Chapter 7.1 It's All in the Game: How to Use Simulation–Games for Competitive Intelligence and How to Support Them by ICT

Jan Achterbergh University of Nijmegen, The Netherlands

Dirk Vriens University of Nijmegen, The Netherlands

ABSTRACT

In this chapter, we explore the role of simulation games for intelligence activities. Although games have been used in intelligence activities, the contribution of building and using simulation games to Competitive Intelligence has, to our knowledge, not been examined thoroughly. In this chapter we fill this gap by explaining the building and using stages of simulation gaming and by discussing the contribution of these stages to directing, collecting, analyzing and disseminating Competitive Intelligence. Moreover, we discuss the role of ICT to enhance the contribution of simulation games to competitive intelligence.

INTRODUCTION

As many authors on competitive intelligence point out, organizations need to collect and process information about the environment to (re)formulate their strategy. Moreover, the pressure to produce timely, accurate, actionable and strategically relevant information is growing because the complexity and dynamics of the environment is increasing rapidly (cf., Kahaner, 1997; Fuld, 1995; Cook & Cook, 2000 for similar arguments). Hence, organizations are trying to structure their competitive intelligence process—the process by means of which strategically relevant information about the environment is delivered.

In the literature on Competitive Intelligence (CI), this process is usually broken up into four stages: direction, collection, analysis, and dissemination (cf. Sammon, 1986; Bernhardt, 1994; Fuld et al., 2002; Kahaner, 1997; Vriens & Philips, 1999). In the direction stage, CI professionals establish what data are relevant for the purpose of strategic decision-making. In the collection stage, relevant data sources are determined and data are collected from them. In the analysis stage, collected data are transformed into competitive intelligence that can be used by strategic decision-makers. In the dissemination stage, the competitive intelligence resulting from analysis is disseminated over strategic decision-makers so that they can incorporate it in the process of (re)formulating their strategies (for a more thorough treatment of the process of competitive intelligence, see Chapter I of this book).

If CI is to deliver its contribution to the process of strategy formulation, a pro-active mode of intelligence gathering seems most appropriate (cf., Ellis, 1993; Hannon, 1997; Tessun, 1997). In a pro-active mode, intelligence practitioners try to anticipate environmental developments that may have a strategic impact and assess their consequences. Pro-active intelligence requires, in our view, a deep insight into the "organization in its environment." For instance, directing the search for information requires an insight into strategic problems the organization in focus has to cope with and environmental factors having an impact on these problems. To direct the search for data, CI professionals need to construct models of these strategic problems and environmental factors. Analyzing collected information and transforming it into intelligence builds on these constructed models and requires an insight into possible effects of a multitude of states of affairs and events in the environment of the organization, on both parties relevant to and the organization in focus itself.

Not only do CI practitioners need a model of the "organization in its environment," it is also important that this model is shared among the different parties involved in the intelligence process. The model should be shared among CI professionals so that they have a common orientation towards performing their CI activities. Moreover, it should be shared among CI professionals and strategic decision-makers for several reasons. Among these are: (1) improving the understanding of CI professionals of strategic problems, (2) grounding the model in the strategic orientation of the organization, (3) facilitating the dissemination of the intelligence, (4) ensuring commitment of strategic decision makers to using the intelligence, and (5) improving the process of monitoring and maintaining the model itself.

Sharing the model among the relevant parties in the organization requires high quality communication (both regarding content and process) between these parties. In this chapter, we examine the potential of (ICT-enabled) simulation games to support this communication process. As Geurts et al. (2000) assert, simulation games may be a valuable tool contributing to improving the quality of the communication. The element of simulation requires participants to interactively model the organization in its environment, systematically analyzing relevant variables, parties, processes and their relations. The element of gaming allows participants to interactively experiment with the model in a relatively safe environment. Together, the simulation and the gaming elements can improve both the content and the process of communication required for pro-active competitive intelligence. Although the use of games in supporting intelligence activities has been reported (e.g., Allgaier & Powell, 1998; Clark, 1998; Fuld, 1998), the link between the different stages of simulation games to CI has not been treated thoroughly. In this chapter, we will examine this link.

To deliver its contribution to the intelligence process, simulation games may be supported by ICT in various ways (e.g., by groupware of various Web-based applications). The role of ICT to 13 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-

global.com/chapter/all-game-use-simulation-games/24379

Related Content

Crime Detection and Criminal Recognition to Intervene in Interpersonal Violence Using Deep Convolutional Neural Network With Transfer Learning

Mohammad Reduanul Haque, Rubaiya Hafiz, Alauddin Al Azad, Yeasir Adnan, Sharmin Akter Mishu, Amina Khatunand Mohammad Shorif Uddin (2021). *International Journal of Ambient Computing and Intelligence (pp. 154-167).*

www.irma-international.org/article/crime-detection-and-criminal-recognition-to-intervene-in-interpersonal-violence-usingdeep-convolutional-neural-network-with-transfer-learning/268800

Real-Time EEG Device for Epilepsy Detection Using Wavelet Transform and Support Vector Machine

Sharad Sarjerao Jagtapand Rajesh Kumar M. (2021). Advancing the Investigation and Treatment of Sleep Disorders Using AI (pp. 104-135).

www.irma-international.org/chapter/real-time-eeg-device-for-epilepsy-detection-using-wavelet-transform-and-support-vectormachine/285272

Integrated Network Topological Control and Key Management for Securing Wireless Sensor Networks

S. Kumarand N. Nagarajan (2013). International Journal of Ambient Computing and Intelligence (pp. 12-24). www.irma-international.org/article/integrated-network-topological-control-and-key-management-for-securing-wireless-sensornetworks/104158

A Semantic Agile Approach for Reconfigurable Distributed Applications in Pervasive Environments

Abderrahim Lakehal, Adel Alti, Sébastien Laborieand Philippe Roose (2020). International Journal of Ambient Computing and Intelligence (pp. 48-67).

www.irma-international.org/article/a-semantic-agile-approach-for-reconfigurable-distributed-applications-in-pervasiveenvironments/250850

Improving the Naïve Bayes Classifier

Liwei Fanand Kim Leng Poh (2009). *Encyclopedia of Artificial Intelligence (pp. 879-883)*. www.irma-international.org/chapter/improving-naïve-bayes-classifier/10347