Frameworks for Classifying e-Business Concepts and Solutions

Chair:

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Panelists:

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The aim of this panel is to discuss and contrast frameworks for classifying e-Business concepts. A common integrative framework is much needed in order to define and measure the development of e-Business. It is much needed as "one cannot measure what one cannot define", and there does not seem to be a good common framework for classifying and describing e-Business.

One of the first and most important tasks in science is classification, going back even to Empedocles' four basic elements of air, fire, earth, and water to Mendeleev's more common Periodic Table of the Elements. E-Business research is certainly still in a relatively nascent state that could benefit from classification. Gradually the bits

and pieces of e-business concepts and models have emerged, and it is time to look for a framework for classifying e-Business concepts and solutions.

All disciplines need to establish a cumulative research tradition. A significant problem in e-Business research is the two uncoupled "planes" of research. On one hand, we have strategic, organisational and economical issues with their business concepts and models. On the other hand, there are applications and technical issues. Bridging this gap will be important to achieve coherent streams of research. The information systems discipline lies at the heart of e-Business research, and with its interdisciplinary nature it is well positioned to bridge this gap.

From a teaching perspective too, we need to integrate these two perspectives. At masters in IS programs and MBA programs with IS or e-Commerce specialisation, we need to teach the students how to integrate knowledge and skills from both perspectives. The students should get a thorough understanding of how technology and applications integrate with business models and concepts. Likewise, when we advice organisations about their e-Business strategy, we need to be clear about this integration and the competencies needed to undertake e-Business.

The panelists will discuss approaches to developing a classification framework with basis in their work on e-commerce models and taxonomies.

The panel should be interactive session in two ways. First, the panelists will not be simply «presenting papers»: rather they will be stating their views, opinions, positions and experiences. Second, we seek active audience participation: while the panelists present their ideas, a free flowing dialogue between (and within) the panel and the audience is actively encouraged.

Position Statement from Paul Timmers:

Business models classification exhibits a peculiar mix of practice and theory. Phenomenology on the one hand helps us to categorize business models as they are being created in real life on some intuitive dimensions. This already helps to create 'order out of chaos'. These dimensions then speculation about their extremes - are there perhaps new business models still to be discovered? This form of phenomenoology also invites field work: can we quanitify the dimensions, can we devise metrics and tools to measure actual business behaviour? More than once it turns out the real-life situations are very hard to capture with these tools and hard evidence is difficult to gather.

These classifications also invite reflection on a possible underlying theory, taking the route from practice to theory. The question is posed as to the significance of the characteristic dimensions. Could they be derived from a 'fundamental theory of e-business'? More then once we then find ourselves returning to 'classical' theories. Examples are transaction cost theory, business process analysis, other theories of organisation, or utility, interaction, sensemaking theories or theories of strategic decision making.

Some have started from such classical theories and attempted to derive a set of meaningful dimensions for businesss models, taking the route from theory to practice.

Both are fruitful exercises as they enrich our insight, and lead to methods to construct new business models.

Invariably they also point to the problems with phenomenological business models classification:

- more than once there is no formal or sufficiently formal definition of 'business model', the theory does not predict a discrete set of business models - contrary to what most classifications suggest, in other words, are there hidden parameters/correlations that result in a discrete set?

- there is an issue with granularity - at what level of detail do we define a business model (a case in point is the confusion between business methods and business models)

- there is an issue of perspective - which theory is most important, and can perspectives be kept disjoint - as an example, can we separate form (the organisational view on business modelling) from function (the purpose-oriented view on business modelling), let alone the increasing importance of the network perspective.

This then ultimately leads me to conclude that there are two key challenges:

1. connecting theory and practice when building business models classifications

2. developing the meta-level of business modelling, that is, integrating multiple approaches in order to develop more meaningful business strategies and operations.

Position Statement from Virpi K. Tuunainen:

There is a growing number of choices or possibilities related to access technologies for customers and business models for the companies conducting eBusiness. There are also necessarily manifold views on e-commerce systems, applications and services because of the multiple stakeholders involved. Multichannel EC model (originally in Järvelä & Tinnilä, 2000; further developed by Heikkilä, Rose, Rossi & Tuunainen, 2001 (forthcoming)) is an attempt to comprehend this complexity inherent in eBusiness.

Multichannel EC model is built around a generic customer channel model (originally by Vepsäläinen & Saarinen, 1998), displaying the trade activities that are present in any commercial transaction as channels. These activities are marketing/persuasion, finance, ordering/commitment and channels of delivery. The current trend in many industries that stresses the need to concentrate on core competencies and outsource the non-critical parts of the business suggests the need for separating the tasks in these channels to different parties in a networked mode of

operations. This further necessitates the definition of interfaces between the parties involved in e-business.

Business models in the framework present different business strategies, processes as well as market mechanisms. Furthermore, a given business model represents a set of constraints, including both organizational inertia as well as environmental limitations, such as characteristics of a given business environment, level of technical development (within the organization as well as in the industry), codes of conduct in business, and regulatory and societal factors.

Multichannel EC model can be used as a framework for e-commerce systems development methods to model systems at the level of business models, while having connections to concrete system models and implementations. This framework for modelling and implementation of future methods builds on previous work on IS design methodologies. This kind of meta-framework is particularly timely now that most companies are rushing to develop e- and m-commerce systems.

Position Statement from Andrew Urbaczewski:

Electronic commerce is a relatively nascent research stream, located in the IS discipline, a relatively nascent discipline, in the schools of business and commerce, which are relatively nascent schools in the university structure. All research areas struggle in the quest for the dependent variable, and EC is certainly no different, much like its predecessors in IS and and business in general. If EC research is to be taken seriously by those outside of this conference, dependent variable definition and categorization is essential.

One of the first steps in basic science is classification. This is seen any many scientific fields, whether it is the Periodic Table of Mendeleev, the Five Forces model of Porter, or the biological taxonomy of living creatures (i.e., Kingdom, Phylum, etc.). EC is lacking in a definitive means of classifying research streams and dependent variables, such that there is no real starting point for new researchers to begin to learn about EC. Sure there are a few classical papers, but none that really create THE starting point for EC.

Electronic commerce researchers need to use their influence to rally behind a particular classification scheme for labeling research streams and pursuing new research questions. Along with Len Jessup and Brad Wheeler, we have created a framework for classifying EC research. We examined over 173 papers written between 1985 and 1998 that were published in mainstream IS journals and also EC specialty journals. We created a 6-pronged framework for EC research: Technical, Economic, Organizational, Societal, Legal, and Behavioral, and we have created subtopics amongst the first three of these classifications. The use of this structure is extremely helpful to us in making sense of the large and varied sources available for publication of EC work.

Regardless of whether our framework or a different framework is adopted, those of us interested in the EC domain should make a commitment to supporting a

framework. Major EC conferences and journals should require authors of submitted papers to classify their works using this schema. In this means, reviewership, readership, and future research is much more clean. It is akin to thinking about a situation where all the EC articles in the world have fallen on the floors of the world's libraries. We can continue to muddle our way through them and hope to find the relevant literature to our research questions, or we can create a classification system, pick the articles up, and put them on the shelves in a way that everyone can find them.