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ADVANCES IN INFORMATION SYSTEMS SET

Volume 2

Information and Knowledge System

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Camille Rosenthal Sabroux

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coordinated by
Camille Rosenthal-Sabroux

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Preface

Communication is an essential aspect of human life, and the opportunities provided by information and communications technologies are unprecedented. Information in various forms can now be transmitted across space and time. Paradoxically, to cite Feenberg [FEE 04], a distance has been created between individuals, of "disposable experiences, that can be turned on or off like water from a faucet". Individuals have thus become services, made available to others via a technical system, which can be activated or deactivated at will.

Originally, the computer was not intended as a means of communication. The Internet was not intended to serve as a conduit for this communication, and information technology was not intended for anything other than the automatic processing of information. Nevertheless, computers have become ubiquitous: information technology is everywhere, in our jobs, televisions, watches, telephones and even in our health. The quantities of information involved, unimaginable in previous decades, are now treated using concepts such as Big Data. Computers play an important role in our private lives, and our private lives themselves have become computerized; with data located at distant and unidentified points, they are in the clouds due to the use of techniques such as cloud computing.

Man thus makes use of all available tools to fulfill the essential need for communication. The use of information and communications technologies should not obscure the substance of these exchanges: information. Information which was previously passed from one person to another through human interaction is now exchanged via computer protocols, which aim to optimize systems interoperability without really considering human

interaction; these interactions involve the exchange of much more than simple information. Information alone is simply a transcription, in the same way as a prehistoric painting on the wall of a cave, hieroglyphs on a papyrus or the neumes of Gregorian chant in a hymnal. Historians of today are constantly confronted with the challenges involved in interpreting this transcribed information (see Figure 1).

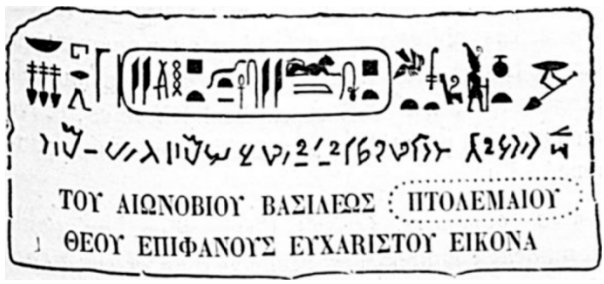

Figure 1. *Information can only become knowledge for you if it has a meaning for you. "King Ptolemy, the ever-living, beloved of Ptah, the god Epiphanes Eucharistos, most gracious lord": extract from the Rosetta Stone [FER 68, p. 43] (source: National Library of France)*

This book aims to highlight the advantages offered by information and communication technology (ICT) both in terms of information exchange and ensuring that the correct meaning is transmitted, allowing beneficial interpretation and the creation of knowledge. Information systems thus become information and knowledge systems. Although an information system may be based on ICT, it cannot be reduced to these technological aspects: users themselves play a role, acting as system components in their own right. These users process, store and transmit information, but this data has a meaning for them, something which does not occur in the case of technological artifacts.

Any attempt to limit information exchange to the framework of a digital information system using computer technology, to the exclusion of human contact, would most probably be seen as "totalitarian" within any organization [FEE 04, p. 180]. However, the number and availability of technological devices, the ease of use and the social character they may acquire all lead to more direct, frequent and essential interaction between individuals and the digital information system. Moving beyond the information transmitted within an organization, this book introduces the concept of information and knowledge system, which highlights the role of

knowledge and the part played by individuals as holders of this knowledge. To do this, a clear distinction should be made between "information" and "knowledge"; moreover, it is crucial to be aware of the fact that information can have different meanings, leading to the creation of different knowledge for different individuals.

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