



FOSS4G 2014

Easy ETL with OGR

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About Sourcepole

› QGIS

- › Core dev. & Project Steering Committee
- › QGIS Server, Printing, Plugins, ...
- › QGIS Enterprise
- › QGISCloud

› OGR / GDAL

- › Interlis drivers
- › Schema support for PostGIS driver

› Web-GIS

- › Mapfish Committer / Mapfish Appserver
- › Contributions to MapServer, Openlayers, ...

ETL

FOSS ETL - High Level

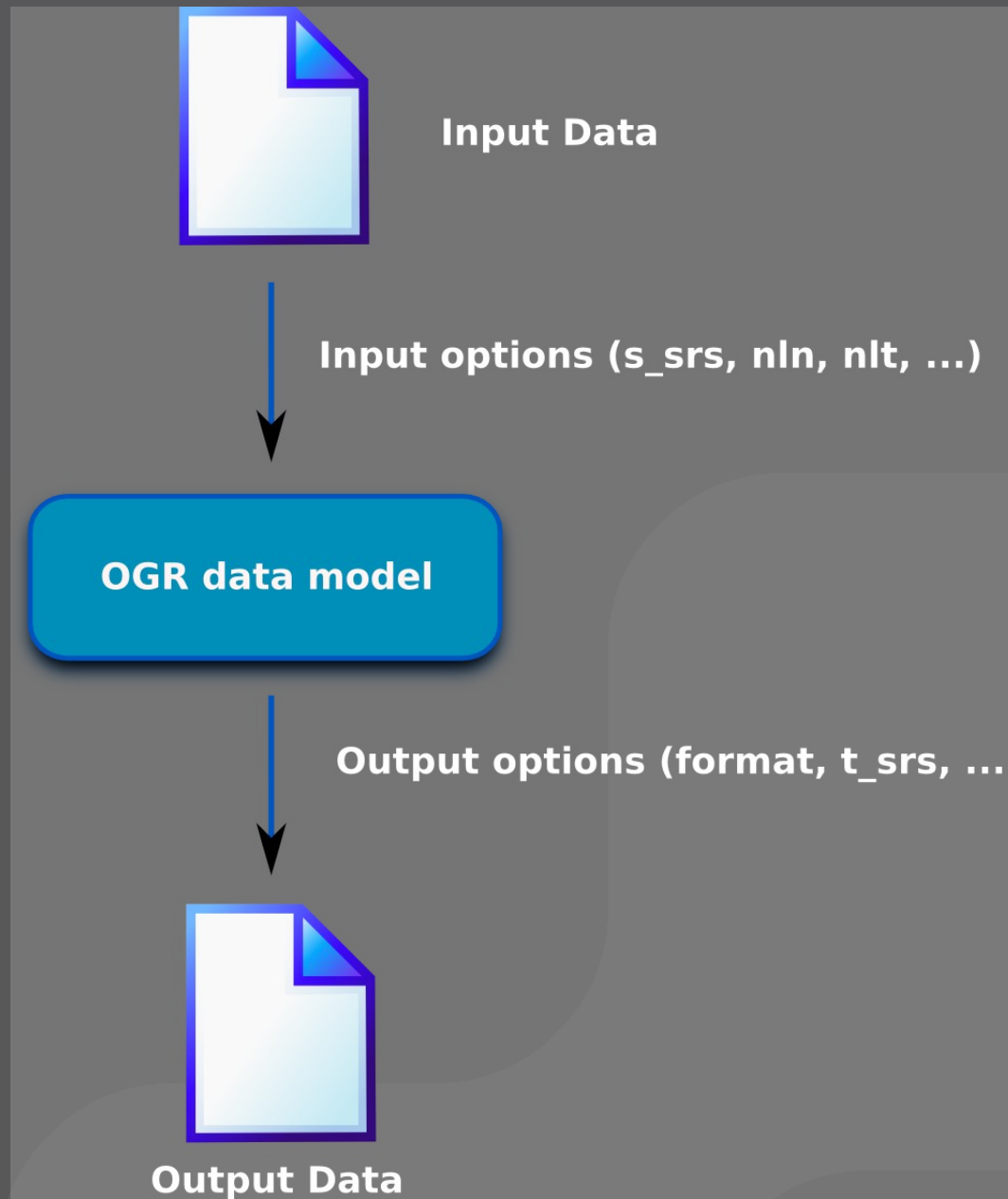


FOSS ETL - Lower Level



ogr2ogr

Building on OGR





OGR data model

- › Attribute fields
- › Feature identifier (FID)
- › One geometry field (≤ 1.10)
- › Multiple geometry fields (≥ 1.11)



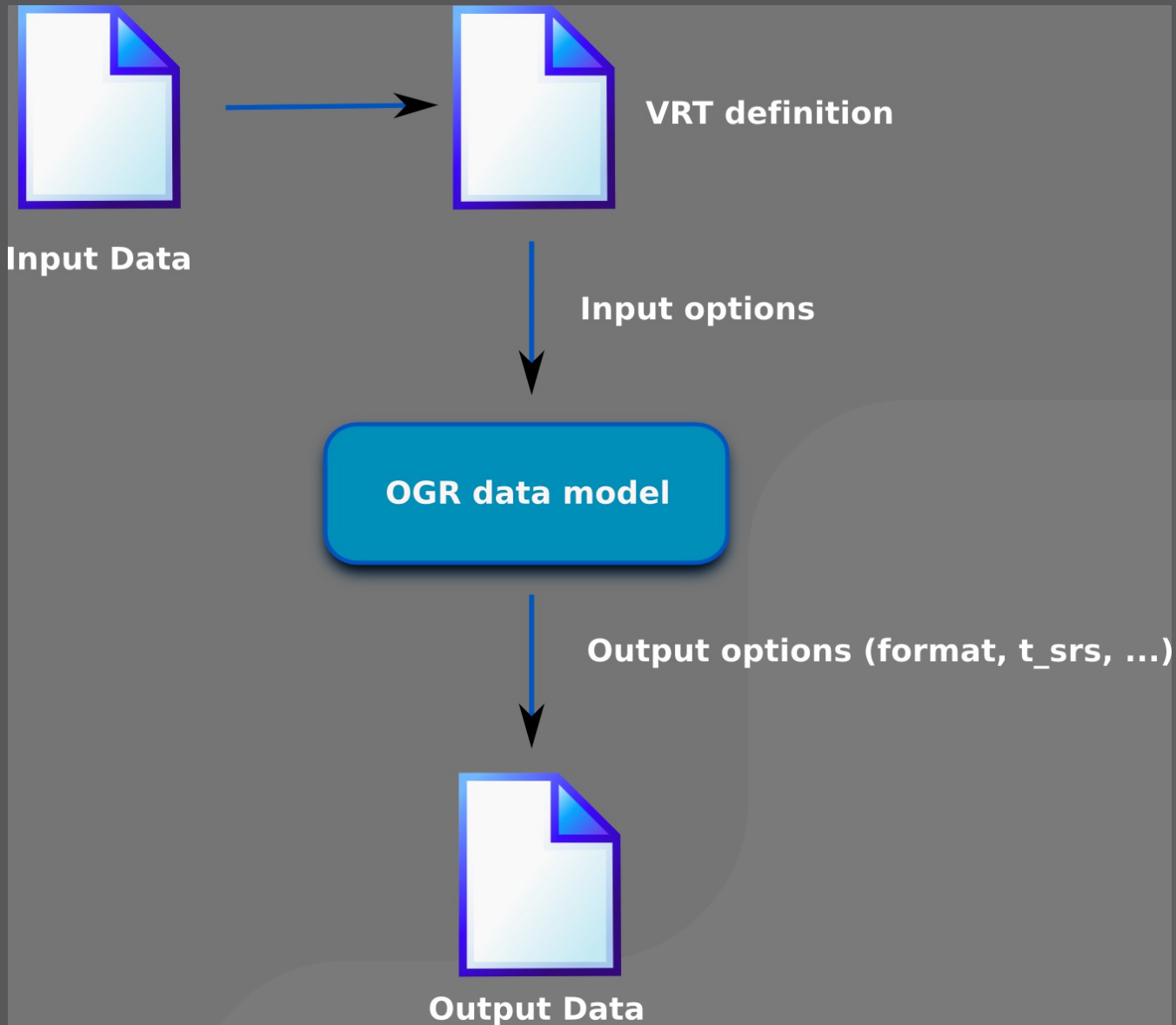
OGR Virtual Format

- › **OGR Virtual Format (VRT)**
 - › http://www.gdal.org/drv_vrt.html
- › **Create spatial layers from flat tables with spatial information in attribute columns**
- › **Example:**

```
<OGRVRTDataSource>
  <OGRVRTLayer name="worms">
    <SrcDataSource>ODBC:DISEASE,worms</SrcDataSource>
    <SrcLayer>worms</SrcLayer>
    <GeometryType>wkbPoint</GeometryType>
    <LayerSRS>WGS84</LayerSRS>
    <GeometryField encoding="PointFromColumns" x="x" y="y"/>
  </OGRVRTLayer>
</OGRVRTDataSource>
```




ogr2ogr with VRT





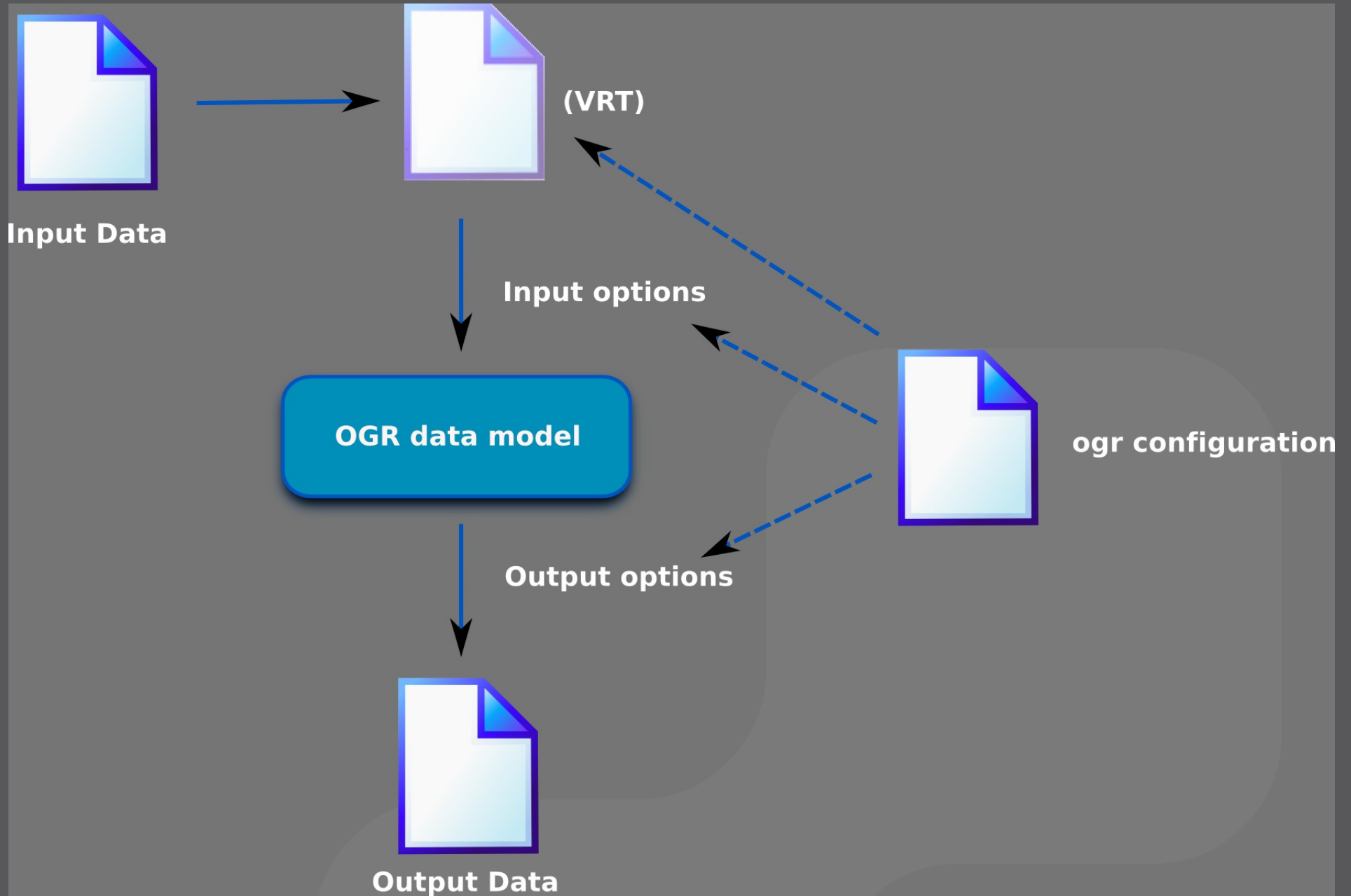
• OGR Virtual Format Features

- › Geometry field definition
- › Column name mapping
- › Column type mapping
- › Omit columns
- › Spatial filtering
- › Reprojected layers
- › Union Layers
- › Layers from (OGR-)SQL expressions
(calculated fields, Joins, etc.)



- › **Python library based on OGR API**
- › **Includes functionality of**
 - › ogrinfo
 - › ogrvrt.py
 - › ogr2ogr
- › **Single binary for command line usage**
- › **JSON configuration file:**
 - › ogr2ogr parameters
 - › Generic VRT specification
- › **QGIS plugin without additional dependencies (no external executables)**

ogr transfrom





ogrtools Quickstart

› Installation:

```
› pip install ogrtools
```

› Command line usage:

```
› ogr -h
```

```
$ /bin/bash
```



Contributions welcome:

- › **Code / Testing / Bugs:**
 - › <https://github.com/sourcepole/ogrtools>
- › **Pythonic OGR API**
- › **More ogr2ogr functionality**
- › **Easier table join configuration**
- › **Documentation (Python API)**
- › **Generic transformation plugin for QGIS**
 - › (Currently specialized on Interlis format)
- › **QGIS processing integration**



Thank you! - Questions?



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