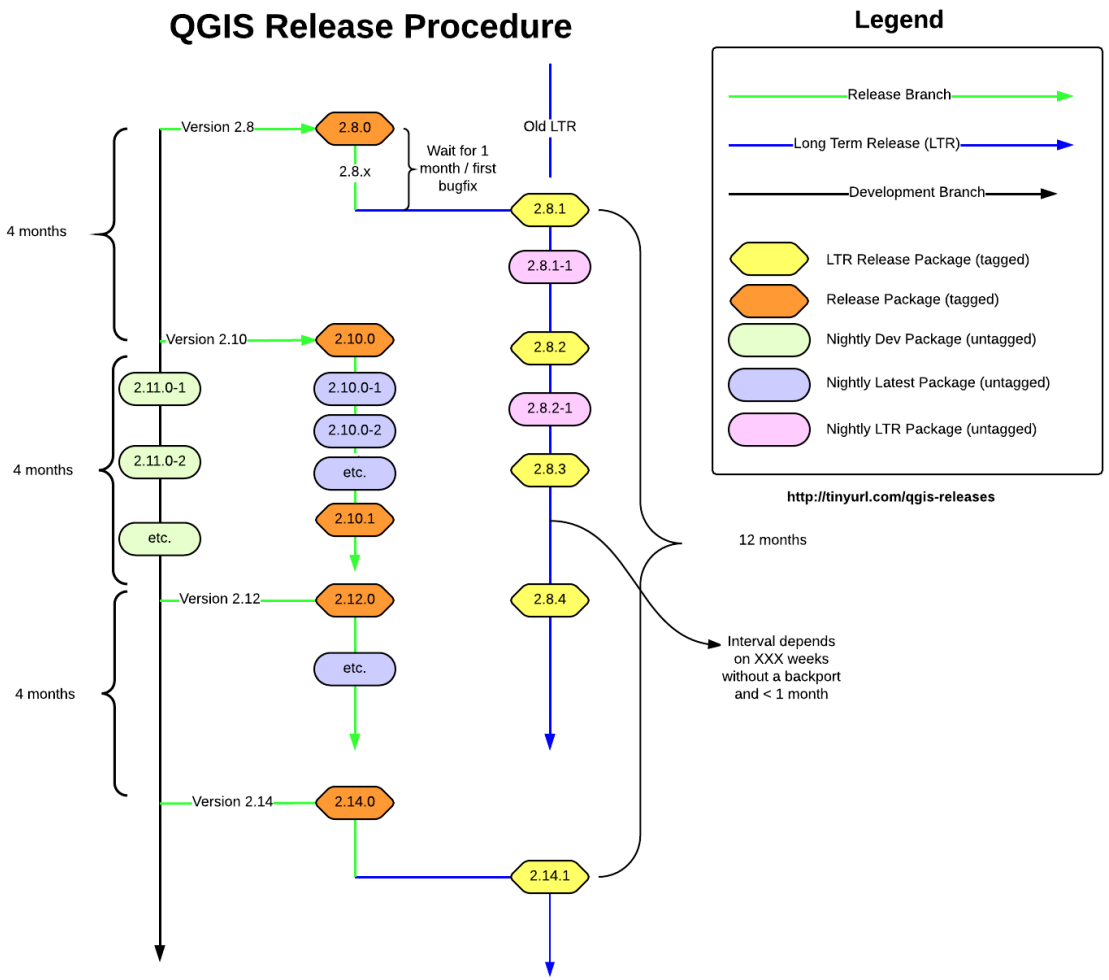
New Features in QGIS

Versions 2.6, 2.8 and 2.10

Marco Hugentobler (Sourcepole) and Andreas Neumann (Stadt Uster)

New Release Model

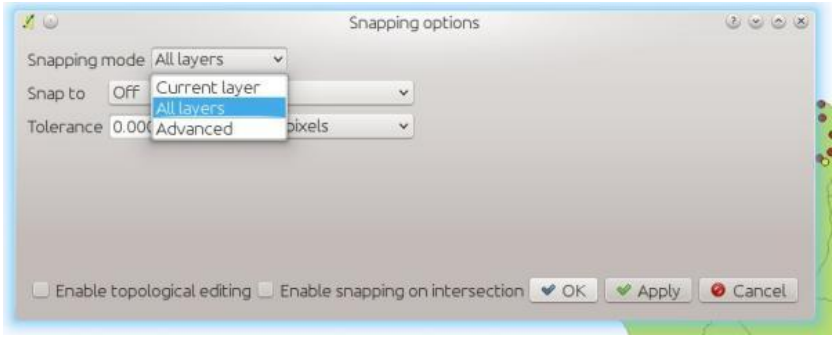


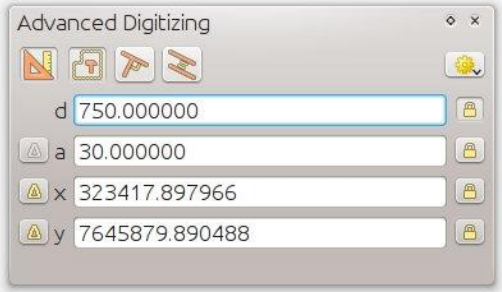
New Release Model

- Time-based regular release every 4 months
- Odd numbers are dev releases, even numbers are regular releases
- 3 months of development, 1 month bug fixing
- Every 4th release is a LTS (long term support) version
- LTS will be supported and receive bug fixes for at least one year
- LTS versions are 2.8 and 2.14 (Feb/March 2016)
- QGIS 2.10 (Pisa) due end of June 2015

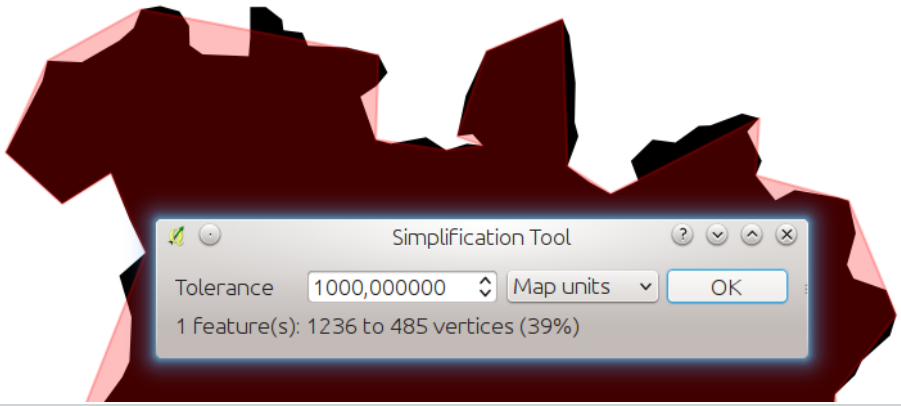
Digitizing tools (2.8)

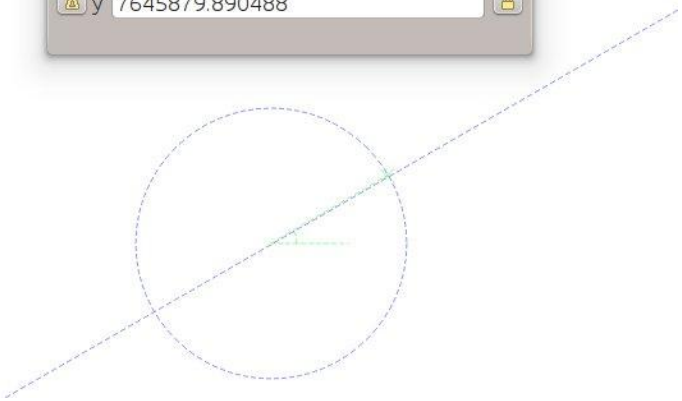
- Improved snapping
- Simplify tool with live feedback
- Advanced “CAD-like” digitizing tool





Co-Sponsored by QGIS-CH, Vevey, Nyon and Tracks for Africa

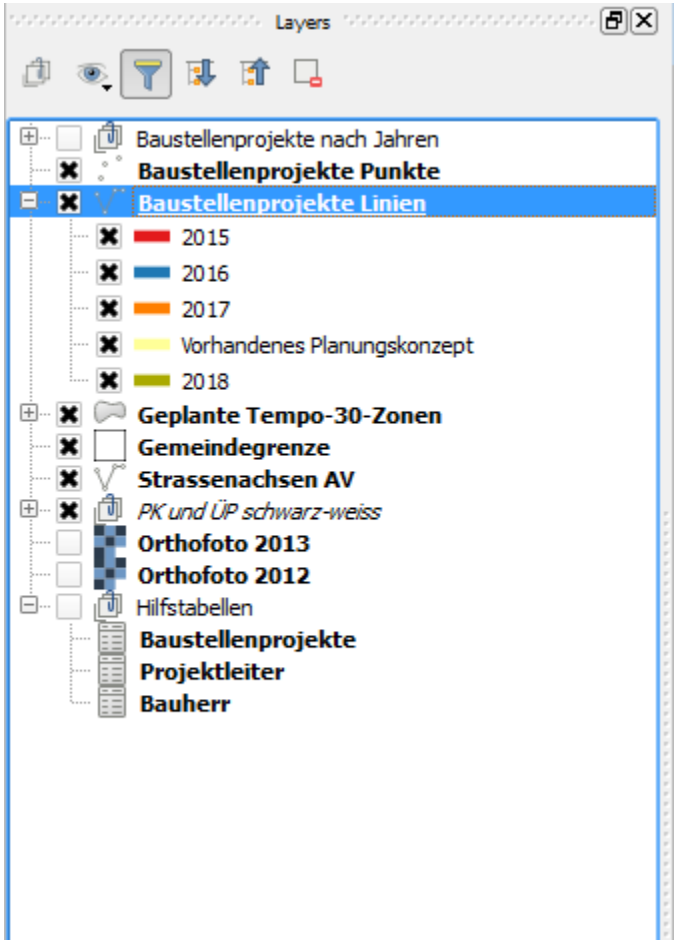




Legend tree redesign (2.6)

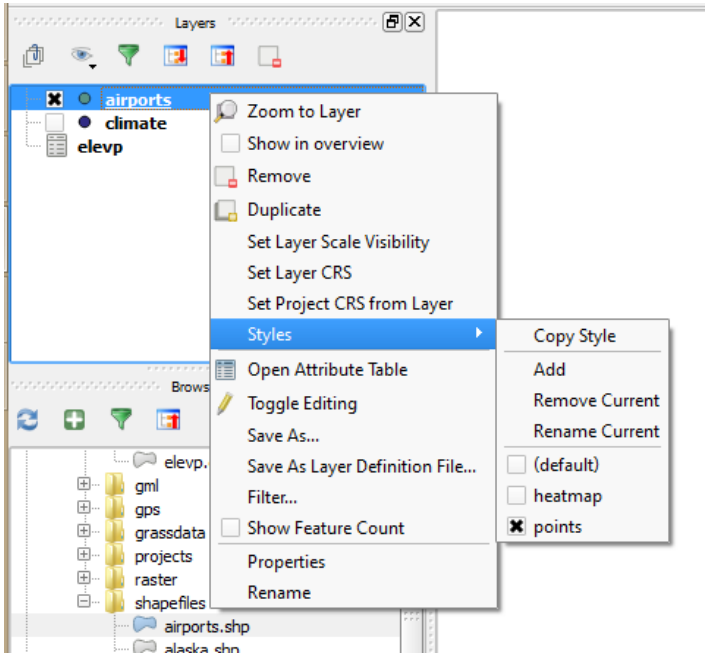
- Complete rewrite of legend tree
- “Pseudo layers” for categories rules within a layer which can be toggled
- Legend can be filtered by visible map content
- Visibility presets for combinations of layer visibility
- Better API for developers

Co-Sponsored by QGIS-CH and SIGE



Multiple Styles per Layer (2.8)

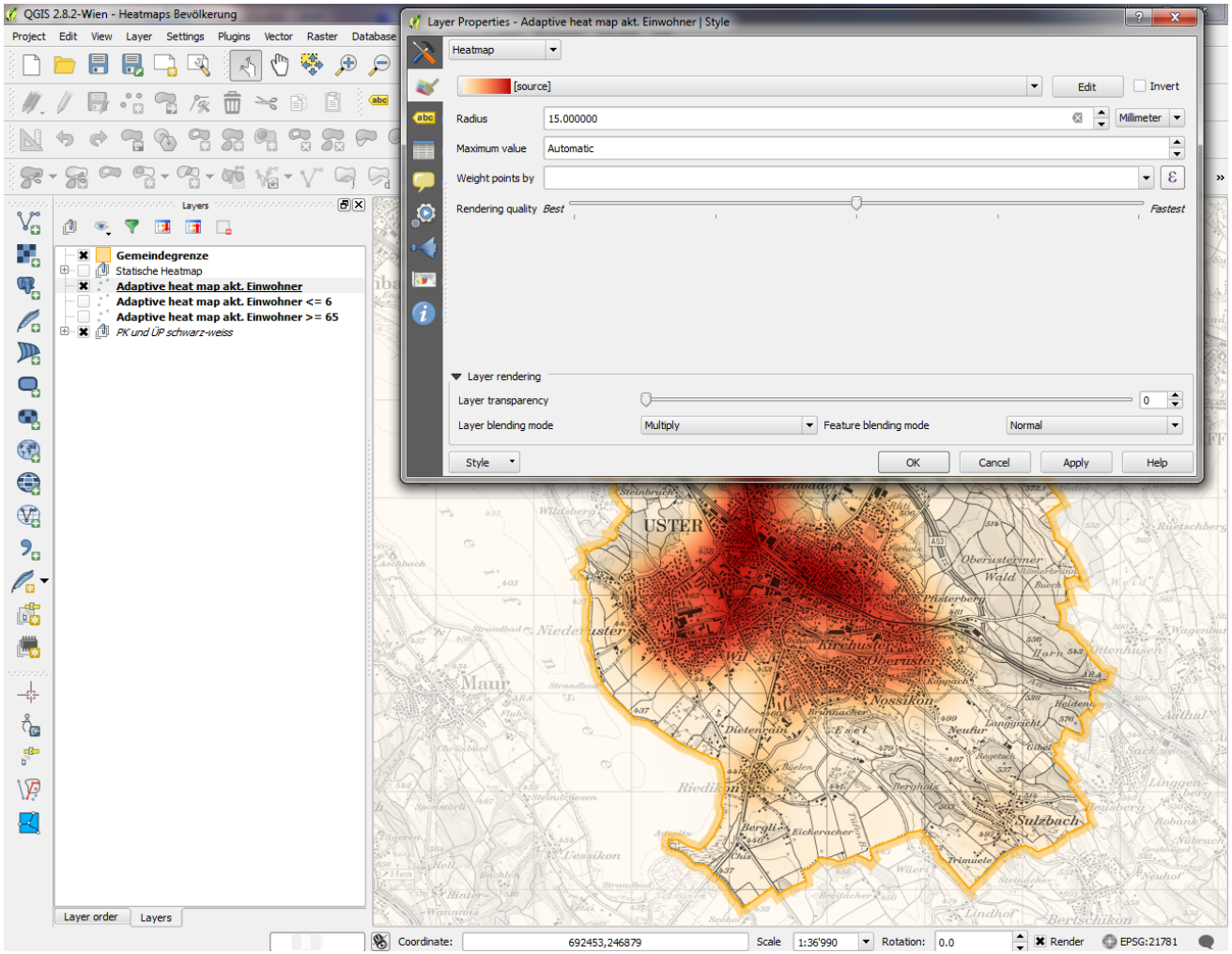
- Not necessary to load the same layer multiple times if you need different views
- Easy switch of different styles on the same layer
- Supported by print composer
- Exposed by QGIS server in WMS service
- Useful to provide black/white and color versions of symbology



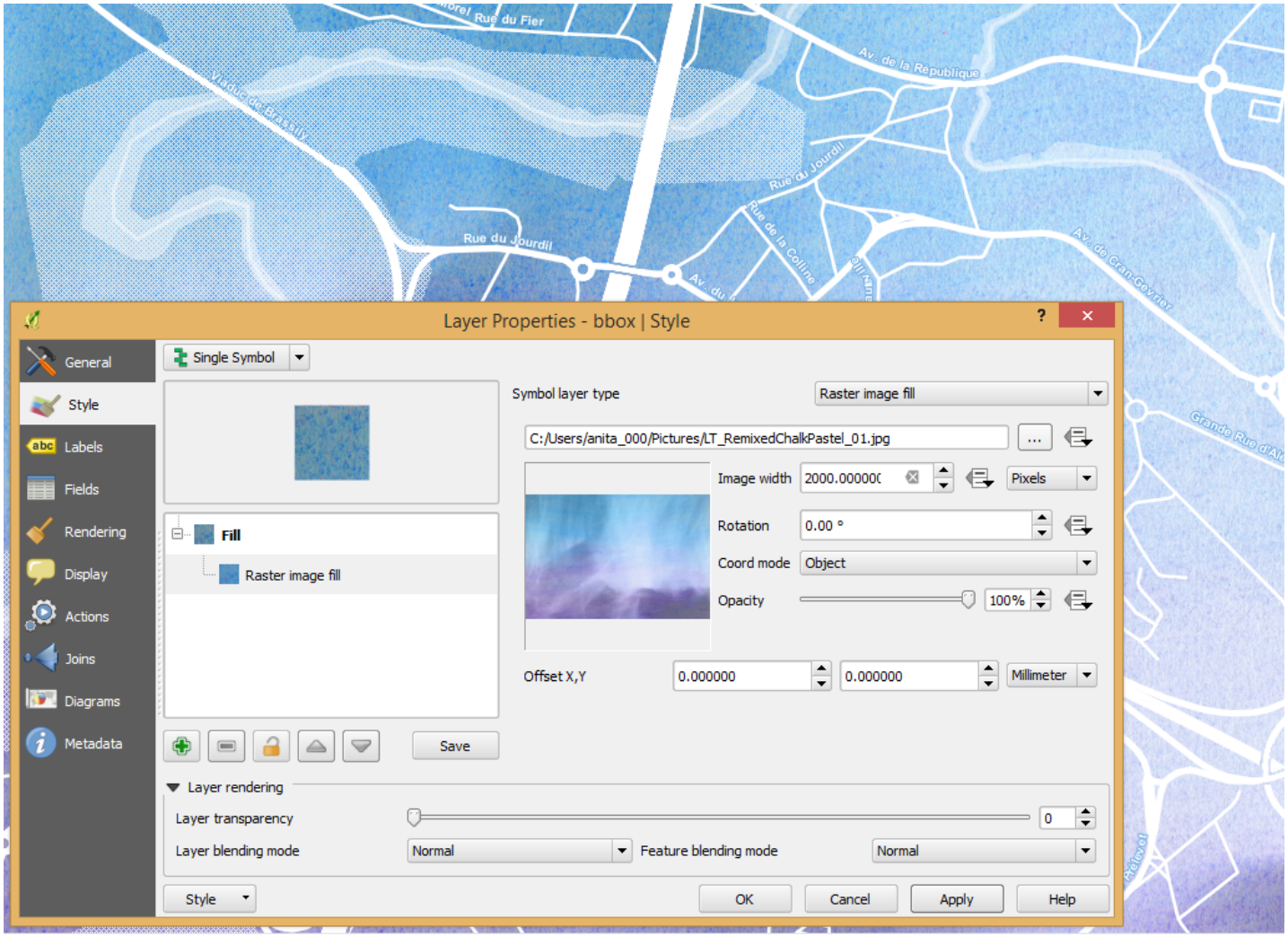
Live Heatmap Renderer (2.8)

- Allows live and dynamic heat map from point data
- Different quality/speed settings
- Possibility to use attributes of expressions as weights

Live Heatmap Renderer (2.8)



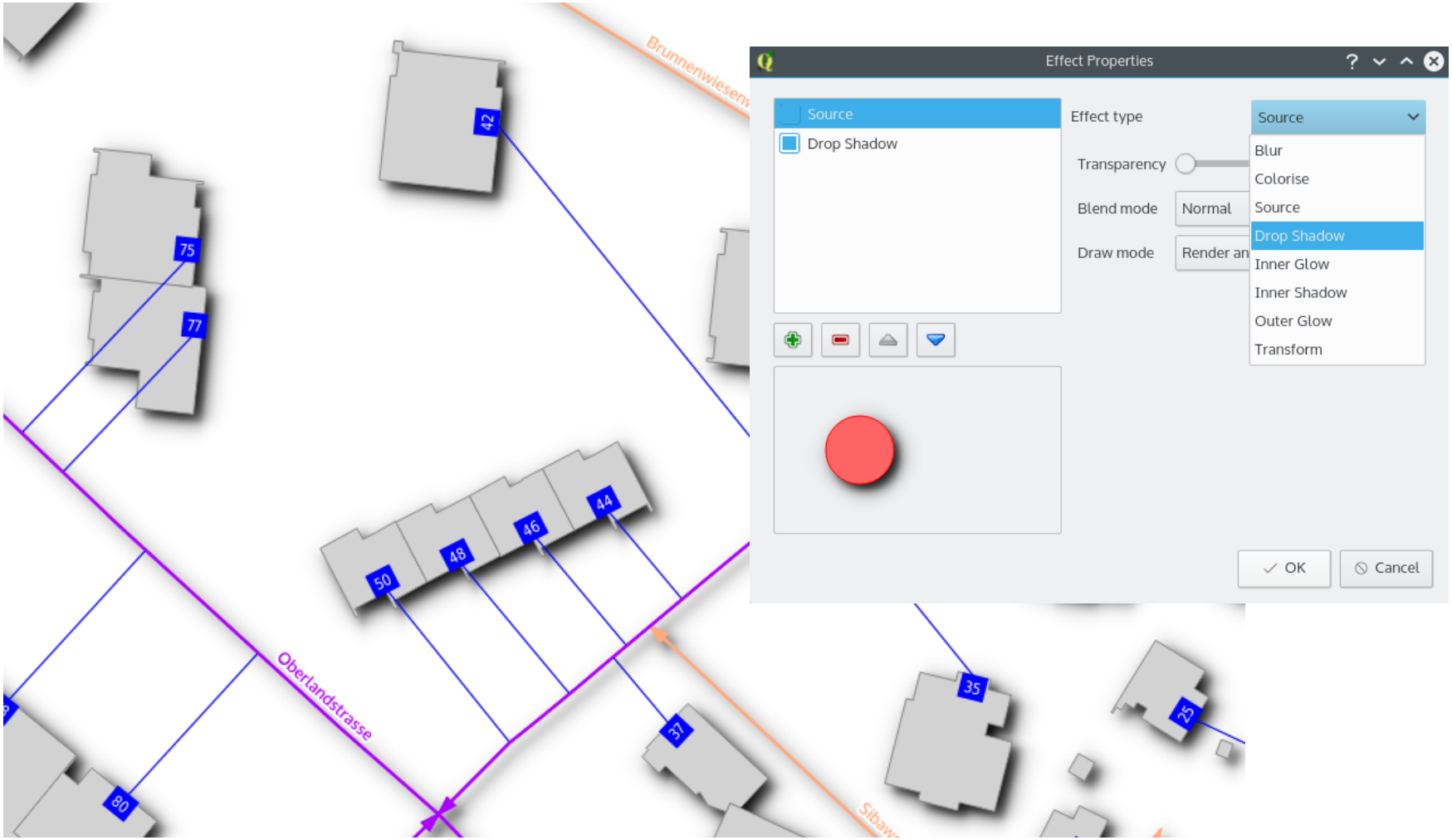
Raster Image Fill Type (2.8)



Live Layer Effects (2.10)

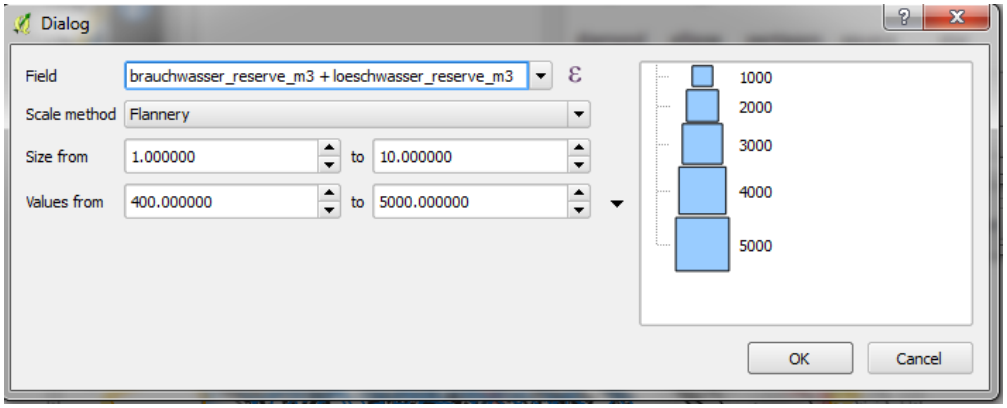
- Applies to all vector geometries of a layer
- Chainable combination of
  - Source
  - Transform
  - Blur
  - Drop Shadow / Inner Shadow
  - Inner glow / Outer glow
  - Colorize
- Combine with transparency and blend modes

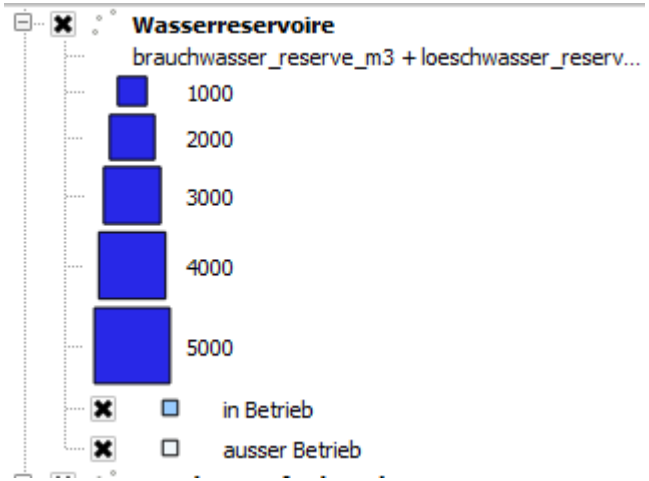
Live Layer Effects (2.10)



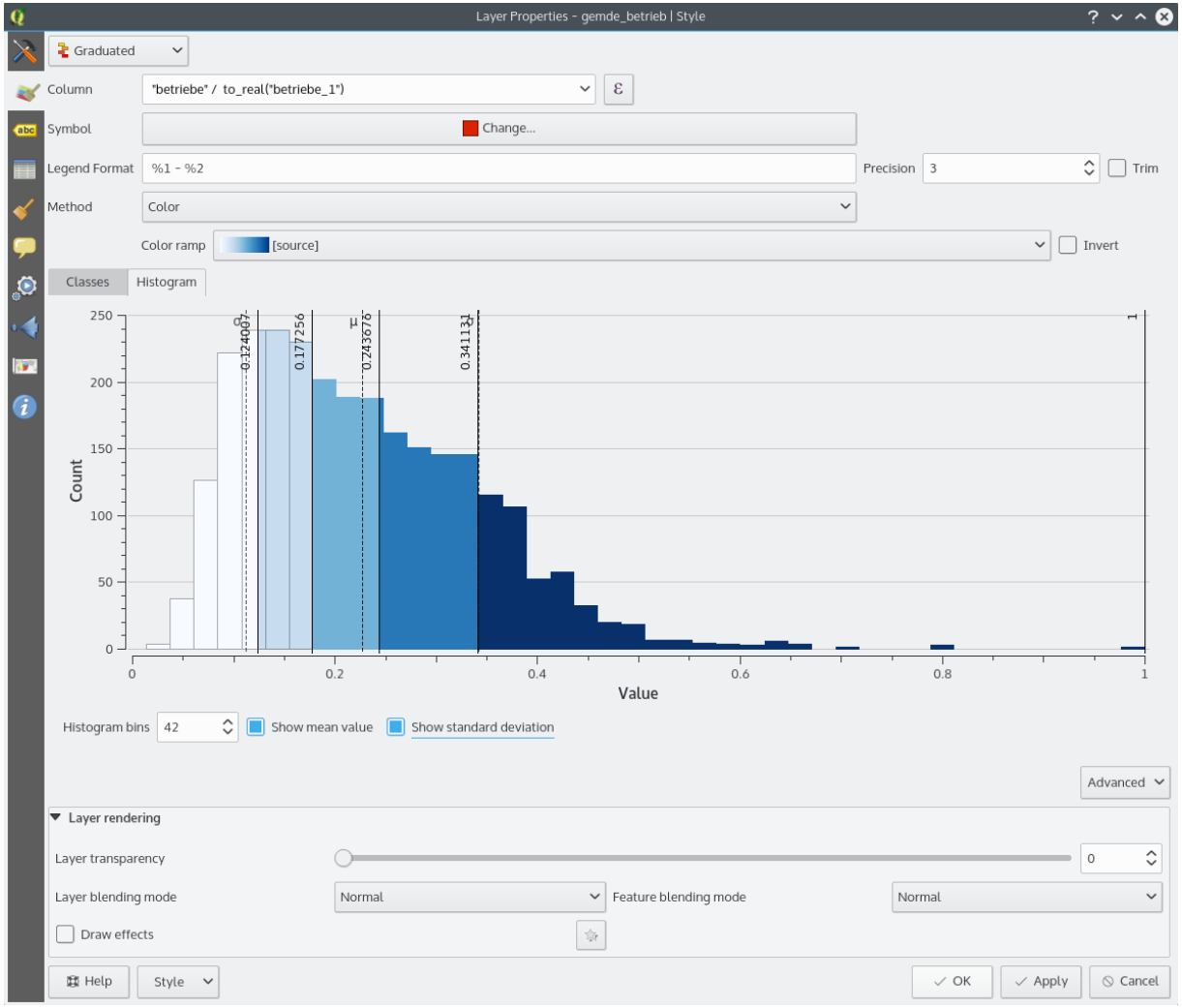
Scaled symbols improvements (2.10)

- Assistant for different scaling modes and mapping min/max to actual sizes
- Legend in legend tree and print composer
- Legend for components of diagrams (without size)



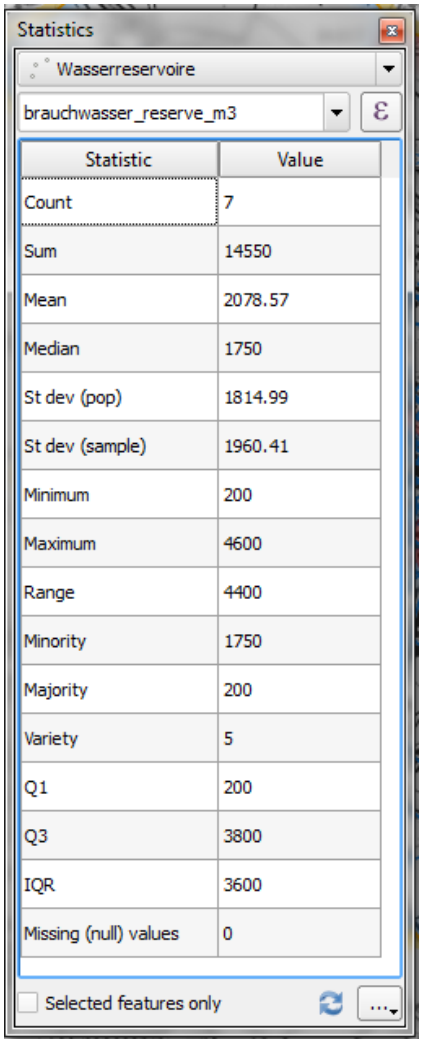


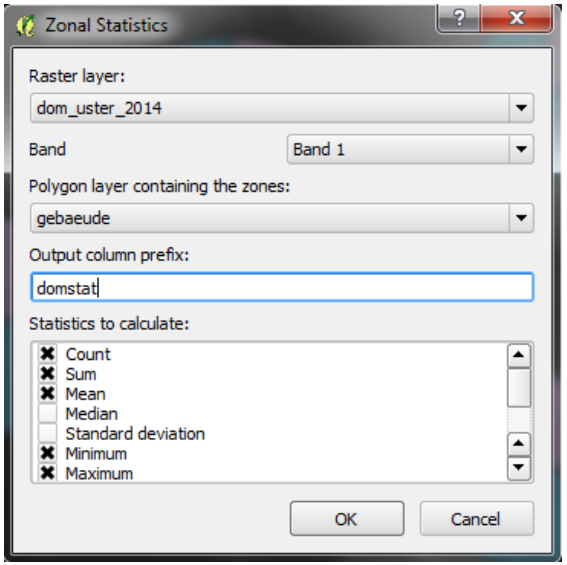
Graduated Renderer Histogram (2.10)



Statistics Summary Panel (2.10)

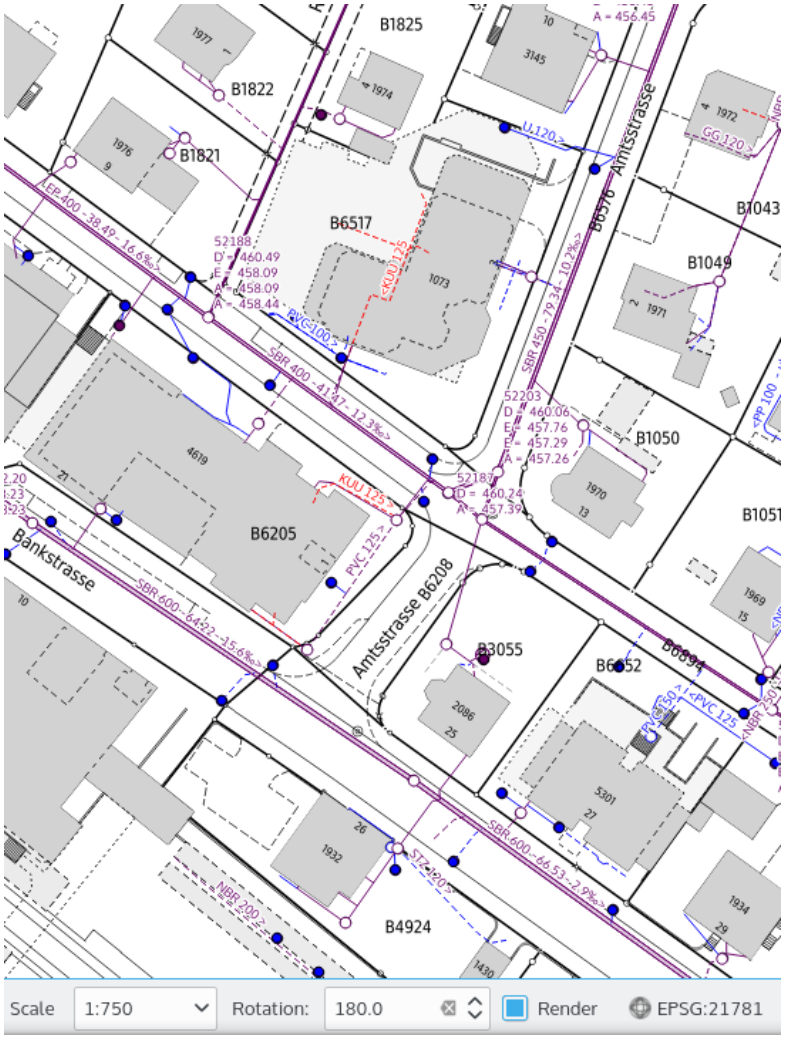
- Various statistical parameters for all or selected features of a layer
- Total count and count of NULL values
- Improved zonal stats plugin - to generate raster/vector overlay statistics





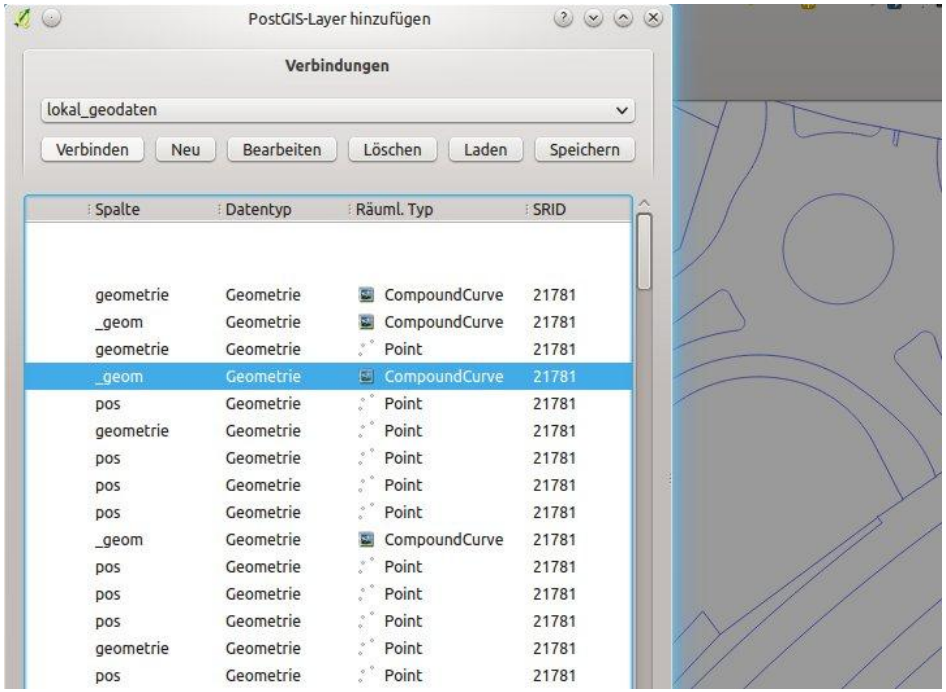
Map Rotation (2.8)

- Labels stay horizontal (when automatically placed)
- Labels don’t get upside down if manually placed
- Also used in print composer
- No comfortable interactive map rotation tool yet (only spinbox)



New geometry model (2.10)

- Most new functionality not yet visible for user in 2.10
- 2.10: possibility to display features with curved type
- 2.12: editing of curved geometry types, z/m-values
- More details in the following presentation

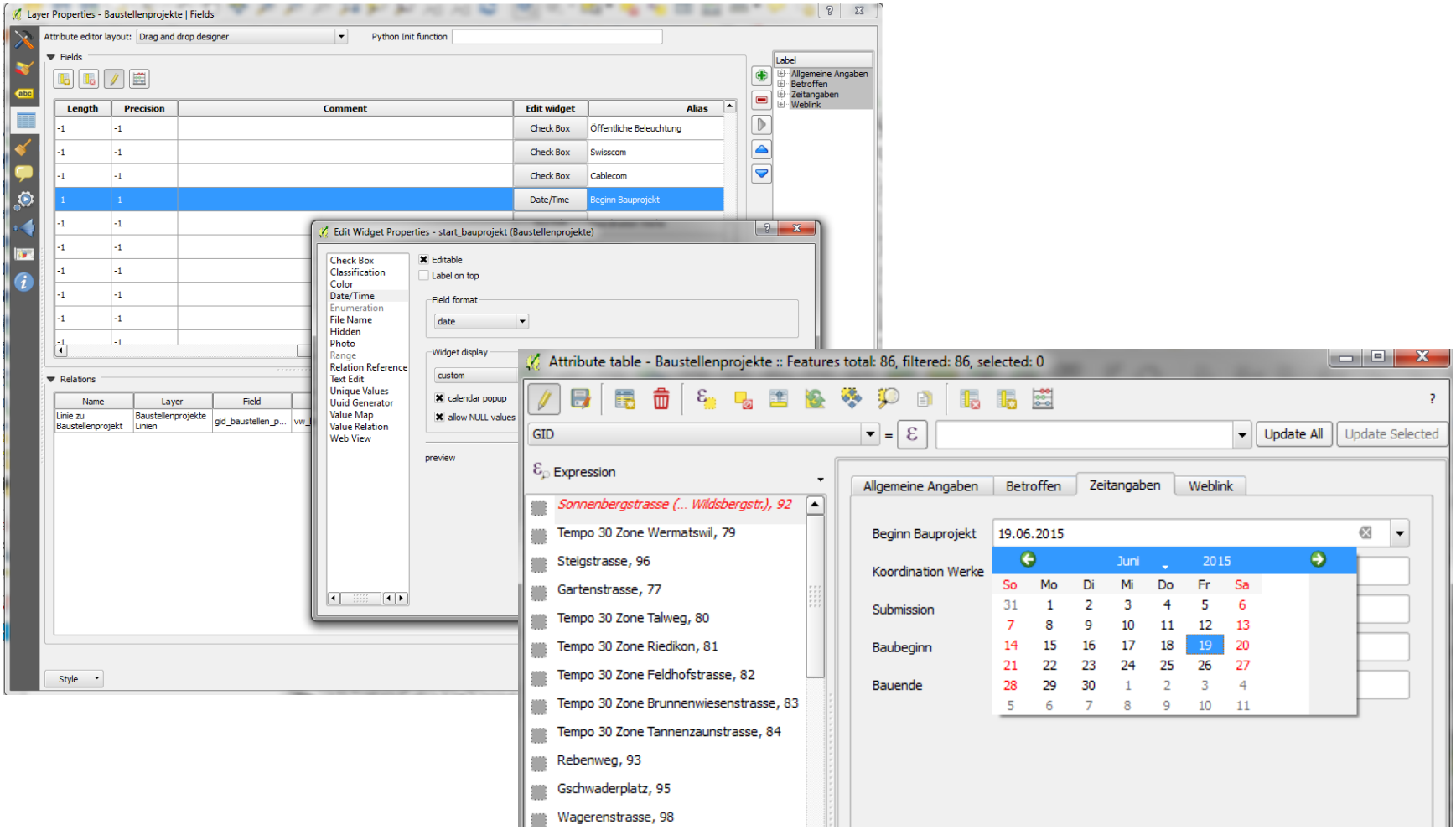


Editor Widget Improvements

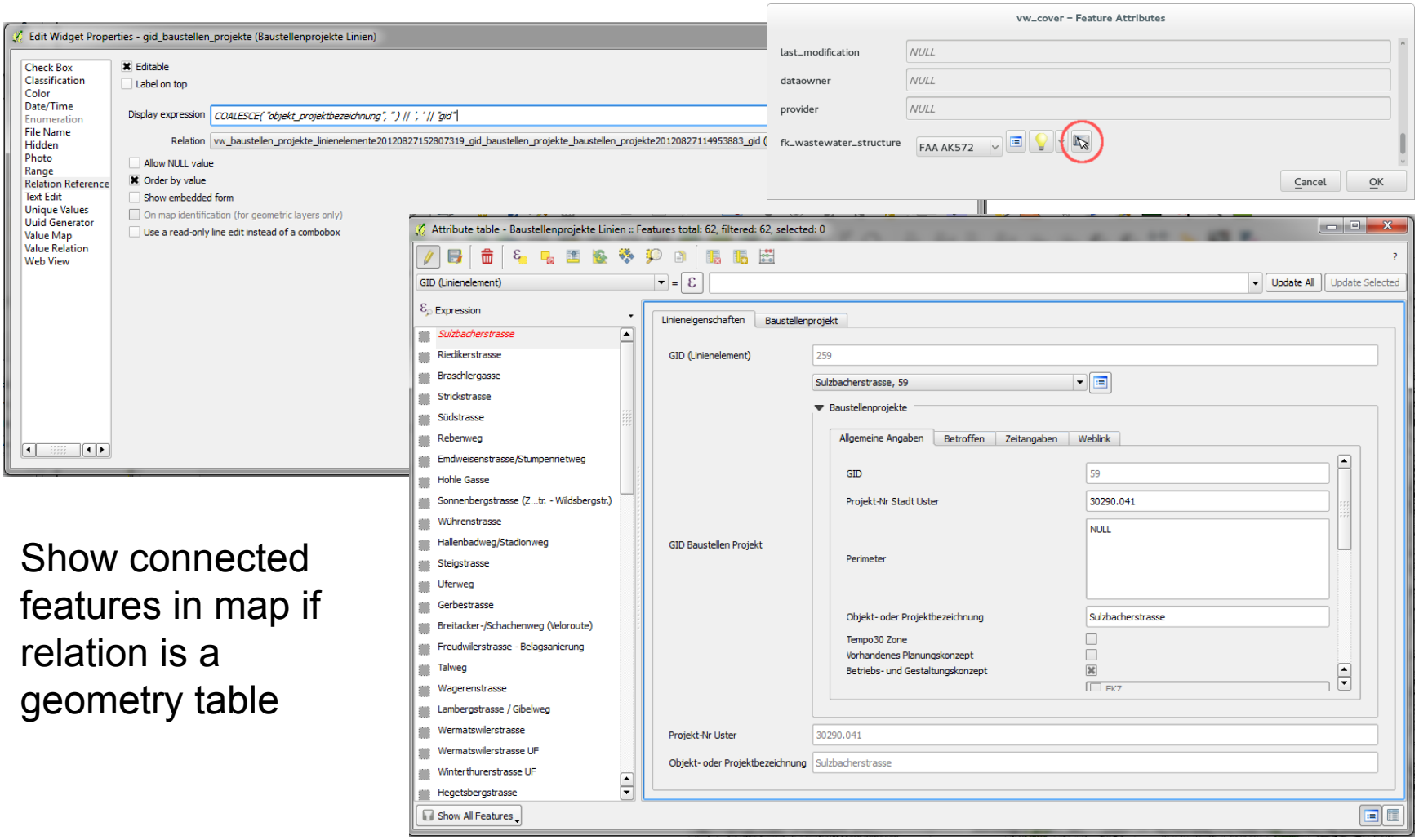
- Ongoing effort (2.6 to 2.10)
- Complete rewrite of widgets
- Extensible with custom widgets
- Proper handling of NULL values
- Improved date/time widget
- Improved widget for nested forms (relations)
- Lineedit with autocompleter for value relations (2.10)
- Drill-down filter for value relations (2.10)

Sponsored by QGIS-CH, SIGE and Uster

Date/Time Widget Improvements



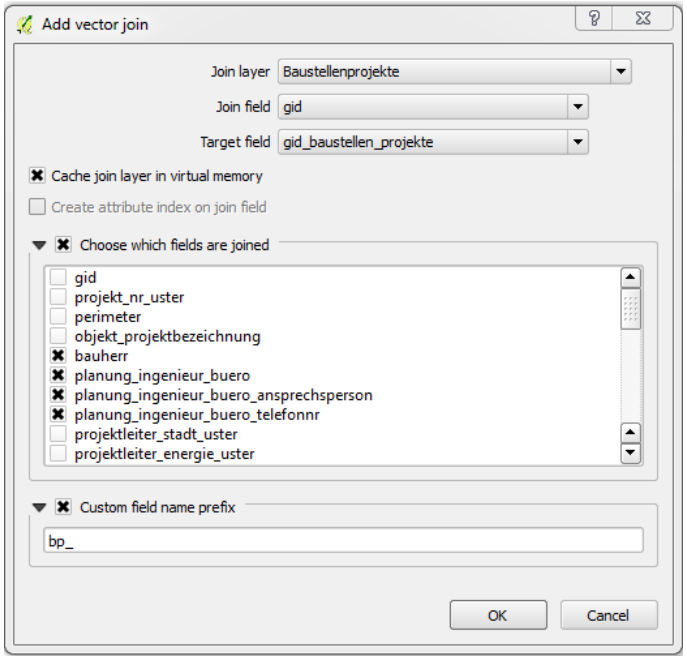
Relation Reference Widget Improvements



Show connected features in map if relation is a geometry table

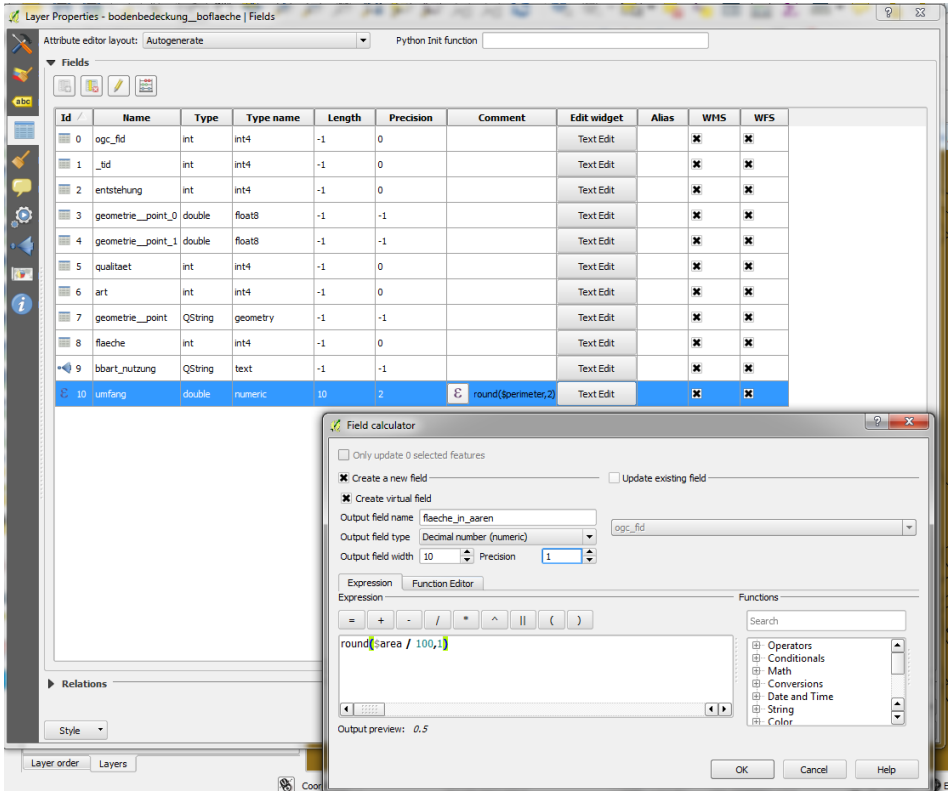
Join Improvements

- Master Layer can still be edited after join and fields added
- Choose which fields are joined
- Choose field name prefix for joined attributes
- Create attribute index on join field (provider dependent)



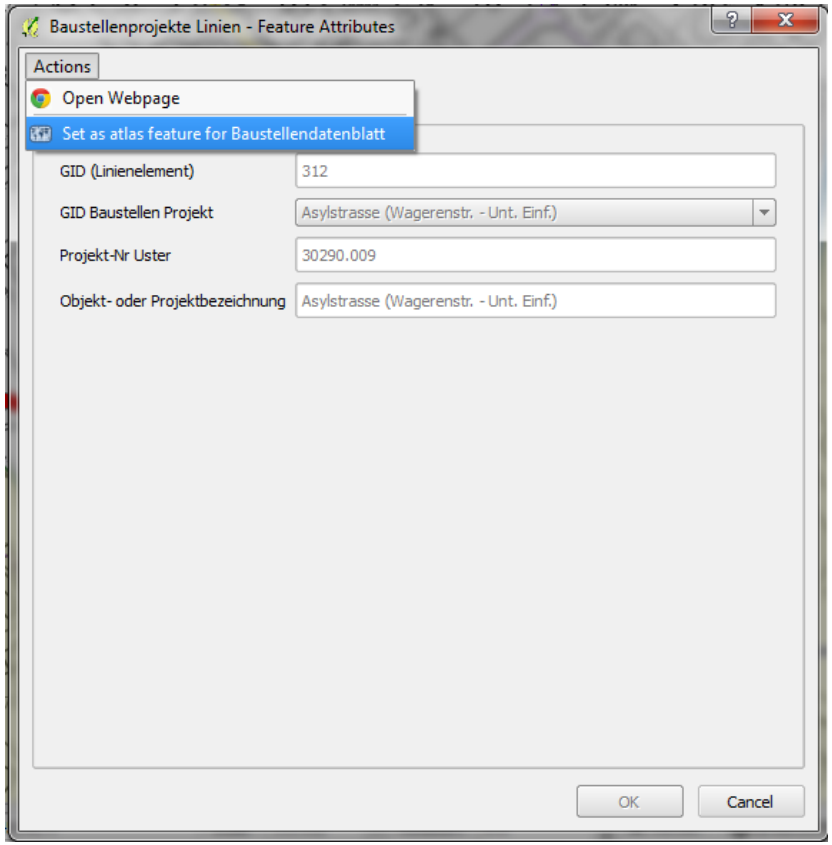
Virtual Fields (since 2.6)

- behaves like database view
- can be used like a normal field, but read-only and automatically updated
- with >= QGIS 2.10 the virtual field definition can also be updated



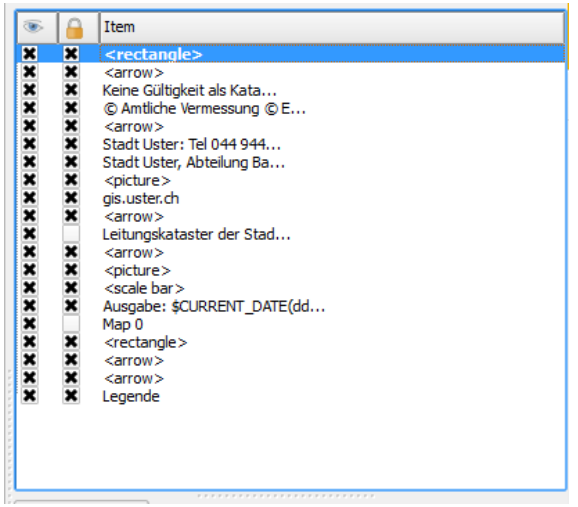
Actions Improvements

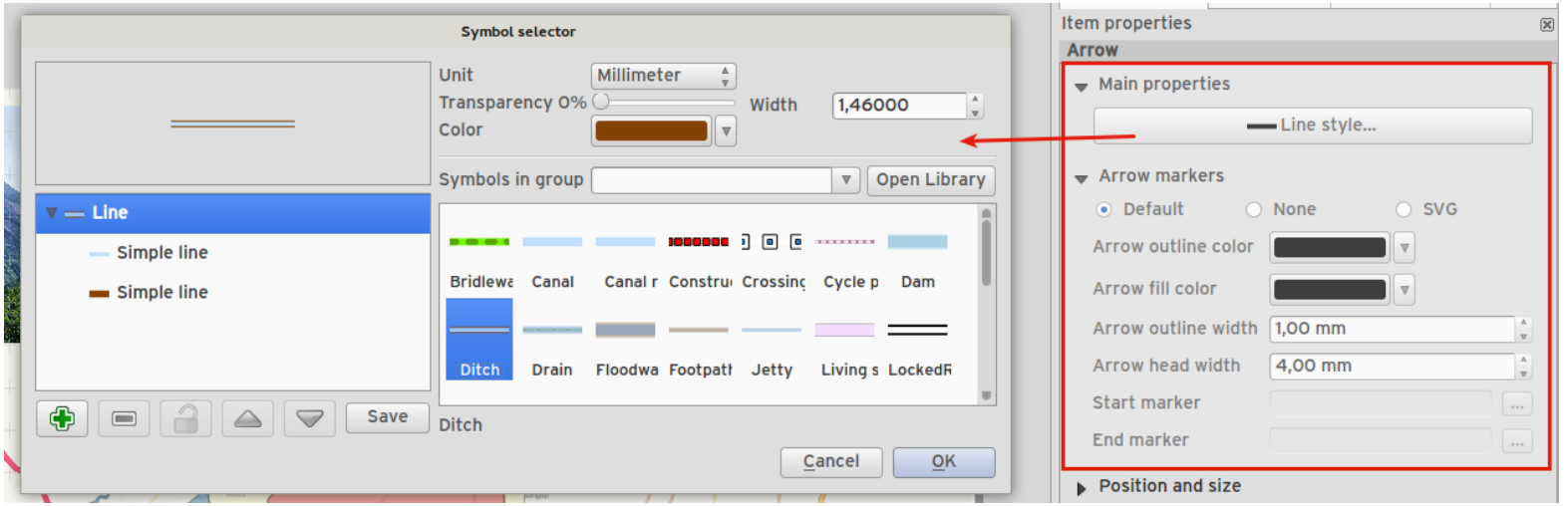
- New actions menu in form
- Actions can have icons associated
- New automatic action for opening datasheets (atlas printing) - if layer is used as Atlas coverage layer



Print Composer Improvements (2.6)

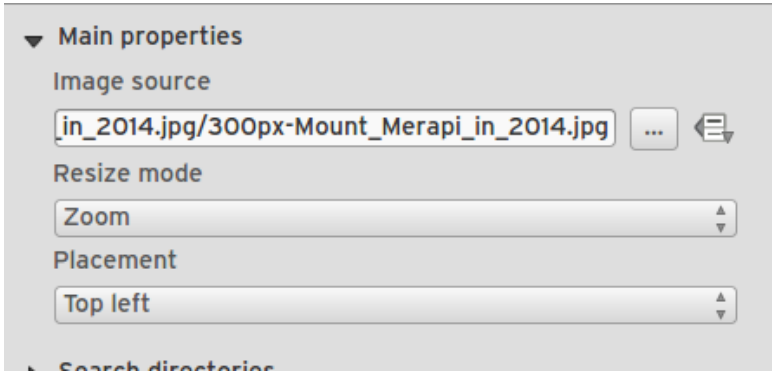
- New item tree to control visibility, editability and reorder/rename elements
- Better styling options for lines/arrows and basic shapes
- More data-defined properties

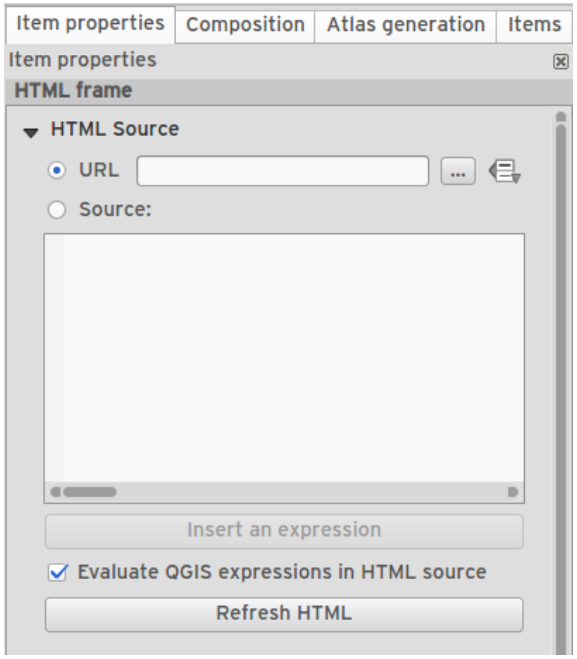




Image/HTML Frame Improvements (2.6)

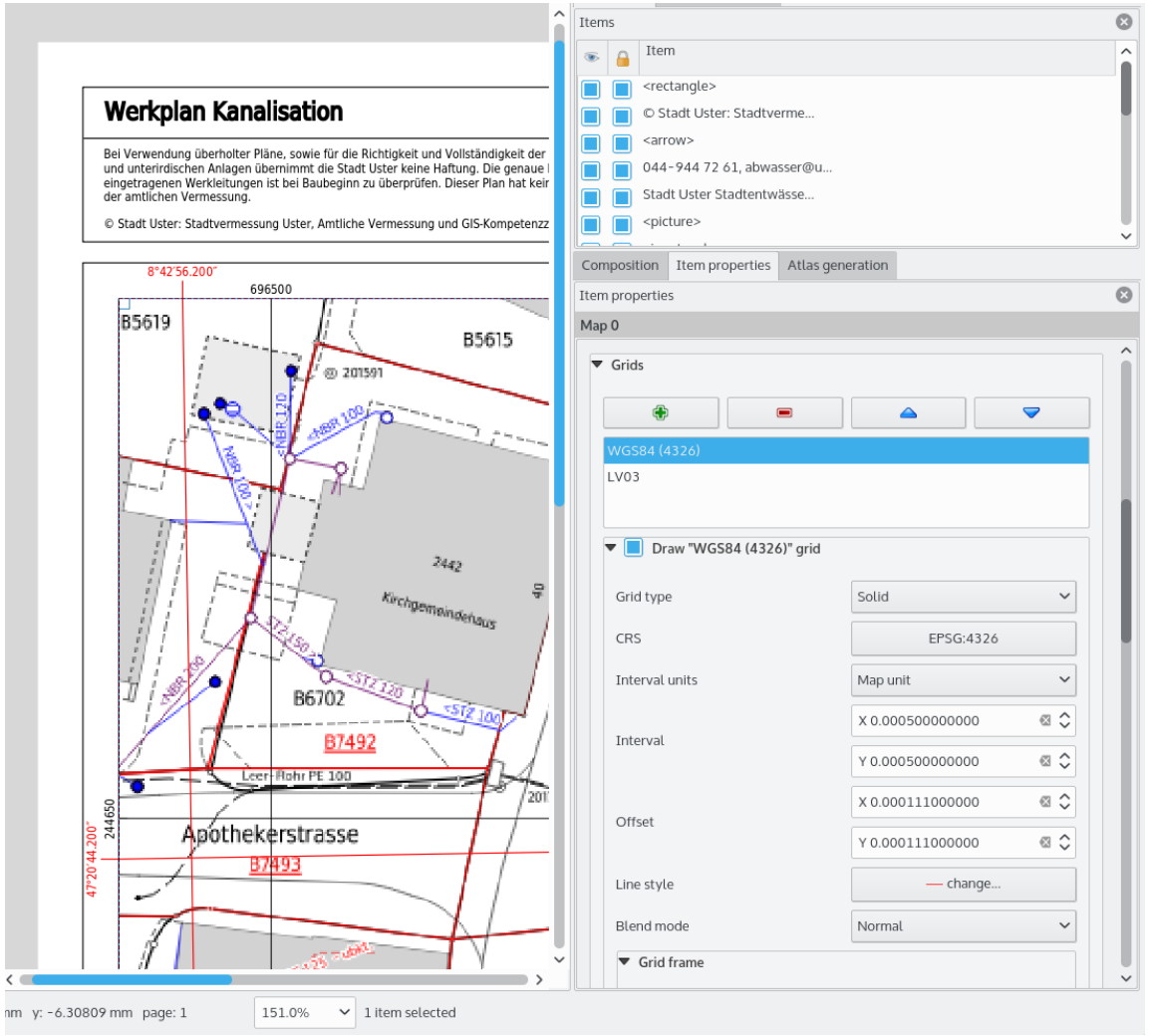
- Support loading image from URL
- Image Path can be constructed from Expressions
- Resize and placement options
- HTML source from local file, URL or generated from expression
- Better page breaks for multipage HTML content
- Data-defined URL support
- Support for user stylesheets and scripting





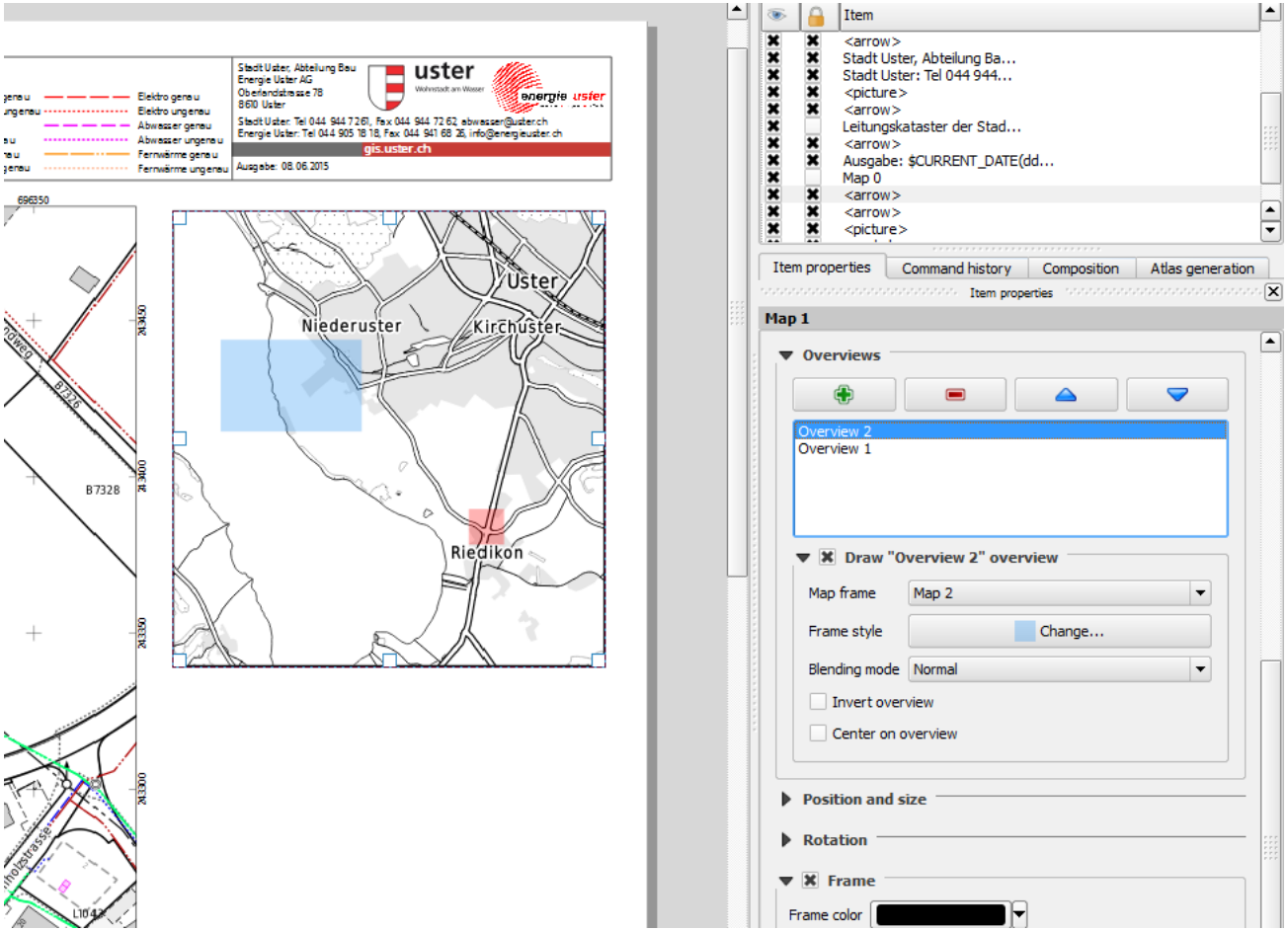
Mapgrid improvements in Composer (2.6)

- Multiple map grids with different CRS
- More Styling Options
- More labelling options
- Better support for lat/lon grids



Multiple Maps in Overview Map (2.6)

- Different styling for each map
- Inverted styling
- Blend modes



Better scaling of scale bars (2.10)

Define min/max length of segment width and change map units per segment

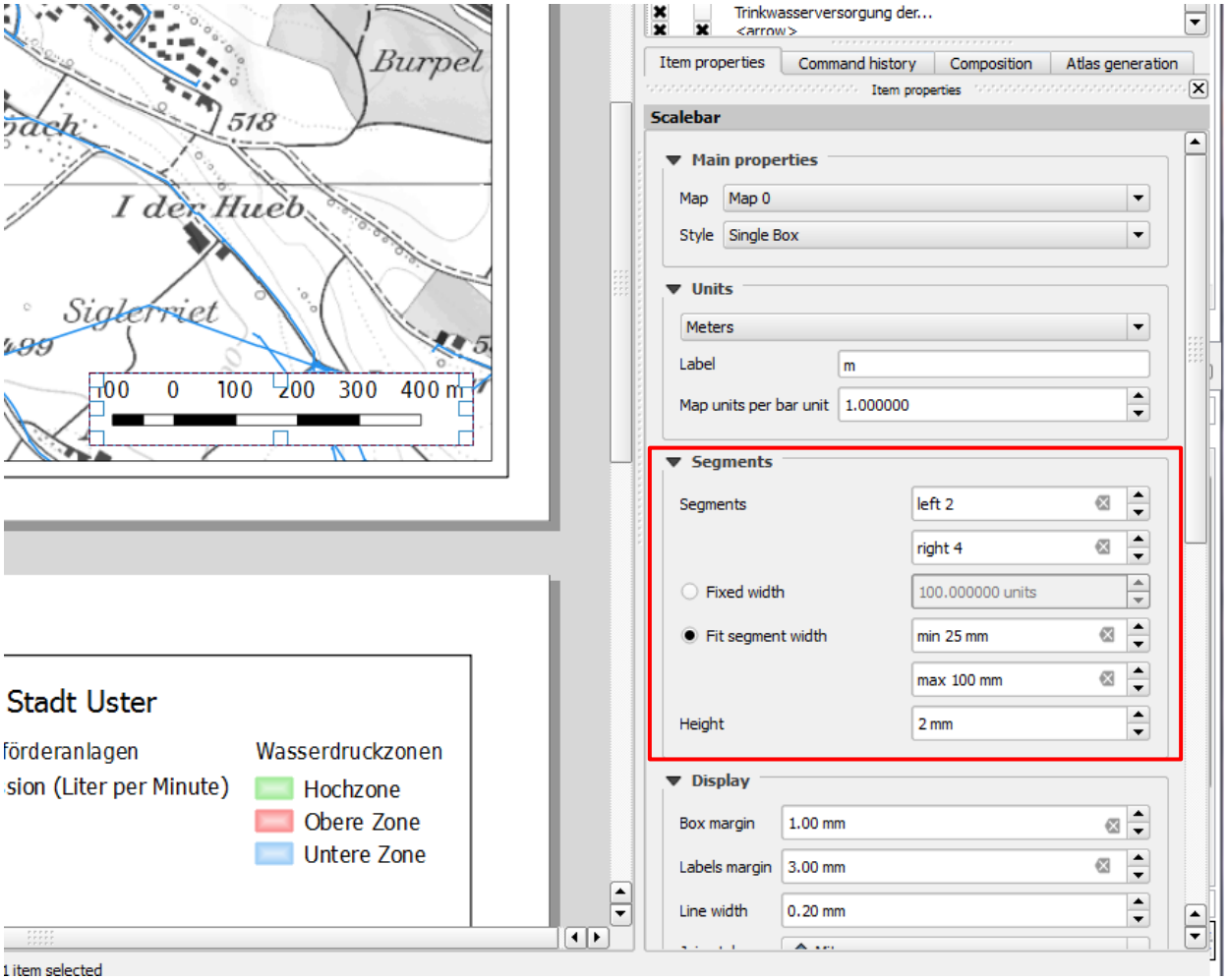
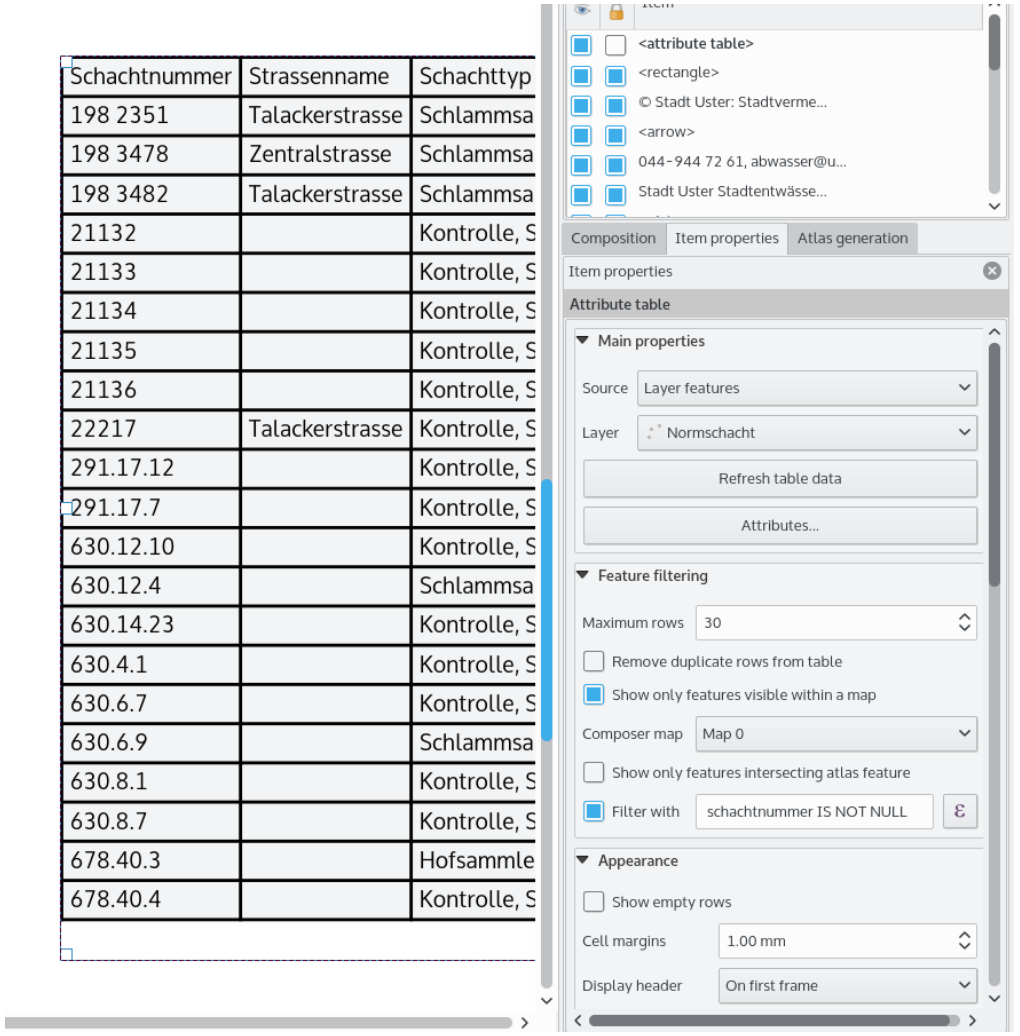


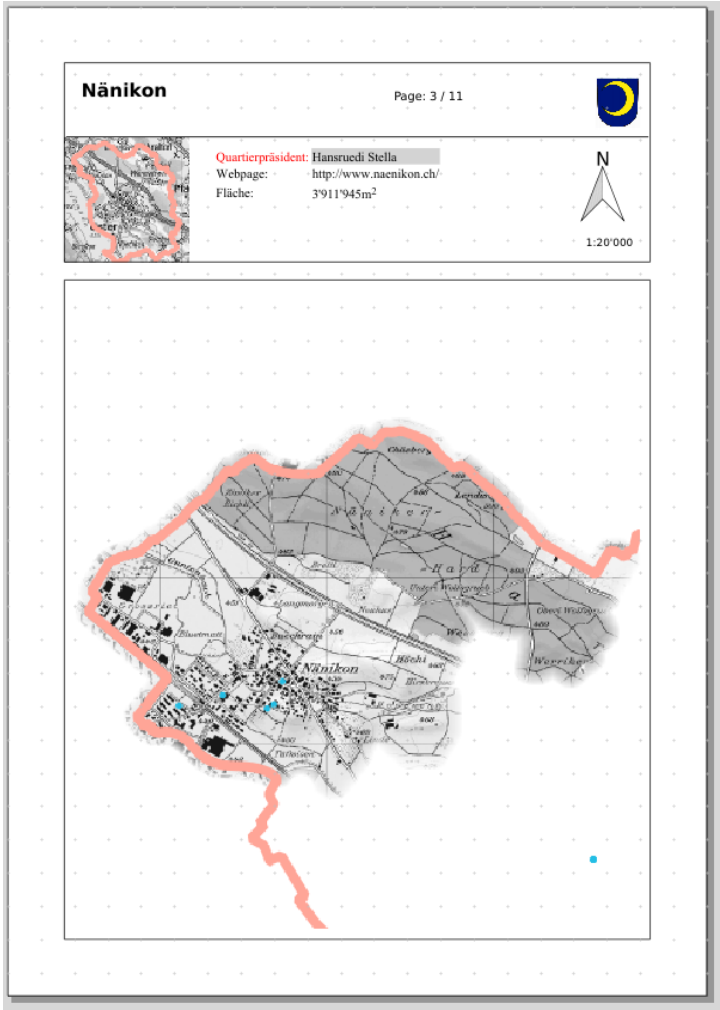
Table Improvements in Composer (2.6)

- Table content can flow in multiple frames/pages
- Lots of new formatting/styling options
- New datasources: atlas feature, intersecting with atlas feature, relations
- New filter/order options



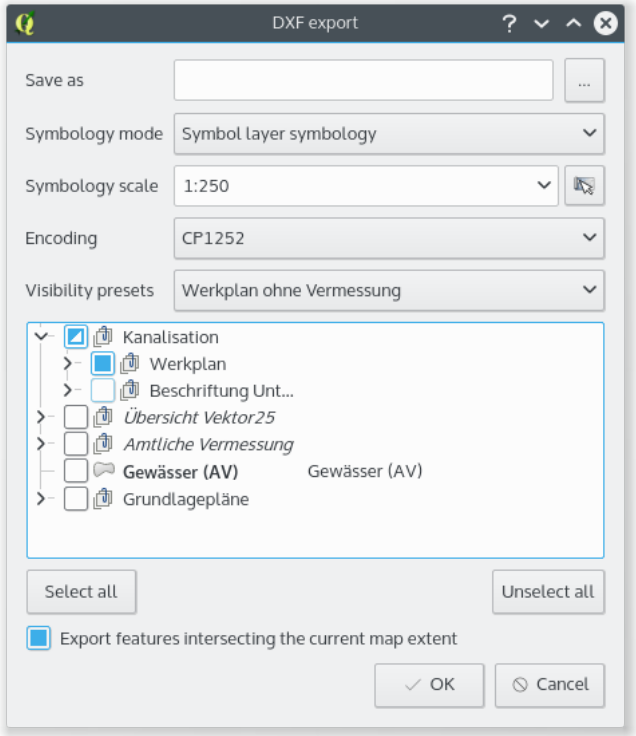
Atlas Serial Print improvements (2.6/2.8)

- New variables for symbology: $map, $atlasfeature, $currentfeature, $atlasgeometry, $geometry
- New geometry relation tests for use in expressions and with Atlas
- New functions to get records and attributes from linked tables: getFeature(), attribute()

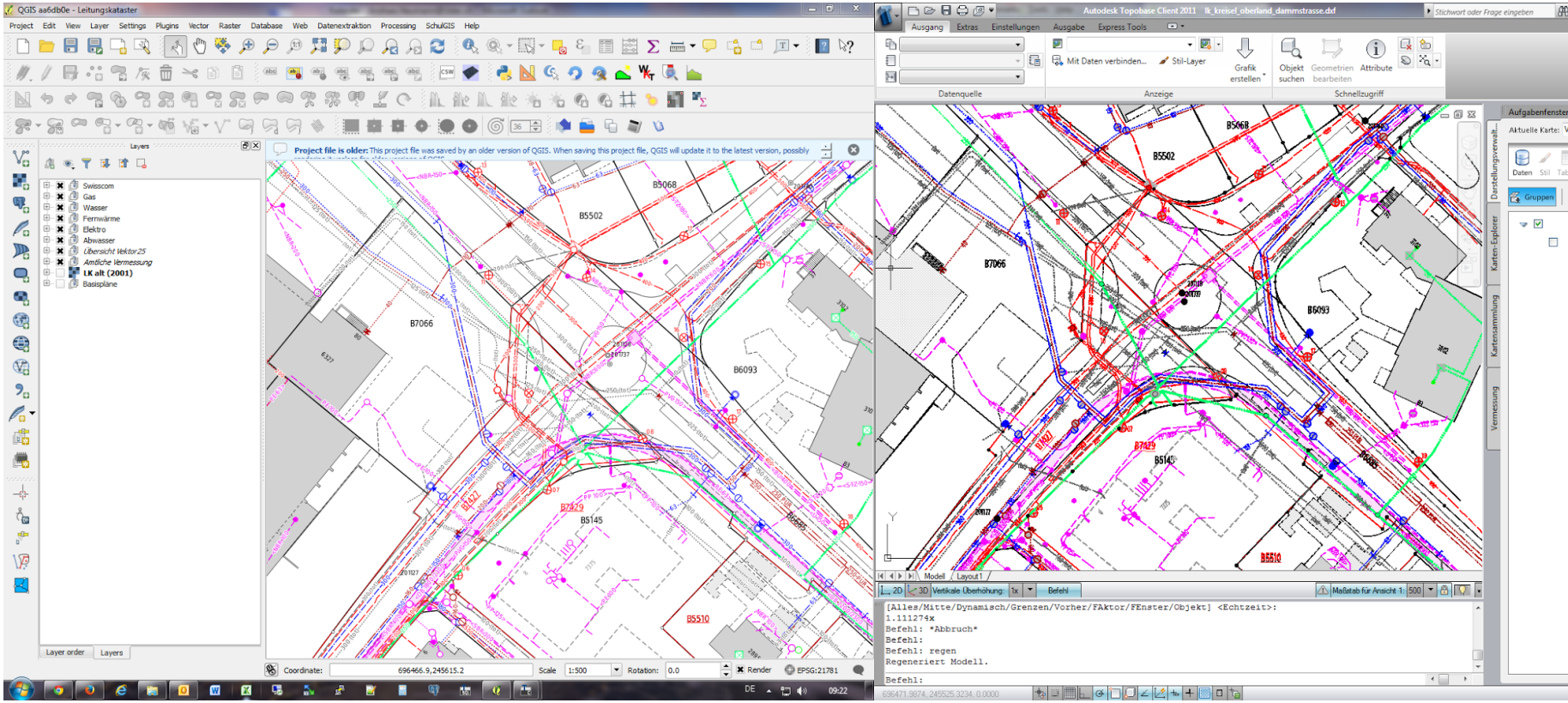


DXF Export Improvements

- Export with our without symbology
- Export everything or visible extent
- Set scale for rendering rules and filters
- Use QGIS layer names or layer attribute to determine layer name
- Support of visibility presets
- Support multiline text
- Support solid fills
- Support transparency
- Support line offsets and units properly
- Automatic conversion of simple and SVG symbols to DXF blocks

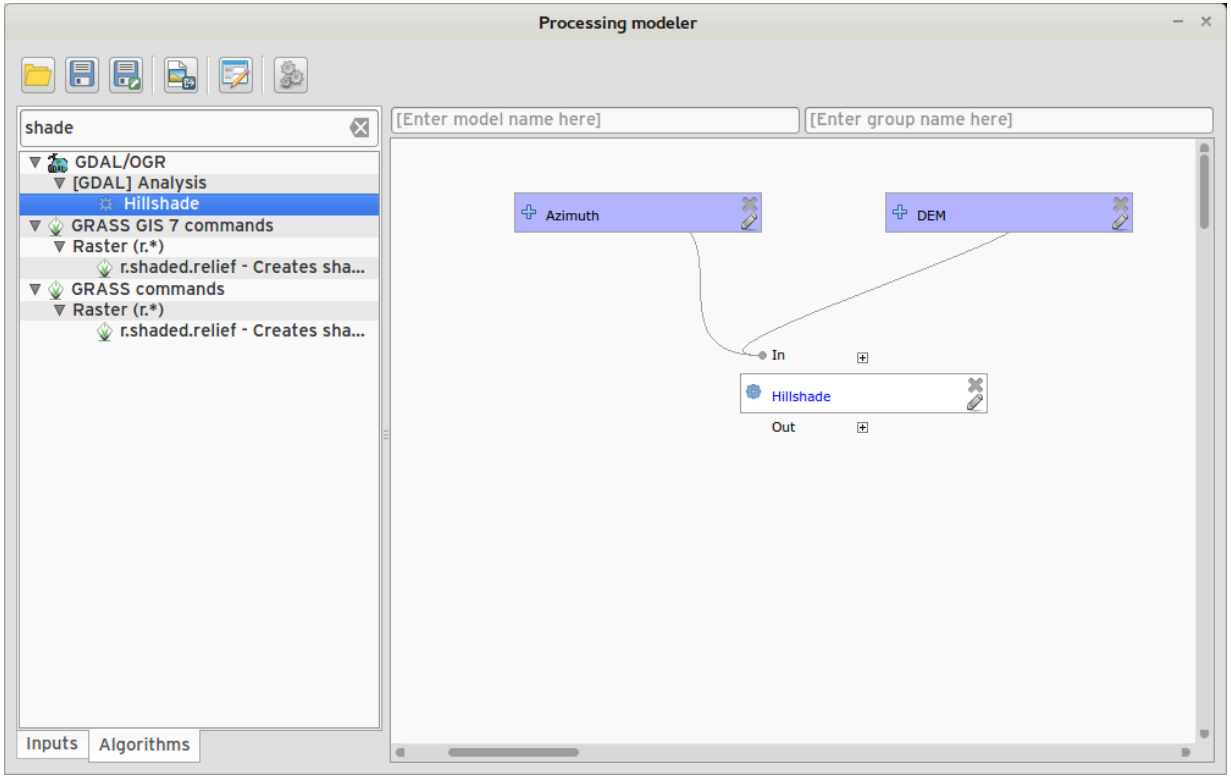


DXF Export Improvements



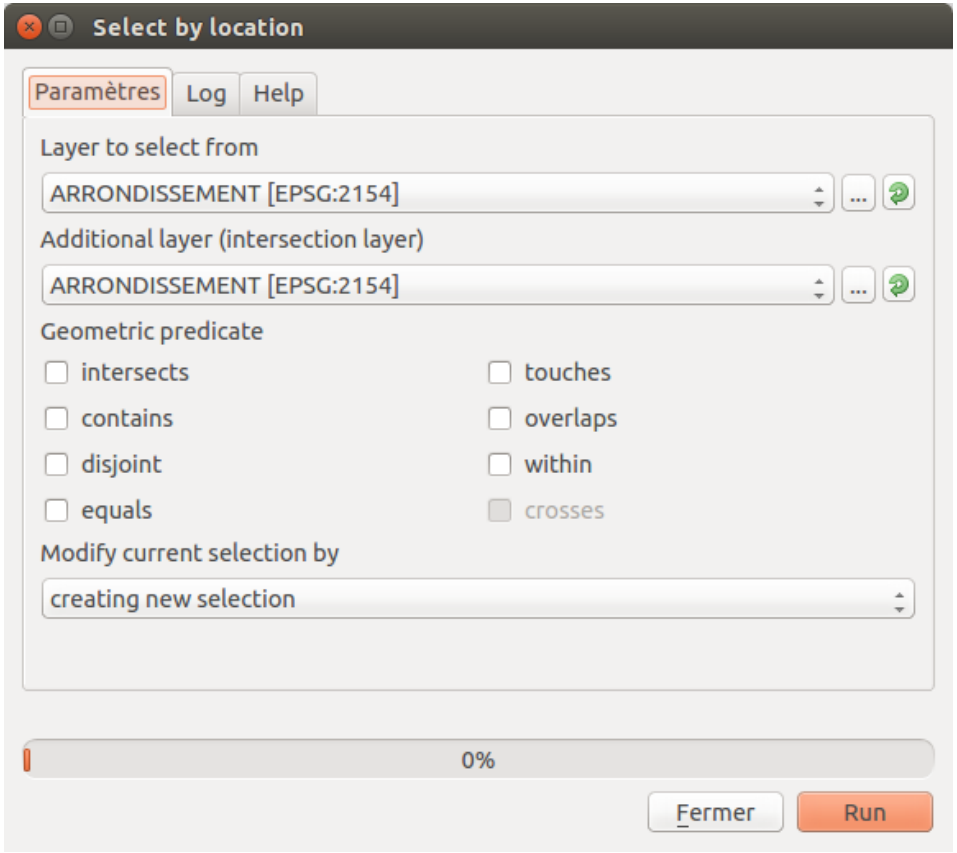
QGIS Processing Improvements (2.6)

- Complete Rewrite of Modeler
- Drag and Drop Support
- Models stored in json format



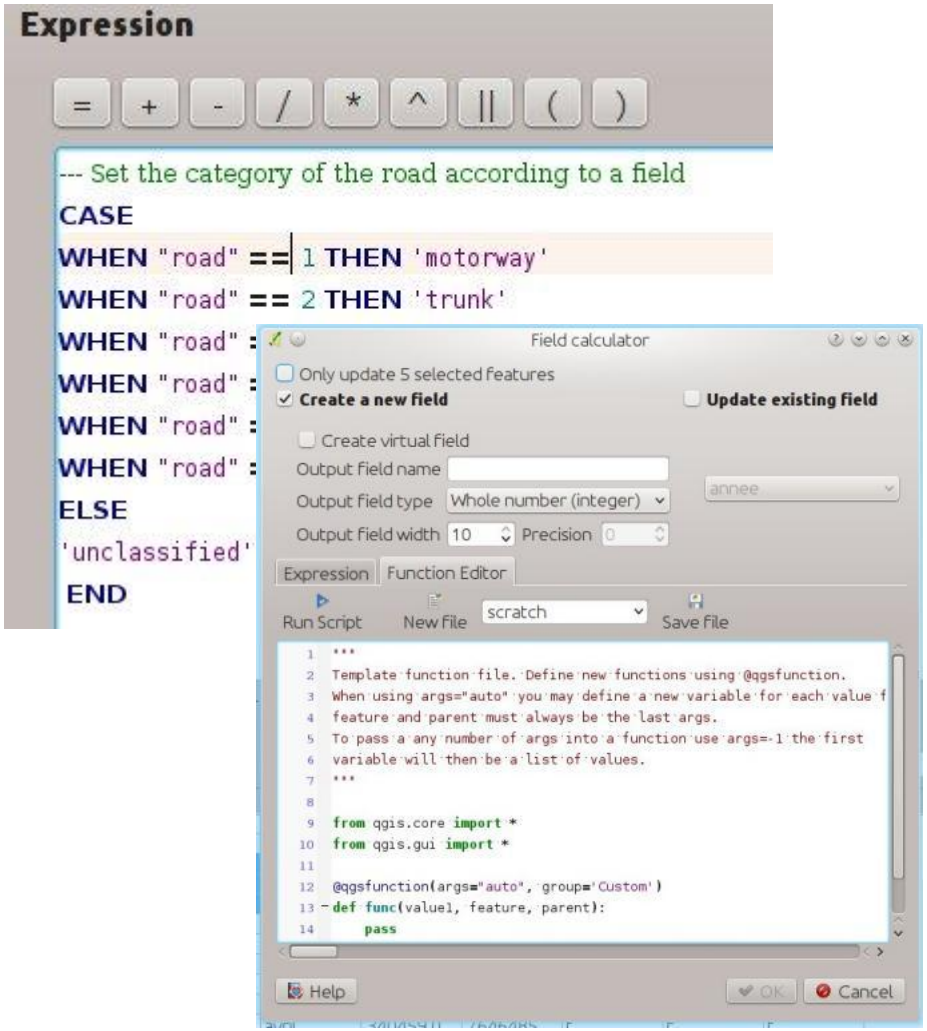
QGIS Processing Improvements (2.8)

- New geometric predicate parameter types for select/extract/join by location
- New Algorithms:
  - refactor fields
  - symmetrical difference
  - Vector split
  - Split lines with lines
  - Vector grid
  - Regular points
  - Hypsometric curves



QGIS Programmability (2.6 and 2.8)

- New API for QGIS widgets
- Custom expressions with Python and new builtin function editor for custom Python expressions
- Add comments (SQL style prefix) to expressions and keep formatting
- Python console improvements
- DB-Manager: run only selected part of SQL query



QGIS Server Improvements

- Enhanced searching with GetFeatureInfo Request (2.6)
- Dynamic GetFeatureInfo tolerance separate for point/line/polygon features
- Precision setting for geometry in GetFeatureInfo response (2.6)
- Python plugins for QGIS Server (2.8)
- Support for layer styles (2.8)
- Describe layer method added to WMS (2.8)

Plans:

- DXF output (2.12)
- Support data-sheets and reports through exposing atlas printing in QGIS Server
- Expose Processing Scripts as WPS

Credits

- To all who paid for new features / bug fixing
  - QGIS-CH
  - SIGE, Uster, Morges, Vevey
  - Kt. Solothurn, Kt. Glarus
  - Agence de l'eau Adour Garonne
  - French Ministry of Ecology, Sustainable Development and Energy
  - World Bank / Inasafe
- To all who developed the new functionality
  - Nyall Dawson
  - Martin Dobias
  - Jürgen Fischer
  - Marco Hugentobler
  - Matthias Kuhn
  - Sandro Mani
  - Hugo Mercier
  - Denis Rouzaud
  - Nathan Woodrow

list is not complete ...