David Harper asserted that ECIR should retain its student focus, with perhaps more variety of activities (agreeing with Peter Ingwersen on this issue). He suggested that mentoring session would be useful, with a focus to help student hone their ideas with critical evaluations performed in small groups. We need to get IR in other conferences. The Europeanisation of IRSG was welcomed. We need to focus more on users and what they do, incorporate such issues into TREC (a User TREC – dubbed UTREC), but we must not necessarily ditch numbers. We need a framework, which will allow user experiments to be repeated. David invite those interested in working on a community wide framework for user testing to contact him if they would like to be involved.

Maristella Agosti asserted that multi-language and cultural issues are major aspects of European IR research. The major language of conferences is English and this makes life difficult for non-native English speakers to present their papers. We have our own TREC in CLEF and we are trying to develop this further through the DELOS2 network of excellence.

John Tait stated that perhaps a move towards national conferences, which would allow young researchers to present and discuss their work in their native language, could be a solution. This will help young researchers more easily refine their ideas – as has happened in the AI community to good effect. This issue of Cross Lingual IR was raised: users are not interested in CLIR – why is this the case? There is some evidence that indicates users prefer to use one language. Is there any real need for CLIR? Is there any belief that CLIR will work?

Ayse Goker stated that ESSIR is a very useful event, perhaps more of them are needed to draw in researchers from other disciplines. This is needed because IR systems are part of other much larger information systems, we need to think about management and software engineering aspects to deal with problems. Disappointment was expressed with the TREC interactive track – there are serious logistical problems to the success of such a track. However, Ayse would like to see more user-oriented research at TREC. It was also noted that much CLIR research done in North America was done by monolingual researchers – is this a valid paradigm for us? There is scope for European researchers to do something worthwhile in this area. In the mobile technology world, Europe is ahead of North America.

Gianni Amati stated that he liked ECIR in that speakers do the right thing, that is they do science. Researchers try and falsify their ideas. Young researchers have a forum to show their results and hence their mistakes – and it is open to others to contribute to the debate. This is different from SIGIR where to get published you must have a stable theory – ECIR papers could not be published at SIGIR. Two questions were posed. At what state are we at in IR? Is our discipline mature?

Josianne Mothe informed the delegates that there used to be a conference in France which had sessions on IR – about half the papers were on IR research. She supported the idea of national conferences/workshops in IR. IR is an applications area, is this a danger or an opportunity? Issues with users were considered to be important, and a number of questions were posed: What is the user searching for? What are their reasons? How do they use the information they find? Do different task warrant different usage?

Kees Koster informed the delegates of the existence of a national IR conference in the Netherlands called “IRINE” – IR in the Netherlands (Holland and Belgium). So far there have been three meetings of this conference (acronym has changed), and it is ongoing. Attempts to broaden out from this narrow community and get involved with IRSG have proven to be difficult. Kees rather provocatively stated that ECIR should be detached from IRSG. There needs to be two levels for students: a first ‘national’ level, then ECIR as a second level with a ‘European’ focus.

Fabrizio Sebastiani focused on the relationship between ECIR and both ESSIR and SIGIR. Relationships with conferences in other disciplines were also mentioned. ECIR should retain a strong student focus. SIGIR is an international conference, unlike some other discipline based conferences which are U.S. based e.g. the main A.I. conference. We have a good relationship with SIGIR and we do not want to damage this link. We do not want to devalue SIGIR as it is a valuable home for IR researchers all over the world. The relationship between ESSIR and ECIR was then examined. As these events were both focused on PhD students it was suggested that:

1. ESSIR should be held every year
2. ESSIR could possibly co-located with ECIR

There is a strong demand for training in IR, as IR is seldom part of the curriculum. There is a resistance by senior academics to include IR material on Degree courses in many parts of Europe as it is felt that ‘Salton did this stuff years ago’. Having ESSIR every 2/3 years does not fulfil this training requirement. We can change the program of ESSIR to keep attracting young researchers, throughout there PhD study. Can we take up the ESLLI (language logic and information) summer school model?

Keith van Rijsbergen stated that we need to defend Salton's legacy, and need to work on our public relations. Keith reminded delegates of an agreement he brokered in 1980 with Salton in which it was agreed that SIGIR would formally be a joint BCS/ACM conference. Keith asserted that it is hoped that through IRiX we will be able to run ESSIR annually.

Peter Ingwersen stated that the only forum for Danish researchers is ECIR. As Denmark is a small country there is no possibility of having sufficient interest to set-up a national forum for IR. It was asserted that IRiX is a response to TREC, we want to get away from competitive aspects. Current IR systems are not built to handle context.

Steve Robertson focused on Theory. It was noted that science and technology is something we do together, we combine in some way. We do science to understand the world, technology to change the world. IR systems are technology. He agreed largely with Karen on the issues she raised, but there are two issues – how well can we make the technology work, how well can we make predictions so that we can distinguish between ideas (models). There is a cultural gap between Europe and North America noted in FMIR – we can make a better distinction between science and technology and allow other views of testing theories to be done?

Keith agreed largely with what Steve said, and further stated that we are concerned in IR with the science of the abstract world: we want to dissociate technology from science.

Karen Sparck Jones tackled an issue raised by Alan Smeaton i.e. the numbers game. To go beyond numbers one needs an expensive infrastructure – can we afford this in Europe? TREC gives us a pointer here on obtaining the infrastructure. It was also stated that the model for ESSIR was important, particularly structure, content and timing.

Keith asserted that Alan had dealt with the issues Karen raised in part. ESSIR is important, but is a big commitment on those asked to deliver material – there is an issue with workload which cannot be ignored. Increasing the frequency of ESSIR has significant implications for the European IR community.

David Harper picked up the issues raised by Keith and stated that we need to be careful about co-locating ESSIR with ECIR because of the commitment such a move would imply.

Gabrielle Pasi agreed that science and technology are different. She believes that IR is in an early stage. IR is an important aspect of information access. She agreed with Alan that most of the industrial applications come from North America, and we in Europe need to tackle the issue by forming associations with industry as well as other disciplines. Young researchers need to be able to deliver and present their work. Gabrielle suggested that a forum where young researchers could compare and contrast results could provide this.

Maristella asserted that we need more theoretical work and we need also to combine this in an experimental framework in order to validate results.

The chair declared the discussion closed.