Drone Remote Identification Protocol (DRIP)
IETF 116 updates: regulators, external SDOs & early adopters
2023 MAR 28 stu.card@axenterprize.com 315-725-7002

• Interactions between regulators & external SDOs affecting DRIP since IETF 115
  – NOV: FAA awarded ANRA contract to demo Broadcast RID -> Network RID conversion (req. GEN-5 Gateway “CS-RID”)
  – JAN: ASTM WK84631 kicked off w/Adam W., Bob M. & Stu C. participating to push DRIP (esp. req. GEN-6 Contact “O2P”)
  – JAN: ANSI published updated UAS Standardization Collaborative (UASSC) report on UAS standards gaps w/DRIP inputs
  – FEB: Adam W. field verified interop of his DRIP receiver app & an independent implementor’s F3411 sender module
  – MAR: Bob M. presented DRIP yesterday at 1st meeting of ICAO Trust Framework Panel concurrent w/IETF 116

• Do we need a MOC showing how to use DRIP to satisfy CAA regs more fully, starting w/Session IDs?
The basic DRIP document set, with Architecture as a main point of entry, probably could serve.

• DRIP will be demonstrated to FAA in UTM Field Test immediately after IETF 116.

• To meet urgent needs (before FAA blessing or registry RFCs), some US agencies are trialng DRIP.

• DRIP needs more participation from outside US w/awareness of other regulator & SDO activities!
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How do these drive DRIP work?

ASTM F3411

CAA rules

RFC 9153
Req’s & Term.

DRIP Arch I-D in RFC editor queue

DRIP Entity Tag (DET=HHIT):
RFC 9374

DRIP Auth formats & protocols for Broadcast RID in WGLC

PRIV-*: Bob-* => ASTM A2X

GEN-6 Contact:
O2P => A2X

DRIP Registries: Adam’s drafts proposed for WG adoption

GEN-5 Gateway:
CS-RID

Please urgently review Auth!
Also please help write registry & provisioning implementation option (EPP, RDAP, HTTP) drafts.
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- ICAO wants an “Observer” (non-voting Subject Matter Expert) from IETF in Trust Framework Panel.
  - Bob & Stu are already on the TFP as Observers representing businesses active in aviation trust so cannot wear this hat.
  - The first meeting of the TFP is happening right now in Montreal; Bob is there.

- ASTM wants ICAO to act as registrar for some RID types & corresponding integer code assignments.
  - Specific Session ID types: “IETF DRIP entity ID” is designated as Type 1 in F3411-22a so we are already covered.
  - Specific Authentication Method (SAM) types: we need at least 3 to support DRIP Links, Manifests & Wrappers.

- To get DRIP SAM assignments:
  - ASTM has sent a letter to ICAO (currently in their legal review) requesting they perform the registrar function.
  - ICAO has unofficially agreed in principle to do it & we are told there will finally be action in the next few days.
  - We (IETF DRIP) will request our SAM assignments as soon as that process is in place.

- We also have been talking w/IANA:
  - IP prefix for initial UAS RID application has been settled in RFC 9374.
  - DNS apex has been tentatively settled as ordinary <nibble-reversed-address>.ip6.arpa in –registries (thanks Jim R!).
  - IANA has unofficially agreed in principle to be the [interim] RID type registrar if ICAO doesn’t move on it soon;
    a request has been ghost-written for ASTM to send to IANA if that proves necessary & is in review in IETF & IANA.