

## Editorial

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The notion of Digital Business Ecosystem (DBE) is a time-honoured one: it was introduced in 2002 to describe a self-organizing community of online companies and organizations relying on Information Technology (IT) to generate value. The original DBE metaphor was put forward, among others, by Paolo Dini at the London School of Economics. It was aimed at capturing the specificity of the European market, mostly based on networks of SMEs and local innovation systems. In 2007 three computer science researchers, Elizabeth Chang, Tharam Dillon and one of us (Ernesto Damiani) started in Cairns, Australia the annual IEEE International Conference on Digital Ecosystems and Technologies, bringing together previous research on socio-economic models of DBEs with new investigations on computational models of service-oriented applications.

Today, the DBE vision has become mature, and is widely used in the scientific literature to describe business-oriented socio-technical systems regardless of their location and structure. A large interdisciplinary research community has gathered around the DBE idea, organizing other important regular events like the ACM Conference on the Management of Emergent Digital Ecosystems (MEDES). The call for papers of this special issue was announced at all major events in the area, including IEEE DEST and ACM MEDES. Its content is hopefully representative of the best work of the entire community.

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The issue contains four papers, selected from a total of 17 submissions via a rigorous refereeing process. The paper “Context-based Counselor Agent for Software Development Ecosystem”, by Tetsuo Shinozaki, Yukiko Yamamoto, Setsuo Tsuruta describes a conversational agent aiming to replace human counsellors assisting IT personnel in software development ecosystems. The paper “Improving the Accuracy of Business-to-Business (B2B) Reputation Systems through Expertise Prediction”, by Heidi Dikow, Omar Hasan, Harald Kosch, Lionel Brunie and Renaud Sornin introduces a new notion of reputation systems in order to build trust and to foster collaborations among DBE actors. Reputation systems are commonplace in peer-to-peer computing; however, they have not yet found mainstream acceptance in business ecosystem. The paper includes a new technique of feedback collection specifically targeted at DBE reputation systems. The paper “Dependability Certification of Services: A Model-Based Approach”, by Claudio Agostino Ardagna, Ravi Jhawar and Vincenzo Piuri discusses a certification scheme that awards machine-readable dependability certificates to DBE services, whose validity is continuously verified using run-time monitoring. Finally, the paper “Service-Requester-Centered Service Selection and Ranking Model for Digital Transportation Ecosystems” by Hai Dong and Farookh Khadeer Hussain focuses on the use of ICT resources to facilitate transport service transactions. The paper proposes a promising technique for selection and ranking of online transport service information.

Putting together a special issue like this is always a team effort. We would like to thank all authors for choosing our special issue as the venue where to present their work, and the anonymous referees that worked hard to select the best papers, providing precious insight and comments. Last but not least we would like to thank Dr. Fulvio Frati, a major force behind IEEE DEST 2012, for his valuable help in making this special issue a key event for the entire DBE research community.