



**MILCOM 2004**  
Harness the Power

# Call for Papers

**MILCOM 2004**  
**31 October – 3 November**  
**Monterey, California**

***Harness the Power for Force Transformation***

MILCOM 2004 is soliciting unclassified and classified papers (up to DoD SECRET and releasable to foreign nationals) relevant to communications and information system capabilities that address the 21<sup>st</sup> century challenges of national defense and homeland security. Industry, academic and government organizations from the U.S. and other DoD-approved countries are encouraged to participate.

Please submit a one-page unclassified abstract via the MILCOM Paper Submission Application (MPSA) available at the conference website ([www.milcom.org/2004](http://www.milcom.org/2004)) per the schedule below. All abstracts must be unclassified, whether the final paper is classified or unclassified. Cleared presenters may present unclassified papers in classified sessions. Please include author names, affiliations, addresses, phone and fax numbers, and e-mail addresses. Please also indicate which author is the point of contact, whether the paper is to be presented in the classified or unclassified session, and the session topic.

**Abstracts due: 27 Feb 2004**  
**Draft papers due: 2 Apr 2004**

**Author notifications: 21 May 2004**  
**Final papers due: 2 Jul 2004**

**MILCOM 2004 will focus on capabilities enabled by harnessing the power of new and emerging communications and information systems technologies. Sessions will be organized into an overall systems framework spanning applications, networks, systems, modules, components and devices.**

***Applicable topics and sample subtopics include:***

***Applications and Operational Concepts***

Scalable, pervasive applications  
Universal situational awareness  
Communications On The Move  
Real time targeting/damage assessments  
Ultra-Wideband applications  
Airborne Intelligence, Surveillance and Reconnaissance  
Homeland Security  
NATO operations  
Joint Forces Operations  
Multi-National Operations  
Operational concept evaluations

***Systems Under Development and/or in Deployment***

Radio communication systems (e.g., JTRS)  
Small Unit Operations Situational Awareness System (SUO/SAS)  
Global Information Grid  
GPS II, GPS III  
MILSATCOM Systems  
Global Cellular Systems

***Network Management***

Packet-Switched/Internet-Protocol based  
Circuit-based/circuit-switched  
Priority/Precedence  
Information security  
User detection  
Multi-Level Security environments  
Multi-National Security environments

***Digital Processing, Routing and Protocols***

Link layer protocols  
Multiple Input Multiple Output (MIMO)  
Protocols for ad-hoc mobile network  
Dynamic allocation  
Baseband equipment and interfaces

***Communication Modeling and Analysis***

Channel propagation modeling and equalization  
Communication link modeling and simulation  
Communication vulnerabilities assessments  
Mission utility assessments  
Capacity and throughput assessments

***Signal Processing, Coding or Waveforms***

Error control coding  
Interference excision/suppression  
Bandwidth-efficient modulation  
Orthogonal FDM  
Space-time codes  
Analog-to-digital conversion

***IF/RF Technologies and Techniques***

Antennas (space, airborne, mobile)  
Modems  
Electronics  
HF radio  
Spread Spectrum  
Signal Acquisition and Tracking  
Ultra-Wideband

***Laser Technologies***

Crosslink application  
Space-ground link applications  
Space-airborne applications  
Pointing and Control  
Acquisition and Tracking  
Modems

***Evolving and Future Architectures,***

***Networks, Systems and Technologies***

Scalable, pervasive system structures  
Customizable system structures  
Virtual, configurable system modules  
Modules as foundations for systems  
Network Centric Infrastructure  
Ubiquitous Networks  
Terrestrial Networks  
Networks with space nodes  
Networks with airborne nodes  
Networks with optical links  
Sentient networks and systems  
Future radio architectures  
Advanced communications theory  
Advanced network management  
Micro-scale technologies  
Nano-scale technologies

***Relevant Topics Not Addressed Above***

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Classified papers are accepted up to the level of SECRET.

Authors with US citizenship are responsible for obtaining approval of foreign disclosure and complying with ITAR.

