

The MAV 08 Technical Paper is a tool for teams to communicate the details of their technical solution to the judging committee. This paper also serves as the outline for the static judging presentation given by each team on 10 - 11 Mar 08. The judges will be looking for all of the elements and sections to be covered during the presentation. The 100 points for completion of the paper are bonus points applied to the static judging phase of the demonstration.

Each section of the Technical Paper must contain or answer all of the sub-elements under that section. Teams may decide to discuss items in greater detail in a given area, but still must provide all of the detail required such that this paper can stand alone.

The paper must be written such that a person can understand the team's entire design without having seen previous papers and designs.

An outstanding example of a well-written technical paper by the South Dakota School of Mines and Technology (SDSMT) is provided below:

http://avdil.gtri.gatech.edu/AUVS/CurrentIARC/SDSMT_IARC2007.pdf

NOTE: The format and content of this paper does not fully match the grading criteria for MAV 08. Teams should follow the below grading criteria closely.

Deadlines:

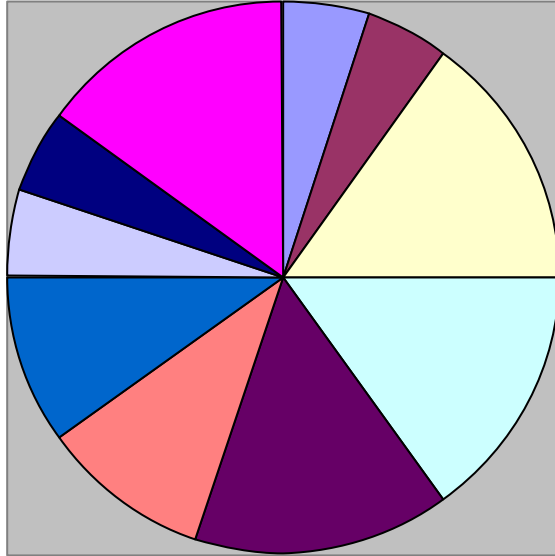
- Draft Abstract: 18 Feb 08 (Print Deadline)
- Full Technical Paper: 5 Mar 08 (Judges Review Deadline)

POC: All abstracts and technical papers should be submitted to Dr. Sam Sampath via email at: sreerangapatam.sampath@us.army.mil, Phone: +65-6476-9247.

MAV 08 Paper Outline

<u>Sections</u>	<u>Points</u>
1) Abstract	5
2) Introduction	5
a) Statement of the problem	
b) Conceptual solution to solve the problem	
b1) Figure of overall system architecture	
c) Milestones	

3) Air Vehicle	15
a) Propulsion and Lift System	
b) Guidance, Navigation, and Control	
b1) Stability Augmentation System	
b2) Navigation	
b3) Figure of control system architecture	
c) Flight Termination System	
4) Payloads	15
a) Sensor Suite	
a1) GNC Sensors	
a2) Mission Sensors	
a21) Target ID/Loc of mines, terrorists and hostages	
a22) Acoustic Techniques	
a23) Chemical/Olfactory	
b) MAV/UGV Communications	
c) GCS to MAV/UGV Communications	
d) Power Management System	
5) Mission Operations	15
a) Flight Preparations	
a1) Checklist(s)	
b) Man/Machine Interface	
c) Route Planning/Commando control	
6) Risk Reduction	10
a) Vehicle Status	
a1) Shock/Vibration Isolation	
a2) EMI/RFI Solutions	
b) Safety	
c) Modeling and Simulation	
d) Testing	
7) Ground Vehicle	10
If Sim UGV is used, discuss strategy to navigate and control Sim UGV deactivation of mines	
8) Conclusion	5
9) References	5
Note paragraph numbers if referencing former papers	
10) Overall Format, Completeness, and Readability	<u>15</u>
TOTAL	100



- Abstract (5)
- Introduction (5)
- Air Vehicle (15)
- Payload (15)
- Mission Operations (15)
- Risk Reduction (10)
- Ground Vehicle (10)
- Conclusion (5)
- References (5)
- Overall Format, Completeness and Readability (15)