Que Sera, Sera: The Coincidental Confluence of Economics, Business, and Collaborative Computing

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Abstract

The World Wide Web (WWW) changes everything, but how? Amazon.com is the current exemplar of e-business but does not begin to suggest what is possible. The Web frequently raises technology-based ideas such as WWW sites, Intranets, extra-nets, global access to information systems, and WWW-based interoperation. However, technical ideas serve to realize more significant changes such as the way business is conducted (e.g., e-business, business-to-business interactions, globalization, elimination of geographic boundaries, consolidation, dis-intermediation, stores without products, and worldwide price competition). More radical and more fundamental changes are those related to new economic models that underlie, predict, and enable new business models and which define technology requirements. The potential offered by the WWW is so great and so radical that it will take at least a decade to understand and possibly another decade to realize, since it involves fundamental change not only in computing models and practice but also in business and most significantly in economics.

This is a time of radical change in what appears to be the parallel worlds of technology, business, and economics. They are not parallel. The intimate relationship of these domains has resulted in collateral homeostasis due in part to their interdependence. Recent radical change in each domain is now opening the door to collateral change. This presentation focuses on the confluence of these changes. Technology change includes not only the WWW but also other major factors. Gizmos, such as the Palm III, will become the dominant computing platform in sheer numbers. The trend toward packaged applications, e.g., SAP R/3, will extend far beyond the current strength in Enterprise Resource Planning to become the dominant method for software development and delivery. Business change involves not only organizations racing to capitalize on e-business opportunities, but also constant re-organization as seen in consolidations, mergers, and acquisitions that pose serious challenges to conventional technology (e.g., integration of generations old technology). Economic change is less obvious and more radical. It involves the move from cost-based accounting to economic-chain accounting. Current technology is designed to support cost-based accounting, which involves the management of data/information/knowledge within the boundaries of an organization. Current technology is inadequate to support economic-chain accounting, which involves the acquisition and management of data/information/knowledge beyond the boundaries of an organization.

This presentation is an exploration of the next generation computing based on the confluence of radical and coincidental changes in economics, business, and technology. Whereas technology is a key enabler of change, it is and is the servant, not the master. Without a depth of understanding of this enabling role and the content in which technology serves, technology can be misguided and its developers can lose perspective. This presentation outlines a proposal made to the US President's Office of Science and Technology for technology research for the next decade, which calls for new computational models, operating systems, data models, and infrastructure, amongst others, to support the next generation of computing, collaborative

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computing. This provides an opportunity to reconsider the role of data in computing. This is only one view. Que sera, sera.

Biography

Michael L. Brodie is Sr. Staff Scientist and Chief Scientist (SAP Program) at GTE Laboratories, Waltham, Mass. He works on large-scale strategic Information Technology challenges for GTE Corporation's senior executives. His industrial and research focus is on large-scale information systems — their total life cycle, business and technical contexts, core technologies, and "integration" within in a large scale, operational telecommunications environment. For two years, his primary focus was GTE's SAP implementation and the related 200 Enterprise Planning and Management (EP&M) systems. He currently co-leads the EP&M Information Technology Team for the upcoming GTE-Bell Atlantic merger and is responsible for more than 300 EP&M systems required to support the merged entity. He has authored more than 120 books and articles.