



Mission Support Tool for Air Operations

- Prepares and disseminates Tasking Orders.
- Monitors missions and resources.

Tasking Orders

Mission planning is a complex part of the management of air resources—both transport and fighter aircraft. There are many constraints on the assignment of particular equipment to specific duties, the cost of inefficient use is very high, and results are often needed urgently.

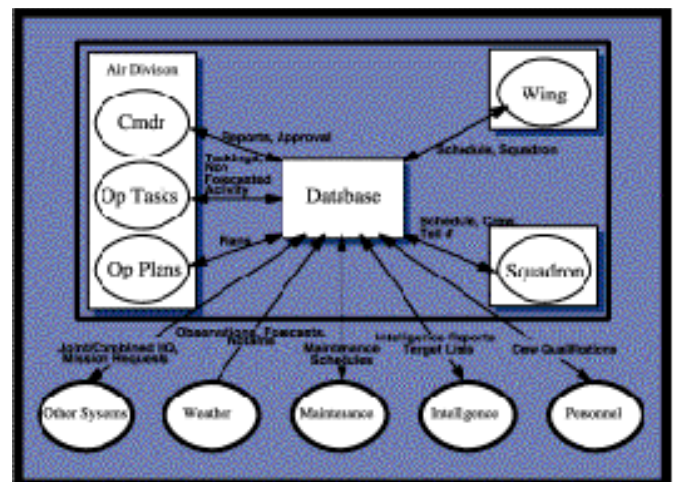
Requests for air missions, responses to emergencies, and routine operations are all planned and coordinated through structured Tasking Orders, and the Valcartier-developed Advanced Technology Battle Management System project includes a module—the Current Operation Mission Support Tool—to guide staff through their preparation, either in a formal, hierarchical fashion or as if the orders were being prepared manually on a white-board. It then distributes the results intelligently, according to their content and urgency. It includes tools to review and control ongoing missions and to monitor the state of the resources—the aircraft, ground facilities, flight crews, etc.—that they require.

The facility promotes interaction among all those involved in or affected by a particular operation and uses an international standard message format (the U.S. Message Text Format) to exchange information with complementary or supporting systems from allied nations.

Prototype Approach

The Current Operation Mission Support Tool was developed using evolutionary prototyping techniques, allowing potential users of an eventual operational system to observe realistic implementations of their stated requirements quickly and to specify both the functions they need and the way they can best be provided. The demonstrator can be tailored readily to the specific needs of particular headquarters, such as a Fighter Group and an Air Transport Group.

Experience gained through hands-on use of the Current Operation Mission Support Tool by Canadian Forces operational staff will be applied to the definition and development of the future Canadian Air Force command and control information system. Although the Current Operation Mission Support Tool demonstrator was developed as a useful facility in its own right, it has also been incorporated into ATBMS, the Advanced Technology Battle Management System, a comprehensive package of tools for air command and control, with a common user interface and data base. A Functional Prototype implementation of ATBMS was demonstrated in 1996 and installed in one Canadian Air Division for further evaluation.



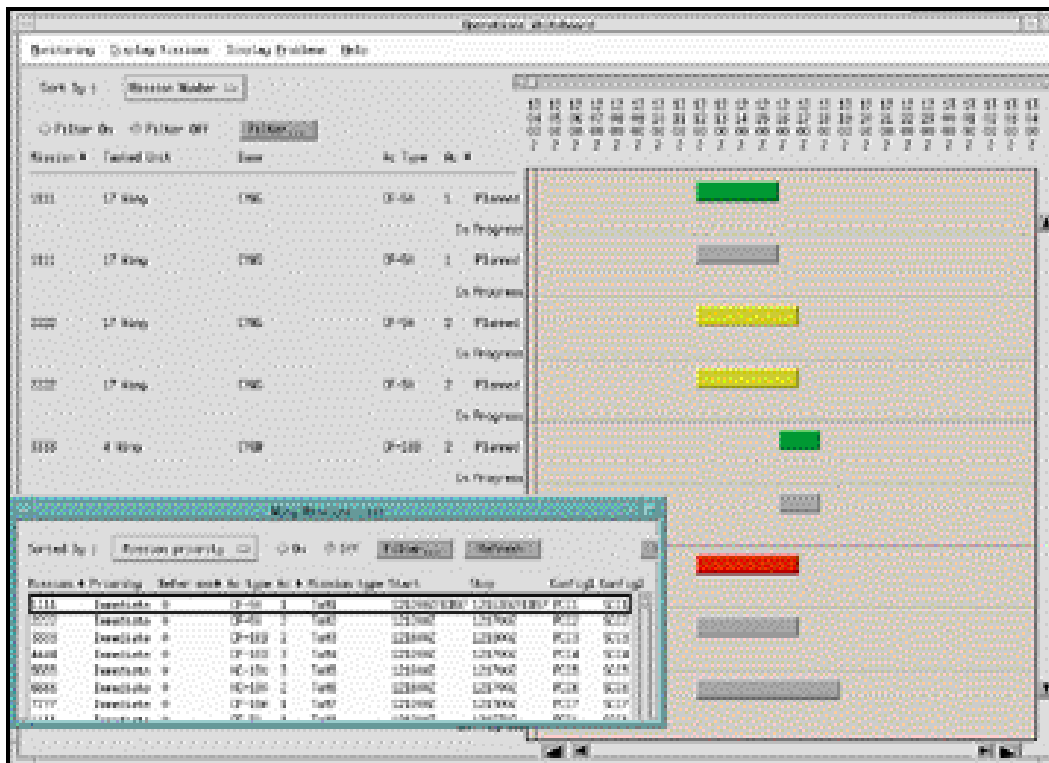
A comprehensive database is at the heart of the Current Operation Mission Support Tool.

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International Implications

Air tasking in support of combat or peacekeeping missions often must be done in close cooperation with allied nations, and particular attention has been paid to interoperability issues in the development of the Current Operation Mission Support Tool demonstrator. The success of this effort was demonstrated in a multinational exercise in 1996, in which the tool was used in direct conjunction with a US air tasking system.

The tool was designed and implemented through the collaborative efforts of DRDC Valcartier scientists, National Defence personnel from headquarters and operational commands, and the DMR Group, Inc.



A whiteboard is used to monitor the execution of missions by the Operations Staff. It shows the status of missions with different colors and provides alerts for missions with complications.

For more information

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