THE GLOBAL STANDARD FOR LIVESTOCK DATA

Network. Guidelines. Certification.

Animal Data Exchange Specification
Getting started…

MAP OF AG

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The open source specification for interoperability of livestock information

- Support multiple species and farming purposes
  - Acknowledging dairy cattle as a core use case
- Standardises data at the integration point between systems
  - You may map data to/from internal representations
- A technical specification for use by analysts and developers
  - Contributions welcomed through open source process
- Based on JSON Schema specifications
  - RDF or UML to come, coordinating with ISO/TC/347

Coverage

Animal
Animal set (group)
Feed and ration
Feed Storage
Inventory transaction
Medicine
Device
Sorting site
Semen straw, embryo

Breeding values
Daily milking averages
Gestation, Lactation
Milk prediction
Test day and results
Statistics
Sorting command
Processing lot
Feed recommendation

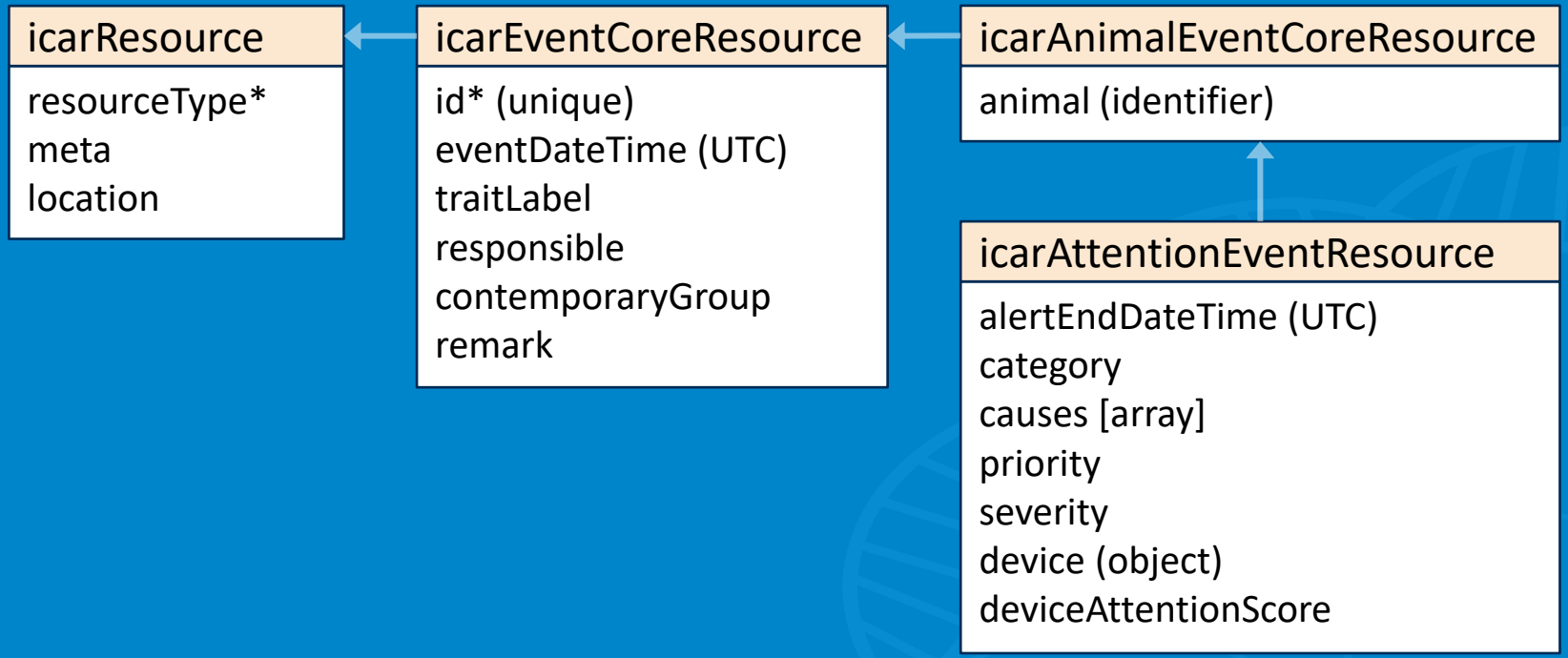
Arrivals*, departures*
Births*, deaths*
Diagnosis, treatment
Set join, set leave
Milking visit, drying off
Carcass observation
Feed intake*
Insemination, flushing
Pregnancy check

Parturition
Abortion, Heat
Position*
Attention
Activity Summary
Weight*
Type Classification
Remark
Withdrawal

A normative data model, informative API specification, and support for code generation

- “Resources” – logical entities that can be fetched or posted (and have meta data)
- “Collections” – support for pagination
- “Events” – observations at a point in time
- “Identifiers” – designed to be extensible, recognise existing standards

A small example

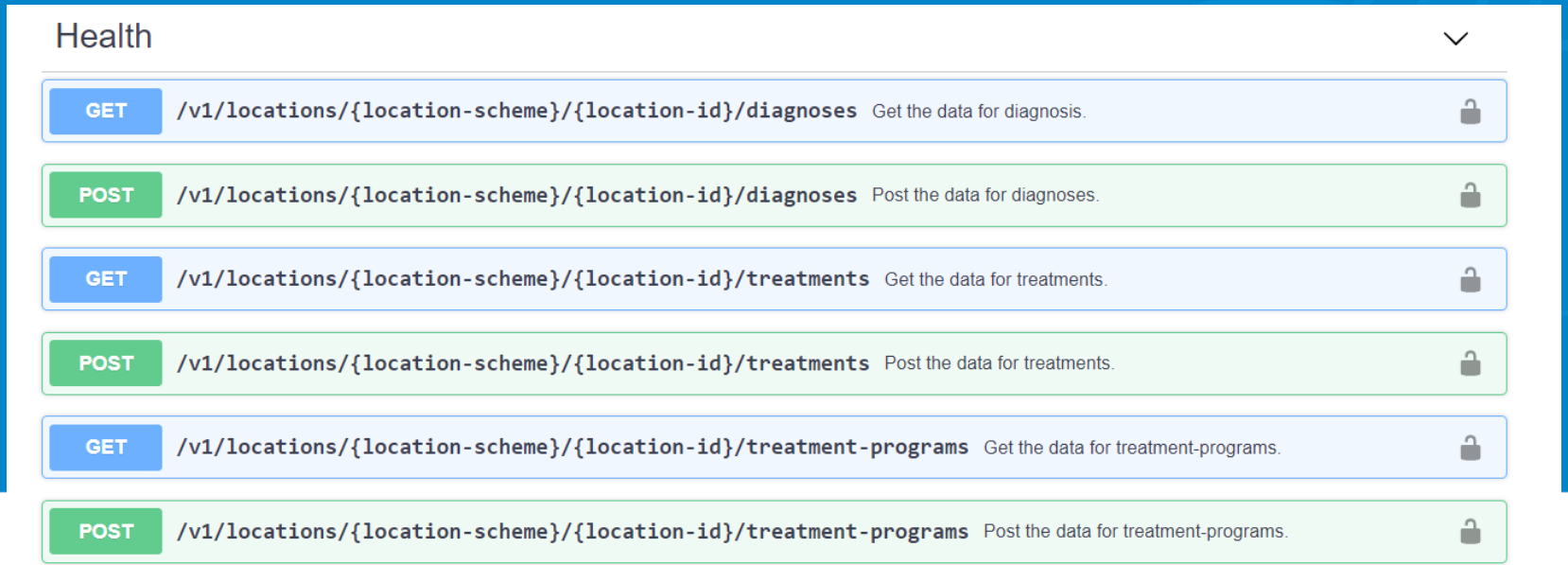


ID schemes allow extensibility and support country or international identity standards

Short URI (Scheme)	Description
eu.animalId	EU-wide animal identification in terms of ISO 11784, where the first three decimal digits represent the ISO 3166-1 numeric country code. This is a generalised form. Actual specifications are set by the Competent Authority in each country.
eu.bovine	EU-wide identification for bovine animals, with an ISO 3166 alpha-2 prefix. This is a generalised form. Actual specifications are set by the Competent Authority in each country.
icar.Interbull	Interbull recognised animal identifiers
nz.digad.birthid	New Zealand dairy Birth Id
std.iso.11785	ISO 11785 compliant RFID Code Number, decimal representation with the first 3 digits containing country or manufacturer code.
usa.ain	United States Animal Identification Number
us.bovine	US Lifetime Herdbook number
uk.cts.eartag	UK identification for bovine animals
au.nlis	Australian NLIS animal identification: the visual code printed on tags

This approach used for animals, locations, diagnoses, breeds, metrics, reasons, …

A normative data model, informative API specification, and support for code generation



Get started at github.com/adewg/ICAR

- Read the wiki and the docs folder
- Follow the Discussions and Issues channels
- Take your own fork of ADE-1 to start your work
- Consider using OpenAPI Generator to generate code
  - Using OpenAPI 3.1: use Generator 7.9.0 or greater
  - Bundled scheme (all APIs) coming soon
  - Pydantic project starting