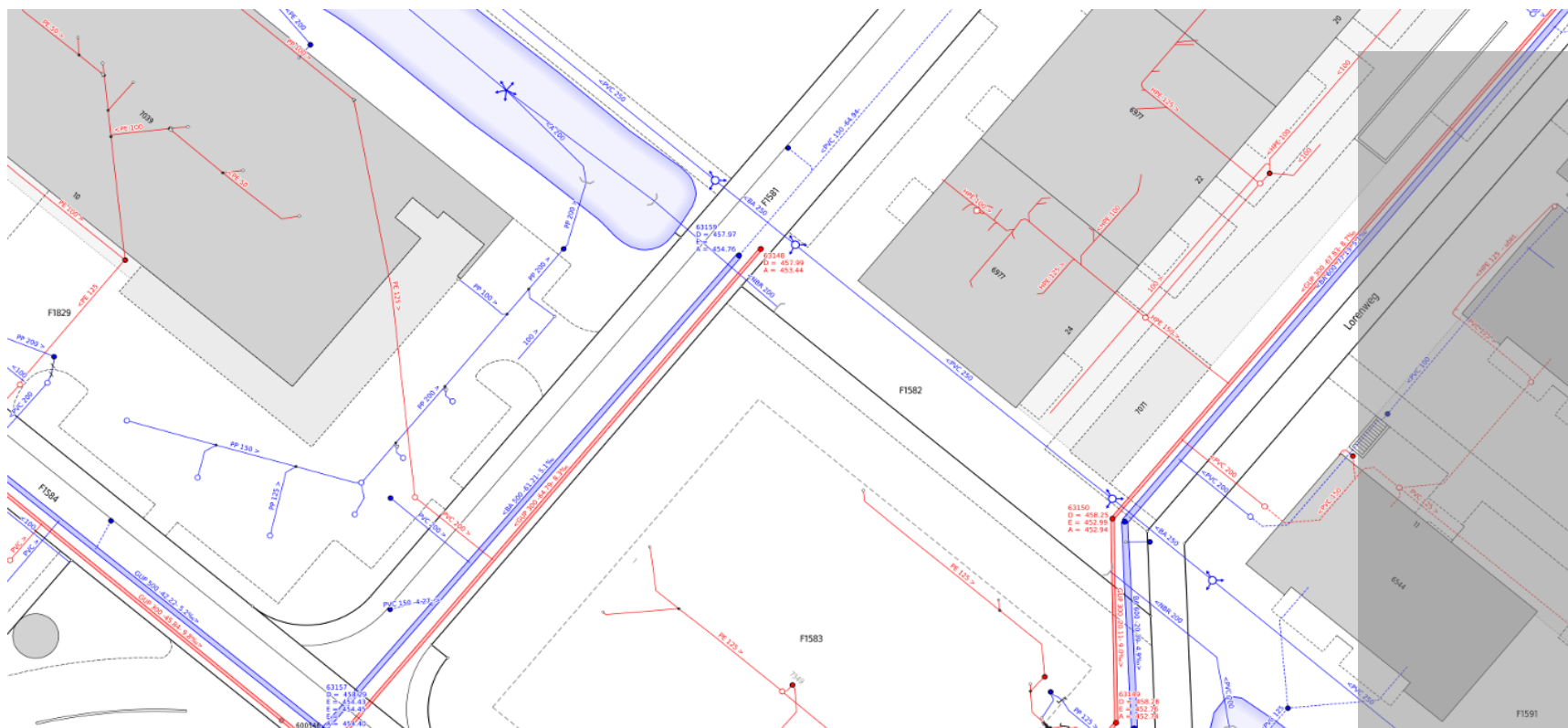




The QGEP Project

Application to document and analyze waster-water networks and the general sewage and storm water plan (GEP)

User Meeting Bern, 15.06.2016



Stefan Burckhardt (SJiB), Matthias Kuhn (Opengis.ch), Dennis Rouzard (SIGE)



Why developing a new application?

- Get the software we want (direct influence on future development)
- Replace existing solution based on ArcView 3x (which isn't maintained anymore)
- Existing commercial solutions do not fully and correctly implement national data models (e.g. VSA-DSS model)
- Most commercial solutions only implement the core part of the waste-water network documentation and not the extensions
- Cost sharing between members
- Know-how pooling among members
- Sometimes faster development than commercial software



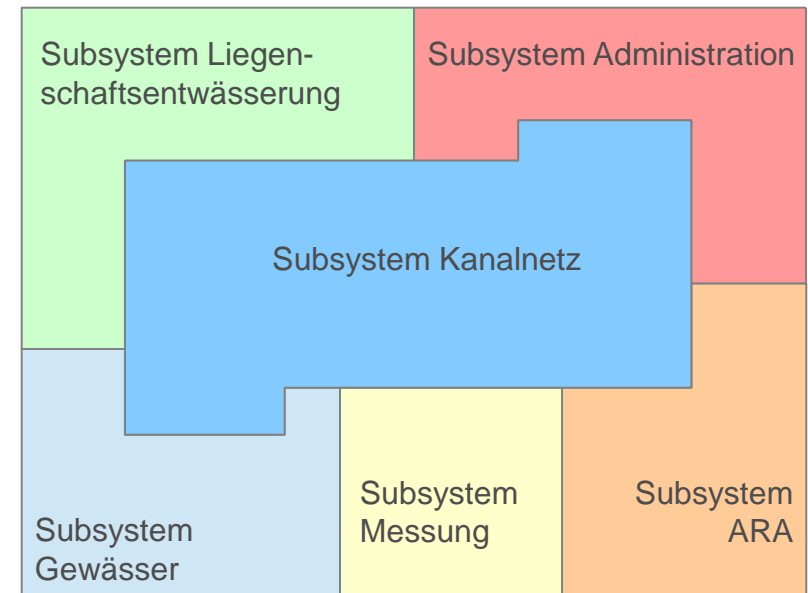
QGEP Goals

- Development of an application to document and analyze waste-water networks and the general sewage and storm water plan (GEP).
- Display and edition of the waste-water network
- Efficient import of GPS data
- Multilingual user interface
- Interfaces to external software
 - Mike Urban, SWMM
 - DXF export, Swiss INTERLIS 2 import/export (SIA 405 and VSA-DSS)
- Analysis functions
 - Network following
 - Profile generation
 - More to come in the future



Datamodell

- Based on SIA405 und [VSA-DSS Datenmodell](#) des Verbandes Schweizer Abwasser- und Gewässerschutzfachleute (VSA)
- Database in Englisch
- Translation to German und French
- Keys use StandardOID with prefix and counter for unique IDs :
- z.B.: "**ch11h8mw**MA010898"

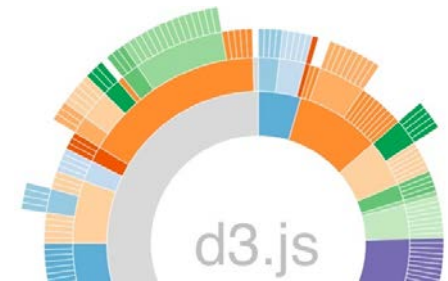


Source: VSA

Full data model: <https://github.com/QGEP/datamodel>

Technical framework

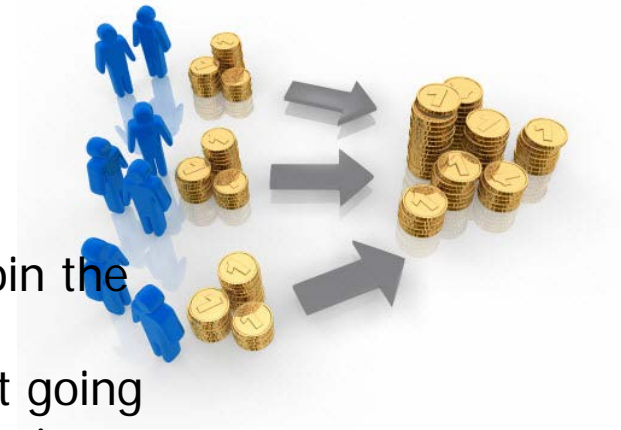
- Database: **PostgreSQL/Postgis**
- Desktop-GIS: **QGIS**
- Network following: NetworkX (Python)
- New generic functions in QGIS Core (C++)
- Python Plugins
- [Qt GUI-Bibliothek](#) (C++)
- Webkit with [d3.js](#) for visualization (eg. for profile functionality)
- Import/Export through [GDAL/OGR](#) and Processing and
- [Ili2pg](#) (Eisenhut Informatik), freeware





Financing

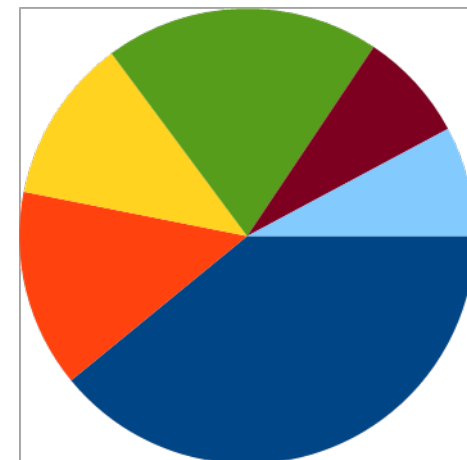
- Cost sharing (Crowd-funding among members)
- Established as sub-group of Swiss QGIS user group in 2014
- Local governments and companies are invited to join the efforts
- Annual fee of CHF 3'000.- to keep the development going
- Additional financing of some members at the beginning
- Approximate initial costs of the project: 250'000.- CHF





Financing: 150k CHF already invested

- CHF 50'000 invested into **QGIS core** to make it suitable for large projects like qWat and QGEP (SIGE, Uster, Morges, Vevey, QGIS user group, etc.)
- CHF 20'000 invested into **data model work** (SQL generation for PostgreSQL, translations, ER model documentation, etc.)
- CHF 35'000 invested directly in **QGEP** development through QGEP membership fees (forms, Python Scripts, scripts for translation, etc.)
- CHF 25'000 invested indirectly through regular **project management** meetings by project members
- CHF 20'000 invested in Uster internship of Matthias Kuhn around **QGEP** (network following, profile function)



- QGIS core
- Data model
- QGEP directly
- Project meetings/coordination
- Uster internship around QGEP
- Testing framework



Project implementation

- **Migrations and pilot projects** in Arbon (TG) and SIGE (Vevey) now other communities planned in 2016 (Morges, Pully)
- If you are interested in the project we can visit your organization for an **onsite demo of our tool** and discuss your organizations requirements and migration issues



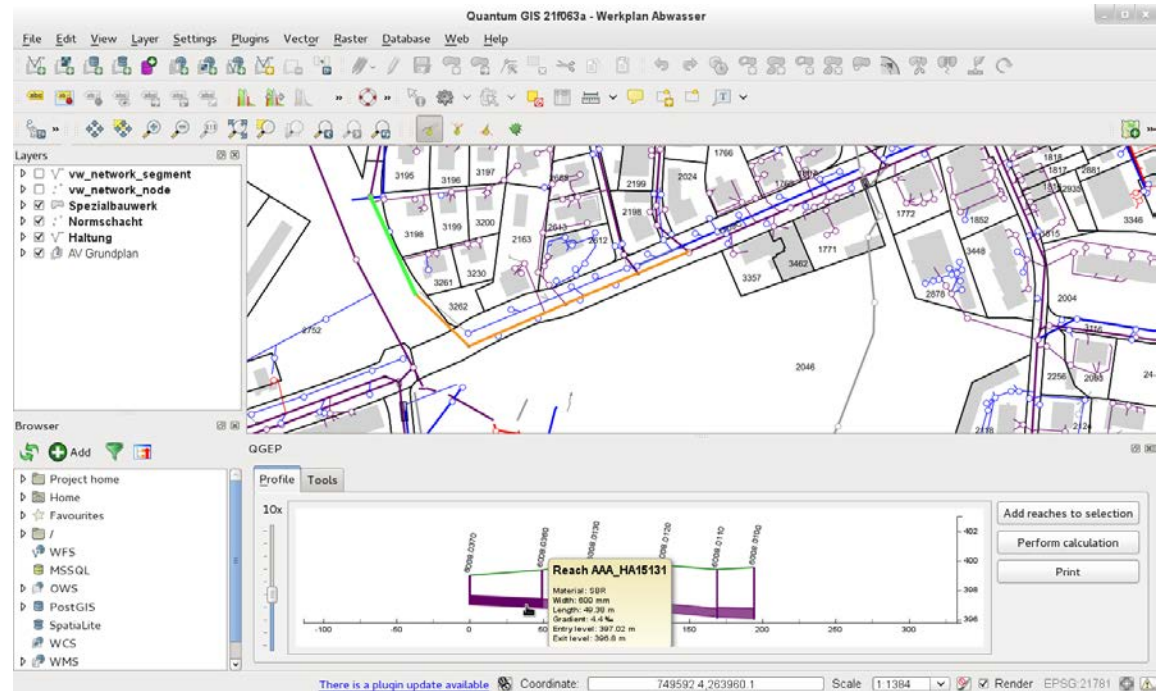
Project status, already finished

- Data model (English) – based on VSA-DSS 2014
 - Generation of Postgis Views, Rules, Triggers and functions (mostly finished, with ongoing improvements)
 - Symbolization and labelling rules and DB triggers
 - QGIS project with localization in English, German, French and Italian (already usable for pilot projects, ongoing improvements)
 - Editing functionality in QGIS (with Python plugin and Postgis rules/functions)
 - Network following (up- and downstream)
 - Interactive profile generation
 - Many improvements in QGIS core during the project
-
- To do: update homepage ;-)



Network following and profile view

- Network following
 - upstream
 - downstream
 - between 2 nodes
- Interactive profile view
- Linked between profile and map
- Attribute display in Tooltips





Challenge: multi-language support and multi-user environment

- A requirement in Switzerland
- Many places that need translation:
 - Forms
 - Value lists
 - Layer tree
 - Labels
 - Print templates
 - Plugin
- Many of them require different approaches
 - Different sources for translation:
 - database and manual → ts files
 - *.qlf layer files with dependencies loaded and translated on-the-fly

Idea: Development of Project Generator (Matthias Kuhn)



Forms Localizations

vw-qgep_cover - Objektattribute

Aktionen

General Cover Wastewater Structure Manhole Wastewater Node Covers Access Aid Backflow Prevention Dryw

ws_type Manhole

Bezeichnung AAA DE49501

Standortname NULL

Baujahr NULL

Funktion Einlaufschacht

Funktion

Sanierungsbedarf unbekannt

Kote NULL

Lagegenauigkeit 5349

dataowner NULL

Status weitere.Berechnungsvariante

Entlueftung (keine Auswahl)

Verschluss (keine Auswahl)

Dimension1 NULL

Dimension2 NULL

Abbrechen OK

Cancel OK

Actions

General Cover Wastewater Structure

ws_type Manhole

designation AAA D

lieu_dit NULL

annee_de_construction NULL

fonction chamb

fonction

necessite_assainir incon

cote NULL

determination_planimetrique 5349

dataowner NULL

etat autre.

aeration (pas d

fermeture (pas d

dimension1 NULL

dimension2 NULL

General Cover Wastewater Structure

ws_type Manhole

identifier AAA DE49229

location_name NULL

year_of_construction NULL

function manhole

function

renovation_necessity unknown

level NULL

positional_accuracy 5349

dataowner NULL

status other.calculation

venting (no selection)

fastening (no selection)

dimension1 NULL

dimension2 NULL



Documentation und Translation with Transifex

The screenshot displays two browser windows. The left window shows the GitHub repository for QGEP documentation, including a README.md file and a list of resources in English, German, French, and Romanian. The right window shows the Transifex interface for translating the QGEP documentation from English to German. The Transifex interface includes a search bar, a table of translation progress, and a detailed view of the 'Data entry' section.

QGEP-Documentation

This is the documentation for the QGEP project

Resources

The final product can be found here:

- English
- Deutsch
- Français
- Română

Process

The documentation is written in English and managed in this git repository. The latest version is always up to date.

Transifex

user-guide: English(en) → German(de)

ALL	UNTRANSLATED	UNREVIEWED
53	35	18

Data entry

There are basically two ways:

Data entry by constructing or digitizing in the QGEP GIS itself

Data entry in an external program or software and then importing the position and/or technical data into QGEP e.g.:

coordinates from manholes from measurement

position and/or technical data from another GIS or CAD system

using data from the surveyor (e.g. property boundaries) as a basis for defining catchment borders

Translations:

- TRANSLATED BY SJIB, 14 MINUTES AGO.
- There are no instructions yet.

Suggestions:

No suggestions available



QGEP auf github

QGEP Project

QGEP project is a project of the [Swiss QGIS User Group](#)

Repository

<http://qgis.vitu.ch/plugins/plugins.xml>

QGIS

- Current version 2.12, PostgreSQL 9.3.6

Meetings

- Coming: ** Wednesday, April 13th, 2016, 09:15, Zürich**, (Josefstrasse)
- Monday, February 1st, 2016, 09:15, Zürich**, (Josefstrasse)
- Monday, November 23th, 2015, 09:15, Zürich, (Josefstrasse)
- Monday, October 19th 2015, 09:15, Zürich, (Josefstrasse)
- Monday, Aug 10th 2015, 09:15, Zürich, (Josefstrasse)
- Monday, Jun 1st 2015, 09:15, Zürich, (Josefstrasse)

QGEP / QGEP

Code Issues 57 Pull requests 0 Wiki Pulse Graphs Settings

Filters is:issue is:open Labels Milestones

57 Open 102 Closed Author

- update selected of vw_qgep tables causes qgis crash
#177 opened 13 days ago by oliver-ch
- comments on columns only available in german **Datamodel**
#173 opened 21 days ago by 3nids
- Digitize Drainage Channel **Plugin**
#171 opened 27 days ago by oliver-ch
- vw_qgep_cover **Datamodel**
#170 opened 27 days ago by oliver-ch
- typo in datamodel **Datamodel**
#169 opened on 27 Jan by 3nids
- Maintenance linked to ws




INTERLIS Schnittstelle mit ili2pg

QGIS Server | Documentation | Dxf2Shape Konverter Plugin | ili2pg - INTERLIS 2-loader for P...

www.eisenhutinformatik.ch/interlis/ili2pg/ | postgres download

Meistbesucht | Translate | Spam Filters | Email De... | Einführung | Flashcards Deluxe - Up... | Design per CSS - FLOA... | https://www.igrooven... | Sechs Schritte zum Ver... | Python Code Playgrou... | Reduce emissions in P...

Deaktivieren | Cookies | CSS | Formulare | Bilder | Informationen | Sonstiges | Kontur | Größe ändern | Werkzeuge | Quelltext anzeigen | Einstellungen

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ili2pg - INTERLIS 2-loader for PostgreSQL/PostGIS

Features

- Translates INTERLIS 2 data model definitions to an PostGIS schema.
- Loads INTERLIS 2 data into an PostGIS database.
- Extracts INTERLIS 2 data from an PostGIS database.

Status

ili2pg is in final state.

License

ili2pg is licensed under the LGPL (Lesser GNU Public License).

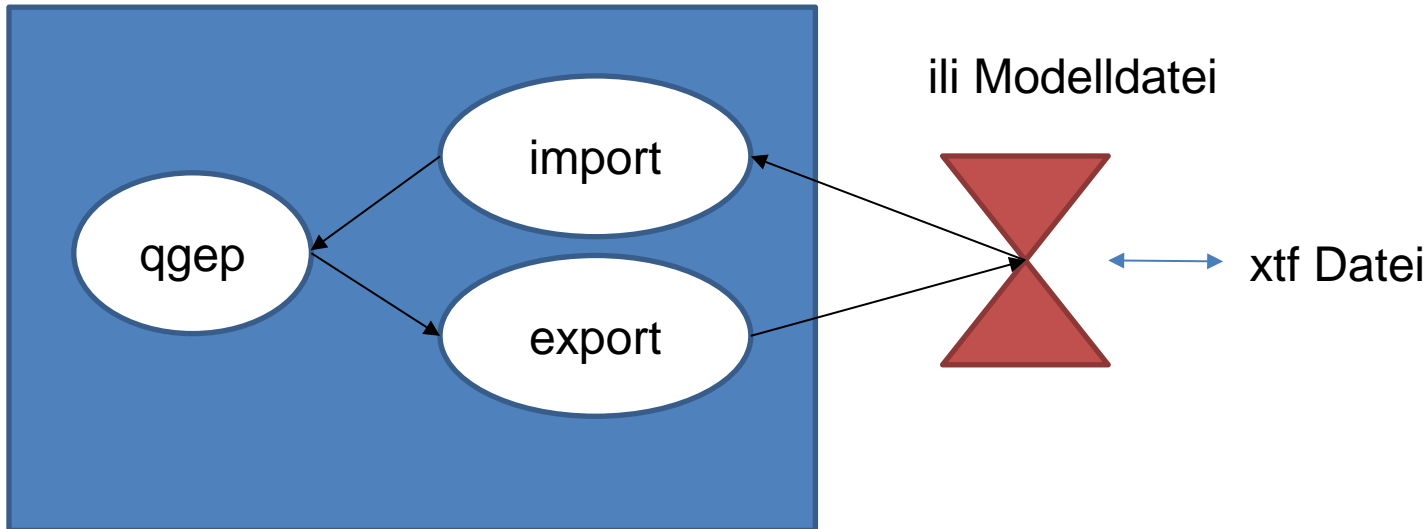
System Requirements

For the current version of ili2pg, you will need a JRE (Java Runtime Environment) installed on your system, version 1.6 or later. The JRE (Java Runtime Environment) can be downloaded for free from the Website <http://www.java.com/>.

Installing ili2pg



INTERLIS Schnittstelle mit ili2pg



use the VSA-Data-Checker to get a «good» xtf



Thank you for your attention!

see:

http://www.qgis.ch/fr/projets/qgep-module-eaux-usees?set_language=fr
(QGEP project information)

<https://github.com/QGEP/QGEP/>
(github project page with issue list, tasks and protocols of development meetings)

<http://www.qgis.org/>
(QGIS project)

<http://www.postgis.net/>
(Postgis project)

<http://dss.vsa.ch>
(DSS data model of the VSA)



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