

Draft Updates

draft-ietf-drip-auth-00

draft-wiethuechter-drip-registries-00

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DRIP WG – IETF110; 08 MAR 2021

Authentication Formats: Status

- Uploaded 2020-12-18 after WG Adoption
- Document available on Github
 - <https://github.com/ietf-wg-drip/draft-ietf-drip-auth>
- Currently on hold
 - Waiting on results of ASTM F3411 update
 - FEC inclusion into ASTM? AuthType/DRIP Header?
 - We are in queue, once changes confirmed draft will be updated

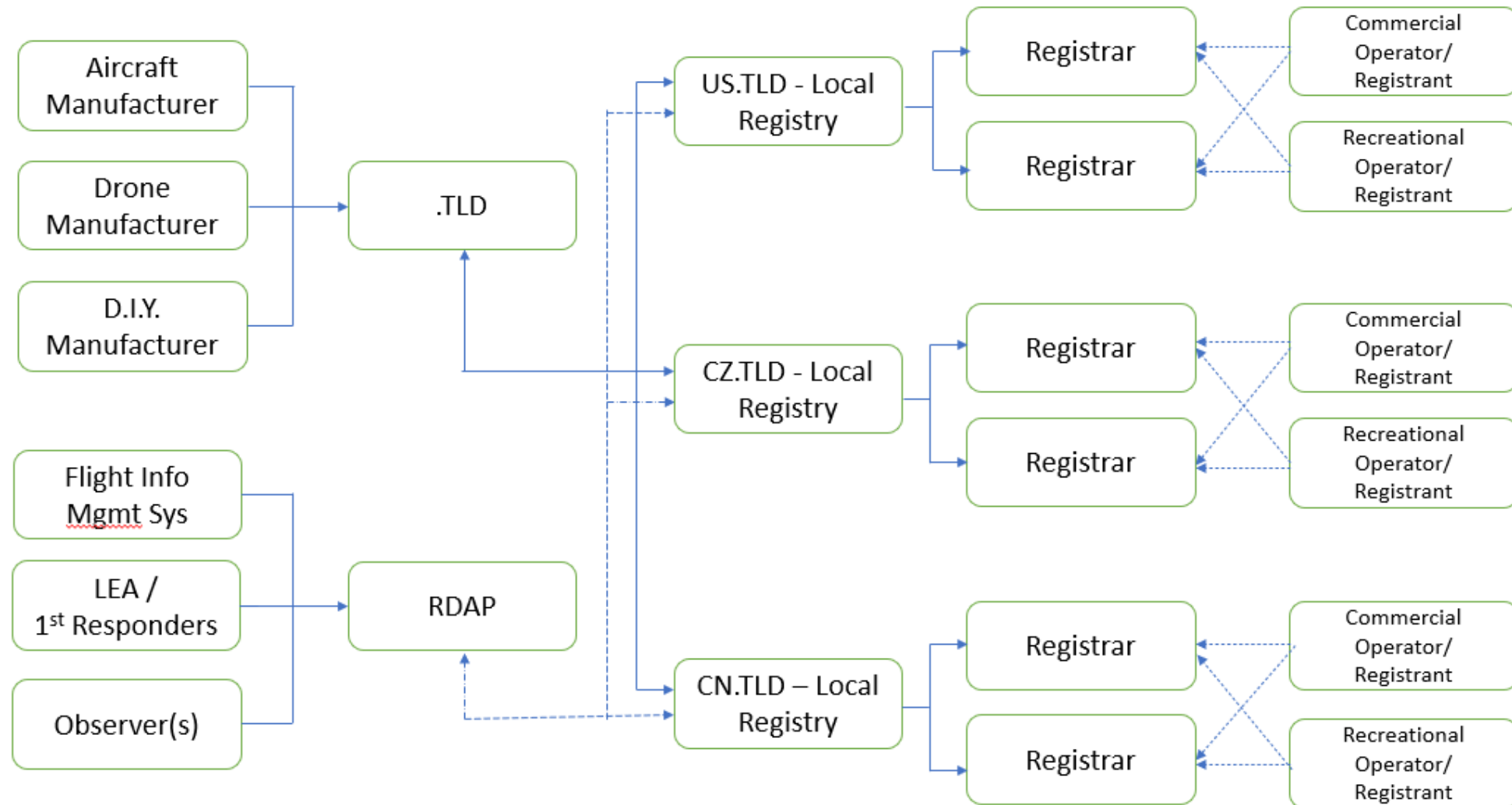
Registries: Status

- Uploaded on 2021-02-22
- Stub from previous work breaking apart older drafts
 - Text taken from Auth. Formats, UAS RID, Identity Claims and Arch.
- Mainly includes provisioning process
 - Interactions between parties to register an ID into DNS
 - The concept is solid (AFAIK); needs wordsmithing
- Missing sections on specifics of how:
 - ID is fully added/updated and linked to a Serial Number (via EPP?)
 - ID is used to lookup Serial Number (RDAP – authorized parties only)
 - Exact fields to be recorded and their transparency level

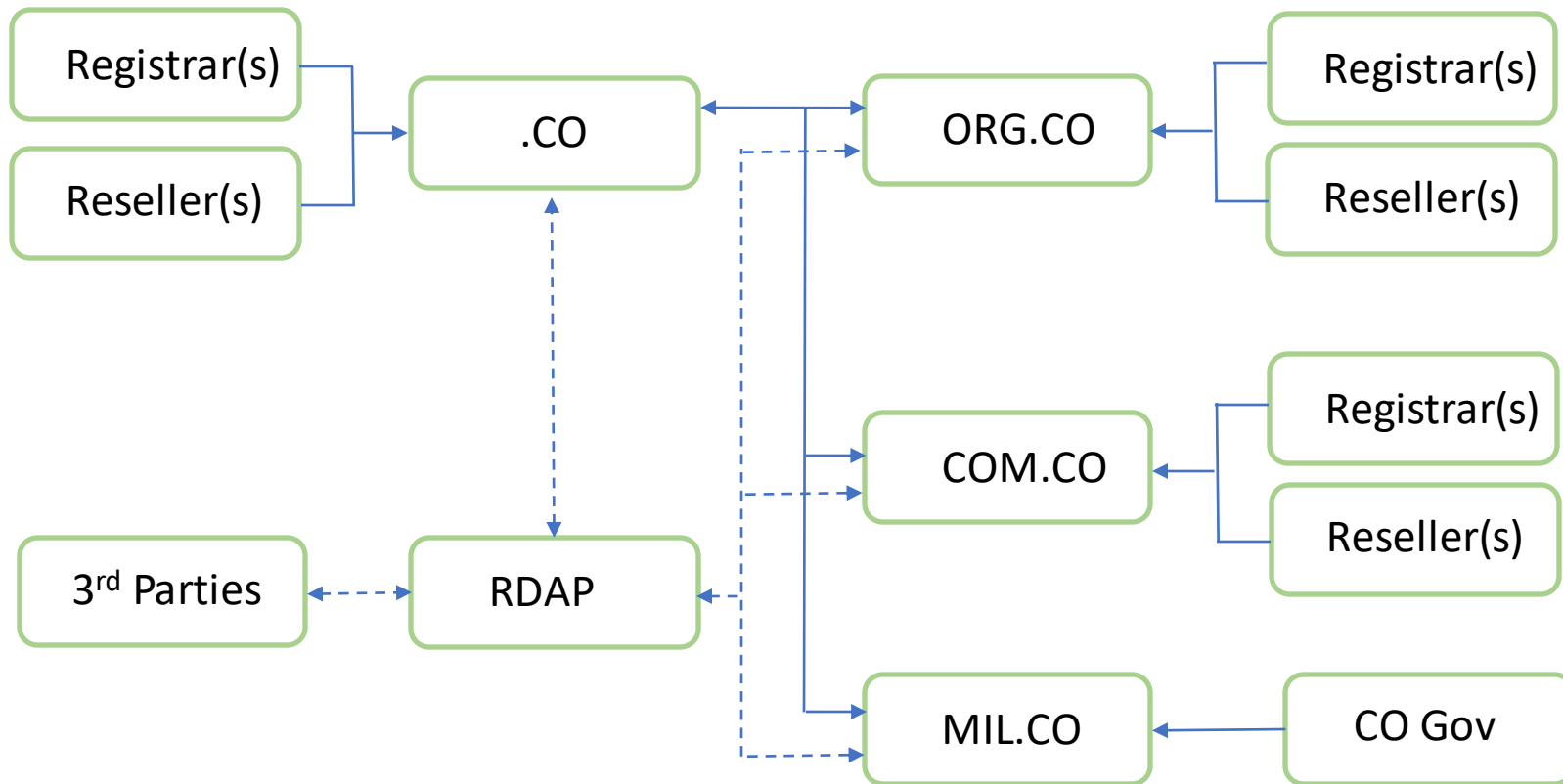
Update On Registry Developments Since IETF-108

- A single instance of a registry sandbox using the .CZ FRED software has been stood-up making use of sector-specific credentials in a TLD.
- Have identified the initial Repository Object Identifiers (ROIDs) and the corresponding data elements; and
- Tracking recent legal and regulatory developments that will directly impact any registry

Proposed Aviation/Drone Eco-System



Parallel to Hybrid ccTLDs



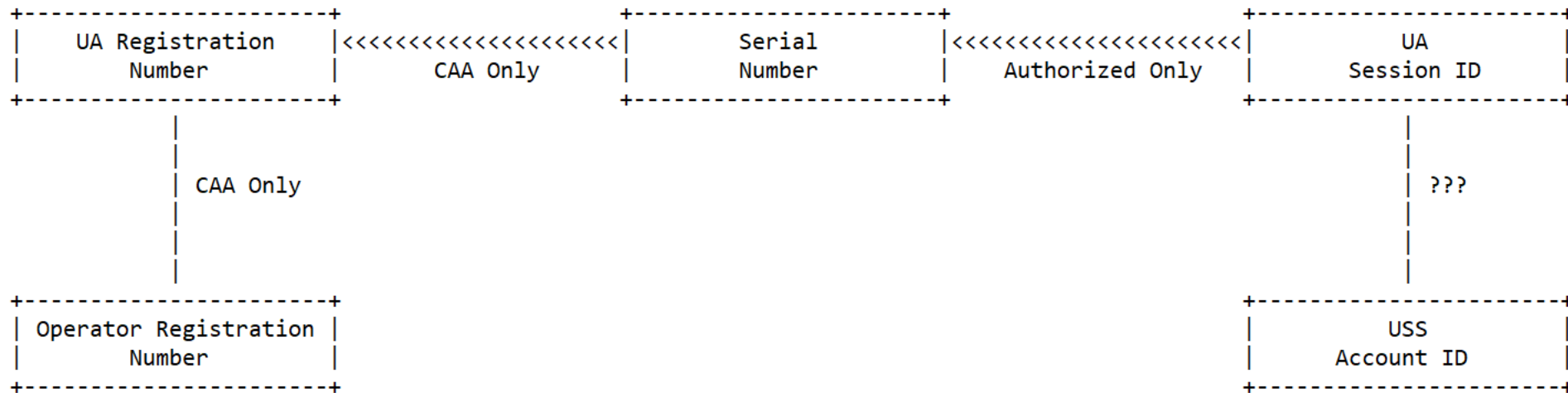
Frame of Reference

Automotive	Aviation	Comments
Vehicle Identification Number (VIN Number)	Global Aviation Repository Object Identifier (Global Aviation ROID) -- ANSI CTA2063-A	Similar to auto manufactures imprinting each vehicle with a globally unique identifier, aviation manufactures would label each airframe (manned & unmanned) with a globally unique identifier
License Plate	Local Aviation Repository Object Identifier (Local Aviation ROID) -- UA Session ID	Similar to each vehicle needing to be registered with the local motor vehicle department, each airframe would need to be registered nationally
Driver's License	Contact Repository Object Identifier (Contact ROID) -- Operator Registration Number	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

Scoping Aviation Repository Object Identifiers (ROIDs)

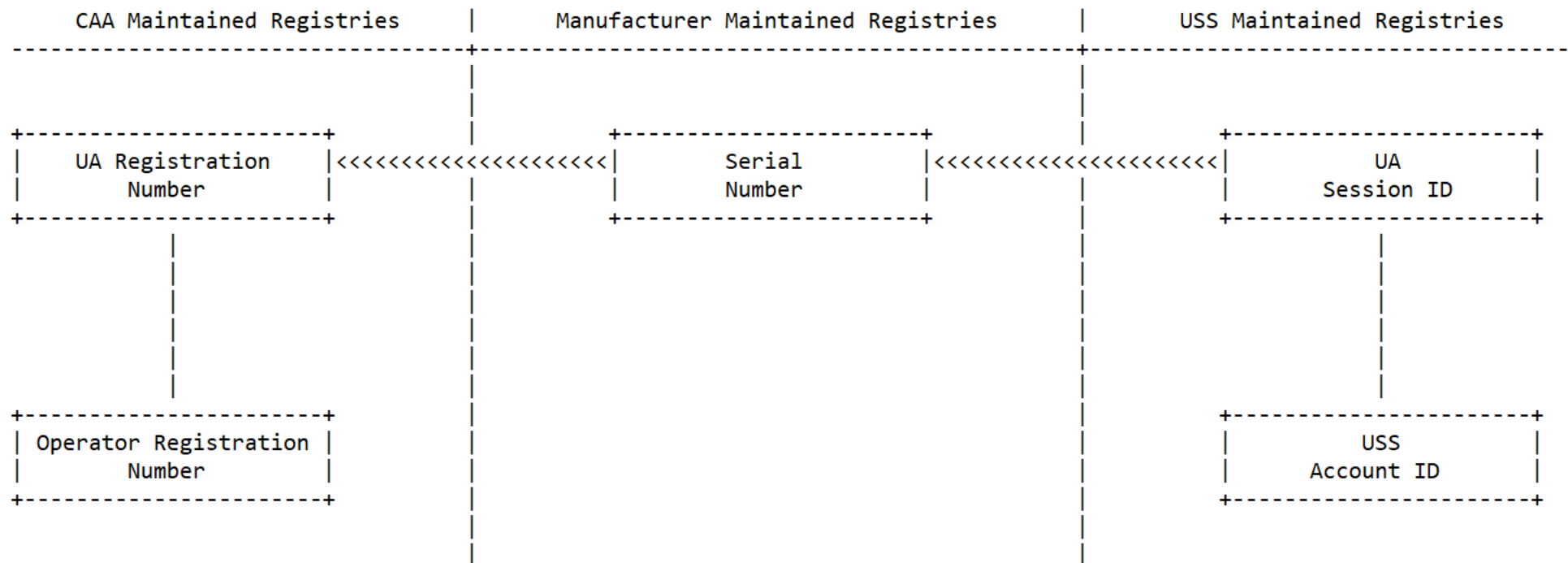
- Identifying potential ROID data elements necessary for the eco-system;
- Determining where the authoritative records of certain ROIDs will be stored;
- Selecting which ROIDs need to be accessed globally and which will have differentiated access;

Registry Key Values & Lookup Links



Note: Serial Number is ANSI CTA2063-A and is either S/N of Aircraft or of UA Remote ID Module

Registry Key Values & Architecture



Note: Serial Number is ANSI CTA2063-A and is either S/N of Aircraft or of UA Remote ID Module

EU Cybersecurity Directive – NIS 2.0

- A draft Directive on Security of Network and Information Systems (NIS 2 Directive) was published in December 2020.
- A summary of this Directive as well as copies of the full text is available here, <https://ec.europa.eu/digital-single-market/en/news/proposal-directive-measures-high-common-level-cybersecurity-across-union>
- The scope of this Directive is defined in in Annex 1 which provides an enumerated list of Essential and Important services, most notable Air Transport (2-A) and Digital Infrastructure (8).

Article 23 - Databases of domain names and registration data

Imposes several obligations on TLD Registry Operators:

- “[C]ollect and maintain accurate and complete domain name registration data”
- Databases shall “contain relevant information to identify and contact the holders of the domain names and the points of contact administering the domain names.”
- “TLD [shall] provide access to specific domain name registration data upon lawful and duly justified requests of legitimate access seekers.”

Article 18 - Cybersecurity Risk Management Measures

- Paragraph 1 requires that “essential and important entities shall take appropriate and proportionate technical and organizational measures to manage the risks posed to the security of network and information systems which those entities use in the provision of their services.”
- Paragraph 2 provides a non-exhaustive list of measures to be included in a cyber risk management assessment, most notable 2(d) - supply chain security including security-related aspects concerning the relationships between each entity and its suppliers or service providers such as providers of data storage and processing services or managed security services;

Article 31 - Administrative fines on essential and important entities

- Paragraph 1 requires that “Member States shall ensure that the imposition of administrative fines on essential and important entities pursuant to this Article in respect of infringements of the obligations laid down in this Directive are, in each individual case, effective, proportionate and dissuasive.”
- Paragraph 4 provides that “Member States shall ensure that infringements of the obligations laid down in Article 18 or Article 20 shall, in accordance with paragraphs 2 and 3 of this Article, be subject to administrative fines of a maximum of at least 10 000 000 EUR or up to 2% of the total worldwide annual turnover of the undertaking to which the essential or important entity belongs in the preceding financial year, whichever is higher.

Article 24 - Jurisdiction and Territoriality

- Paragraph 1 establishes jurisdiction over “DNS service providers, TLD name registries, cloud computing service providers, data centre service providers and content delivery network providers referred to in point 8 of Annex I ... shall be deemed to be under the jurisdiction of the Member State in which they have their main establishment in the Union.”
- Paragraph 3 states that “If an entity referred to in paragraph 1 is not established in the Union, but offers services within the Union, it shall designate a representative in the Union. The representative shall be established in one of those Member States where the services are offered. Such entity shall be deemed to be under the jurisdiction of the Member State where the representative is established. In the absence of a designated representative within the Union under this Article, any Member State in which the entity provides services may take legal actions against the entity for non-compliance with the obligations under this Directive.”

Thank You