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THE MISSING LINK: THEORETICAL REFLECTIONS ON DECISION RECONSTRUCTION

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Abstract

In this paper, we address theoretical considerations on the problem of decision reconstruction, which is defined as the process that allows an individual or group of individuals, whether internal or external to the organization, to understand how a group, using a GSS, reached a previous decision. We also analyze the implications of decision reconstruction with regard to both group support systems (GSS) research and knowledge management. We present an information model, whose constituting elements are not only concerned with GSS decision-making, but also towards GSS decision reconstruction. Using a GSS prototype based on the proposed model, we made a preliminary test in order to analyze how different people act when reconstructing decisions. In the process, we have exposed and detected limitations and present a solution proposal to overcome these limitations.

Keywords: Decision; reconstruction; argumentation.

1. INTRODUCTION

Group support has always been a convoluted field of research, as groups exist in real life in a wide variety of forms, with regard to the number of elements, backgrounds and working environments they represent. Most of all, they represent

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a set of distinct people that will hardly always think alike (even when great minds are involved...). Although involving complex matters, the field of group support has thrived over the years with interesting, valuable and revealing information on how groups interact and, for the sake of this paper, on how they support their activities by means of adequate software tools. Though there are many different names given to those tools in the literature, we will adopt the broad concept (as set out in Arnott & Pervan, 2005), in which such group support systems (GSS) are seen not only as a communication support, but also (and perhaps more importantly) as a decision-enabling technology, supporting debate, organization of ideas, simulation and analysis of consequences, and, ultimately, enabler of decisions. Also, it is acknowledged that GSS facilitate knowledge acquisition (Kwok, Ma & Vogel, 2000), improve decision quality and quantity, enhance participants' satisfaction (A. Dennis, Haley & Vandenberg, 1996; A. R. Dennis, Wixom & Vandenberg, 2001), and reduce the cost and length of meetings, though larger groups appear to benefit more than smaller groups (Vreede, Vogel, Kolfschoten & Wien, 2003).

Through the earlier works of DeSanctis and Gallupe (published in DeSanctis & Gallupe, 1987) and ever since, the scientific community has seen a growing number of group support systems (most of them only in a prototype stage and only a few, but remarkable ones, which matured into vendible software). We contend, however, that the vast majority of those systems were "merely" devised in order to support decisions. Boland *et al.* (in Boland, Tenkasi & Te'eni, 1994) warn that this can result in imposing limitations to the effectiveness of local knowledge infrastructure. A consensus building approach can limit the opportunities for group learning due to a premature closure of discussions. This is increasingly problematic given the fast changing environments that demand multiple interpretations of information and a continuous evaluation (Malhotra, 2000).The majority of group support systems were developed according to a sequential structure of the different stages of a decision process (according to Simon, 1977), namely: the identification and listing of all the alternatives – the *intelligence* phase; the determination of all the consequences resulting from each of the listed alternatives – the *design* phase; and the comparison of the accuracy and efficiency of each of these sets of consequences – the *choice* phase.

In our opinion, the described situation also led to unforeseen consequences regarding organization memory and knowledge management, especially in distributed working environments. As the memory of the agents involved in earlier decisions may no longer be available within the boundaries of an organization (for instance due to a career move, retirement or even death), it might be quite difficult to retrieve the reasons for past decisions. This becomes particularly problematic within organizations that mostly rely on its employees as the main information source for past situations. Though many organizational knowledge models consider individual memories as a natural and important source for organizational memory (see for instance Ackerman, 2000; Cross & Baird, 2000; Guerrero & Pino, 2001; Lehner & Maier, 2000; Stein & Zwass, 1995; Walsh & Ungson, 1991), its role fades out in distributed environments, large companies, complex businesses and, basically, in every organization that stays in business (or active) longer than the career time of its employees. A technological twist is imposed when it is required to register, extract, disseminate and essentially to provide the right information to anyone in need of it (which is the basic objective of knowledge management). In this line of reasoning, though GSS are usually well provided with tools to support decisions, they do not always possess proper mechanisms (or at least flexible ones) to explain or describe past decisions, as well as the processes that led up to them.

As we believe that another step needs to be taken towards fulfilling such an objective, we present in this paper the theoretical groundings for developing a support framework for decision reconstruction in GSS, a construct described in section 2, and, thus, expanding their supporting scope. In addition, we present the first attempt at designing an information model that supports it. We dedicate the last part of the paper to exposing the detected limitations and future research considerations.

2. GSS AND DECISION RECONSTRUCTION

The role of GSS as an effective support for decision-making was already set in the introduction. However, by combining the importance of supporting the decision-making process with the importance of understanding the decisions that came out of those processes, whether for knowledge or auditing purposes, an progression towards transparency in decision-making (as stated in Danielson, Ekenberg, Grönlund & Larsson, 2005; Stirton & Lodge, 2001) can be achieved.

By introducing proper support for decision reconstruction into GSS, we can empower them as tools for consultation and external scrutiny of decisions, as well as effective means to achieve the aims of legislative initiatives such as the European Transparency Initiative (Commission of the European Communities, 2006) or the American Sarbanes-Oxley Act[1]. Both initiatives intend to pressure organizations to register every aspect of their decision-making: the parties and organiza-

[1] The Sarbanes-Oxley Act (SOX) of 2002, also known as the Public Company Accounting Reform and Investor Protection Act of 2002 is a United States federal law enacted in response to a number of major corporate and accounting scandals. The legislation establishes new or enhanced standards for all U.S. public company boards, management, and public accounting firms. The Act establishes a new quasi-public agency, the Public Company Accounting Oversight Board, which is charged with overseeing, regulating, inspecting, and disciplining accounting firms in their roles as auditors of public companies. The Act also covers issues such as auditor independence, corporate governance, internal control assessment, and enhanced financial disclosure.

tional role, documents, procedural steps and even tasks that may not have started yet, with an aim to ease future audits (Turoff, 2006; Turoff, Chumer, Hiltz *et al.*, 2004; Turoff, Chumer, Van de Walle & Yao, 2004).

At this point, a more formal definition of what we mean by decision reconstruction is needed. We define decision reconstruction as the process that allows an individual or group of individuals, whether internal or external to the organization, to understand how a group, using a GSS, had reached a previous decision. We also comprehend the concept of decision reconstruction in *lato sensu*, meaning that the utility of the construct fits the needs of the organization's internal and external users, as well as its usually independent examiners, normally known as auditors.

Research on decision reconstruction so far seems to have been directed towards building and using visualization tools rather than verifying the efficiency of such tools in understanding past decisions. Also, though expert systems research expresses an interest in explaining (rebuilding) decisions and embedding explanation subsystems (Turban, Aronson & Liang, 2005), the specificity of the development and, especially, the normative character of such systems are factors that make those modules unsuitable for the needs of dynamic groups that require collaborative work. As stated in the introduction, GSS are a natural solution to handle this kind of work. Nevertheless, as GSS are built upon the idea of cumulative (sequential) support for the decision-making phases (as defined by Simon, 1977), it is not always easy to understand the earlier stages of a discussion. This is particularly evident at the end of discussions when classes are created to encompass the discussion elements and some of the details are "flattened". For instance, in a GSS voting environment, it is usual to expect that initial preferences change as part of the group process (Turoff, Hiltz, Bieber, Fjermstad & Rana, 1999a). When the decision is made and results are disclosed, the final report is almost silent when it comes to showing how progress was made, if there were changes of opinions (and by who, if possible), what were the convincing arguments, etc., which were part of the process from the start of the discussion to its end. In this case, a new group iteration (which could be the point in time when someone changes his/her vote) substitutes the earlier one, and the previous discussion scenario is discarded. However, reports usually only embed the latest result, especially when reporting is an automatic feature.

We posit that performing decision reconstruction using a GSS solution can be a flexible solution to the problem. However, this can only happen if the information model underlying it is able to support and structure the collaborative discourse (as defined by Turoff *et al.*, 1999a), thus implying the support of the decision process from phase 1 to phase 3 (Simon, 1977) as well as the reverse process (from phase 3 to phase 1). Changing environments call for interpretation of new events and re-interpretation of existing practices (Boland *et al.*, 1994). By interpretation, we must understand it to be the process of giving meaning to information, which is a function of human interpretative and constructive activities (Malhotra, 2000). In order to enable the re-interpretation process, the systems must foster and capture multiple perspectives on past and present information and events, namely decision processes. We posit that providing support to explicit divergent information and opinions in collaborative decision groups is the key to achieve the understanding of past decisions and develop the ability to reconstruct and to interpret or probably reinterpret a decision process.

Information technology is known to foster the creation, storage, transfer and application of knowledge in an organization (Alavi & Leidner, 2001). The preservation and maintenance of the organizational memory is an essential concern among organizations (Stein & Zwass, 1995) and it raises the need for mechanisms to perform the search and extraction of relevant information, or otherwise there would be an information overload (Courtney, Chae & Hall, 2000; Nunamaker, Dennis, Valacich, Vogel & George, 1991).

GSS, in particular, facilitates the seizure of knowledge (Liou & Nunamaker, 1990), namely by capturing and retaining encoded knowledge (Stein & Zwass, 1995), enhancing collaboration (Nunamaker *et al.*, 1991; Vreede *et al.*, 2003) and facilitating the use of knowledge in mutually dependent contexts (Guerrero & Pino, 2001). GSS provides a collaborative learning context where people can interact, create and obtain knowledge, which has been acquired and shared by groups (Kwok *et al.*, 2000).

The repositories of a GSS keep a group memory, drawing it from electronic group meetings, a facility which is offered to group meeting participants who need to access historical information or knowledge for recommendations. Combining GSS with the collective memory is also likely to provide additional information processing support (Paul, Haseman & Ramamurthy, 2004), especially when information and knowledge are not easily accessible in large organizations.

To achieve the previous objectives, GSS covers a wide range of services, or features (described in detail, for instance, in Bafoutsou & Mentzas, 2002; Fjermestad & Hiltz, 2000-2001 and Maier, 2004), which must be chosen according to the specific situation and group which is to be supported. In order for users to obtain the newest information, GSS also has the ability to manage successive versions of the information and to maintain a record of the people involved, which enables the organization and classification of information, easing its retrieval (Gunnlaugsdottir, 2003).

When supporting a decision-making process, GSS plays an important role in registering and codifying group's contributions, thus enriching the organizational memory. By fostering the decision reconstruction ability of GSSs', we promote their capability for information retrieval, thus contributing to ease and deepen the comprehension of past decisions, while fostering knowledge acquisition. In addition, expanding GSS capabilities from the perspective of knowledge management can significantly improve the performance and satisfaction of group meeting participants (Hung, Tang & Shu, 2008).

Although GSS might foster relationships between information, linking discussions is not an always-present feature in current GSS, as group discussions are usually handled independently. The situation means that though group participants can retrieve information from other discussions and "copy and paste" the information between discussions, the software does not recognize that there are intertwined elements among discussions. To perceive such connections, organizations often need to resort to other systems (for instance, search engines using artificial intelligence techniques based on natural language recognition to generate categories) in order to integrate information.

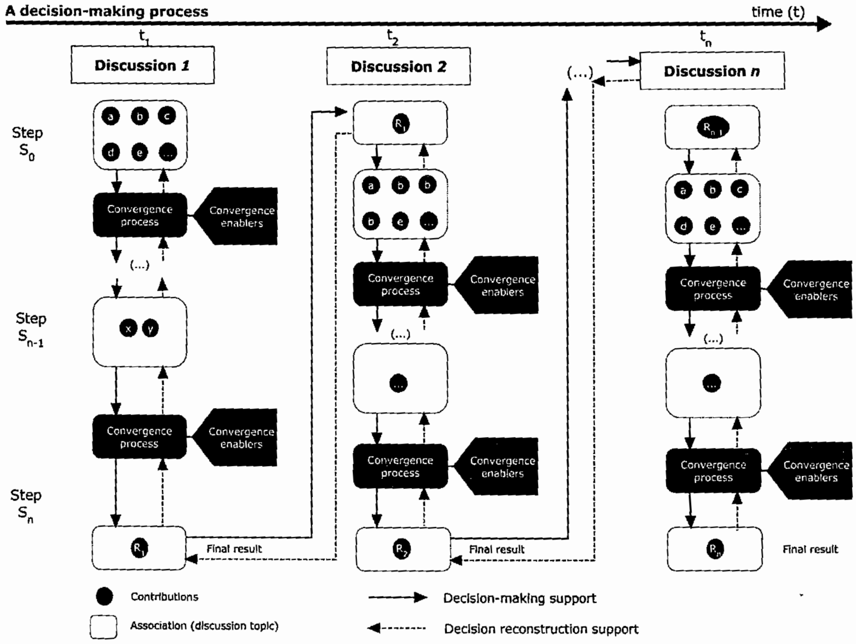
Decision makers must understand how the past affects their present decisions. In this matter, we propose that expanding the ability for explicitly interconnecting GSS discussions facilitates the search and extraction of relevant information from the organizational memory and mitigates the need for more elaborate (and expensive) software to retrieve information. This feature broadens the possibilities for an accurate decision reconstruction since all decision elements (whether or not discussed within a single discussion) would be available, thus fostering relationships between information and facilitating the use of knowledge in mutually dependent contexts (Guerrero & Pino, 2001).

Figure 1 represents the described situation. In this case, the decision of discussion 1 (R1) becomes the starting point for discussion 2, explicitly maintaining the connection to the previous discussion and therefore making it possible to reconstruct the decision-making in discussion 2, as the first discussion influenced the second. The association to elements of earlier discussions (whether the final decision or some of the in-between steps) can be linked into a discussion at any stage and not just at its beginning (Figure 1 is represented this way merely to preserve its readability), granting the possibility of deepening the decision reconstruction process whenever needed. This process allows adjusting the level of detail and time-span of the decision reconstruction analysis.

Another implication of decision reconstruction is the possibility of reviewing whether a past decision was indeed the best solution, taking into consideration the available information, for a problem or, in other words, to perform a decision-audit. Such audits (whether internal or external), though carrying a certain connotation of mistrust, seem valid and even necessary in many contexts, such as for accounting and finance purposes. Of course, this line of reasoning might also support the will for a better understanding of past decisions (which were bound by the available information at the time), in order to observe what went wrong then with a view to avoiding similar situations in the future (and not only for liability purposes), thus also contributing to the afore pointed objectives of knowledge management.

FIGURE 1

Linking decision processes (own source)



Interconnecting decision discussions, and not just the discourse elements within a discussion, creates another possibility for enhancing the support that GSS can provide. It is known that many decisions depend on key elements that are decided by administration or expert boards and that those elements may assume the form of projections (e.g. financial, market behavior, offer and demand, etc.), rather than hard data. Based on such decisions, many other decisions can occur. If the connection among those decisions is not maintained, organizations may face a serious problem if projections need to be reviewed, or actual data becomes available, as there is the danger of losing the knowledge of the implications of such changes. In this situation, the decision reconstruction support, through discussion linking, fosters knowledge management by easing the awareness of what processes are affected by the information change and whether or not they have implications regarding previous decisions.

Probably there are many situations where the sole review of discussion topics and resulting decisions is enough to recall the details of the decision process, especially if the people who review them are the decision agents that were involved in it. Still, as those decision agents may no longer be in the organization, we believe that anyone should be able to retrieve that information easily. In these circumstances, the GSS needs to allow an in-depth examination whenever required.

Part of the problem is that GSS solutions should cover a multiplicity of approaches for supporting different ways of building a collaborative discourse (according to Turoff, Hiltz, Bieber, Fjermstad & Rana, 1999b). These ways range from a simple question-reply pattern to more elaborate argumentation models supported by argumentation theory (as seen, for instance Bentahar, Moulin & Bélanger, 2010; Kunz & Rittel, 1979; Maleewong, Anutariya & Wuwongse, 2008; Toulmin, 2003).

3. A MODEL FOR DECISION RECONSTRUCTION

A general GSS information model for decision reconstruction needs to be able to register or document the in-between steps of the convergence/consensus-building process provided by the interconnection of the argumentation elements presented by the group during the discussion. This type of behavior resembles the capabilities of entity-based versioning systems, which can create versions of packages, classes, and even individual methods of a complete system over its entire lifespan (Robbes & Lanza, 2005). As such, the ability for fine-grained versioning would allow an in-depth registration of different elements (discussions, topics, convergence procedures, etc.) and their evolution over time. As already described, another characteristic of for a general GSS information model for decision reconstruction is its ability to link information which came in between various discussions.

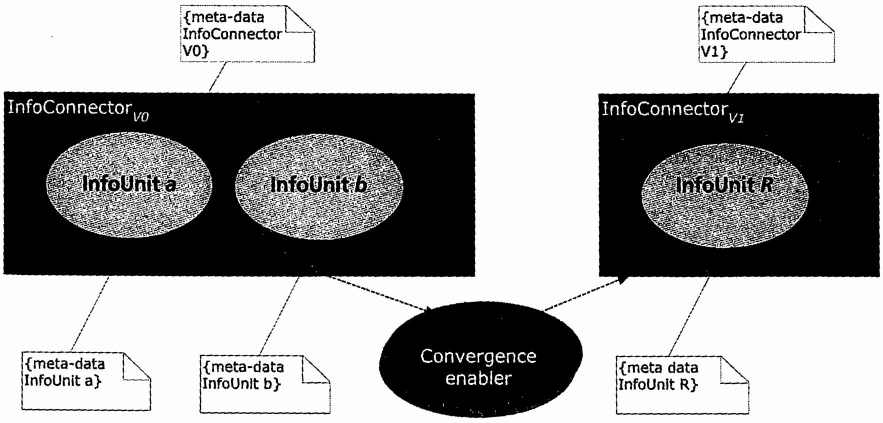
Figure 2 shows the model and its abstract components. We describe the components of the model and its relationships in the next subsections. Nevertheless, the intended model encompasses three aspects. The first one refers to the combination of *InfoUnits* and *InfoConnectors* to support the context and structure of the groups' contributions (dividing the group speech into categories such as discussion, topics, information "buckets", etc.). The second aspect is the combination of *InfoUnits*, *InfoConnectors* and *Meta-data* to support different argumentation models, whether in decision-making or in decision reconstruction. The third refers to the *Convergence Enabler* as being the responsible aspect for versioning the information elements and enabling registration and review of the in-between steps of a decision process.

3.1 InfoUnits

The purpose of these elements is to receive (and store) any type of contribution from a group, independent of the commonly used argumentation model in the GSS. In order to support any kind of entry, they require additional charac-

FIGURE 2

A general information model for GSS decision reconstruction (own source)



terization (performed through the *Meta-data* element) to define their role within argumentation models (e.g. as claims, issues, rebuttals, backings, statements, propositions, etc.). *InfoUnits* are independent elements and therefore they need to be connected or grouped in order to capture their context or relationships, by means of *InfoConnectors*. Though *InfoUnits* can receive any type of contribution, it is possible to restrain their supported data types, which forces the group to comply with predefined data formats (e.g. numerical or textual), in order to ease the integration with the *Convergence Enabler* element, as described ahead.

3.2 InfoConnectors

InfoConnectors evidence the relationships or multiplicity of links among *InfoUnits* (e.g. sequence, dependence, versioning, merging, etc.), using a hyperlink metaphor. *InfoConnectors* also act as information containers by creating sets of *InfoUnits*, as one of the most common features in GSS is their ability to allow the group to separate their contributions into meaningful categories such as discussions, topics, etc., thus providing support for discourse structuring.

The reference to the type of connection relies on the *Meta-data* element associated with *InfoConnectors*, as these are mere void links among *InfoUnits*, which describe both the type of relationship between *InfoUnits* (e.g. support, response to, evidence for, etc.), according to the implemented argumentation model, and the encompassed structuring support by associating *InfoUnits* into discussions, topics, categories, etc. By doing this we ensure that every argumentation model can be represented as a combination of *InfoUnits*, *InfoConnectors* and their associated *Meta-data*, while preserving the flexibility of GSS of being able to organize information.

Depending on the discussion, decision-making support might benefit from the use of formatted contributions or from predefined data-types used when inserting data (e.g., percentage numbers, weights, etc.). Therefore, *InfoConnectors* can establish data validation rules over *InfoUnits*, so that the later process of supporting the convergence of contributions, using *Convergence Enablers*, could be eased or even performed automatically.

3.3 Meta-data

When *InfoUnits* and *InfoConnectors* are generated, an associated *Meta-data* element, containing a dynamic list of properties, is also created. These properties range from automatic indexing information, such as identification, authoring, time stamping, etc., to additional properties that can be set to register personal annotations and measures for defining the affective value of information objects (Lopatovska & Mokros, 2008). That sort of information provides the elements needed to establish categorizations that deepen contextual information and help users to understand, use and extract information, while reducing possible information ambiguity (Lee, 2004).

To bridge the gap between normal GSS and argumentation theory, *Meta-data* can also register argumentation model properties, referring to both *InfoUnits* and *InfoConnector*, as already mentioned. As different discussions (or discussion segments/phases) may require distinct argumentation structures, *Meta-data* offer the support for different argumentation models. An *InfoUnit*, or a set of *InfoUnits*, can be characterized regarding multiple argumentation models. This possibility allows a future reviewer to observe decisions using the underlying logic of different argumentation models, enhancing the support for a faster and richer decision reconstruction.

3.4 Convergence Enablers

These elements support groups in achieving decisions when divergent contributions (*InfoUnits*) exist, for instance, within discussion topics (*InfoConnectors*).*Convergence Enablers* implement decision-making techniques, creating new versions of the discussion topics, which encompass convergent *InfoUnits*. Achieving the final decision, however, might require more than one convergence process and more than just one convergence method. By maintaining a record of the convergence process, as well as the used methods, *Convergence Enablers* contribute to ease the decision reconstruction processes by saving the in-between steps of the decision process.

3.5 Model validation

We tested this model, implemented in a GSS prototype (please see the details in Antunes & Costa, 2009) that simulated a public contracting process (though based in real documents), in order to analyze how different people act when reconstructing decisions. We codified a contracting process into our GSS, regarding the acquisition of external auditing services, according to existing legislation requirements. We divided the discussion into different discussion topics, which ranged from the financial elements submitted by each applicant and their proposals for the price and time limit for executing the task, to the contributions of applicants and decision agents. The idea-generation phase relied on a simple reply-response scheme, while the debate and consensus building required a more structured representation, which implied evidencing the arguments (support/rebuttal) as well as the sequence (versions or steps) of the convergence processes, expressed through textual discussion and online voting. A final document, which represented the formal outcome of the decision process, was also included.

Having codified the earlier elements, we invited seven senior technicians to review the decision process using our GSS. The reviews were made in independent sessions (meaning that the reviewers had no contact among them), in which we observed their behaviour when performing the proposed tasks. Although being experienced with both management and group support systems usage, the subject group had no practice in using our GSS, and only had a basic written tutorial on how to operate the system.

The results evidenced the capability of the information model to register and recover relevant information and a rigorous understanding of the involved decision process.

However, participants considered that some important reconstruction tools in the prototype were missing. Each of them complained about the lack of restructuring tools for the decision process information (argumentation elements and other data) allowing for his/her own way of analyzing the past situation. To overcome this problem some of the participants suggested re-structuring tools. They also complained that the existent tools and the modelling possibilities of the prototype were excellent in supporting several ways for conducting a decision process, as different argumentation models were used in different parts of the discussion, but that such freedom of style hindered the decision reconstruction process, as they firstly assumed that only one argumentation model was present in the whole discussion.

The GSS prototype had two main goals: on one hand to fully support a decision process accommodating several ways or forms of conducting, by allowing a very flexible structuring and argumentation environment and, on the other hand, to fully support the decision process reconstruction with a minimum of cognitive load. We found that these two objectives are somewhat opposed: too much freedom of style on the decision process makes its reconstruction harder.

4. FINDING THE MISSING LINK

By providing information on which argumentation models were used in a decision-making process, as well as the followed steps to reach the final decision, decision reconstruction agents (the people who will review the decisions) can access the knowledge on the used information structure and its logic. The problem, not yet solved, relies on decision reconstruction agents wanting to view the information under a different structure or argumentation model in order to attain a better understanding of the decision in analysis.

As presented, decision reconstruction seems largely bounded and restrained by the argumentation model (or models) used in the decision-making process, from phase 1 to 3, which hinders the intended flexibility for the model. However, we devised a decision reconstruction support model that would endorse decision reconstruction agents the flexibility to use several possibilities of analysis, supported by information elements that would also allow different ways (graphically, for instance) of representing and understanding the decision process.

Although the combination of *InfoUnits*, *InfoConnectors* and *Meta-data* can support the structure of different argumentation models, as it stands, the *Meta-data* element cannot guarantee a transition between argumentation models. Although it is possible to express more complex argumentation models into simpler ones, for instance Toulmin's argumentation model (Toulmin, 2003) into a question-reply model, the opposite process may not be accomplishable, or at least automatically, due to the lack of associated information.

At this point, it is easy to realize that a linking mechanism between argumentation models is missing. We believe that such mechanism is attainable by two processes, though separated or intertwined.

4.1 Manual approach

In this process, decision reconstruction agents manually supply the types of relationship between the discourse elements (*InfoUnits*) as perceived by a decision reconstruction agent. *InfoConnectors* were established in the decision-making process and their associated *Meta-data* characterize the links according to their structuring roles (discussions, topics, etc.), as well as their argumentation roles (response, support, rebuttal, etc.). In this situation, if a decision reconstruction agent intends to observe the existing information structure using a different argumentation model, he needs to perform a manual characterization of the *Meta-data* elements associated to existing *InfoUnits* and *InfoConnectors*, according to the intended argumentation model. In this sort of situation, it is also highly likely that new *InforConnectors* become needed.

This approach seems highly inefficient, or at least time-consuming, requiring an explicit characterization interface, where a GSS should ask the decision reconstruction agent to input all the necessary argumentation attributes.

4.2 Computer-based approach

This second approach makes use of automatic mechanisms (i.e. intelligent agents) to perform a semantic and syntactic analysis of the different contributions (*InfoUnits*) to infer the type of relationships between the elements, according to a selected argumentation model, and creating new *InfoConnectors* whenever needed. Although this would lend speed to the process of classifying the relationships among *InfoUnits,* according to different argumentation models, such an approach needs to guarantee the accuracy of the process in order to preserve the embedded relationships. In spite of the fact that this automatic procedure seems more effective than the previous one, the development of intelligent agents is not a trivial task and there is a higher cost factor involved.

4.3 Hybrid approach

The combination of the earlier approaches seems to provide the desired flexibility to perform the process.

We contend that the GSS should identify the information gaps when an argumentation model change is intended, by using the computer-based approach. In addition, instead of creating new connections and establishing their characterization automatically, the GSS should propose the creation of such connections/ characterizations and ask for its confirmation from the decision reconstruction agent. This procedure centers the process around the decision reconstruction agent, rather than the intelligent agents, as it provides feedback for the performed automatic analysis and contributes to the training of the intelligent agents.

5. CONCLUSIONS AND FUTURE RESEARCH

We have presented the importance of decision reconstruction in organizations and its implications in existing theory, particularly in knowledge management. Although GSS commonly possesses tools to support decision-making, explaining past decisions is not always a well-supported process. Accordingly, we presented the theoretical groundings for developing a support framework for decision reconstruction in GSS, in order to expand their supporting scope.

In spite of the fact that the information model for decision-making and decision reconstruction provides the elements to support both processes, the proposed model is still not without limitations. The main problem involves the process to be followed to review the decision processes under different argumentation models, as argumentation models do not overlap. This situation means that the decision reconstruction process is not only a problem of information restructuring, but also a problem of associating argumentation models. Therefore, translating one argumentation model into another seems to be the first step to address in future research, while bridging the information gap among argumentation models. In addition, *Meta-data* also needs additional properties to turn the characterization of specific argumentation models "on" and "off".. Such properties would allow the support for graphical representation purposes, in order to observe where (or whether) argumentation elements overlap, thus contributing to providing an actual support to a multiplicity of approaches regarding decision reconstruction.

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Resumo

Neste artigo, abordam-se considerações teóricas sobre o problema da reconstituição de decisões. Esta reconstituição é definida como o processo que permite a um indivíduo ou grupo de indivíduos, sejam eles internos ou externos à organização, compreender como um grupo, usando um sistema de apoio a grupos, chegou a uma dada decisão. São expostas também as implicações da reconstituição de decisões para a investigação sobre sistemas de apoio a grupos e sobre gestão do conhecimento. Apresenta-se ainda um modelo de informação, cujos elementos devem suportar não só a tomada de decisão, mas também a reconstituição de decisões. Para analisar a forma como as pessoas agem enquanto reconstituem decisões efectuou-se um teste preliminar, utilizando um protótipo baseado no modelo apresentado. No processo, expõem-se as limitações detectadas e uma proposta de solução para as obviar.

Palavras-chave: Decisão; reconstituição; argumentação.