



EWG-DSS Newsletter

Newsletter of the EURO Working Group on Decision Support System

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Editorial Board

The Newsletter of the EURO-WG on Decision Support Systems is currently edited by:

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Comments and announcements to next issues of the EWG-DSS Newsletter should be sent to F.Dargam@SimTechnology.com or Zarate@irit.fr with the subject: "EWG-DSS Newsletter".

Editorial

by **Pascale Zaraté** (Current Head of the EURO Working Group on DSS)

The EWG-DSS group was created in Madeira (Portugal) during the Euro Summer Institute on DSS in May 1989. Researchers belonging to this group meet each year in different countries. The first meeting was held in Fontainebleau (France) in 1990; the second in Bruges (Belgium) in 1991, this meeting was organised together with the first Mini Euro Conference devoted to DSS, organised by J.P. Brans. The third meeting of the group took place in Hungary in 1992; and the fourth in Sintra (Portugal) in 1993. Then the group migrated to a cold climate and the fifth meeting was organised in Turku (Finland) in 1994. The sixth meeting happened again in a warm land, in Samos (Greece) in 1995. The seventh meeting was held in Ispra (Italy) in 1996; then again in Bruges in 1997, together with the second Mini Euro Conference devoted to DSS, organised by J.P. Brans. Following the second Bruges meeting, our previous chairman Tawfik Jelassi organised the ninth meeting in Granada Spain) in 1998. For the tenth birthday the group went again to Turku in 1999. In 2000 the meeting was held in Toulouse (France) and I was chosen as the new chairperson during this meeting. In 2001 the EWG-DSS group met in Cascais (Portugal). In 2002, our meeting took place together with the Mini Euro Conference devoted to DSS, in Brussels (Belgium) at the VUB from March 24th to 27th, chaired by J.P. Brans and T. Jelassi. The conference consisted of five distinct themes: DSS; Chairperson: P. Zaraté; E + M Commerce; Chairman: T. Jelassi; Multicriteria Analysis; Chairperson: M. Roubens; Human Centered Processes (HCP); Chairman: G. Coppin and J.P. Barthelemy; Prometheus (ethic movement) Chairman: J.P. Brans and M. Despontin.

During these thirteen years, the DSS theme has evolved and we can now see that Information Technologies have had a great impact on the design of such systems. DSSs continue to exist in isolation using classical techniques and methodologies to support Decision-Making, as for example in MultiCriteria Decision-Making. Animating this field that is more complex, developing new methodologies and systems represents a challenge for us as researchers.

As you know, the European Commission is preparing the new Frame Programme (FP6) on Research and Development as part of its European Research Area policy. More information about the FP6 can be found at the web site http://europa.eu.int/comm/research/fp6/index_en.html

Under this perspective, EURO promoted a number of meetings with the European Commissioner on research, Philippe Busquin, and a number of other high ranking EC officials. The purpose of those meetings was to check the possibility for EURO, its member societies and the whole OR community, to benefit from the FP6 and more in general from the R/D policy of the EC. Following these meetings, Euro prepared a "memorandum" which explains what EURO can do within the FP6 and this is now being distributed. I have received the memorandum and if any EWG-DSS members are interested to create such a program or project, I can send it. More information about it can be found on: <http://www.cordis.lu/fp6/eoi-instruments>

Hoping that collaborations and co-operations among all of us will be fruitful, I send to all of you my best regards.

Yours Sincerely, Pascale Zaraté

Recent Publication

A special issue will appear very soon in the European Journal of Operational Research (EJOR) edited by Rita Ribeiro, Antonio Rodriguez and Pascale Zaraté. This special issue will publish a selection of papers presented during the 11th EWG-DSS meeting (June 2000) in Toulouse, and the 12th EWG-DSS meeting (June 2001) in Cascais.

The papers present several aspects and themes of DSS and include the following publications:

Editorial by Rita Ribeiro, Antonio Rodriguez and Pascale Zaraté.

Towards using computational methods for real-time negotiations in electronic commerce by Georgios P. Papamichail and Dimitros P. Papamichail.

Data mining for decision support on customer insolvency in telecommunications business by S. Daskalaki, I. Kopanas, M. Goudara and N. Avouris.

Reinforcing Decision Aid by Capitalizing on Company's Knowledge: Future Prospects by Michel Gründstein, Camille Rosenthal Sabroux and Alexandre Paculski.

Software Evaluation Problem Situations by Ioannis Stamelos and Alexis Tsoukias.

The AGAP System : A GDSS for project analysis and evaluation by Joao P. Costa , Paulo Melo , Pedro Godinho and Luis Dias.

A fuzzy multiple objective decision support model for energy economy planning by Ana Rosa Borges and Carlos Henggeler Antunes.

Fuzzy MADM: An outranking method by T. Aouam, S.I. Chang and E.S. Lee.

Aggregation with generalized mixture operators using weight functions by Rita Almeida Ribeiro and Ricardo Alberto Marques Pereira.

SINGRAR – A fuzzy distributed expert system to assist command and control activities in

naval environment by M. Simoes Marques and F.J. Pires.

Simulation of the European Central Bank decisions and forecast of short term Euro rates with an adaptive fuzzy expert system by Lorenzo Rizzi, Flavio Bazzana, Nikola Kasabov, Mario Fedrizzi and Luca Erzegovesi.

Consistency Stability Intervals for a Judgement in AHP DSS by Juan Aguaron, Maria Teresa Escobar and Jose Maria Moreno Jimenez. ♦

Perspectives

Reflections on aspects needing more attention in the development of DSSs by Fátima Dargam

By checking the work presented in the 12th. Mini EURO Conference as well as from reading recent publications concerning development of specific Decision Support Systems, we can observe that most of the working effort has been concentrated on the investigation of approaches to handle different problems in decision making, like co-operation, communication, consensus and negotiation, within a methodological level.

In some cases, prototypes have been modelled in a pre-customized way, using general-purpose programming languages and demanding a very long development time. In fewer cases available DSS tools and /or spreadsheet packages were used. Some work represented mathematical models in the system without any transparency. That is, without catering for the fact that the targeted interested community – most of the times the real decision makers – do not want to have structures of matrices or trees as their interactive means of introducing or updating data/values in the system.

From the observations above, I believe we can take two main starting points as the basis for improvements when developing a DSS.

(1) We should take more care about providing better (easier to handle) user interfaces for DSSs. By doing so, we may considerably help the decision-makers to understand and use the system in a more effective way.

(2) We should dedicate more working effort to selecting appropriate software tools for the implementation of a specific DSS, so that the representation model of its decision making scenario can be coded without compromising too much its abstraction level. And that the overall implementation time of the system remains affordable.

In keeping with the second point above, we can place the work of Alexandre Gachet, who proposes an up-to-date software framework for supporting the development of specific DSSs (see the Research Review section of this Newsletter).

The reflections described here about the points that are still missing – or that need more attention on the development of DSSs can be considered as “*food for thought*”. They may serve as a building block for an open debate on how to improve DSS development in general. How the other members of the EWG-DSS will respond to them? Well, this I do not yet know. But, I am sure we will hear about it soon through our mailing list. ♦

Research Review

In this section we present the on-going work of Alexandre Gachet. The author is a PhD candidate in the Department of Computer Science of the University of Fribourg in Switzerland.

His work emphasizes the need of a new component model within the available DSS development tools, in order to build specific Decision Support Systems. He revisits the classification of DSS development tools proposed by Sprague in the 80's. By updating Sprague's original view in face of the currently available DSS tools and DSS generators, he proposes a software framework for

developing DSS, which is meant to support both high and low level requirements (like decentralized distributed architecture, mobility, cooperation among users, etc.). It employs high level of code reusability which lowers considerably the development time of the system.

Below you find the abstract of his paper presented at the 12th. Mini EURO Conference, in Brussels.

“Software Frameworks for Developing DSSs – A New Component in the Classification of DSS Development Tools”

by Alexandre Gachet
<alexandre.gachet@unifr.ch>

Abstract: Despite a dramatic evolution in technology during the last twenty years, Sprague's Framework for Development of Decision Support Systems (introduced in 1980) has remained unchanged until today and still offers a strong basis on which many current DSSs rely. However, the interpretation of this framework by the DSS community evolved as years went by, bringing the classification in line with current technological improvements, thereby blurring the boundaries between its various components. This paper analyses this evolution and shows that the current interpretation of Sprague's framework breaks the natural balance of the original framework. Then, it proposes the inclusion of a new component in order to round off the spectrum of decision-making situations that require the development of Specific DSSs.

Keywords: Sprague's Framework, Software Frameworks, DSS Tools, DSS Generators, Specific DSS. ♦

EWG-DSS Meetings

As agreed in an informal meeting of the EWG-DSS during the 12th Mini EURO Conference in Brussels last April, the next meetings of the EURO working group on Decision Support Systems will possibly take place as follows. The organization of the following meetings is not yet fixed and may still be changed.

EWG-DSS Meeting 2003

The group meeting in 2003 is proposed to happen in conjunction with the 14th Mini Euro Conference HCP2003, dedicated to Distributed Decision Making and Man Machine cooperation. This conference will be organised by R. Bisdorff and will be held from 4th to 7th May 2003 in Luxembourg. Contributions for this conference must be presented on an extended abstract (5 pages) format. Contributions presented during this conference could be published in EJOR or Incognito journals.

Four Euro Working Groups take part in the organization of this conference, namely: EWG – DSS ; EWG – MCDA ; EWG – Ethics and E-SIGMA.

Half of a day, during the conference time, will be dedicated to a symposium organised by each group.

A possible meeting with the IFIP group 8.3 on DSS is under discussion and the decision will be made during the Cork conference.

EWG-DSS Meeting 2004

The EWG-DSS 2004 meeting is proposed to happen in a joined conference with the IFIP group 8.3. The place and the dates are not definitively defined yet. More details about it will be available to the group members in future issues of the EWG-DSS Newsletter.

We expect that a significant number of members of the DSS working group can participate in our next meetings, so that further collaboration among members and exchanging of ideas can be promoted on a larger scale. ♦

Upcoming Events

July 2002

DSIAge2002 – International Conference on Decision Making and Decision Support in the Internet Age.

This conference is organized by the IFIP TC8/WG 8.3 and will take place in Cork, Ireland, during the period of 3th to 7th of July 2002.

For more information consult the web site of the conference: <http://afis.ucc.ie/DSIAge2002>.

July 2002

IFORS 16-th Triennial Conference Edinburgh, UK, From July 8th to 12th, 2002. Hosted by the Operational Research Society.

For more information consult the web site of the conference.

May 2003

14th Mini Euro Conference – HCP2003 – Conference on Human Centered Processes: Distributed Decision Making and Man-Machine Cooperation.

This conference will take place in Luxembourg, during 5th to 7th of May 2003.

For more information consult the web site of the conference: <http://www.cu.lu/hcp2003>. ♦

Contributing to this Newsletter

Every member of the EWG-DSS is very welcome to contribute to this Newsletter.

Subjects can be related to:

- Recent Publications
- PhD Dissertations
- Book Presentations / Reviews
- Research Group Presentations
- Research Views and Perspectives
- Forthcoming Events
- General Announcements

Contributions to the EWG-DSS Newsletter should be sent to one of the email addresses below with the subject: “EWG-DSS Newsletter”.
F.Dargam@SimTechnology.com
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EWG-DSS Members

Since the foundation of the Decision Support System Working Group, in 1989, by the occasion of the 6th. EURO Summer School in Madeira, the number of registered members has increased from 25 up to 77.

The updated list of members is available upon request to Pascale Zaraté. Changes to this list should be reported to Pascale Zaraté. ♦

Contacting the EWG-DSS

The EURO-WG on Decision Support Systems is currently head by Pascale Zaraté, who is also in charge of organizing and updating the web site and the mailing list.

EWG-DSS

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Joining the EWG-DSS

If you wish to join the EURO-Working Group on Decision Support Systems, please send an e-mail to zarate@irit.fr, with the following information:

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