STA+ Extension

deda.next

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STA+ overview

STAplus 1.0 Standard specifies a backwards compatible extension to the OGC SensorThings API Part 1: Sensing Version 1.1 (STA) Standard data model.

STAplus extension is based on requirements from the Citizen Science community.

- The dominant use for the OGC SensorThings API (STA) data model (and API) can be coined with the use case “single authority provides sensor readings to consumers”.
- The **STAplus extension INSTEAD:**
  - Is designed to support a model in which **observations are owned by different users** that may express the **license** for re-use.
  - The extension supports expressing explicit **relations between observations** and creating **groups of observations** to containerize observations that belong together.
  - **Relations** can be created among any individual observations or observations of a group to support performant Linked Data extraction and semantic queries.

OGC® DOCUMENT: 22-022

External identifier of this OGC® document: http://www.opengis.net/doc/{doc-type}/{standard}/{m.n}

Open Geospatial Consortium

https://portal.ogc.org/files/103639

OGC SENSORTHINGS API 1.1 EXTENSION: STAPLUS 1.0

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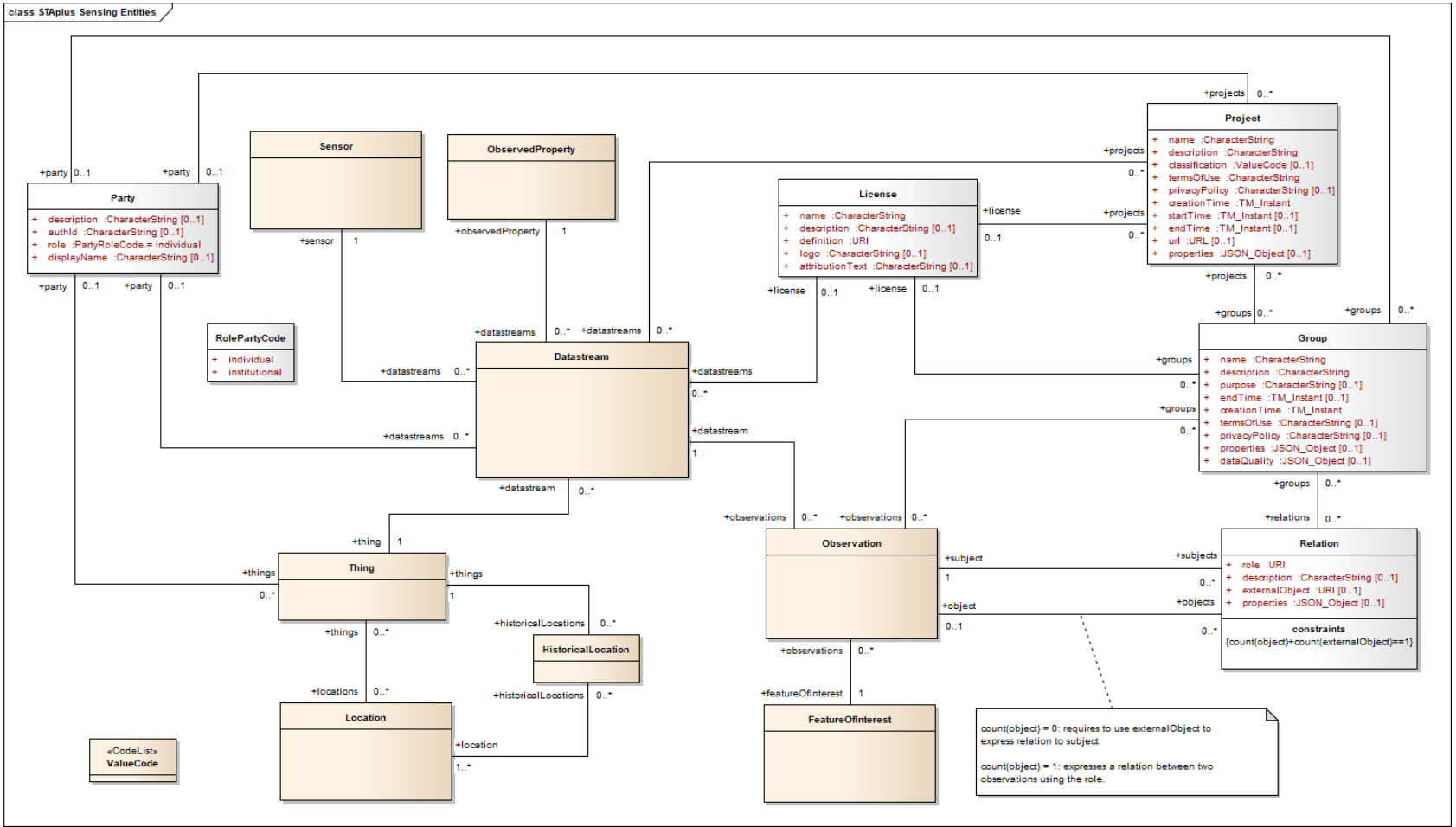
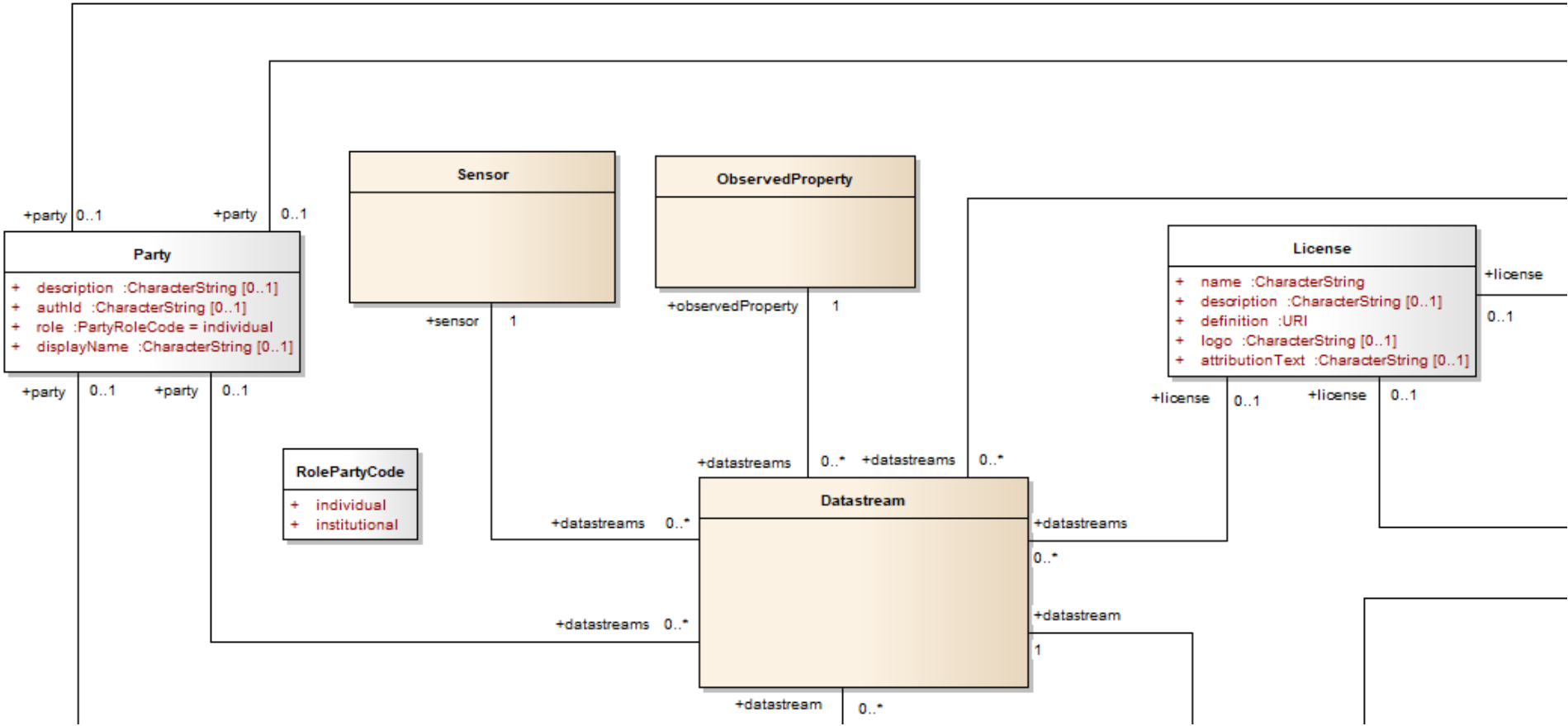
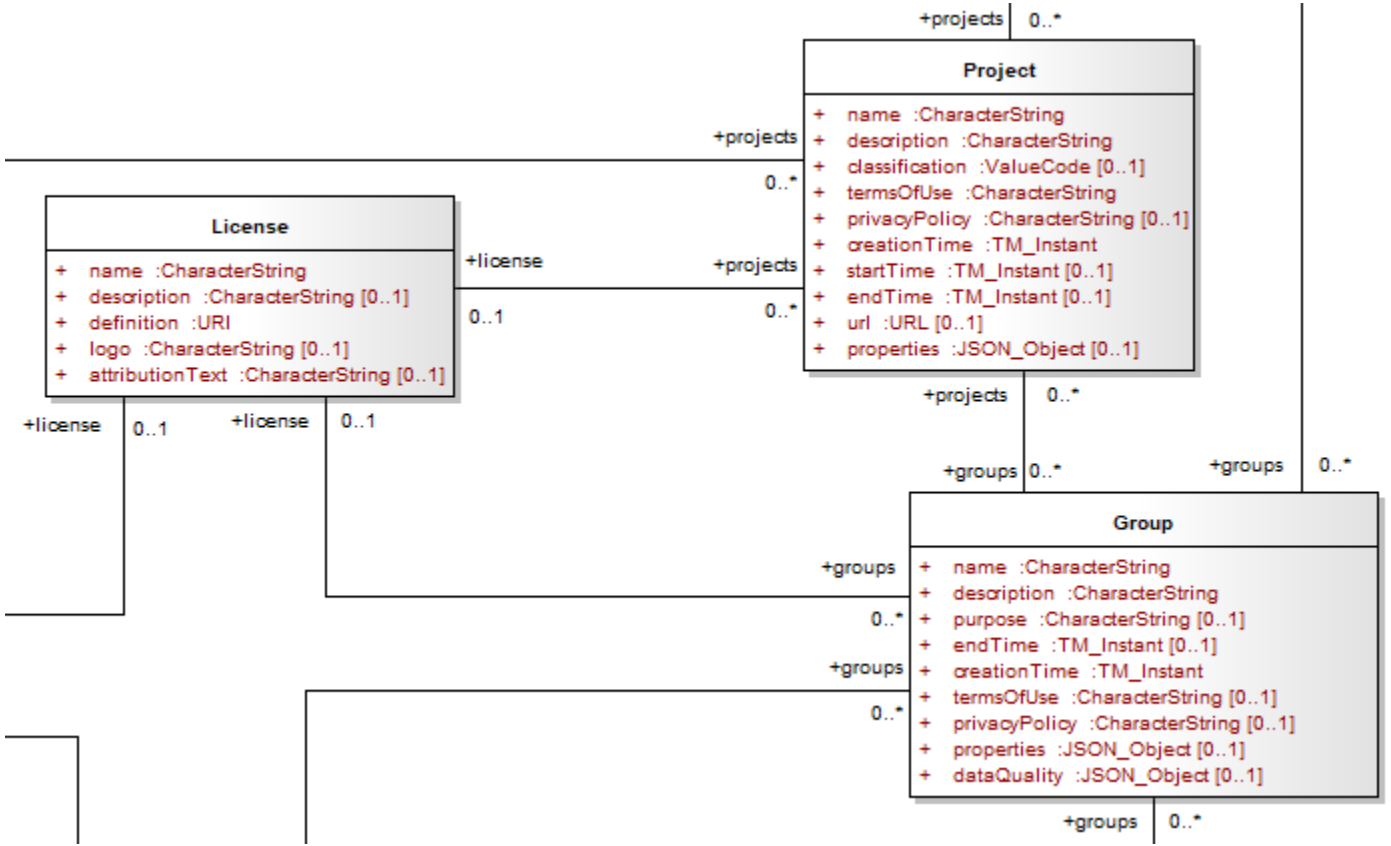
STA+ schema


class STAplus Sensing Entities
Party
+ description :CharacterString [0..1]
+ authId :CharacterString [0..1]
+ role :PartyRoleCode = individual
+ displayName :CharacterString [0..1]
Sensor
ObservedProperty
Project
+ name :CharacterString
+ description :CharacterString
+ classification :ValueCode [0..1]
+ termsOfUse :CharacterString
+ privacyPolicy :CharacterString [0..1]
+ creationTime :TM_Instant
+ startTime :TM_Instant [0..1]
+ endTime :TM_Instant [0..1]
+ url :URL [0..1]
+ properties :JSON_Object [0..1]
License
+ name :CharacterString
+ description :CharacterString [0..1]
+ definition :URI
+ logo :CharacterString [0..1]
+ attributionText :CharacterString [0..1]
RolePartyCode
+ individual
+ institutional
Datastream
Group
+ name :CharacterString
+ description :CharacterString
+ purpose :CharacterString [0..1]
+ endTime :TM_Instant [0..1]
+ creationTime :TM_Instant
+ termsOfUse :CharacterString [0..1]
+ privacyPolicy :CharacterString [0..1]
+ properties :JSON_Object [0..1]
+ dataQuality :JSON_Object [0..1]
Thing
Observation
Relation
+ role :URI
+ description :CharacterString [0..1]
+ externalObject :URI [0..1]
+ properties :JSON_Object [0..1]
constraints
{count(object)+count(externalObject)==1}
HistoricalLocation
Location
FeatureOfInterest
«CodeList»
ValueCode
count(object) = 0: requires to use externalObject to express relation to subject.
count(object) = 1: expresses a relation between two observations using the role.

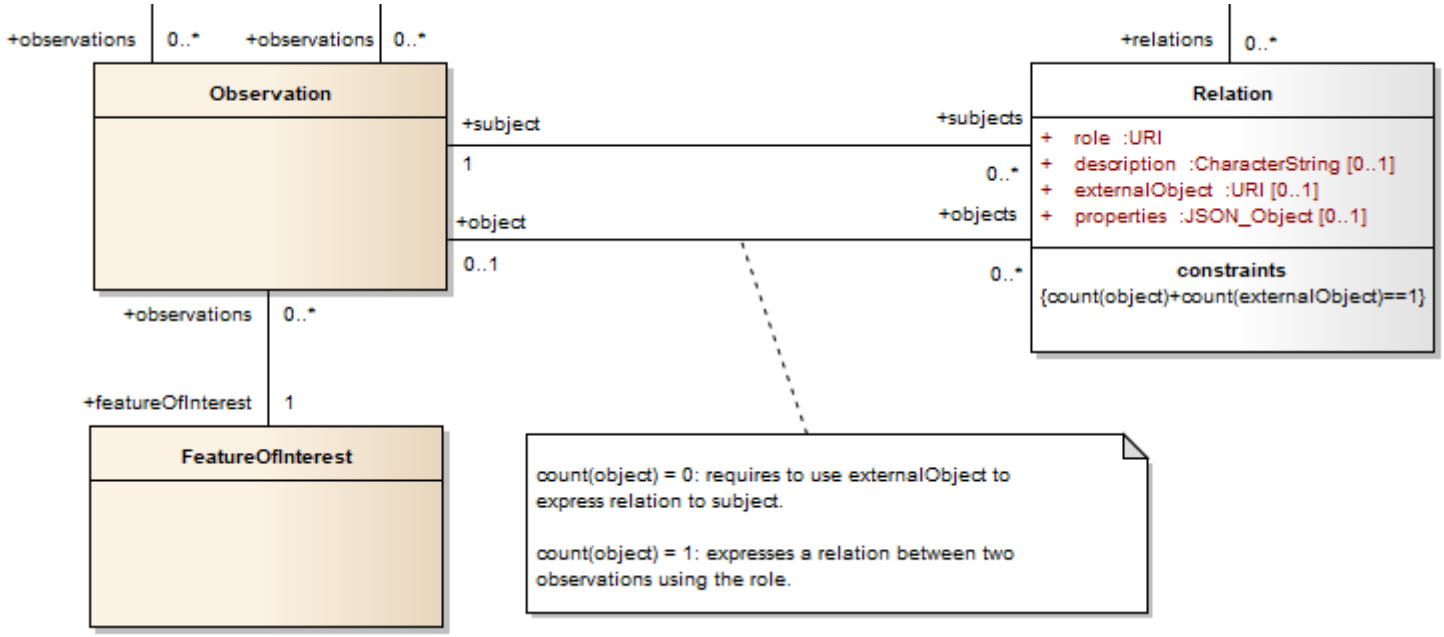
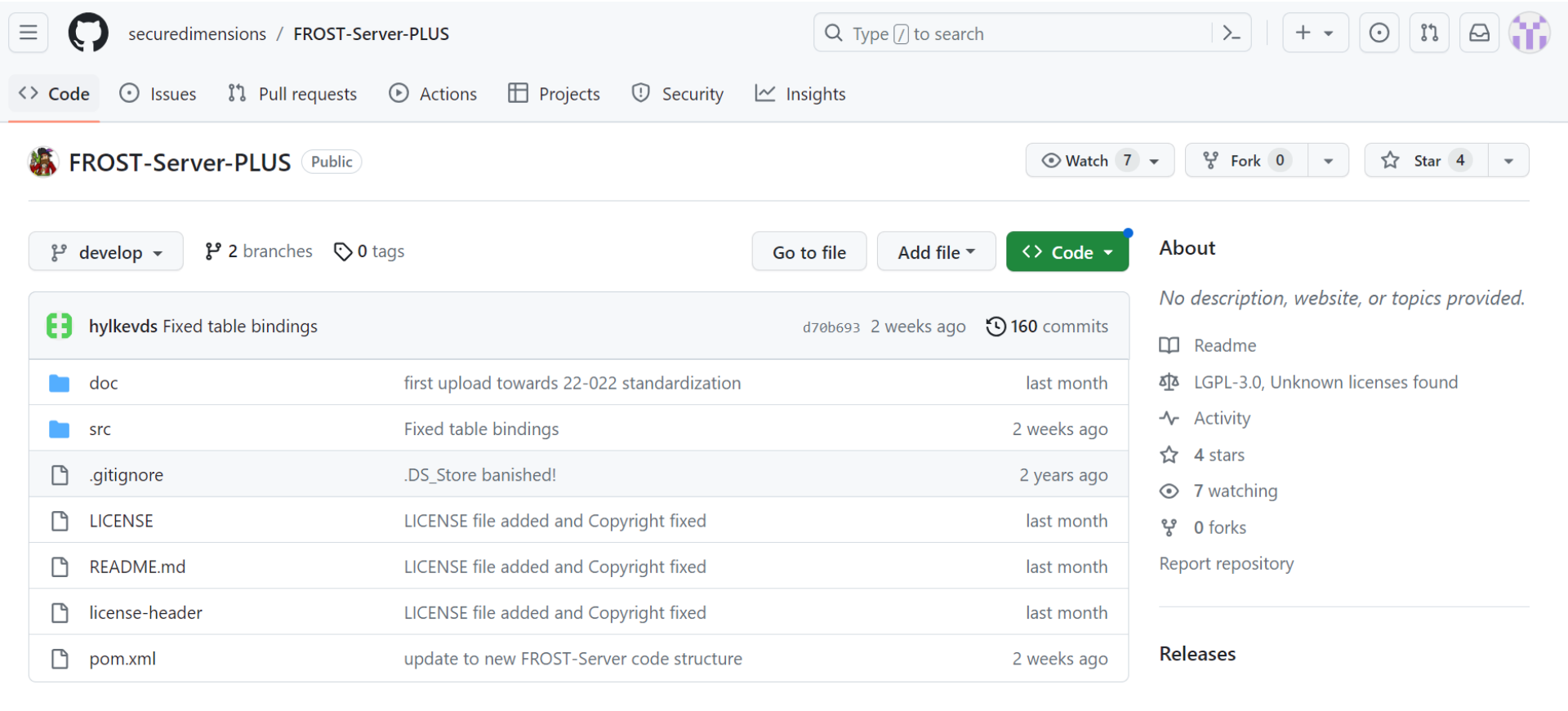
STA+ schema – detail 1 of 3



STA+ schema – detail 2 of 3



STA+ schema – detail 3 of 3



STA+ implementation…