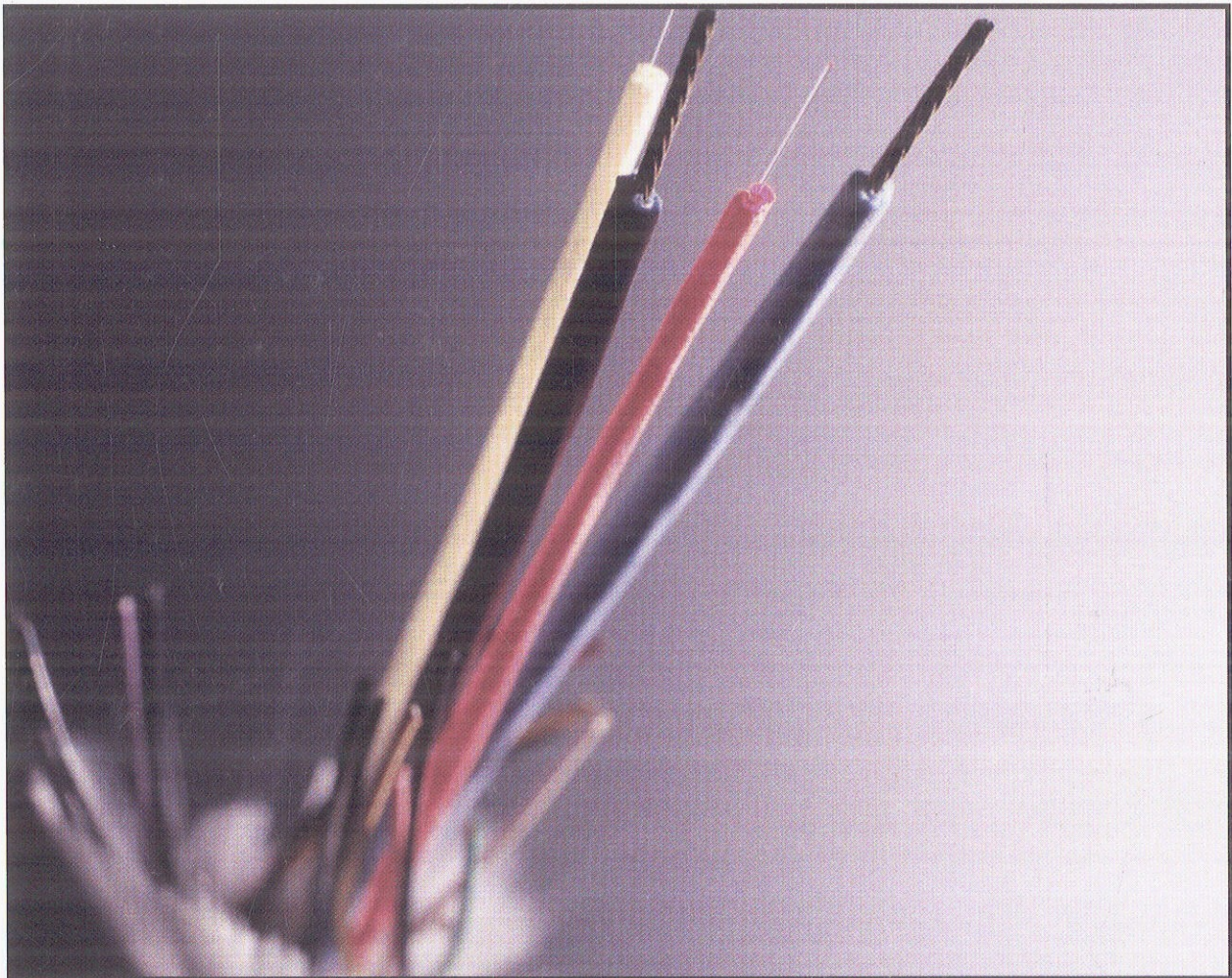


PREMIER REFERENCE SOURCE

Connectivity and Knowledge Management in Virtual Organizations

Networking and Developing Interactive Communications



Cesar Camison, Daniel Palacios, Fernando Garrigos, & Carlos Devece

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Section I

Building Virtual Communities for Sharing Knowledge

The first two chapters of the book place the reader in the context of virtual communities and the role that these communities play in knowledge sharing and creation. The development of virtual organizations and social networks depends on the participation and involvement of their members, and a social analysis of virtual communities and the motivation factors are crucial in any approach of virtual organization management.

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The chapter analyses the growing importance of virtual communities in the creation and sharing of knowledge and their limits and ways of improvement, especially in the virtual organization context. Focusing on the role of social networks in virtual communities, the author assesses the importance of virtual organizations in promoting and nurturing social networks, and thus, virtual communities.

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<i>Luis V. Casaló, University of Zaragoza, Spain</i>	
<i>Carlos Flavián, University of Zaragoza, Spain</i>	
<i>Miguel Guinaliú, University of Zaragoza, Spain</i>	

The chapter assesses empirically the factors that influence the members' participation in virtual communities. This study tries to shed some light on a crucial question: Which are the factors that drive professionals to participate in virtual communities and condition their involvement? Concepts like trust, past experiences and level of communication in the community and their effect on the members' participation are analysed and discussed.

Section II

Networking and Knowledge Management for Competitive Advantage

How to use networking for competitive advantage is a critical issue in knowledge demanding industries. Virtual networks offer to firms in these industries relevant information, resources, technologies and capabilities. In this section, networking is analysed as a knowledge absorptive enabler in knowledge management and as a tool for knowledge integration in strategic alliances.

Chapter III

Can Virtual Networks Encourage Knowledge Absorptive Capacity? 39

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This study focuses on the increasing necessity of knowledge for organizations to be competitive, presenting a framework of proactive knowledge management tools and new organizational forms for coping with this challenge. In this new organizational structure, virtual networks are an essential component for absorbing and creating knowledge. It also describes how embeddedness in such a network can affect most of the factors identified as antecedents of absorptive capacity.

Chapter IV

Knowledge Integration Through Inter-Organizational Virtual Organizations 61

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This work analyses the advantages offered by virtual organizations in the problem of knowledge integration in strategic alliances. Using the Knowledge-Based View, this study ponders over the knowledge transference speed and flexibility gained when this kind of organization is used in inter-organizational alliances.

Section III

Knowledge Management in Virtual Organizations

Knowledge Management offers a solid theoretical ground for tackling some of the social and cultural problems in networking, especially those related with knowledge creation and sharing. These three chapters adopt this view for the study of virtual organizations and their possible forms of management.

Chapter V

Visualizing Knowledge Networks and Flows to Enhance Organizational Metacognition in Virtual Organizations 74

Mark E. Nissen, Naval Postgraduate School, USA

This study faces the knowledge management of a growing and increasingly complex virtual organization. It describes how organizational metacognition offers the potential to elucidate the key issues associated with knowledge networking and how knowledge-flow visualization can be used to diagnose dynamic knowledge patterns.

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Eduardo Bueno Campos, University of Madrid, Spain

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This chapter analyses the relationship between intellectual capital and knowledge strategies from a strategic management point of view. Considering the Communities of Practice as a reference for knowledge governance, this work proposes a strategic action plan for structuring the knowledge initiatives in firms.

Chapter VII

Knowledge Management in SMEs Clusters 106

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In this chapter, a network functioning model is proposed for the creation, transfer and sharing of knowledge in the supply chain of SMES clusters. Considering that SMES normally work and are immersed in particular geographical regions, this work analyzes the particular case of knowledge generation and sharing in SMES clusters as an essential source of competitive advantage.

Section IV

Knowledge Management Tools

These chapters consider the management tools for Knowledge Management. The first chapter presents a tool classification and evaluation of their advantages and drawbacks, and the second one the experience of development and implementation of Knowledge Management software for SME. The third chapter centers its attention on e-learning tools.

Chapter VIII

Tools for Supporting Knowledge Management: Knowledge Internalization Through

E-Learning 126

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This chapter presents a tool classification and the characteristics searched in knowledge management systems, focusing on e-learning techniques. Choosing e-learning techniques as the most excellent method to turn explicit knowledge into tacit knowledge in the knowledge creation process, the authors present a classification of the most relevant characteristics that must be satisfied in e-learning platforms.

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The Value of Virtual Networks for Knowledge Management: A Tool for Practical Development 148

Cesar Camison, Universitat Jaume I, Spain

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Daniel Palacios, Universitat Jaume I, Spain

Carles Camisón-Haba, Universidad Politecnica de Valencia, Spain

This work exposes the experience of the development and use of a KM software for SMEs, and the difficulties found in the project, the results and the lessons learned. The chapter ponders the tools that must be included in any KM system to articulate basic KM procedures, tools like groupware, thesaurus, knowledge repositories and expertise maps.

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M. Eugenia Fabra, University of Valencia, Spain

Cesar Camison, Universitat Jaume I, Spain

This chapter analyzes the progress that has been made in the quality of e-learning initiatives in the last years. Companies in knowledge intensive industries need to obtain efficiency in the administration of their training processes and this works ponders over the factors involved in achieving this efficiency like technological platforms, training materials and training methods.

Section V Specific Problems and Industries

Networking has provoked an authentic revolution in some sectors, especially in those where the access to clients has been a determinant limitation until the arrival of internet. The public sector and the tourism industry are two interesting examples. Besides, some specific areas of information management are analysed in a network context, such as business analytics success and decision making.

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Júlio da Costa Mendes, University of Algarve, Portugal

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<i>J. J. Tari, University of Alicante, Spain</i>	

This chapter assesses how governmental agencies can improve their services offered to citizens through networking and the main problems they face in doing so. An empirical research based on the perceptions of the technology managers of Spanish councils with more than 5000 inhabitants and institutional websites were carried out. The findings disclose some lessons for public managers to take into account when implementing an e-Government strategy.

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<i>Jyoti Bachani, University of Redlands, USA</i>	

This chapter proposes a framework for coping with the technical and social complexity of virtuality in business analytics which is based on the combination of Decision Sciences, Information Systems and Management. Some implications for managers interested in exploring business analytics in their organization through virtual networks are presented.

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<i>Andrew Targowski, Western Michigan University, USA</i>	

This chapter provides theoretical analysis and synthesis of how computer applications are applied in problem-solving and decision-making in the practice of real and virtual networks. It highlights the importance of knowledge management technology as a tool, offering some conclusions in its implementation, but always considering technology as another factor, and perhaps the easier one, to manage knowledge.

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Section VI Selected Readings

Chapter XVI

A Complex Adaptive Systems-Based Enterprise Knowledge Sharing Model..... 281

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This chapter describes a complex adaptive systems (CAS)-based enterprise knowledge-sharing (KnS) model. The CAS-based enterprise KnS model consists of a CAS-based KnS framework and a multi-agent simulation model. Enterprise knowledge sharing is modeled as the emergent behavior of knowledge workers interacting with the KnS environment and other knowledge workers. The CAS-based enterprise KnS model is developed to aid Knowledge Management (KM) leadership and other KnS researchers in gaining an enhanced understanding of KnS behavior and its influences. A premise of this research is that a better understanding of KnS influences can result in enhanced decision-making of KnS interventions that can result in improvements in KnS behavior.

Chapter XVII

Developing a Telecommunication Operation Support Systems (OSS): The Impact of a Change in Network Technology..... 301

James G. Williams, University of Pittsburgh, USA

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The Telecommunications Act of 1996 opened competition in the telecommunications market in the U.S. and forced the incumbent telecommunications companies to open both their physical and logical infrastructure for competitive local exchange carriers (CLECs). In this case study we focus on the problems that face a CLEC with regard to designing an information system and getting a back office system, called an operations support systems (OSS), operational in a highly competitive, complex, fast-paced market in a compressed time frame when a change in a critical telecommunications network component, namely the central office switch, is made after 75% of the system implementation was completed. This case deals with the factors that led to this change in central office switches, its impact on the IT department, its impact on the company, and the alternatives considered by the IT department as possible solutions to the many problems created by this change.

Chapter XVIII

Enabling the Virtual Organization with Agent Technology 321

Tor Guimaraes, Tennessee Tech University, USA

Emerging agent-based systems offer new means of effectively addressing complex decision processes and enabling solutions to business requirements associated with virtual organizations. Intelligent agents can provide more flexible intelligence/expertise and help the smooth integration of a variety of system types (i.e., Internet applications, customer relationship management, supplier network management, enterprise resources management, expert systems). This chapter presents an overview of expert systems as the most widely-used approach for domain Knowledge Management today as well as agent technology,

and shows the latter as a superior systems development vehicle providing flexible intelligence/expertise and the integration of a variety of system types. To illustrate, a system developed first by using an expert system approach and then by an agent-based approach is used to identify the strengths and weaknesses of the agent-based approach. Last, the practical implications of a company adoption of agent-based technology for systems development are addressed.

Chapter XIX

Virtual Communities of Practice: A Mechanism for Efficient Knowledge Retrieval in MNCs 339

Jens Gammelgaard, Copenhagen Business School, Denmark

Thomas Ritter, Copenhagen Business School, Denmark

In geographically dispersed organizations, like multinational corporations (MNCs), contextual gaps exist between senders and receivers of knowledge. Employee socialization resulting from physical proximity facilitates contextualization of the transferred knowledge. However, in MNCs most knowledge transfers take place through virtual communication media. We investigate the phenomenon of virtual communities of practice, and propose them to be efficient for individual's knowledge retrieval as participation in such communities reduces the contextual gaps between senders and receivers of knowledge. However, the organization must provide a knowledge-sharing friendly culture, and an institutional protectionism, in order to establish the required level of swift trust within the virtual community.

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