Editorial

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Biographical notes: Simon French is a Professor of Information and Decision Science at the Manchester Business School. He has interests in decision and risk analysis, Bayesian statistics, information systems and knowledge management. He was a member of the International Chernobyl Project; it was this experience on the Chernobyl Project that led him to realise the paramount importance of good information management and communication as an integral part of risk management. Later work in food chain and other public risks led to his appreciation of the need for stakeholder participation in the management and decision processes; and recently he has worked on public participation and *e*-democracy, particularly in relation to societal risk management. He is one of the coordinators of the European Science Foundation programme *Towards Electronic Democracy* (TED).

The advent of web technologies has brought the possibility of supporting geographically and temporally dispersed group decision making. Technically it is now possible to discuss issues, debate objectives, formulate problems, access data, analyse models, conduct sensitivity analyses, vote, decide and implement actions, all without the group meeting other than virtually. Web-based Group Decision Support Systems (WGDSS) can then 'take' and, perhaps, proceed further to implement the decision. Such systems already exist within many organisations and companies. They also have potential to operationalise truly deliberative *e*-democracy in which citizens interact over the web to participate in societal decision making. In 2002 the European Science Foundation began the programme *Towards Electronic Democracy* (TED)[1] focused on the development of methods to address societal issues via the WWW using the methodologies of modern decision analysis and support to involve citizens and stakeholders in the actual process of decision making: a *true* step towards *e*-democracy rather than the *e*-administration techniques that so far have lain at the heart of *e*-government initiatives. At TED's heart was a vision to develop methodologies which enable multiple decision analyses to be communicated, explored and, indeed, built over the WWW, thus providing the mechanism by which stakeholders may be drawn more closely into the decision-making process.

When we embarked on our work within TED, I think most of us believed that the challenges that faced us were technological: for instance, how could decision analytic algorithms be deployed robustly in large-scale websites to allow very many users to interact securely? However, very soon we discovered that issues related to

communication and the cognitive aspects of the system were dominant factors in developing such systems (French, 2006; French *et al.*, 2006). Firstly, can we expect all citizens in society to be able to comprehend the decision model(s) and interact, inputting their understandings, perceptions and judgements and so contributing to the decision-making process? Hence the system may not inform their judgements and understanding, nor may their inputs inform the decision-making process. With training such as can be provided within organisations, these cognitive issues may be overcome. However, when the context of use of a WGDSS is that of deliberative *e*-democracy, there is less opportunity to provide citizens with prior training in the use of the tools and their interactions may be neither effective nor well founded. Do such uses of WGDSS in *e*-democracy risk a modern version of GIGO – garbage in, garbage out? Secondly, the system has to fit into a political of societal decision process. It is well known from many studies of information systems that its fit with business or organisational processes can be poor and can inhibit its effective use. Is there any reason to suspect that *e*-democracy systems will inevitably fare any better?

The papers in this special issue arise from debates within the TED programme; and, in particular, at a TED workshop held at Manchester Business School in November 2005 on *Human-Computer Interface Issues in e-Democracy*. They explore many of the issues sketched above.

The paper by De Cindio *et al.* does much to set the context for current developments in deliberative *e*-democracy. They discuss their work in deliberative community networks, the current state and future directions. While there are many other strands of developments in public participation, such deliberative networks are among the most interactive. Within them many perspectives are articulated and discussed.

Collaboration engineering is a relatively novel discipline which seeks to design protocols, patterns of interaction and tools to create and support effective meetings. Alabulkarim and Macaulay discuss how a perspective from collaboration engineering could shape developments in *e*-democracy. They suggest that it is possible to identify patterns in the social aspects of collaboration and propose a pattern for facilitation that can be used to underpin the ICT requirements.

Many societal decisions have geographically referenced aspects: where to site a school, what areas to pedestrianise, *etc.* Yet our everyday language for discussing spatial issues, our geographic vernacular, is far from the precise language used by town planners and their like. How can *e*-democracy tools built upon spatial decision support tools, *i.e.*, geographic information systems, be designed to interact with the citizens' vernacular – or, rather, vernaculars? The paper by Evans and Waters addresses such issues and offers some directions to move forward.

Cáceres *et al.* take a different application, that of participatory budgets in which citizens offer their views on how a public body should set priorities in its budget allocations. Here they look at the HM^3 design method to help develop the tool so that citizens can navigate their way through the pages and the underlying process. Efremov and Ríos Insua also look at the same participatory budget application, but they explore how one might use interactive decision maps to present the Pareto boundary in more than two dimensions to identify non-dominated budgets. They also report a small experiment which shows the promise of the method.

One of the major issues in deliberative democracy is ensuring that the process is representative. For a variety of reasons, not all citizens will be able to involve themselves. Geldermann and Ludwig tackle this issue by considering the weights used

in a multicriteria decision methodology and discussing how these might be set to gain the most representative perspective. Their ideas are undoubtedly controversial, but it is interesting to see how an understanding of multicriteria decisions can articulate and inform the discussion.

Bannister and Connolly step back from the interface between an *e*-democracy tool and the citizen and consider the participation process itself. Specifically they consider the risks inherent in developing, implementing and managing *e*-democracy systems and give us much pause for thought.

References

French, S. (2006) 'Web-enabled strategic GDSS, e-democracy and arrow's theorem: a Bayesian perspective', *Decision Support Systems*, in press.

French, S., Ríos Insua, D. and Ruggeri, F. (2006) 'E-participation and decision analysis', *Decision Analysis*, under revision.

Note

1 http://www.esf.org/ted and http://infodoc.escet.urjc.es/ted/