Enabling UAS registration/lookup with EPP and RDAP

Managing and Using an Aviation Domain Hierarchy

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Michael Palage
et al
Charter References

• “[D]escribes the architecture that address the technical requirements and that will attempt to re-use protocols or architectures already standardized at the IETF.”

• “[P]rimarily leverage Internet standards (including HIP, EPP, RDAP, and DNS) and infrastructure as well as domain name registration business models.”

• “[B]alance public safety authorities’ need to know trustworthy information with UAS operators’ and other involved parties’ privacy.”
Design Building Blocks

- Leverage existing internet protocols, e.g. EPP, RDAP

- Globally federated Aviation Repository Object Identifier (Aviation ROID) for both man and unmanned aircraft

- A geographic hierarchical taxonomy based on ISO-3166-2

- The processing of Localized Contact ROIDs (owners/operators)

- Differentiated access (automated/manual) to ROID data elements in accordance with relevant data privacy laws
### Frame of Reference

<table>
<thead>
<tr>
<th>Automotive</th>
<th>Aviation</th>
<th>Comments</th>
</tr>
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<tbody>
<tr>
<td>Vehicle Identification Number (VIN Number)</td>
<td>Global Aviation Repository Object Identifier (Global Aviation ROID)</td>
<td>Similar to auto manufactures imprinting each vehicle with a globally unique identifier, aviation manufactures would label each airframe (manned &amp; unmanned) with a globally unique identifier</td>
</tr>
<tr>
<td>License Plate</td>
<td>Local Aviation Repository Object Identifier (Local Aviation ROID)</td>
<td>Similar to each vehicle needing to be registered with the local motor vehicle department, each airframe would need to be registered nationally</td>
</tr>
<tr>
<td>Driver’s License</td>
<td>Contact Repository Object Identifier (Contact ROID)</td>
<td>Similar to individuals requiring a license from an appropriate authority to operate a motor vehicle, owners/operators of aircraft would need to obtain licensure from the appropriate government agencies</td>
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</tbody>
</table>
FAA’s UTM Pilot Project 2 (UPP2) Architecture

Proposed Enhancement
FAA’s UTM Pilot Project 2 (UPP2) Architecture
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FAA’s UTM Pilot Project 2 (UPP2) Architecture
Next Steps

• Continue outreach and engagement with global aviation community, specifically in connection with Aviation ROID format.

• Prepare an Internet Draft

Thank You

Michael Palage

(mpalage@infonetworks.global)