BRIEF OVERVIEW OF SAE INTERNATIONAL UAS ACTIVITIES
Presented to ANSI UAS Collaboration
19.05.2017

Mark P. DeAngelo, PhD
Aerospace Standards Engineer
Over 250 SAE aerospace technical committees & subcommittees have developed many existing standards that can be applied to UAS.

- New and revised standards are including provisions for UAS.

Currently, two committees develop standards exclusively for UAS:

- AS-4 Unmanned Systems Steering Committee
  - AS-4JAUS Joint Architecture for Unmanned Systems Committee
  - AS-4UCS Unmanned Systems Control Segment Architecture
- E-39 Unmanned Aircraft Propulsion Committee
Published SAE International UAS standards address the following topics:

- Wiring
- Flight control design
- Actuators
- Pilot training recommendations
- Safe operation and release of weapons
- Auxiliary power sources
- Message and data formats
- Interoperability
- Software architecture
- Control segment architecture
SAE International UAS Works In Progress include:

<table>
<thead>
<tr>
<th>Document</th>
<th>Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARP6336</td>
<td>Lighting Applications for Unmanned Aircraft Systems (UAS)</td>
</tr>
<tr>
<td>AIR6388</td>
<td>Remote Identification and Interrogation of Unmanned Aerial Systems</td>
</tr>
<tr>
<td>AS6523</td>
<td>Data Dictionary for Quantities Used in Unmanned Systems</td>
</tr>
<tr>
<td>AS6009A</td>
<td>JAUS Mobility Service Set</td>
</tr>
<tr>
<td>AS6111</td>
<td>JAUS Unmanned Maritime Vehicle Service Set</td>
</tr>
<tr>
<td>AS6386</td>
<td>JAUS Automated Behaviors and Diagnostics Service Set</td>
</tr>
</tbody>
</table>
This SAE Aerospace Information Report (AIR) discusses practical considerations for remotely identifying lightweight unmanned aerial systems (UAS), less than 55 lbs. Identification standards shall address all phases of unmanned systems operations (e.g. vehicle in flight and vehicle powered-off on the ground). There are multiple ways to achieve positive identification—passively, actively, visually, and electromagnetically. This AIR introduces multiple UAS identification methods and reviews existing identification standards and technologies.
SAE AIR6388 Remote Identification and Interrogation of Unmanned Aerial Systems will address the following topics:

1. Scope
2. Applicable Documents
3. Introduction to Identification Methods and Technologies
4. The Need for Remote Identification of UAS
5. Remote Identification of UAS – Requirements
6. Remote Identification of UAS – Methods and Technologies