Knowledge and Innovation:

Journal of the kmci

A Publication of the

Knowledge Management Consortium International

Volume One, Number Three

April 2001

Knowledge Management Consortium International, Inc. ("KMCI") Electronic End User License Agreement

NOTICE TO USER: THIS IS A CONTRACT. BY INDICATING YOUR ACCEPTANCE BELOW, YOU ACCEPT ALL THE TERMS AND CONDITIONS OF THIS AGREEMENT.

This KMCI End User License Agreement accompanies a KMCI media product containing written materials ("Knowledge and Innovation: Journal of the KMCI, Vol. 1, No. 3." hereinafter called "KI13"). The term "KI13" shall also include any upgrades, modified versions, updates, additions, and copies of KI13 licensed to you by KMCI. This copy of KI13 is licensed to you as the end user or your employer or another third party authorized to permit your use of KI13. "You" as used in the remainder of this License Agreement refers to the licensee. KMCI may have a written agreement with the licensee that varies some of the terms of this Agreement, such as the Permitted Number of Computers. The "Permitted Number of Computers" as used in the remainder of this License Agreement is the number of seats corresponding to the price you pay for this report as specified just below unless you have a written agreement with KMCI which specifies otherwise.

❑ One Person or a Company license for One Seat -- Free to Premium Members of KMCI, or $100 per year for one-seat subscription
❑ Company License for an Unlimited Number of Seats -- Free to Corporate Sponsors

The licensee must read this Agreement carefully before indicating acceptance at the end of the text of this Agreement. If you are the licensee and you do not agree with the terms and conditions of this Agreement, decline where instructed, and you will not be able to continue the process of purchasing a license for this report. Your purchase and possession of this report therefore constitutes agreement with the terms of this license.

KMCI grants to you a nonexclusive license to use KI13, provided that you agree to the following:

1. Use of KI13. You may
* Install KI13 in a single location on a hard disk or other storage device on a single computer.
* Provided KI13 is configured for network use, install and use KI13 on a single file server for use on a single local area network for either (but not both) of the following purposes:
  (1) permanent installation onto a hard disk or other storage device of up to the Permitted Number of Computers; or
  (2) use of KI13 over such network, provided the number of different computers on which KI13 is used does not exceed the Permitted Number of Computers.
* Make one backup copy of KI13, provided your backup copy is not installed or used on any computer.
* Make "printed copies" of KI13 or portions of KI13 per Permitted Computer, provided distribution of these printed copies is restricted to primary users of the permitted computers.

HOME USE. The primary user of each computer on which KI13 is installed or used may also install KI13 on one home or portable computer. However, KI13 may not be used on the secondary computer by another person at the same time KI13 on the primary computer is being used.

2. Copyright. KI13 is owned by KMCI. KI13 is also protected by United States Copyright Law and International Treaty provisions. You must treat KI13 just as you would any other copyrighted material, such as a book. You may not copy KI13, except as set forth in the "Use of KI13 " section. Any copies that you are permitted to make pursuant to this Agreement must contain the same copyright and other proprietary notices that appear on or in KI13. Trademarks shall be used in accordance with accepted trademark practice, including identification of trademark owner's name. Trademarks can only be used to identify printed output produced by KI13. Such use of any trademark does not give you any rights of ownership in that trademark. Except as stated above, this Agreement does not grant you any intellectual property rights in KI13.

3. Transfer. You may not rent, lease, sublicense or lend KI13. You may, however, transfer all your rights to use KI13 to another person or legal entity provided that you transfer this Agreement, KI13, including all copies, updates and prior versions, to such person or entity and that you retain no copies, including copies stored on a computer.

4. Governing Law and General Provisions. This Agreement will be governed by the laws in force in the State of Viginia excluding the application of its conflicts of law rules. This Agreement will not be governed by the United Nations Convention on Contracts for the International Sale of Goods, the application of which is expressly excluded. If any part of this Agreement is found void and unenforceable, it will not affect the validity of the balance of the Agreement, which shall remain valid and enforceable according to its terms. You agree that KI13 will not be shipped, transferred or exported into any country or used in any manner prohibited by the United States Export Administration Act or any other export laws, restrictions or regulations. This Agreement shall automatically terminate upon failure by you to comply with its terms. This Agreement may only be modified in writing signed by an authorized officer of KMCI.

5. Notice to Government End Users. If this product is acquired under the terms of a: GSA contract -- Use, reproduction or disclosure is subject to the restrictions set forth in the applicable ADP Schedule contract; DoD contract--Use, duplication or disclosure by the Government is subject to restrictions as set forth in subparagraph (c) (1) (ii) of 252.227-7013; Civilian agency contract--Use, reproduction, or disclosure is subject to 52.227-19 (a) through (d) and restrictions set forth in the accompanying end user agreement.

Unpublished-rights reserved under the copyright laws of the United States.

Knowledge Management Consortium International, Incorporated, Att: Gary Gamber, MorningStar Systems, Inc.10999 Red Run Boulevard, Ste. 215, Owings Mill, MD 21117.

EDITORIAL BOARD

Editor's Introduction

The first two issues of "Knowledge and Innovation" emphasized issues of theory, scope, technology, and practice. These aspects of KM are well-represented again in this issue in many of our articles. Our concern with "second generation" KM also continues as an important thread in all of our articles. What is new in this issue is our introduction of Intellectual Capital as a major area of concern. This theme will be of increasing importance in future issues of K & I. It is introduced here through a lengthy article on IC by Lorin Loverde of the Monterrey Institute. This issue also introduces our first article on another major theme of knowledge management: benefit estimaton.

The issue begins with an article by myself on "Key Issues in Knowledge Management." In it I treat a number of issues central to KM from a critical perspective. The issues include one's basic approach to KM, the nature of knowledge including discussion of the pyramid view of data, information, knowledge, and wisdom, definitions of Knowledge Management, Hierarchical VS. Organic KM. Knowledge Management and Data Management, Knowledge Management and Information Management, and KM and Culture. I've taken a number of positions in this article that I expect to be controversial in the community, and I welcome critical articles in response.

Our second article by Steve Cavaleri and Fred Reed is on "Organizational inquiry: The Search for Effective Knowledge." It is a particularly careful analysis of the key characteristics of inquiry: its fallibilist and active character, its relationship to knowledge development and to knowledge management, its connection to double-loop learning, knowledge dynamics, effective and reliable acts, and the learning organization. A particularly significant aspect of the article is the view of "communities on inquiry." it presents. The article suggests that not simply communities of practice, but more specifically communities of inquiry are what produce knowledge.

Next is Lorin Loverde's article on Intellectual Capital. This outlines a comprehensive multi-perspective approach to the IC area. It is an approach that should engender a great deal of interest and comment. In the article, intellectual Capital (IC) is differentiated from two other accounting categories: Good Will and salable Intangible Assets. The Mergers and Acquisitions (M&A) approach is used with projected and discounted cash flow values over multiple years to provide a context of higher-than-book value. Six Balance-Sheet approaches are given (short-term, annual types). IC is linked to action-based assets supported by the highest-and-best use criterion. Ten approaches to Profit and Loss Statement cash flow measurements are given (multiple-year types). Hard knowledge and soft knowledge categories are used to help classify IC. Further, the concepts of single-loop and double-loop learning are expanded to three and

5

four-loop learning to identify higher-order IC across multiple cultures and in trans-cultural contexts. Competitive advantages of IC are viewed in terms of speed, quality, flexibility, creativity, and integrity. Extensive classifications of IC allow the identification of those types of IC in which a given corporation is deficient, giving rise to knowledge liabilities but also opportunity areas.

Elias Oxendine and Mark Nissen next provide us with a case study that is both interesting from the application point of view and theoretically sophisticated. Their article entitled "Knowledge Process and System Design for the Carrier Battle Group," builds upon recent work focused on knowledge management and system design from three integrated perspectives: 1) reengineering process innovation, 2) expert systems knowledge acquisition and representation, and 3) information systems analysis and design. The work provides an integrated framework for knowledge process and system design that covers the gamut of design considerations from the enterprise process in the large, through alternative classes of knowledge in the middle, and on to specific systems in the detail. Oxendine and Nissen illustrate the use and utility of the approach through an extreme enterprise example addressing Navy carrier battlegroups in operational theaters. Their analysis addresses many factors widely considered important in the knowledge management environment. Using their integrated methodology, you can see how to identify, select, compose and integrate the many component applications and technologies required for effective knowledge system and process design.

The last article is another one of mine, this time on the subject of knowledge management benefit estimation. It presents concepts, methodology and tools for producing improved KM benefit estimates. It provides a framework for thinking about more comprehensive estimation of KM benefits -- estimation that is tightly coupled to corporate goals, and that distinguishes benefits according to their relative importance. Instead of a single methodology, the paper defines an abstract pattern of Comprehensive Benefit Estimation (CBE) that achieves the goal of tight coupling of benefits, goals, and KM initiatives and competing alternatives. The paper ends by specifying how one may tailor the pattern to achieve a feasible estimation procedure in different concrete situations.

Knowledge and Innovation: Journal of the KMCI publishes original articles relating to any part of the Knowledge Life Cycle (KLC) of organizations or to the Knowledge Management Process and its impact on the Knowledge Life Cycle. Articles can focus on

- Innovation,
- The Knowledge Life Cycle and its subprocesses: Information Acquisition; Individual and Group Learning; Knowledge Claim Formulation; Knowledge Claim Validation, broadcasting, searching/retrieving, teaching, and sharing
- the Natural Knowledge Management System of organizations,

- their Artificial Knowledge Management Systems (IT-related aspects of KM),
- the relationship between the two, or
- the impact of knowledge management processing on the KLC or any of its components, and
- normative or philosophical issues related to the KLC and the Knowledge Management Process.
- critical commentaries on articles appearing in the Journal or in other sources

A particular emphasis of the Journal is on complex adaptive systems (*cas*) approaches to knowledge management issues. Human organizations exhibit *cas* behavior. Knowledge management in such organizations must adapt itself to this behavior, if it is to be successful. Without such adaptation, or alternatively, the complete restructuring of the organization, KM initiatives are bound to fail. It is at the nexus of knowledge management, *cas* and organization theory that the means to success in knowledge management will be found*. **Knowledge and Innovation** is the only *Knowledge Management* periodical that has this nexus as its focus.

Another way in which **Knowledge and Innovation** is very different from other journals devoted to KM is in our emphasis on the whole knowledge life cycle. This journal does not equate sharing tacit knowledge, or electronic search and retrieval, or document management, or other singular activities with KM. For us, KM is about what we do to manage the swirl of problem solving, knowledge production, innovation, and knowledge integration, in our organizations. Knowledge sharing is part of that process, electronic search and retrieval, document management, and a hundred other activities are also part of it. The trick is not to look at activities in isolation but to analyze them in their broader *cas* organizational context. We see **Knowledge and Innovation** as a forum for doing that sort of systems analysis.

The Journal is published quarterly by the KMCI and will be distributed to corporate and organizational sponsors, to subscribing individuals, and to KMCI members. It is a refereed Journal with articles reviewed by members of the Editorial Board. Its readers will include professors and students, government professionals, private sector knowledge workers and practitioners, and knowledge managers in all areas. Welcome again to our new community. We hope you'll join the party by submitting articles for our consideration and by reading us faithfully every quarter. For our part, we will supply you with the authoritative source of articles on Knowledge Management.

JOSEPH M. FIRESTONE, PH.D.
EDITOR-IN-CHIEF