



Meet an AKTor

WHAT sort of people work for AKT? We went to Edinburgh to meet Jessica Chen-Burger, who has worked as a research fellow on AKT since January 2001.

Jessica took her first degree in Business Studies at Soochow University, Taiwan. She has two masters degrees – from Missouri and Edinburgh – and a Ph.D. in Artificial Intelligence from Edinburgh. She specialises in modelling business processes and before AKT worked on the US DARPA-funded initiative Air Operations Enterprise Modelling.

■ What are you working on at the moment?

My current work has two strands: one is knowledge management using business process modelling and workflow techniques; the other is part of an initiative – the AKT Map – for providing an intelligent knowledge portal for AKT capturing the research activities of AKT fellows, the people they collaborate with, the important literature and software systems that influence their work and the results of their research activities.

■ And who are you collaborating with?

In AKT, I collaborate mainly with Aberdeen, but through the AKT spin-off project, CoAKTinG, I work with the OU and Southampton. I've also really enjoyed getting to know researchers who are part of the wider AKT family.

■ What are your future AKT plans?

I hope to bring formality and automation to knowledge management where possible. I have already done some of this in the past and hope to pursue this line of work in the future.

■ And what do you think AKT's legacy will be?

Given the internet, obtaining almost any kind of information is no longer an issue. Instead, the most important problem today is to determine whether a piece of information is relevant and trustworthy.

With the diversified talents and commitments of AKT members, I am confident that AKT can shed new light on these important and urgent issues.

AKT in numbers

- 6 years
- 5 universities
- £7.3 million
- 55 researchers

AKTors dominate EKAW conference

THE start of the university academic year saw AKTors dominate EKAW, the premier European conference on knowledge management and the Semantic Web, held in Sigüenza, Spain.

In the most visible sign of this, AKT's Director, Prof. Nigel Shadbolt, was a keynote speaker – together with Prof. Tom Mitchell, a pioneer of machine learning, and Prof. James Hendler, chair of the W3C working group (WebOnt) on the Semantic Web.

Tim Berners-Lee, the inventor of the web, insists that the Semantic Web – incorporating meaning into web pages (see pages 2/3) – will have a larger impact than the original web.

During his talk, Prof. Shadbolt presented examples of how AKT technologies were leading the way. For instance, Ontocopi automatically identifies emergent communities of practice within organisations and uses 3D visualisations to highlight significant clusters of collaborators.

Another indicator of AKT's impact at the conference was the number of AKT-related papers accepted. Seven papers were co-authored by AKTors and four of the five AKT sites were represented at the workshop. Also, two of the three top paper authors were AKTors – Dr Fabio Ciravegna and Dr John



Domingue, each of whom co-wrote three papers. Indeed, the AKT consortium had more papers at the conference than any single nation.

Variety

The seven AKT papers covered a number of key AKT technologies in a wide variety of contexts. For example, Dr Ciravegna described how the Melita system would enable information extraction – automatically extracting items of interest from natural language text – to be

carried out by non-experts. Melita achieves a usability improvement by semi-automating document markup – standard information extraction requires users to mark-up about 100 texts.

Dr Enrico Motta presented MnM, a web-based tool, which also helps annotate documents both automatically and semi-automatically.

Finally, Dr Srinandan Dasmahapatra presented work which automatically identifies when terms in web documents refer to the same entity.

Seven things everyone should know about the World Wide Web . . .

1 Infinite content: As far as the casual web user is concerned, it is in effect an infinitely large dynamic multimedia library.

2 Community of authors: Unlike a library, however, the proportion of readers who are also authors is very high.

3 HTML = content layout + links: The main web language is HTML (HyperText Markup Language), which 'tags' text to be displayed in different styles/fonts and enables you to click on 'links' to jump from one page to any other.

4 Web pages on the fly: For big websites, the pages you see are created 'on the fly'. Content is stored in a generic database, and actual web pages are displayed ('rendered') according to design templates, customised to the person reading them.

5 XML = context-sensitive layout: XML (eXtended Markup Language) goes beyond HTML by tagging abstract functions such as 'headline' or 'author'. These abstract tags allow the display to vary according to the viewing device (eg PC vs mobile phone).

6 Unwieldy and not future-proof: The web could collapse under its own weight. And we must remember that as old formats fall into disuse, older content will become harder to retrieve.

7 Becoming proactive: Literal-minded look-up is all very well, but the web should be more like a smart and helpful librarian, intelligently helping users by understanding what they mean. This is the challenge of the Next-generation Semantic Web, the challenge that AKT has taken up.

Empowering meeting attenders

■ From page 1

University will add some of its pioneering approaches – such as BuddySpace, a suite of enhanced presence management and instant messaging tools, and Compendium, which helps capture the information generated in a discussion in the form of a visual 'group memory' available to all stakeholders.

Key issues for discussion and action will be flagged to all participants using the University of Edinburgh's I-X Process Panels, which help

monitor progress and delegate tasks across complex task structures.

Even those who missed a key discussion at a particular meeting will be able to relive it afterwards: a BuddySpace alert will take them straight to the relevant Compendium diagram, provide schematic highlights of the pros and cons of the debate, and let them jump directly to an 'instant replay' of the video and audio streams recorded and annotated at that point in the discussion!

AKTors Club

INDUSTRIAL relevance is a key factor in AKT. The problems of infosmog are first and foremost real problems within real organisations. Hence we see it as a key test of AKT that our technologies address these problems – and this is a self-imposed test, not one that our funding body, the EPSRC, has dictated.

Our original bid for funding was supported by a number of industrial firms and organisations that were interested in our approach and knew of our partners' reputations. These initial supporters included bluechip firms such as Unilever, BA, Rolls-Royce, Boeing and BP Amoco, and technology firms such as Parametric Technology, Epistemics, Teknowledge and Multicosm (now Active Navigation).

This nucleus of support has been expanded into the AKTors Club, a grouping of organisations that support our research. Club members can be 'players', in which case they display an active interest in AKT, and have a named representative who can track the development of AKT's technologies, and a monitored web page on the AKT website. A second level of membership is that of the 'audience', which contains those companies that have expressed an interest in AKT.

■ The AKTors Club can be accessed via the website at <http://www.aktors.org/club/>. To join, please send an email request to club-request@aktors.org.