



**ILAIS - Israel Association for Information Systems**  
A Chapter of the **Association for Information Systems**  
The premier global organization for academics specializing in Information Systems



# **2<sup>nd</sup> ILAIS Conference**

**May 21, 2007**

**The Graduate School of Business Administration**

**Bar-Ilan University**

**Ramat-Gan, Israel**

Conference Chair: Dr. David G. Schwartz  
Program Chair: Dr. Roy Gelbard  
Doctoral Consortium Chair: Dr. Doron Tauber



הכנס נערך בחסות בית הספר למנהל עסקים של אוניברסיטת בר-אילן, ומוקדש לזכרו של ידידנו ועמיתנו פרופ' רמי שגיא ז"ל.

**פרופ' אברהם (רמי) שגיא ז"ל (1947-2003)**

רמי כהן כראש בית הספר למינהל עסקים משנת 1999 ועד ליום פטירתו כ' אדר ב' תשס"ג ה-24.03.2003.

רמי היה בעל תואר ראשון ושני מהאוניברסיטה העברית בירושלים ותואר דוקטור מהמחלקה לפסיכולוגיה באוניברסיטת בר-אילן.

נושא עבודת הדוקטורט: "היבטים קוגניטיביים של התנגדות לשינוי בארגון מדומה."

**תחומי התמחותו המדעיים כללו:**

- מנהיגות ארגונית
- שיתוף עובדים בהחלטות ארגוניות
- ערכים ארגוניים
- הסדרי עבודה חלופיים והתנהגות בלתי יצרנית (counterproductive behavior) בארגונים.

**פעילות אקדמית נרחבת בארץ ובעולם:**

- הדריך סטודנטים לתארים מתקדמים.
- זכה במלגות, פרסים ומענקי מחקר.
- ארגן כנסים מדעיים.
- Reviewer וחבר מערכת בכתבי עת בתחומי הניהול והפסיכולוגיה.
- בשנת 2002 קבל פרופסור לשם כבוד של University of Flores, Buenos Aires, Argentina.
- עבד ויעץ לחברות במשק הישראלי.

הוא נולד בירושלים 9 ספטמבר 1947. הניח אשה, רעיה, 5 ילדים ונכדה. רמי שלב בין עבודתו האקדמית ללימוד תורה.



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## Conference Program

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### 09:00-09:30 Coffee and Registration

### 09:30-09:45 Greetings by

Dr. David G. Schwartz, Bar-Ilan University, ILAIS'07 Conference Chair  
Prof. Harold Bash, Vice President for Research, Bar-Ilan University  
Prof. Phillip Ein-Dor, Tel-Aviv University and President, ILAIS

### 09:45-11:15 Session 1

Session chair: Prof. Dov Te'eni, Tel-Aviv University

- Avigdor Gal, Technion, "*Modeling the Behavior of Schema and Ontology Matchers*"
- Igor Kanovsky, Haifa University & Emek-Israel College, "*Complex Networks Clustering by Link Weighting*"
- David L. Bahn, Metropolitan State University of Minnesota, "Open source software adoption within enterprise systems"

### 11:15-12:45 Session 2

Session chair: Dr. Daphne Raban, Haifa University

- Bezalel Gavish, Southern Methodist University, "*Fraud and Fraud Reduction on Auction Sites*"
- Eli Cohen, Informing Science Institute, "*Failure to Inform: Errors in Informing Systems*"
- Tsvi Kuflik, Haifa University, "*A preliminary examination of the Gap between Customers and Providers in the eCommerce Marketplace*"

### 12:45-13:45 Lunch break

### 13:45-15:15 Session 3

Session chair: Dr. Roy Gelbard, Bar-Ilan University

- Judit Bar-Ilan, Bar-Ilan University, "*Presentation Bias is Significant in Determining User Preference for Search Results*"
- Adi Katz, Sami Shamon Academic College of Engineering, "*Contextualization as an Adaptive Behavior in Computer-Supported Cooperative Work*"
- Rachel Or-Bach, Emek-Israel College, "*The role of a KBS course within IS education -Design guidelines and implementation findings*"

### 15:15-15:45 Symposium - ILAIS-08 Objectives

Symposium chair: Prof. Phillip Ein-Dor, Tel-Aviv University and President, ILAIS

### 15:45-16:15 Coffee break

### 16:15-18:15 Doctoral Consortium Session

Session chair: Dr. Doron Tauber, Bar-Ilan University

- Adir Even, Boston University, "*Utility-Inequality: a Cost-Benefit Perspective for Managing Data Repositories*"
- Milly Perry, Bar-Ilan University, "*Knowledge Management As a Mechanism for Large-Scale Technological and Organizational Change Management (E-learning and ERP) in Israeli Universities*"
- Ofir Ben Assuli, Tel Aviv University, "*Assessing the Subjective Value of Information in Decision Making Processes in Banking Information Systems*"
- Yoram M Kalman, Haifa University, "*They just don't understand! - On the allure of synchronicity to users of Computer Mediated Communication*"
- Zac Sadan, Bar-Ilan University, "*Analysis of Knowledge flow in organizations using Meta-Data ties of information, documents and Social Networks*"



## **Session 1 (A)**

### **Modeling the Behavior of Schema and Ontology Matchers**

**Avigdor Gal D.Sc.**

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*Schema matching* is the task of matching between concepts describing the meaning of data in various heterogeneous, distributed data sources. It is recognized to be one of the basic operations required by the process of data and schema integration and thus has a great impact on its outcome. *Schema mappings*, the outcome of the matching process, can serve in tasks of targeted content delivery, view integration, database integration, query rewriting over heterogeneous sources, duplicate data elimination, and automatic streamlining of workflow activities that involve heterogeneous data sources. As such, schema matching has impact on numerous modern applications, currently suffering from the lack of ability to easily and effectively organize their dataspace. It impacts business, where company data sources continuously realign due to changing markets. It also impacts the way business and other information consumers seek information over the Web. Finally, it also impacts life sciences, where scientific workflows cross system boundaries more often than not.

In the context of Web applications and the advent of the semantic Web, and especially with the use of semantic Web techniques a new term, in addition to schema matching, has come into existence, namely *ontology matching*. Ontologies are considered to be semantically richer than schemata in general, and therefore, techniques for schema matching can be easily adopted to ontologies but not vice versa. Therefore, one can consider schema matching to be a special case of ontology matching. The focus of this work is on the process of schema matching, which we propose to investigate. We aim at improving the process and measure the improvement through the impact on its outcome mappings. In this sense, there is no substantial difference between schema and ontology matching. We therefore use the term schema matching as a generic term, representing both terms.

Research into schema matching has been going on for more than 25 years now, summarized in several surveys and various online lists, first as part of a broader effort of schema integration and then as a standalone research. Due to its cognitive complexity, schema matching has been traditionally considered to be AI-complete, performed by human experts. For obvious reasons, manual concept reconciliation in large scale and/or dynamic environments (with or without computer-aided tools) is inefficient and at times close to impossible. The move from manual to semi-automatic schema matching has been justified in the literature using arguments of scalability (especially for matching between large schemata) and by the need to speed-up the matching process. Researchers also argue for moving to fully-automatic (that is, unsupervised) schema matching in settings where a human expert is absent from the decision process. In particular, such situations characterize numerous emerging applications triggered by the vision of the semantic Web and machine-understandable Web resources. In these applications, schema matching is no longer a preliminary task to the data integration effort, but rather ad-hoc and incremental.

The AI-complete nature of the problem dictates that semi-automatic and automatic algorithms for schema matching will be of heuristic nature at best. Over the years, a significant body of work was devoted to the identification of schema matchers, heuristics for schema matching. The main objective of schema matchers is to provide schema mappings that will be effective from the user point of view, yet computationally efficient (or at least not disastrously expensive). Such research has evolved in different research communities, including information systems, databases, information retrieval, information sciences, data semantics, and others. Despite the long history of this research field and the numerous proposals for heuristics, schema matching is yet to



deliver satisfactory results, maybe because the right "silver bullet" is yet to be found among the existing approaches or maybe because we have been searching in the wrong place all along. Therefore, together with the continuous search after better schema matchers, we believe that a different approach should be taken in designing new schema matchers. We term these schema matchers *second line matchers*. Intuitively, second line schema matchers operate on the outcome of other schema matchers to improve their original outcome.

In this work, we propose a model for second line matchers, based on the notion of probabilistic similarity matrices, capturing the uncertainty inherent to the process of automatic schema matching. A schema matcher bases its decision regarding the matching of schema elements on a similarity matrix, in which each entry quantifies the matcher "belief" in element's pair-wise similarity. Our model assumes that the entries in the similarity matrix are taken from some probabilistic distribution(s), modeling the uncertainty regarding the matcher "beliefs." In particular, we argue that a matcher determines an entry value using two different distributions, one for correct mappings and another for incorrect mappings.

We continue and discuss the properties of second line matchers. In particular, we connect the notion of *monotonic matchers*, defined in our early work on schema matcher behavior, to the new model of probabilistic similarity matrix. We shall also provide some observations regarding the usability of the model in designing second line matchers that improve on the outcome of earlier methods. We support our analysis with an empirical study using a big real-world data set. We show that second line matchers can increase performance (in terms of precision) in up to 50%, with little reduction in recall.

To conclude, this work focuses on the modeling and design of second line matchers, matchers that aim at improving those matchers that work directly on input schemata. We believe that the model and the observations that can be derived from it will encourage the community to seek more schema matchers, fulfilling the need for industrial-strength schema matchers.

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**Session 1 (B)**

**Complex Networks Clustering by Link Weighting**

**Igor Kanovsky Ph.D.**

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In this paper, we describe a new algorithm for cluster recognition in complex networks and its application to some real world graph. A typical network has Small World properties or/and some other edges correlation. The method invokes link weighting called link community, which is based on the link participants in local links correlation. Inter-cluster links are perceived as not correlated or weak correlated. We propose an extension of the popular Small World model of Watts and Strogatz and use it to test our approach. The limitations and advantages of the method are investigated in this paper.

A lot of complex systems may be represented as a Small World (SW) graph. For example the Web, Internet, personal contacts, citation graph, and protein interaction networks, etc. These systems are inhomogeneous in the perception of existence of sub- graphs with relative bigger density of edges, so called “communities” or clusters. From a practical point of view it is important to recognize clusters within real world networks. The problem of cluster recognition is a well-studied field of data mining. New approaches for network clusters structure identifying in complex networks were introduced. The algorithms are based on the concept of betweenness centrality of a node or link, of which utilization may not be effective for big size graphs or when only partial graph data is available.

In this paper an alternative idea for network clustering is proposed. Real world networks have to provide some functionality. This is expressed by the SW effect and other link-link correlations. Thus it is expected that inside a cluster the link correlation has to be significantly stronger than for inter-cluster links. For example, the clustering coefficient calculated for a cluster has to be bigger than one calculated for its entire network. We propose link weighting based on its near neighbors’ link correlation, which represents the intro-cluster nature of the link. As usual, clusters are recognized as a set of nodes connected with links having weights bigger than some threshold value.

## Session 1 (C)

### Open source software adoption within enterprise systems

**David Bahn Ph.D.**

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Open source (OS) software has been in use for more than a decade. Nonetheless, notwithstanding the emergence of the LAMP (Linux-Apach-MySQL-PHP) stack, the adoption of OS as part of enterprise systems has been more recent and is not yet widespread. This paper describes research in progress examining the extent to which the challenges of enterprise systems are affected by introduction of OS software components.

Using a simplified taxonomy of 3 types of challenges for the deployment and ongoing maintenance /management of enterprise systems, the research agenda is to explore the following questions, comparing enterprise system projects which incorporate significant OS software components with those that do not.

<b>Challenge category</b>	<u>General Questions:</u> <i>OS issues</i>
Business issues	<u>Does the function of the enterprise system align with business goals/strategy of the adopting organization?</u> <i>Do OS components improve alignment over time?</i> <i>Is the incorporation of OS components perceived to improve alignment, independent of the reality?</i>
Technical issues	<u>Does the organization rely on internal or external resources for support of software components in the enterprise system?</u> <i>How does the organization identify competent technical resources to support OS components?</i> <i>How do support models for typical OS “stack” components (e.g. Linux, MySQL, etc.) differ from those for OS application (e.g. SugarCRM, Open for Business) components?</i> <u>How does the organization measure the total life cycle cost of an enterprise system?</u> <i>When is decreased licensing cost a primary driver of OS adoption, and when is freedom from dependence on a proprietary software vendor the primary driver? When is perception of OS reliability/quality a primary driver of adoption?</i>
Legal issues	What licensing and governance issues are organizations most typically aware of for their enterprise systems? <i>How do organizations deal with the legal uncertainties posed by OS “copyleft” licenses?</i> <i>For which kinds of applications or enterprise systems components are adopting organizations less averse to the risks posed by OS licenses?</i>

**Session 2 (A)**

**Fraud and Fraud Reduction on Auction Sites**

**Bezalel Gavish Ph.D.**

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Auction sites depend on the perception of bidders that they will be treated fairly, and will not be subject to fraud. Recent data collected by IC3 demonstrates that fraud during the auction process is the leader in swindling activities on the Internet. Many media outlets, like the Financial Times report that online fraud represents "an epidemic of huge and rapidly growing proportions". The perception that auction sites are a fertile ground for fostering fraudulent activities reduces the incentive of many potential sellers and bidders from joining the bidding process.

Understanding fraud is especially important because of the "network externality" effect, in which a large number of satisfied bidders/buyers lead to a large number of sellers; this effect is based on the knowledge that satisfied bidders induce others to overcome their reluctance to enter into a risky activity of bidding and paying to unknown entities. An increase in the number of traders increases the auction system efficiency. Headlines that present auction based swindling activities have the reverse effect, deterring users from using the internet for commercial/auction based activities.

Swindlers are very creative in developing defrauding methods and react to countermeasures developed by the consumers and merchant communities. We will present and classify methods that swindlers use to defraud users during the auction process, and suggest procedures to reduce the level of successful fraudulent activities. We will also report the results of an empirical survey on the magnitude of fraudulent auctions on auction sites. The empirical results obtained in this survey, invalidate some of the claims made by online auction site operators that fraudulent activity is negligible.

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**Session 2 (B)**

**Failure to Inform: Errors in Informing Systems**

**Eli Cohen**

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The paper examines ways in which information systems can and do misinform clients. Using a common framework for understanding information systems, it uncovers four primary (and eleven secondary) methods by which systems can fail to inform. The paper uses research conducted in a variety of fields.

This paper lays groundwork for experimental research into the human factors involved in the failure of information systems to inform. Its purpose is to develop a framework for this inquiry by drawing from research findings in a variety of fields, such as psychology, journalism, and cybernetics. While this paper applies the work to information systems, the work is applicable to all the fields that endeavor to inform clients. These fields collectively are known as Informing Science (Cohen, 1999).

Over 30 years ago, Ackoff's (1967) suggested that those designing information systems misinformed their clients by building systems based on five unjustified assumptions:

- (1) the critical deficiency under which most managers operate is the lack of relevant information,
- (2) managers request the information they need,
- (3) if managers had the information they want, their decision making would improve,
- (4) better communication among managers improves organizational performance, and
- (5) managers need not understand how their information system works, just how to use it.

This paper builds on Ackoff original theme, although not his method. The theme of this paper is to show that information systems can and do misinform their decision maker clients and how this misinforming occurs.

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## **Session 2 (C)**

### **A preliminary examination of the Gap between Customers and Providers in the eCommerce Marketplace**

Erminio Gius, Ernesto D’avanzo, Tsvi kuflik, Ekaterina Spivak, Tiziana Capozzoli, Laura Landi

**Tsvi Kuflik Ph.D.**

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In recent years we experience a tremendous growth in the number of on-line shopping web sites, which reflects the benefits, and ease of on-line shopping (and the opportunities for producers/sellers). This was naturally followed by *cognitive overload* (Sweller et al., 1990; Kirsh, D., 2000/1) that resulted in the development of *recommender systems* (shopping *decision support* systems). Even though these systems try to support the customer in coping with the information overload, on-line shopping raises many issues in addition to *cognitive overload*, including *trust*, *security*, *privacy*, and more. All these issues need to be addressed to the satisfaction of the customers before they will make use of such systems. This work tries to examine the user requirements, as reflected by current eCommerce websites and eCommerce recent research, and define the gap between customers’ need and services provided by current web sites. Following this stage we can identify major research and developing directions for on-line shopping to better support potential customers. The contribution of this preliminary research is twofold:

- It focus on both future research and future on-line shopping web site development
- It represents a preliminary study for future inquiry concerning bridging information gaps in on-line shopping

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### **Session 3 (B)**

## **Contextualization as an Adaptive Behavior in Computer-Supported Cooperative Work**

**Adi Katz & Dov Te'eni**

**Adi Katz Ph.D.**

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Computer-mediated collaboration, a dominant mode of communication both within and between organizations, introduces unique opportunities but also new problems. One of these problems is the higher risk of misunderstandings, which is more likely to occur in computer-mediated team work than in face-to-face teams (Cramton, 2001). Moreover, it may be particularly acute when distributed workers come from different functional backgrounds (or 'departmental thought worlds'), holding different perspectives (Dougherty, 1992; Powell et al., 2004). Computer-mediated collaboration between distributed workers who come from diverse functional backgrounds and hold different perspectives are a common and essential combination in today's complex organizations. Current theories of communication suggest that misunderstanding may be reduced by contextualization, i.e., providing contextual information to explain a core message.

*Perspectives* can include domain knowledge, terminology and interpretations of phenomena, intentions and attitudes, social context and physical context (Krauss and Fussell, 1996; Boland and Tenkasi, 1995). On the one hand, different perspectives ensure a variety of worldviews, ideas and capabilities that are important in collaborative work (Pelled, 1996; Milliken and Martins, 1996). On the other hand, different perspectives increase misunderstanding between communicators and requires them to overcome the gap (Clark and Marshall, 1981; Sperber and Wilson, 1986). We concentrate on terminology, one aspect of a perspective which can be classified as being at the more molecular (as opposed to molar or general) level of perspectives. Overcoming differences at any level requires effort, but overcoming differences at the molecular level, which relates to making references e.g. the terminology used, is more cognitively demanding (Roßnagel, 2000).

We treat contextualization as an adaptive behavior that can be explained by considerations of cost (expenditure of cognitive resources) and benefit (higher mutual understanding and thereby better performance). Using the cost-benefit lens, we argue that the degree of using contextualization can be predicted by the extent to which the perspectives of the collaborators are different or shared: difference of perspectives between collaborators motivates them to contextualize in order to increase mutual understanding and thereby increase performance. Benefits seem to be high when a message is liable to be misunderstood because the listener lacks the context available to the speaker (Gumperz, 1982; Weick and Meader, 1993).

While the need to support effective communication and to increase the likelihood of mutual understanding is particularly relevant to computer-mediated communication, the cognitive effort required for contextualization is particularly heavy in computer-mediated communication because information transfer, especially the transfer of complex information, is less efficient than in richer media (Kraut et al., 2002). It may therefore be especially important to understand contextualization behavior and its impact on performance in computer-supported collaborative work.

**Session 3 (C)**

***The role of a KBS course within IS education Design guidelines  
and implementation findings***

**Rachel Or-Bach Ph.D.**

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A course on Knowledge-Based Systems (KBS) is often not included in the Information Systems (IS) education curriculum, and when it is included it is usually an elective course taken by only a few students. We claim that with an appropriate design such a course can serve several important roles within IS education. Besides providing students with new tools to extend information systems capabilities, this course provides an opportunity to discuss, explore and experience issues of knowledge representation, modeling, abstraction, knowledge management and programming paradigms. Such a course provides an opportunity for students to think explicitly about knowledge and its possible representations and how a choice of a representation shapes the reasoning and the reasoning products. Such a course is also an opportunity to present students with a different computing paradigm, a declarative one, and to demonstrate differences between programming paradigms and how the paradigm influence the methods and ways one is using for solving a problem.

The course "Introduction to Expert Systems" is an elective course for students in our Computer Science and Information Systems department. In this course students are introduced to issues of knowledge acquisition, knowledge representation and expert systems design along with actual implementation. The implementation part of the course involves programming with CLIPS, which is an expert system shell (<http://www.ghgcorp.com/clips/CLIPS.html>). This rule-based system with a declarative programming paradigm is very different from programming paradigms that the students are familiar with. The course includes a hands-on laboratory, where we employ many programming examples. Program examples play an important role in teaching programming and the use of a library of annotated examples or templates is highly advocated by computer science educators. In this course students find themselves with a multitude of files of potentially useful code examples, which they have difficulties to retrieve when needed. This situation seems ideal for providing students with insight into various issues related to knowledge management, metadata and ontologies; and also to the issue of reusability.

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***Doctoral Consortium (A)***

***Utility-Inequality: a Cost-Benefit Perspective for Managing Data Repositories***

**Adir Even**

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Firms manage large data resources that support business processes and decision-making. While the costs of managing these resources are largely understood, the benefits cannot be easily assessed. Our goal is to better understand the benefits gained by managing data resources, conceptualized as utility. We particularly explore utility-inequality – the extent to which records vary in utility contribution. We develop statistical tools to model and measure inequality and use them to study the implications for different data management decisions such as the design of data resources, acquisition and pricing of data, and methods for data quality management. Here we present some key results and insights from a preliminary empirical assessment of inequality in a large alumni dataset.

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***Doctoral Consortium (B)***

***Knowledge Management as a Mechanism for Large-Scale Technological and  
Organizational Change Management (E-learning and ERP)  
In Israeli Universities***

**Milly Perry**

Advisor Dr. Shoham Snunith

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Over the last decade higher education has had to face numerous pressures and changes (globalization, mass education, large-scale university rivalry – local, private and foreign – budget cuts, demands for greater accountability and increasingly sophisticated technologies) (Hanna, 2003; Scott, 2003; Waterhouse, 2005). Universities, the world over, must adapt to daunting social and educational challenges, in which technology is playing a bigger role than ever before – both in inducing changes as well as in providing the means to cope with them. This technology decade had had an impact on almost every aspect of learning and work in academia: research, instruction and administration. Indeed, leading researchers had pointed out that the introduction of any new technology is bound to involve significant changes in work processes and organizational structures, even to the point of reshaping the university's future (Bates, 1999; Duderstsadt, 2000; Gutti-Rosenblit, 2005; Kiernan, 2002; Scott & Wagner, 2003, p1). The role of technology in reshaping the university's very essence is pivotal in helping fulfill academia's role as an agent of social and cultural change. Achieving this goal demands, on the one hand, a thorough evaluation and understanding of prevailing practices of change management, and on the other hand, establishing a well planned change management mechanism. Such a mechanism would provide the means whereby decisions will be made regarding organizational and technological shifts that are to determine the university's ability to survive and attract prospective students and staff, particularly in view of the traditional reluctance in some academic circles to embrace changes (Smith, 1999; Elton, 2003).

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## ***Doctoral Consortium (C)***

### ***Assessing the Subjective Value of Information in Decision Making Processes in Banking Information Systems***

**Ofir Ben Assuli**

Advisor DR. Moshe Leshno

Graduate School of Business Administration

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Assessing the value of information in decision making processes is one of the most important issues in the research of organizational information, and it has been studied extensively in the context of a wide range of disciplines (Ahituv [1989]). The information provided by the information systems that have become such an integral part of so many organizations following the “Information Revolution” has several important roles to play, the primary one being to provide important input that improves the decision making process (Ahituv & Neumann [1994]). The Information thus obtained can even improve the quality of the decisions made and reduce the inherent risks. The importance of assessing the value of information in decision making processes and the development of research methods to estimate the value of information have led to more efficient planning of new information systems, and to the improvement of existing information systems in organizations, thus improving support for decision making.

Recently, information systems have entered the field of investment counseling with the goal of supporting the work of bank employees authorized to provide these services. Information systems that are designed to support investment counseling have a huge potential for supplying complete, uniform, exact, up to date, relevant, accessible and reliable banking information. Information about customers, such as the goals and nature of the investment, investment horizon, customer’s risk classification, customer’s investment history and more, can greatly improve the decision making of the bank’s investment counselors.

The primary goal of this study was to assess the contribution of information technology to decision making in general and to try to offer suggestions to improve its contribution to the decision making of investment counselors in a banking setting in particular. The study dealt with assessing the subjective value of an integrative Counseling Decision Support System of a leading bank in Israel, which aggregates information presented to the investment counselors during trading days. The system’s recommendations are based on the customer’s current investment portfolio and on the wide range of products that exist both at the bank and in the financial markets. It is based on analytical decision making mechanisms in use at the bank merged with the bank’s Stock Index, Bond Yield Model and the Fund Counseling Model. This study makes use of two accepted methods, the AHP Analytical Hierarchy Processing method (Saaty [1981]) and the correlation analysis method (Neumann-Segev [1979]). The use of these two accepted statistical methods, which gave results that were similar, significant and consistent, substantially increases the contribution of this study. The research method consisted of determining the primary purpose of investment counseling and then setting the goals which contribute to realizing this purpose (customer characterization, customer counseling and efficiency in customer service) as well as delineating the information components (such as the targets and nature of the investment, the investment horizon, the customer’s risk classification) required to carry out these goals. In line with the research method, a questionnaire was constructed and filled out by 40 investment counselors, who used the integrative Counseling Decision Support System, at a number of the bank’s branches.

The main conclusion is that the subjective value of information is affected primarily by four main factors: the administrative rank and position of the decision maker, the type of task or decision he/she needs to make, the experience he/she has, and the education level he/she has. This conclusion can be used to improve the information system that was the subject of this study, to plan other decision support systems for investment counselors, and to improve other existing systems.





## ***Doctoral Consortium (D)***

***They just don't understand!***

### **On the allure of synchronicity to users of Computer Mediated Communication**

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Computer Mediated Communication (CMC) media is traditionally divided into two categories: synchronous media (e.g. instant messaging, chat) and asynchronous media (e.g. email, discussion board). Recent trends, as well as findings about the manner in which users actually utilize CMC technologies, show that communication media are actually used at varying levels of synchronicity, and not at only one level; that there are intermediary levels of synchronicity ranging from the highly synchronous to the highly asynchronous; and, that the level of synchronicity is not only a function of the medium being used, but also of decisions taken by users. Moreover, it is becoming clear that despite the opportunity offered by various so-called asynchronous media, users tend to utilize the capability of asynchronous media in a highly skewed manner, giving preference to the synchronous over the asynchronous.

In this paper, we describe the trends that have blurred the dichotomy between synchronous and asynchronous communication, and speculate about the reasons for the human preference for high synchronicity. We discuss the implications of this preference for Information Systems researchers and practitioners.

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## ***Doctoral Consortium (E)***

### ***Analysis of Knowledge flow in organizations using Meta-Data ties of information, documents and Social Networks***

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Networking and especially social networking have been extensively studied during the past few years. As research has progressed, surprising findings have been shown which affect various areas in our everyday life. There is no doubt that social networking is of utmost importance to knowledge management in organizations, and particularly in technology-rich corporations in which much knowledge replication occurs. However, only few models depicting the connection between social networks and knowledge management have been constructed, despite the many recent studies on this subject. The aim of the current study is to design a model associating between knowledge flow in organizations and several well-known social network models. In order to construct this model we shall use a database depicting knowledge connections based on documents shared among the employees of a large organization in Israel. Based on the extensive knowledge which exists in the database, we shall form the organization’s basic social network. Using this network we shall develop several models, wherein every action executed on each document (e.g., reading, writing, removal of a document, etc.) expresses the directed knowledge flow of the social network. Using this data, we will try to strengthen the association with social network models such as the Small World Network model, Unscaled Network model, etc., and we shall project our conclusions on the fields of knowledge management and knowledge flow.

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