

**JOINT ARCHITECTURE FOR
UNMANNED GROUND SYSTEMS
(JAUGS)
WORKING GROUP**

February 12, 1998
Tyndall AFB, FL

Minutes of Meeting

1. The meeting agenda is provided at TAB A and the list of attendees at TAB B.
2. The JAUGS Working Group conducted its second meeting on February 12, 1998 at Tyndall Air Force Base, Florida. The stated objectives of the meeting were to formally convene the Working Group per the OUSD Charter, to discuss matters germane to the draft JAUGS Specification Version 0.2, and to present the draft Plan of Action and Milestones (POA&M).
3. Mr. Ed Brown welcomed the members to Tyndall, provided administrative information, and presented the agenda for the meeting.
4. Mr. Robert Wade presented a review of JAUGS, inasmuch as there were new members who were not at the first meeting. Additionally, he moderated a discussion of WG processes and activities. He invited the WG members to be active participants and voice their opinions and concerns. There was much work ahead, and for JAUGS to succeed, members would need to represent their organizations and accomplish certain tasks between formal JAUGS WG meetings. Mr. Wade distributed copies of the draft JAUGS Specification V0.2 and copies of the draft TUV User Appraisal final report. He asked for comments on V0.2. There followed a general discussion of how JAUGS will accommodate technological advances.
5. During discussion of WG processes and activities, the following points were made:
 - a. Mr. Brown requested that minutes of the meeting be distributed electronically. Mr. Kotora inquired as to whether members needed hard copy distribution of the slides, since copies were handed out at meetings. The consensus of the WG was that hard copy distribution was unnecessary. Slides and the other JAUGS documents should be put on a website. Mr. Brown also requested a comment collector on the website.
 - b. Mr. Rick Quintero discussed NIST's Intelligent Systems Division's website which has a collaborative document editing feature. The software is a beta version NASA Ames. The URL is <http://www.scanner.cme.nist.gov:5000/docserver>.
 - c. Mr. Kotora passed around a draft copy of the Next Generation UGV Mission Program Structure. This document comes from the AUTONAV program and is a collaborative effort between NIST and the Mounted Battlespace Battle Lab. It is a detailed analysis and breakdown of all tasks scouts perform during a reconnaissance mission. The consensus of the WG was that this kind of information might be helpful to all UGV developers. Mr. Quintero said he would get the latest version to the WG.

6. Mr. David McConnell briefed the Message Routing System within the Reference Architecture (RA). He covered the following major points in his briefing:

- a. Open systems approach is required and must allow simple systems to remain simple and complex systems to be realized.
- b. RA will be layered and may require the Generic Open Architecture (GOA) approach, currently favored by the Society of Automotive Engineers (SAE).
- c. He then discussed Message Routing Service initialization, preliminary message binary formats, and some of the issues attendant to the RA.

7. Mr. Rodolfo Casiple next briefed the Task Control Architecture (TCA). This approach to designing an architecture was developed by Carnegie Mellon University (CMU) and has certain attributes for systems with real-time requirements. Concern was voiced about how long CMU would continue to support it, along with an idea to use TCA's specification but not the product itself.

8. Ms. Elena Messina presented a briefing on the Common Object Request Broker Architecture (CORBA). This is a specification supported by OMG (Object Management Group), a consortium of over 600 companies in the software market. She focused on the real-time issues associated with CORBA, as there is significant overhead imposed by message brokerage. Ms. Messina discussed requirements for real-time messaging systems and stated that there is new effort underway to make CORBA more of a real-time architecture. She also pointed out that CORBA is a standard called out in the JTA, so it may well apply to JAUGS.

9. During the next portion of the meeting on an Expansion Port Concept, Mr. Wade brought up several items and issues he would like the working group to consider. These are listed in the action items paragraph of these Minutes.

10. Lastly, Mr. Kotora presented a strawman POA&M. It is a deliverable required by OUSD. It postulates a delivery date for V1.0 of JAUGS on 1 June 1998. The WG concurred that the next meeting should include industry, as well as other government agencies as deemed appropriate. The members were asked to comment on the POA&M as well.

11. The following action items were accepted by the members as indicated:

- a. Review V0.2 of the RA and DM and provide comments to Mr. Wade by COB 27 February. **(Action: All)**
- b. Nominate other government agencies to attend the next WG meeting. Provide input to Mr. Wade by COB 27 February. **(Action: All)**
- c. Consider and provide comments on the items listed below:
 - (1) Expansion Port Concept
 - (2) How to account for military procedures, e.g., loss of command, target detected
 - (3) Addition of a time/date stamping component
 - (4) How to accomplish synchronization of time

- (5) Addition of audio/acoustic component
- (6) Addition of combat I.D. component
- (7) Reliability impact of loss of a service provider
- (8) How to accomplish “hot swapping” of components, e.g., payloads, OCU’s
- d. Provide JAUGS charts for the upcoming Demo III technology kick-off meeting. **(Action: Mr. Wade)**
- e. Update the JAUGS Management Plan. **(Action: Mr. Katora)**
- f. Provide updated Mission Program Structure for the scout mission. **(Action: Mr. Quintero)**
- g. Provide electronic copies of briefing slides to Mr. Katora. **(Action: Mr. Brown, Ms. Messina, Mr. Wade)**
- h. Install V0.2 of the draft Specification on the UGV/S JPO website for the interim; install all JAUGS related documents, minutes, charts, etc., on the JRP website. **(Action: Mr. Wade, Mr. Katora)**
- i. Provide comments to Mr. Katora on the POA&M by COB 27 February. Deliver POA&M to OUSD as soon as possible. **(Action: All, Mr. Katora)**
- j. Members should volunteer to present topics as appropriate, e.g., MHRA, Software Safety, any topic of interest to the WG architecturally. **(Action: All)**
- k. Obtain services of a legal advisor for JAUGS matters. **(Action: Mr. Wade)**

8. The meeting concluded with general consensus that the next meeting should be 16-17 March 1998 in Denver, CO. Mr. Wade and Mr. Katora will brief selected members of industry 1300-1700 on the 16th; all members of the WG will meet 0800-1700 on the 17th.

APPROVED:

/s/ Robert Wade 19 Feb 98

date

AGENDA
JAUGS WORKING GROUP MEETING
12 FEB 98

TYNDALL AFB, BUILDING 9706, CONFERENCE ROOM

0800-0810	WELCOME/ADMIN	MR. BROWN
0810-0830	INTRO TO JAUGS	MR. WADE
0830-1000	WG ACTIVITIES/ PROCESSES	ALL
1000-1015	BREAK	
1015-1115	MESSAGE ROUTING SYSTEM	MR. McCONNELL
1115-1145	AFRL EXPERIENCE WITH TCA	MR. BROWN
1145-1315	LUNCH	
1315-1400	CORBA	MS. MESSINA
1400-1445	EXPANSION PORT CONCEPT	MR. WADE
1445-1515	BREAK	
1515-1600	POA&M	MR. KOTORA
1600-1700	ACTION ITEMS/ WRAP UP	MR. WADE