Chapter IV

Information Technology Infrastructure for Inter-Organizational Systems

Sean B. Eom
Southeast Missouri State University, USA

Choong Kwon Lee
Georgia Southern University, USA

Abstract

An IOS is an information and management system that transcends organizational boundaries via electronic linkages with its trading partners. The electronic linkage is established by information and communication technologies. Extranets are the core technology for building IOSs. There are a host of other technologies that serve as the infrastructure for managing IOSs. They include coordination technologies, monitoring technologies, filtering and negotiating technologies (intelligent agents), and decision-making and knowledge-management technologies. In this chapter, a brief overview of each of these technologies is presented.
Introduction

As defined earlier, an IOS is an information and management system that transcends organizational boundaries via electronic linkages with its trading partners. The electronic linkage is established by a host of information and data communication technologies. Supporting IOS activities requires the following:

- The Internet/extranets/intranets
- Mobile computing/multimedia platforms
- Coordination technologies for coordinating resources, facilities, and projects
  - Workflow management systems
- Monitoring technologies
  - Executive information systems/executive support systems
- Filtering and negotiating technologies
  - Intelligent agents
- Decision-making and knowledge management technologies
  - Groupware

Extranets

Since the invention of the first computer in the mid-1940s, the computing technology has been continuously evolved in response to the changing business and technological environments. There are several forces in the environment to which a business organization must respond (business drivers). A significant force is the globalization of businesses and markets. Global business activities have been intensified by the fundamental economics of comparative advantage and the realization that the large global market share of a firm can eventually increase the firm’s profit over the long run. The globalization of business and market, in turn, triggered intensified global competition in all functional areas of business organizations, including price, advertising, quality, manufacturing, etc. To effectively cope with the global level of competition, business organizations have been under constant pressure to produce better products and services, on time, in response to changing customer demands. Consequently, business organizations have to concentrate on the several critical objectives that must be achieved to survive in the new era of global competition. They include increasing productivity, maintaining superior quality, improving responsiveness, and focus-
Related Content

[www.igi-global.com/chapter/system-characteristics-perceived-benefits-individual/44163?camid=4v1a](www.igi-global.com/chapter/system-characteristics-perceived-benefits-individual/44163?camid=4v1a)

Evolution of Inter-Organizational Information Systems on Long Timescales: A Practice Theory Approach
[www.igi-global.com/chapter/evolution-inter-organizational-information-systems/61602?camid=4v1a](www.igi-global.com/chapter/evolution-inter-organizational-information-systems/61602?camid=4v1a)
Exploring Local Interaction Attributes Affecting Leadership Effectiveness on Assignment in Multinational Companies: A Qualitative Phenomenological Study
[www.igi-global.com/chapter/exploring-local-interaction-attributes-affecting-leadership-effectiveness-on-assignment-in-multinational-companies/176161?camid=4v1a](www.igi-global.com/chapter/exploring-local-interaction-attributes-affecting-leadership-effectiveness-on-assignment-in-multinational-companies/176161?camid=4v1a)

Enterprise Resource Planning (ERP) Embedding: Building of Software/Enterprise Integration
[www.igi-global.com/chapter/enterprise-resource-planning-erp-embedding/44140?camid=4v1a](www.igi-global.com/chapter/enterprise-resource-planning-erp-embedding/44140?camid=4v1a)