

# Allocation of Responsibility for Meeting Interoperability Goals

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## Abstract

Today's tactical data networks are being expanded and enhanced to meet the needs of an expanding family of systems (FOS) involved in Theater Air and Missile Defense (TAMD). Goals for interoperability are needed to guide the evolution of the FOS and to realize the full capability of the participating units or even preserve the existing capability. Such overarching goals for TAMD systems are being established by Joint Forces Command. However, interoperability goals will not be implementable unless the joint responsibility for meeting the goals can be allocated to individual systems.

This paper traces the interoperability of the FOS as measured by the completeness, clarity, and accuracy of the tactical picture to the performance attributes of the contributing platforms. It is found that the interoperability objectives being set forth by JFCOM can be traced to engineering performance requirements for individual systems provided the intensity of the threat environment, the network architecture, and the number of participants with overlapping areas of responsibility are specified. Given these facts, the Joint objectives can be met through a combination of techniques, including improved network interfaces, limiting the joint-operational range of the participants, improved sensor performance or improved data processing, or fusion of sensor data.