

**Terms of Reference**

Revision 1 (PMC approved December 16, 2005)

**Special Committee 203**

**Minimum Performance Standards for Unmanned Aircraft Systems and Unmanned Aircraft**

**1. REQUESTER AND SPECIAL COMMITTEE VOLUNTEER LEADERSHIP:**

	Requester	Co-chairman	Co-chairman	Designated Federal Official
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**2. DELIVERABLES:**

<b>Product</b>	<b>Due Date</b>
1. Guidance Material and Considerations for Unmanned Aircraft Systems	June 2006
2. Minimum Aviation System Performance Standards (MASPS) for Unmanned Aircraft Systems	TBD
3. MASPS for Command, Control and Communication Systems for Unmanned Aircraft Systems	TBD
4. MASPS for Sense and Avoid Systems for Unmanned Aircraft Systems	TBD

**3. TERMINATION OF COMMITTEE ACTIVITIES**

Special Committee 203 will terminate its activities when the Program Management Committee (PMC) approves the committee's final document. Any change/extension of the committee's work program requires prior PMC approval.

**4. NAS ARCHITECTURE LINKAGE**

The National Airspace System (NAS) architecture characterizes the inter-relationships of aircraft and vehicles operating in the NAS using infrastructure and related equipment. SC-203 recommendations will help assure Unmanned Aircraft Systems (UAS) operate safely within the NAS and are compatible with other NAS architecture elements.

**5. REQUIREMENTS ASSESSMENT:**

Many federal agencies and commercial operators are currently operating or seeking authority to operate UAS

in the NAS. SC-203 products will help assure the safe, efficient and compatible operation of UAS with other vehicles operating within the NAS.

## **6. PRODUCTS:**

### **A. Guidance Material and Considerations for Unmanned Aircraft Systems, (UAS):**

This document defines the NAS environment and the UAS operations being considered for realistic implementation in the foreseeable future. Using operational descriptions and analysis, the document identifies how these new aircraft and their associated systems could be operated (both normal and non-normal) with no negative impact on the national airspace system.. It provides key definitions and assumptions essential to properly understand UAS operations and provide a high level function oriented, description of the basic taxonomy of UAS. It also identifies unique functional allocations that distinguish UAS implementation from those of manned aircraft and gaps in available performance standards for use in UAS certification. It proposes how to close those gaps and provides the framework for establishing sub-functional teams to continue the future, more detailed work of SC-203.

### **B. Minimum Aviation System Performance Standards (MASPS) for Unmanned Aircraft Systems :**

This document will contain quantitative performance standards with specific focus on UAS level operational performance. It will build on functional allocations identified in the *Guidance Material and Considerations for Unmanned Aircraft Systems* document above and provide guidance for the *MASPS for Command, Control and Communication Systems for Unmanned Aircraft Systems* and the *MASPS for Sense and Avoid Systems for Unmanned Aircraft Systems* which will follow.

### **C. MASPS for Command, Control and Communication Systems for Unmanned Aircraft Systems :**

Develop recommended standards for command, control and communication systems used in conjunction with UAS operations. Recommended standards will address but should not be limited to:

- Human Factors
- Reliability Factors
- Data Links functional performance requirements

### **D. MASPS for Sense and Avoid Systems for Unmanned Aircraft Systems :**

Develop recommended standards and procedures for UAS sense and avoid systems that provide a safety level equivalent to that for manned aircraft operations. Current see and avoid regulations are found in Part 91.113(b). Recommended standards will address but should not be limited to:

- Reliability Factors
- Traffic Avoidance functional performance requirements
- Data/Communication Links functional performance requirements
- Operational Safety Considerations

## **7. GUIDANCE:**

SC-203 recommendations will be based on the premise that UAS and their operations will not have a negative impact on existing NAS users.

The special committee products will be developed using the methodology described in DO-264, *Guidelines For Approval Of The Provision And Use Of Air Traffic Services Supported By Data Communications*, which provides a means to establish the operational, safety, performance, and interoperability requirements for aviation systems.

The special committee will coordinate with other RTCA special committees tasked with the development of enabling systems and technologies in addition to other UAS activities (e.g. Access5, UNITE, JAA, ASTM, SAE, ICAO, EUROCAE, etc.).

As with all RTCA documents, due dates are subject to change. The SC-203 will coordinate any date changes with the PMC.

## **8. OTHER CONSIDERATIONS:**

### **EUROCAE**

RTCA SC-203 is an independent advisory committee, not a joint RTCA/EUROCAE committee. Coordination between SC-203 and EUROCAE will be undertaken as appropriate.