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**Extending Simple Network Management Protocol (SNMP) Beyond Network
Management: A MIB Architecture for Network-Centric Services**

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Abstract

The promise of the Global Information Grid (GIG) includes connecting sensors, shooters and decision-makers who may not be physically co-located in a manner efficient for combat employment, decision-making and information sharing. Current information architecture strategies, such as Network-Centric Enterprise Services have started down one path, requiring the implementation of a Service Oriented Architecture (SOA) and all the requisite underpinnings thereof. These are, for an organization the size of the DoD a very large problem set in and of themselves. An additional unfortunate side effect of choosing a conventional SOA as the backdrop for the GIG is that only those devices capable of running an entire webserver/database stack are able to participate in the architecture, effectively excluding computationally constrained devices. Additionally, the connectivity requirements in a conventional SOA restrict participation by bandwidth-constrained and intermittently connected entities. This paper investigates one possible solution, utilizing SNMP as the language and mechanism for sharing data between disparate systems. Specific decision-support MIBs will be developed to allow transmission of decision-specific information in both push (TRAP/SET) and pull (GET) directions.