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# COTS Software for the Net-Centric C2 Decision Support and Knowledge Management

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**Suggested Topics:**

Net-Centric Applications
C2 Technologies
Information Management

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# COTS SOFTWARE FOR THE NET-CENTRIC C2 DECISION SUPPORT AND KNOWLEDGE MANAGEMENT

## *Extended abstract*

1. *C2 decision support, knowledge management and software applications.*
2. *Software (SW) possibilities and expectations; directions to the solution.*
3. *Research projects as a background for the experimentation.*
4. *Lessons learned.*

**Keywords:** C2 system, decision support, knowledge management, CIS, COTS SW (Clementine, ITM, and Tovek Tools).

## 1. C2 decision support, knowledge management and software applications

Decision support (DS) and knowledge management (KM) in net-centric C2 environment present an enormous and complex matter usually including many steps, methods, techniques and tools. It is hardly to expect a unique SW solution for that large subject. This area is dynamic and an application "for ever" can hardly be achieved.

Some SW concepts are very promising, for example service oriented architecture (SOA), but the required services must be well prepared, tested and implement. In the authors' opinion, best solution is to find out useful services provided by COTS SW and implement them for C2 support.

## 2. SW possibilities and expectations; directions to the solution

Managers' expectations of COTS software deployment are usually very high. They assume that software will solve all key existing issues in an organization. Software is often mistaken for method or process that should exist independently. Roles participating on software deployment are presented and possible models of implementation are discussed in this part.

## 3. Research projects as a background for the experimentation

Researchers' experience is based on two research projects which has been solved at the University of Defense; "Planning processes in the MoD" [1], and "Communication and information systems (CIS) development and integration in the NATO environment" [2].

First one (1) examines Data Mining Clementine suite [4a] for the decision support in the planning processes and the second one (2) experiments with ITM (Intelligent Topic Manager) [4b] for the IS development with the effective information retrieval.

## 4. Lessons learned

(1) Difficult and complex data analysis can be smartly solved using Clementine. The tool transforms analysis tasks to simple data streams covering all requests. Reporting and visualization of data mining analysis results is important step for model understanding. Clementine provides comprehensive set of reporting tools as well.

(2) Suggestion of the new method of preparing ontology in the security area using analytics and text mining Tovek Tools SW [4c]. IS architecture by ITM implementing.

## *Literature*

*[1] Development, integration, administration and security of communication and information systems in NATO environment (University research project).*
*[2] Development of suggestion support methods in processes of planning and activity evaluation in MoD. (University research project).*
*[3] NATO NEC Feasibility study.*
*[4a] www.spss.com; [4b] www.mondeca.com; [4c] www.tovek.cz*