

GeoPackage Status

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The 120th OGC Member Meeting

15 September 2021

The world's leading and comprehensive
community of experts making location information:



Findable



Accessible



Interoperable



Reusable



Agenda

OGC

12 : 45 : 87
FEB - 05 - 3254
167 78 804

- GeoPackage 1.3
- GeoPackage and OGC APIs



MAX - 34 - 685
KL - IT - 3678 - 986

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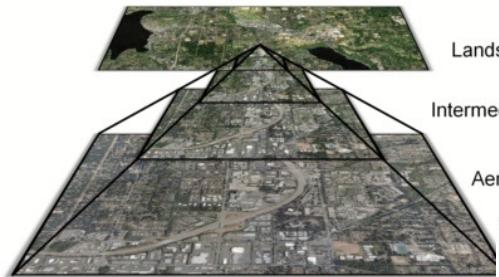
X 2995

O 4583

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GeoPackage: Raster Maps, Images, and Feature Data in One File

OGC



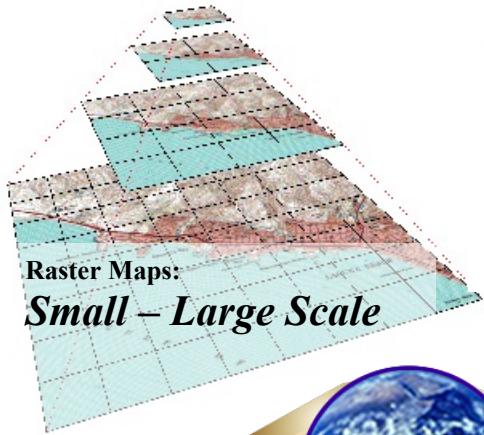
Landsat imagery

Intermediate levels

Aerial imagery

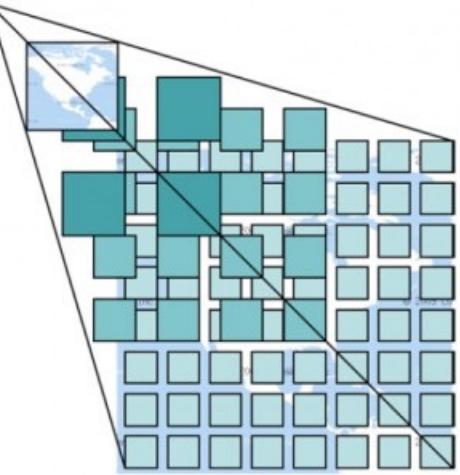
Imagery

Low – High Resolution

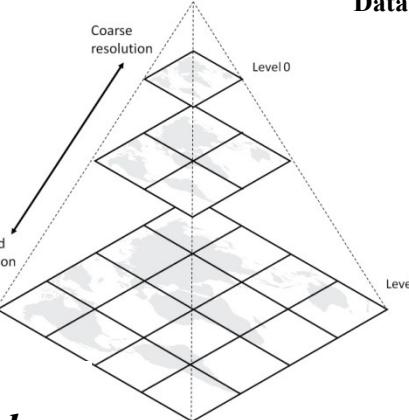


Raster Maps:

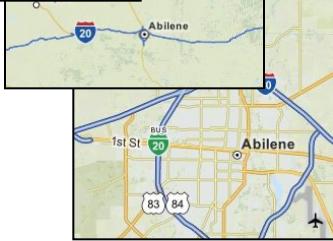
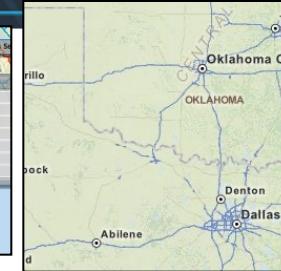
Small – Large Scale



Tile Pyramids
24 zoom levels



Feature
Data



Single File Sqlite Database

containing all data for direct-use on mobile platforms & handheld devices



- **Go here first!**
- Web version of standard
- E-Learning Course
- News, implementations, sample data, and FAQ
- Hyperlinks for participants (quickest way to portal, Wiki, etc.)
- Backed by [github.com](https://github.com/opengeospatial/geopackage)
[\(https://github.com/opengeospatial/geopackage\)](https://github.com/opengeospatial/geopackage)

- Adopted by OGC in 2020 as [12-128r17](#)
- Minor revision (substantive and administrative changes)
 - No critical (breaking) changes
 - All changes were vetted to ensure that they did not introduce any significant interoperability risks
- Focus is on a wide range of interoperability and extensibility issues
 - See release notes at [https://docs.ogc.org/is/12-128r17/18-066r1.html](#)

Summary of Substantive Changes

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- Create Requirements 146 and 147 to enforce alignment of Spatial Reference System (SRS) identifiers between tables
- Clarify the structure of user-defined tables and views
 - Revise Requirements 29, 54, and 119 to specifically describe the rules for user defined features, tiles, and attributes *tables*, respectively.
 - **User-defined *tables* SHALL have an INTEGER primary key column (alias for *rowid*)**
 - Add Requirements 150, 153, and 151 to specifically describe the rules for user defined features, tiles, and attributes *views*, respectively.
 - **User-defined *views* SHALL have an INTEGER "primary-key-like" (i.e., with unique values) column as their first column.**
- Relax Requirement 104 to allow use of schemas with attributes and extensions
- Relax Requirement 94 to allow metadata scopes to be extended
- Create new Requirement 152 to describe empty geometries



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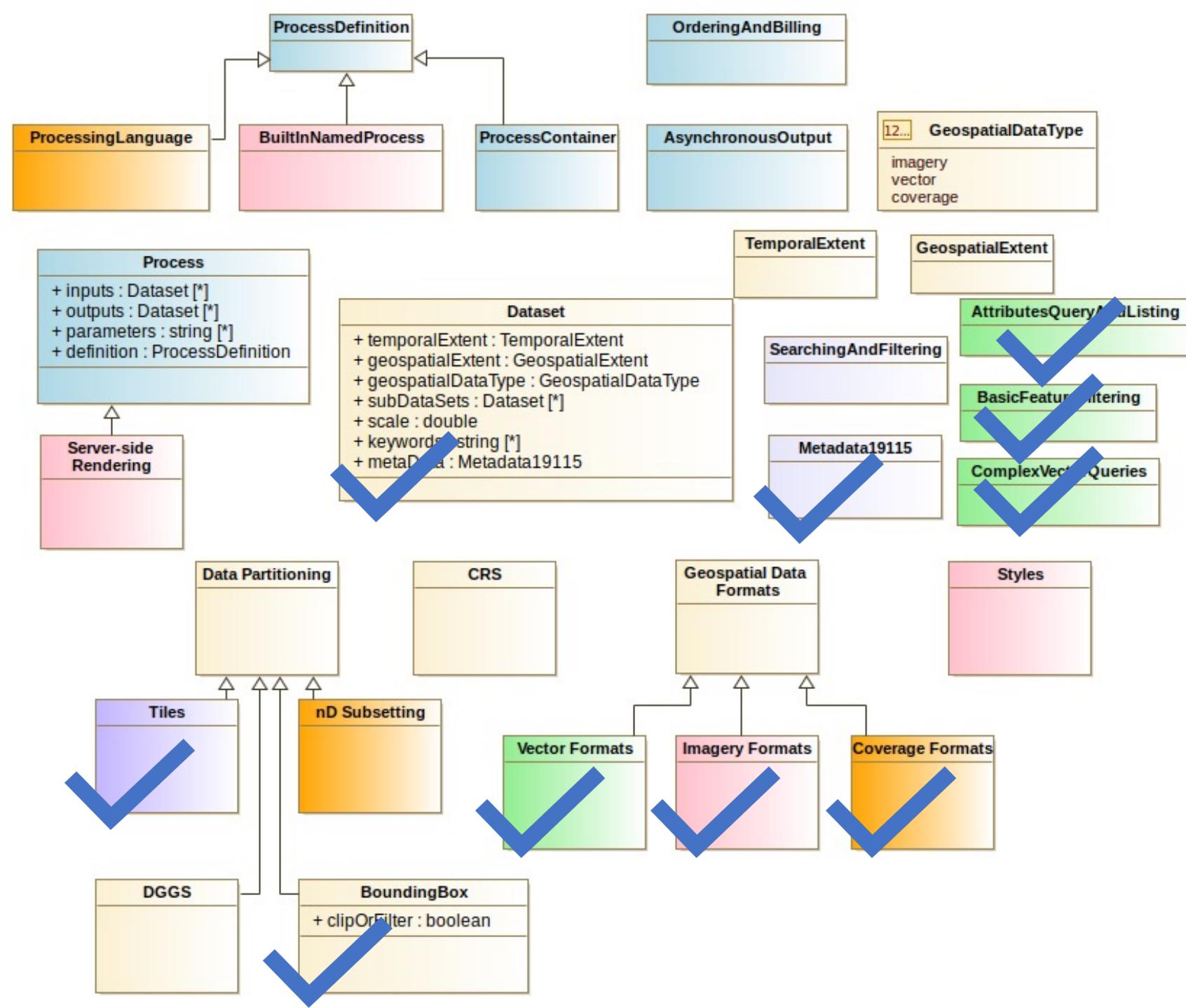
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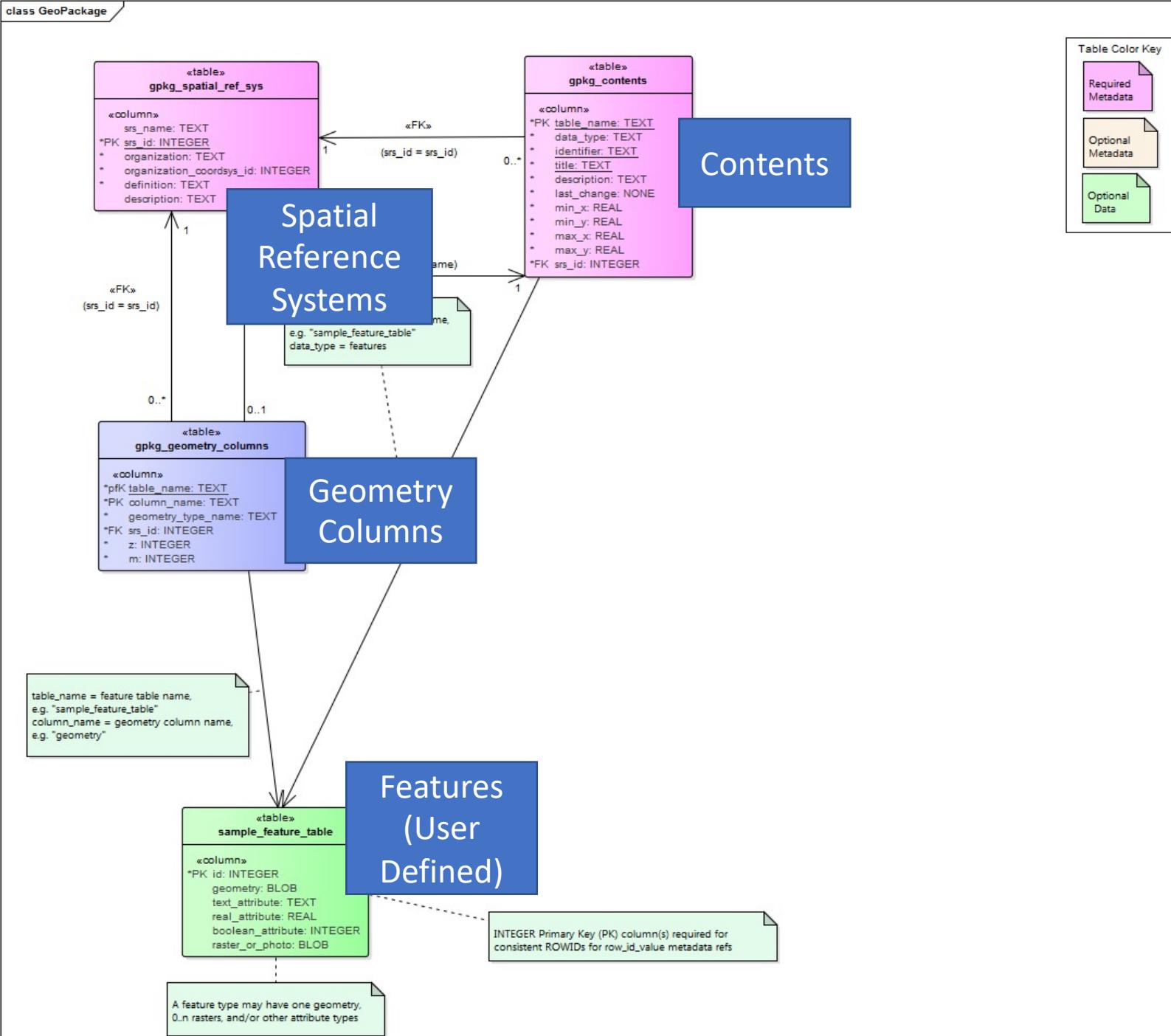
GeoPackage and OGC APIs

- GeoPackage supports much of the OGC API baseline.



Features

OGC

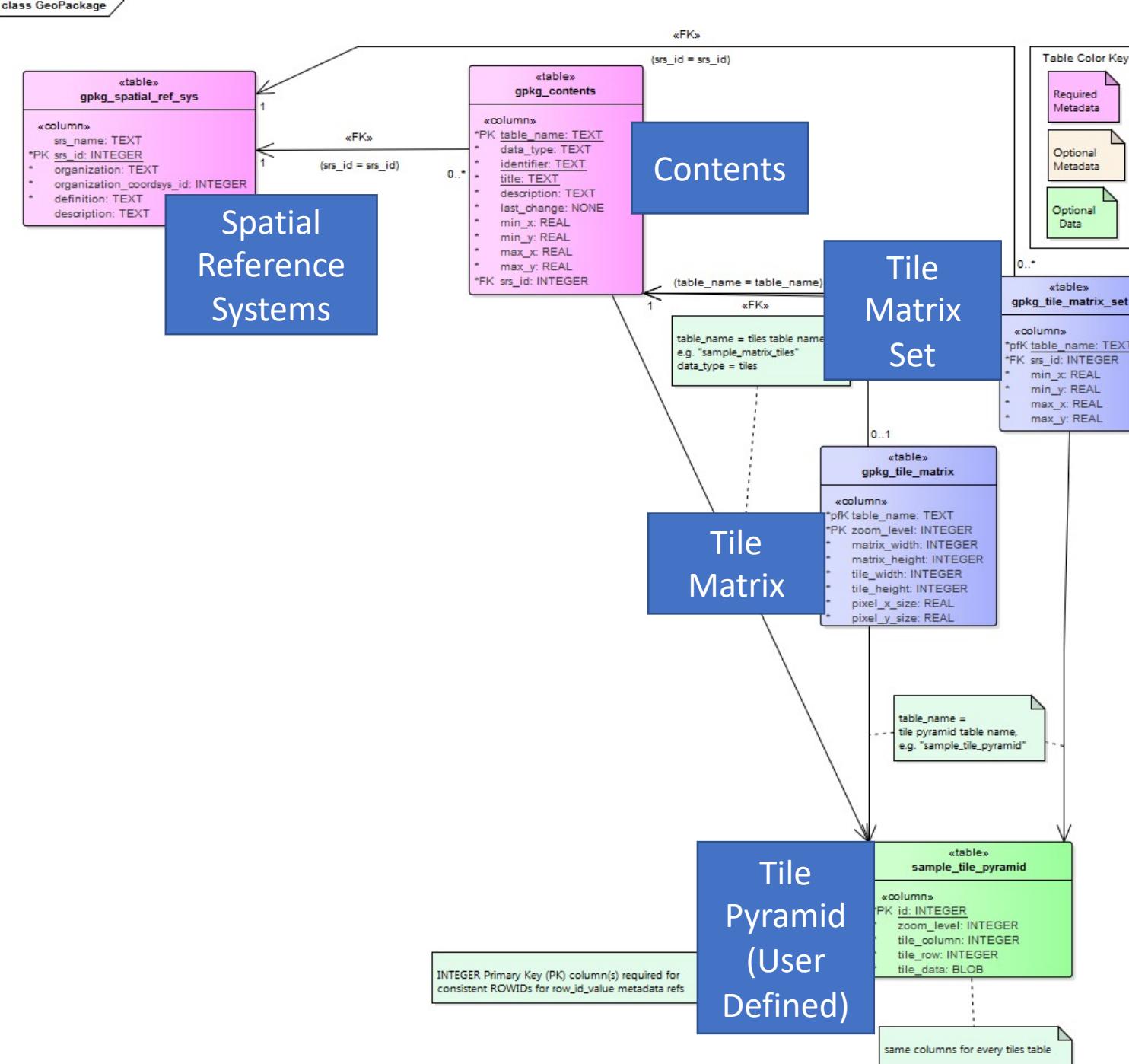


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Tiles

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GeoPackage – OGC API Crosswalk

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OGC

GeoPackage	OGC API	Endpoint
gpkg_spatial_ref_sys	features	/collections (crs property)
gpkg_contents	features tiles	/collections /tiles
gpkg_geometry_columns		/collections/{table_name}
<i>user-defined features table</i>		/collections/{table_name}/items/{feature_id}
gpkg_tile_matrix_set	tiles	link with relation type " http://www.opengis.net/def/rel/ogc/1.0/tileset "
gpkg_tile_matrix	tiles	part of a tile matrix set document
<i>user-defined tiles table</i>	tiles coverages	/collections/{table_name}/map/tiles /collections/{table_name}/coverage/tiles
gpkg_metadata	any	links with relation type " http://www.opengis.net/def/rel/ogc/1.0/data-meta " (or possibly "service-desc", "service-doc", or "service-meta")



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