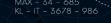
### **GeoPackage Vector Tiles extensions**

- Draft extensions developed in Vector Tile Pilots **Summary ER:** https://docs.ogc.org/per/19-088r2.html#geopackage extensions
- Latest draft extensions: https://gitlab.com/imagemattersllc/ogc-vtp2/-/blob/master/extensions/
- Vector Tiles Extension, Vector Tiles Attributes Extension
- Formats: Mapbox Vector Tiles, GeoJSON Vector Tiles
- Tile Matrix Set Extension: Support for Variable Width TMS, WorldCRS84Quad (level -1) with -180..180 latitude (blank above/below)





# GeoPackage Vector Tiles extension

- gpkg\_extensions:
  - table\_name gpkgext\_vt\_layers, gpkgext\_vt\_fields: extension\_name: im\_vector\_tiles
- gpkg\_contents data\_type: vector-tiles
- New tables
  - gpkgext\_vt\_layers
  - gpkgext\_vt\_fields



# GeoPackage Vector Tiles Attributes Extension 45 : 87 FEB - 05 - 3254

### GeoPackage Vector Tiles Attributes extension

- Attributes are in user defined table like regular GPKG features
- Using related table extensions: gpkgext\_relations table
- attributes\_table\_name column in gpkgext\_vt\_layers







# GeoPackage Mapbox Vector Tiles Extension

# GeoPackage Mapbox Vector Tiles extension

- User-defined tiles table tile data: Mapbox Vector tiles content
- gpkg extensions
  - column name: tile data
  - extension name: im vector tiles mapbox



# GeoPackage GeoJSON Vector Tiles Extension 12: 45: 87 FEB - 05 - 3254

### GeoPackage GeoJSON Vector Tiles extension

- User-defined tiles table tile\_data: GeoJSON tile content
- gpkg\_extensions
  - column name: tile data
  - extension name: im vector tiles geojson



# GeoPackage TileMatrixSet extension

- New tables:
  - gpkgext\_tile\_matrix\_set
  - gpkgext\_tile\_matrix
  - gpkgext\_tile\_matrix\_tables
  - gpkgext\_tile\_matrix\_variable\_widths
- Replace existing tables with views:
  - gpkg\_tile\_matrix\_set
  - gpkg\_tile\_matrix



- Work on producer / consumer of GeoPackage with vector tiles
  - Will provide sample GeoPackages from Vector Tile Pilots
- Discuss need for abstract specification topic on Vector Tiles
  - See 2DTMS issue #86
- Discuss next steps for standardizing vector tiles extensions





# O 2763

# Thank You!

### **Community**

500+ International Members

110+ Member Meetings

60+ Alliance and Liaison partners

50+ Standards Working Groups

45+ Domain Working Groups

25+ Years of Not for Profit Work

10+ Regional and Country Forums

### **Innovation**

120+ Innovation Initiatives

380+ Technical reports

**Quarterly Tech Trends monitoring** 

### **Standards**

65+ Adopted Standards 300+ products with 1000+ certified implementations 1,700,000+ Operational Data Sets

Using OGC Standards





