12TH ICCRTS "Adapting C2 to the 21st Century"

Title: Impact of Culture on Information Sharing for 21st century C2 Systems

Suggested tracks:

*Track 4: Cognitive and social issues

*Track 7: Network-Centric Experimentation and Applications

*Track 5: Organizational issues

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Extended abstract

Information sharing is crucial within the command and control (C2) process. Network Centric Warfare (NCW) "translates information superiority into combat power by effectively linking knowledgeable entities in the battlespace" (Alberts, Garstka & Stein, 1999, p. 2). While networking technology enables the linking of entities, technology alone is not sufficient to promote the sharing of information (Balthazard & Cooke, 2004; Jarvenpaa & Staples, 2000; Warne, Bopping, Ali, Hart & Pascoe, 2005). In particular, the entities have to be able to understand one another.

21st century military operations are invariably joint and combined, and often involve collaboration with civilian entities, such as the emergency services, suppliers, non-governmental organisations, and international organisations (e.g. UN agencies). Each participating entity has its own national, organizational, and professional culture (Hofstede, 2001). Hence, information sharing and understanding takes place in a cross-cultural context. For example, the prize-winning Integrated Staff Information System (ISIS) – developed by the Dutch Army's C2 Support Centre for Dutch Army users – was used in Task Force Fox in Macedonia by the EU's civilian observers and by military personnel from seven different nations.

Although the importance of cultural influences on information sharing and collaboration is widely recognized, little academic research has been conducted in this field (Steinwachs, 1999; Gupta & Govindarajan, 2000; Weir & Hutchings, 2005; McKinnon, Harrison, Chow & Wu, 2003). The purpose of this paper is to survey the existing research literature on the cultural factors that influence information sharing during the C2 process. The survey is the initial output of the first author's doctoral research, drawing its inspiration from analogous research in aviation and medicine (Helmreich & Merritt, 1998). Like C2, the aviation and medical domains are technology-driven. It is anticipated that, on completion, the research will result in guidelines for C2 system developers and users.

The paper starts by describing why it is important to share information during the C2 process. Examples will be given, showing that information sharing during the C2 process can be problematic and that technology alone is insufficient to promote the sharing of information. A framework will be presented in which the factors influencing information sharing during the C2 process are depicted. Previous research examining information sharing in a cross-cultural context will be surveyed. This will result in hypotheses regarding the impacts of culture on information sharing during the C2 process. In the next phase of the research, these hypotheses will be tested by means of observation, interviews and experimentation.

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