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# On the Move to Meaningful Internet Systems: OTM 2010

Confederated International Conferences:  
CoopIS, IS, DOA and ODBASE  
Hersonissos, Crete, Greece, October 25-29, 2010  
Proceedings, Part I

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## General Co-chairs' Message for OnTheMove 2010

The OnTheMove 2010 event in Hersonissos, Crete, during October 24–29, further consolidated the growth of the conference series that was started in Irvine, California, in 2002, and held in Catania, Sicily, in 2003, in Cyprus in 2004 and 2005, in Montpellier in 2006, in Vilamoura in 2007 and 2009, and in Monterrey, Mexico, in 2008. The event continues to attract a diversified and representative selection of today's worldwide research on the scientific concepts underlying new computing paradigms, which, of necessity, must be distributed, heterogeneous and autonomous yet meaningfully collaborative. Indeed, as such large, complex and networked intelligent information systems become the focus and norm for computing, there continues to be an acute and ever increasing need to address and discuss face to face in an integrated forum the implied software, system and enterprise issues as well as methodological, semantic, theoretical and application issues. As we all realize, e-mail, the Internet and even video conferences are not by themselves sufficient for effective and efficient scientific exchange.

The OnTheMove (OTM) Federated Conferences series has been created to cover the scientific exchange needs of the community/ies that work in the broad yet closely connected fundamental technological spectrum of Web-based distributed computing. The OTM program every year covers data and Web semantics, distributed objects, Web services, databases, information systems, enterprise workflow and collaboration, ubiquity, interoperability, mobility, grid and high-performance computing.

OTM does not consider itself a so-called multi-conference but instead is proud to give meaning to the “federated” aspect in its full title: it aspires to be a primary scientific meeting place where all aspects of research and development of Internet- and intranet-based systems in organizations and for e-business are discussed in a scientifically motivated way, in a forum of (loosely) interconnected workshops and conferences. This ninth edition of the OTM Federated Conferences event therefore once more provided an opportunity for researchers and practitioners to understand and publish these developments within their individual as well as within their broader contexts. To further promote synergy and coherence, the main conferences of OTM 2010 were conceived against a background of three interlocking global themes, namely, “Cloud Computing Infrastructures,” “The Internet of Things, or Cyberphysical Systems,” “(Semantic) Web 2.0 and Social Computing for the Enterprise.”

Originally the federative structure of OTM was formed by the co-location of three related, complementary and successful main conference series: DOA (Distributed Objects and Applications, since 1999), covering the relevant infrastructure-enabling technologies, ODBASE (Ontologies, DataBases and Applications of SEmantics, since 2002), covering Web semantics, XML databases

and ontologies, and CoopIS (Cooperative Information Systems, since 1993), covering the application of these technologies in an enterprise context through, for example, workflow systems and knowledge management. In 2007 the IS workshop (Information Security) was added to try cover also the specific issues of security in complex Internet-based information systems. Each of the main conferences specifically seeks high-quality contributions and encourages researchers to treat their respective topics within a framework that incorporates jointly (a) theory, (b) conceptual design and development, and (c) applications, in particular case studies and industrial solutions.

Following and expanding the model created in 2003, we again solicited and selected quality workshop proposals to complement the more “archival” nature of the main conferences with research results in a number of selected and more “avant-garde” areas related to the general topic of Web-based distributed computing. For instance, the so-called Semantic Web has given rise to several novel research areas combining linguistics, information systems technology and artificial intelligence, such as the modeling of (legal) regulatory systems and the ubiquitous nature of their usage. We were glad to see that seven of our successful earlier workshops (ADI, EI2N, SWWS, ORM, OnToContent, MONET, ISDE) re-appeared in 2010 with, in some cases, a fourth or even fifth edition, often in alliance with other older or newly emerging workshops, and that no fewer than four brand-new independent workshops could be selected from proposals and hosted: AVYTAT, DATAVIEW, P2PCDVE, SeDeS. Our OTM registration format (“one workshop buys all”) actively intends to stimulate workshop audiences to productively mingle with each other and, optionally, with those of the main conferences.

We were also most happy to see that once more in 2010 the number of quality submissions for the OnTheMove Academy (OTMA, formerly called Doctoral Consortium Workshop), our “vision for the future” in research in the areas covered by OTM, took off again and with increasing success. We must thank the team of collaborators led by Peter Spyns and Anja Schanzenberger, and of course the OTMA Dean, Erich Neuhold, for their continued commitment and efforts in implementing our unique interactive formula to bring PhD students together. In OTMA, research proposals are submitted for evaluation; selected submissions and their approaches are (eventually) presented by the students in front of a wider audience at the conference, and are intended to be independently and are extensively analyzed and discussed in public by a panel of senior professors.

As said, all four main conferences and the associated workshops shared the distributed aspects of modern computing systems, and the resulting application pull created by the Internet and the so-called Semantic Web. For DOA 2010, the primary emphasis stayed on the distributed object infrastructure; for ODBASE 2010, it became the knowledge bases and methods required for enabling the use of formal semantics; for CoopIS 2010, the focus as usual was on the interaction of such technologies and methods with management issues, such as occur in networked organizations, and for IS 2010 the emphasis was on information security in the networked society. These subject areas overlap in a scientifically

natural fashion and many submissions in fact also treated an envisaged mutual impact among them. As for the earlier editions, the organizers wanted to stimulate this cross-pollination by a “shared” program of famous keynote speakers around the chosen themes: we were quite proud to announce Wil van der Aalst, T.U. Eindhoven, The Netherlands, Beng Chin Ooi, National University of Singapore, Michael Brodie, Chief Scientist, Verizon, USA, and Michael Sobolewski, Polish-Japanese Institute of IT, Poland.

We received a total of 223 submissions for the four main conferences and 127 submissions in total for the workshops. The numbers are about 5% lower than for 2009. Not only may we indeed again claim success in attracting an increasingly representative volume of scientific papers, many from the USA and Asia, but these numbers of course allow the Program Committees to compose a high-quality cross-section of current research in the areas covered by OTM. In fact, the Program Chairs of the CoopIS 2010 conferences decided to accept only approximately one paper from every five submissions, while ODBASE 2010 and DOA 2010 accepted about the same number of papers for presentation and publication as in 2008 and 2009 (i.e., average one paper out of three to four submitted, not counting posters). For the workshops and IS 2010 the acceptance rate varied but the aim was to stay consistently at about one accepted paper for two to three submitted, and subordinated of course to scientific quality assessment. As usual we have separated the proceedings into three volumes with their own titles, two for the main conferences and one for the workshops, and we are most grateful to the Springer LNCS team in Heidelberg for their professional suggestions and meticulous collaboration in producing the files for downloading on the USB sticks.

The reviewing process by the respective Program Committees was again performed very professionally, and each paper in the main conferences was reviewed by at least three referees, with arbitrated e-mail discussions in the case of strongly diverging evaluations. It may be worthwhile to emphasize that it is an explicit OTM policy that all conference Program Committees and Chairs make their selections completely autonomously from the OTM organization itself. Like last year, paper proceedings were on separate request and order this year, and incurred an extra charge.

The General Chairs are once more especially grateful to the many people directly or indirectly involved in the set-up of these federated conferences. Few people realize what a large number of individuals have to be involved, and what a huge amount of work, and in 2010 certainly also financial risk, the organization of an event like OTM entails. Apart from the persons in their roles mentioned above, we therefore wish to thank in particular our eight main conference PC Co-chairs: CoopIS 2010: Herve Panetto, Jorge Cardoso, M. Brian Blake; ODBASE 2010: Alejandro Buchmann, Panos Chrysanthis, York Sure; DOA 2010: Ernesto Damiani, Kai Hwang. And similarly the 2010 IS, OTMA and Workshops PC (Co-)chairs: Javier Cámara, Carlos E. Cuesta, Howard Foster, Miguel Angel Pérez-Toledano, Stefan Jablonski, Olivier Curé, David Thau, Sara Comai, Moira Norrie, Alessandro Bozzon, Giuseppe Berio, Qing Li, Kemafor Anyanwu,

Hervé Panetto (again), Alok Mishra, Jürgen Münch, Deepti Mishra, Patrizia Grifoni, Fernando Ferri, Irina Kondratova, Arianna D’Ulizia, Paolo Ceravolo, Majed Ayyad, Terry Halpin, Herman Balsters, Laura Ricci, Yan Tang, Jan Vanthienen, Yannis Charalabidis, Ernesto Damiani (again), Elizabeth Chang, Gritzalis Stefanos, Giles Hogben, Peter Spyns, Erich J. Neuhold and Anja Schanzenberger. Most of them, together with their many PC members, performed a superb and professional job in selecting the best papers from the harvest of submissions. We are all grateful to our supremely competent and experienced Conference Secretariat and technical support staff in Antwerp, Daniel Meersman, Ana-Cecilia, and Jan Demey, and last but certainly not least to our editorial team in Perth (DEBII-Curtin University) chaired by Houwayda El Fawal Mansour. The General Co-chairs acknowledge with gratitude the academic freedom, logistic support and facilities they enjoy from their respective institutions, Vrije Universiteit Brussel (VUB), Curtin University, Perth, Australia, and Universidad Politécnica de Madrid (UPM), without which such an enterprise would not be feasible. We do hope that the results of this federated scientific enterprise contribute to your research and your place in the scientific network... We look forward to seeing you again at next year’s event!

August 2010

Robert Meersman  
Tharam Dillon  
Pilar Herrero

# Organization

OTM (On The Move) is a federated event involving a series of major international conferences and workshops. These proceedings contain the papers presented at the OTM 2010 Federated conferences, consisting of four conferences, namely, CoopIS 2010 (Cooperative Information Systems), IS 2010 (Information Security), DOA 2010 (Distributed Objects and Applications) and ODBASE 2010 (Ontologies, Databases and Applications of Semantics).

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