e-Business Challenges and Directions: Important Themes from the First ICE-B Workshop

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Abstract. A three-day asynchronous, interactive workshop was held at ICE-B’10 in Piraeus, Greece in July of 2010. This event captured conference themes for e-Business challenges and directions across four subject areas: a) e-Business applications and models, b) enterprise engineering, c) mobility, d) business collaboration and e-Services, and e) technology platforms. Quality Function Deployment (QFD) methods were used to gather, organize and evaluate themes and their ratings. This paper summarizes the most important themes rated by participants: a) Since technology is becoming more economic and social in nature, more agile and context-based application develop methods are needed. b) Enterprise engineering approaches are needed to support the design of systems that can evolve with changing stakeholder needs. c) The digital native groundswell requires changes to business models, operations, and systems to support Prosumers. d) Intelligence and interoperability are needed to address Prosumer activity and their highly customized product purchases. e) Technology platforms must rapidly and correctly adapt, provide widespread offerings and scale appropriately, in the context of changing situational contexts.

Keywords: Adaptability, agile methods, autonomic computing, business value, business-IT alignment, change management, cloud computing, collaboration, composability, context-aware computing, CRM, customer relationship management, digital native, e-Business, applications, models, enterprise ontology, enterprise engineering, e-Services, integration, intelligent user interfaces, interoperability, interoperability, mobility, physical organization, platforms, product customization, prosumer, SDLC, semantic Web, service orientation, service scalability, social CRM, social networks, societal IT, system development life cycle, ubiquity, virtual organization, virtual worlds.

1 Workshop Overview and Important Challenges

1.1 Workshop Objectives and Methodology

The International e-Business Conference (ICE-B) is one track within the International Joint Conference on e-Business and Telecommunications (ICETE). In 2010, a unique
A three-day interactive workshop was held for ICE-B’10. The workshop was conducted as an asynchronous collaborative consortium. The goal was to create a jointly authored paper on e-Business challenges and directions in the following subject areas: a) e-Business applications and models, b) enterprise engineering, c) mobility, d) business collaboration and e-Services, and e) technology platforms. The workshop had two venues: a) a traditional position paper presentation session, and b) an interactive forum which lasted all three days of ICE-B’10. Regarding the former, position paper authors became subject area leads for the joint paper. Regarding the latter, a very large physical display was maintained for recording: a) all themes generated by ICE-B’10 papers and presentation sessions, b) participants’ research, and c) importance ratings. The method for information posting, organization and rating was directly from Quality Function Deployment [158]. On the last day of the workshop, ICETE’10 participants voted on the relative importance of posted themes. This paper reports on the most important themes, tying them back to ICE-B’10 conference papers and posters.

1.2 e-Business Applications Challenges

Economic, Technological, Societal, IT. Changes in business are usually related to the way that it must adapt to the Five Forces [131]. Nowadays, business is increasingly moving towards e-Business to stay competitive, but introducing new applications into a business may lead to a variety of problems, especially if that business is not accustomed to being supported by that technology [145]. This is particularly pronounced when a business moves from a static Web presence (i.e. a Web site or a transaction portal [30] to a dynamic Web presence (i.e. social network blog, online customer chat forum, “try before you buy” virtual experience [35] Many businesses now struggle to make Web 2.0 profitable [83].

New Technology Creates Strategic Challenges. Web 2.0 has opened up businesses to customers [66]. As a result, laggard firms are struggling to decide: how much operational transparency to provide users during an end-to-end transaction, how much investment is needed to comply with new standards, how to formulate a business case that all customers can understand, and how much operation control to give up. Coupled with these decisions are dilemmas such as how much information to share, getting off the proprietary network legacy, breaking or keeping the mindset/trade-off of value versus cost, and how much product ownership to give away. In addition, traditional challenges (i.e. suppliers, new entrants, demand, etc) still exist [14].

More Agile e-Business is Needed. Application development practices from the mid-1950s to the mid-1980s concentrated on the computer. Human resistance to these applications is primarily due to bad design [21]. The practices of the mid-1980s to the mid-2000s concentrated on users, but often limited themselves to a fixed set of contexts. Resistance to using this software was due primarily to computer illiteracy or usability errors. Since the mid-2000s, user contexts are noted for being dynamic, complex, and possibly unpredictable [94]. So, e-Business applications need to have more than just interfaces and workflows that match pre-defined usage contexts [71]. Users must have the ability to design e-Business applications as they are being used.