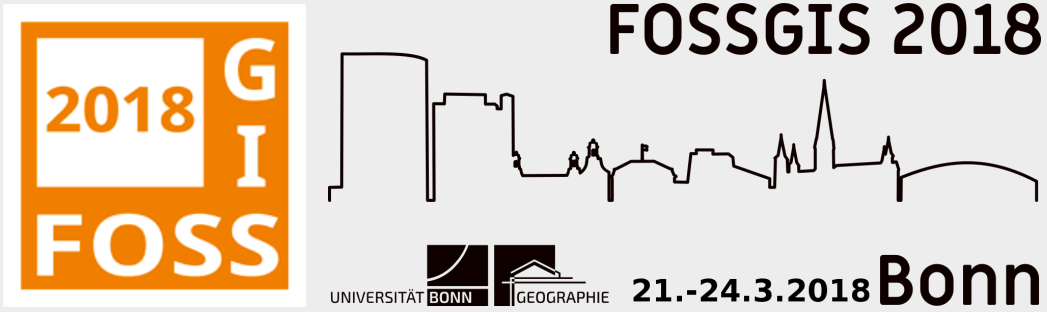
# Aktuelles aus dem deegree Projekt

*Neues in 3.4 und Weiterentwicklungen für INSPIRE*

*Torsten Friebe < friebe@lat-lon.de | @torfri >*

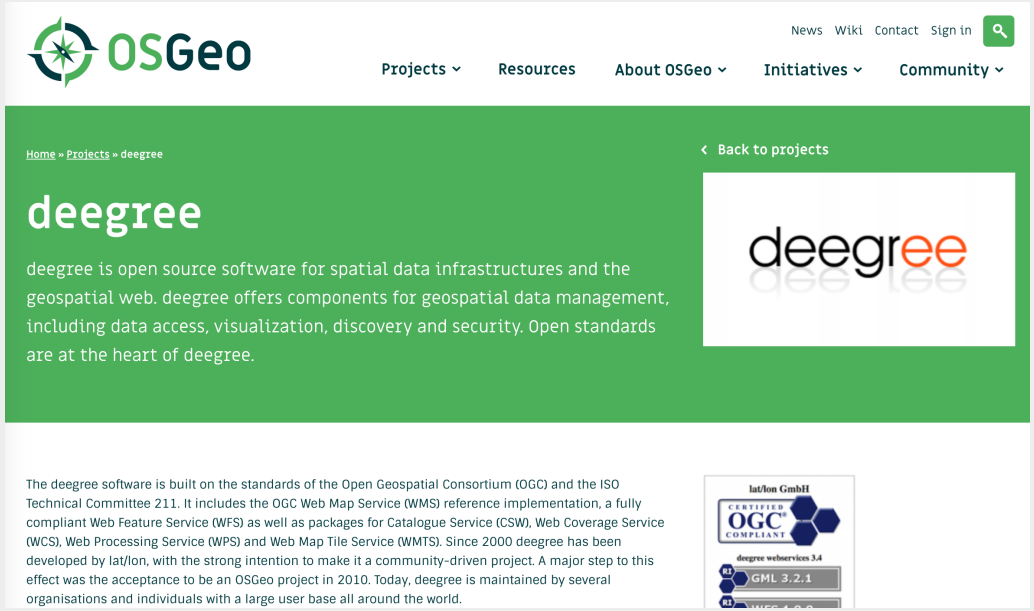


# Sprecher

- Torsten Friebe
  - Mitglied im Technical Management Committee (TMC) des OSGeo Projekt deegree
  - Mitglied der Geschäftsführung lat/lon GmbH, Bonn

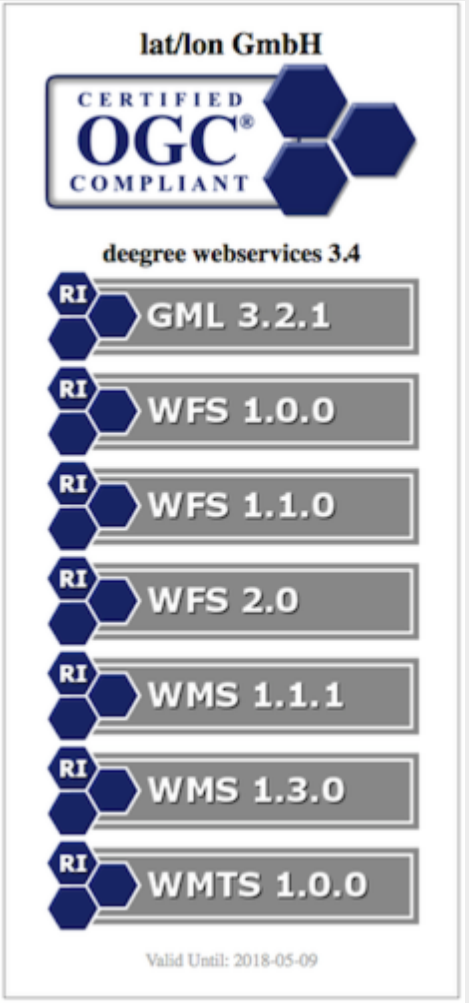
# OSGeo Projekt deegree

- Projektstart: 2002
- OSGeo Projekt: seit Februar 2010
- Open Source Lizenz: LGPL 2.1
- deegree bei OSGeo
  https://www.osgeo.org/projects/deegree/



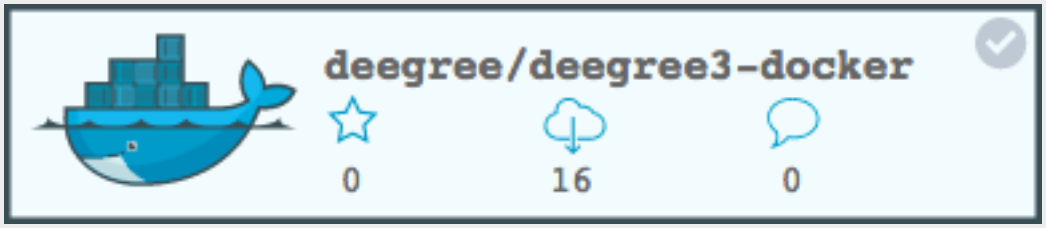
# deegree und OGC Standards

- Unterstützung für vollständigen INSPIRE Stack:
  - View Service (WMS 1.1.1 and WMTS 1.0)
  - Download Service (WFS 2.0)
  - Discovery Service (CSW 2.0.2 APISO)
- Support für INSPIRE Datenthemen (GML 3.2.1)
- deegree ist Referenzimplementierung
  https://github.com/opengeospatial/cite/wiki/Reference-Implementation
- deegree beim OGC
  http://www.opengeospatial.org/resource/products/details/?pid=1351



# deegree auf Docker Hub

- NEW Docker Image unter http://hub.docker.com




https://hub.docker.com/r/deegree/deegree3-docker/

Icon made by http://www.flaticon.com/authors/ctrlastudio from www.flaticon.com

# deegree auf GitHub

OSGeo Project deegree

**69** Forks

**50** Stars

**22** Watcher

**23** Contributors

https://github.com/deegree/deegree3



Icon made by http://www.flaticon.com/authors/dave-gandy from www.flaticon.com

# deegree aktuelle Release Version

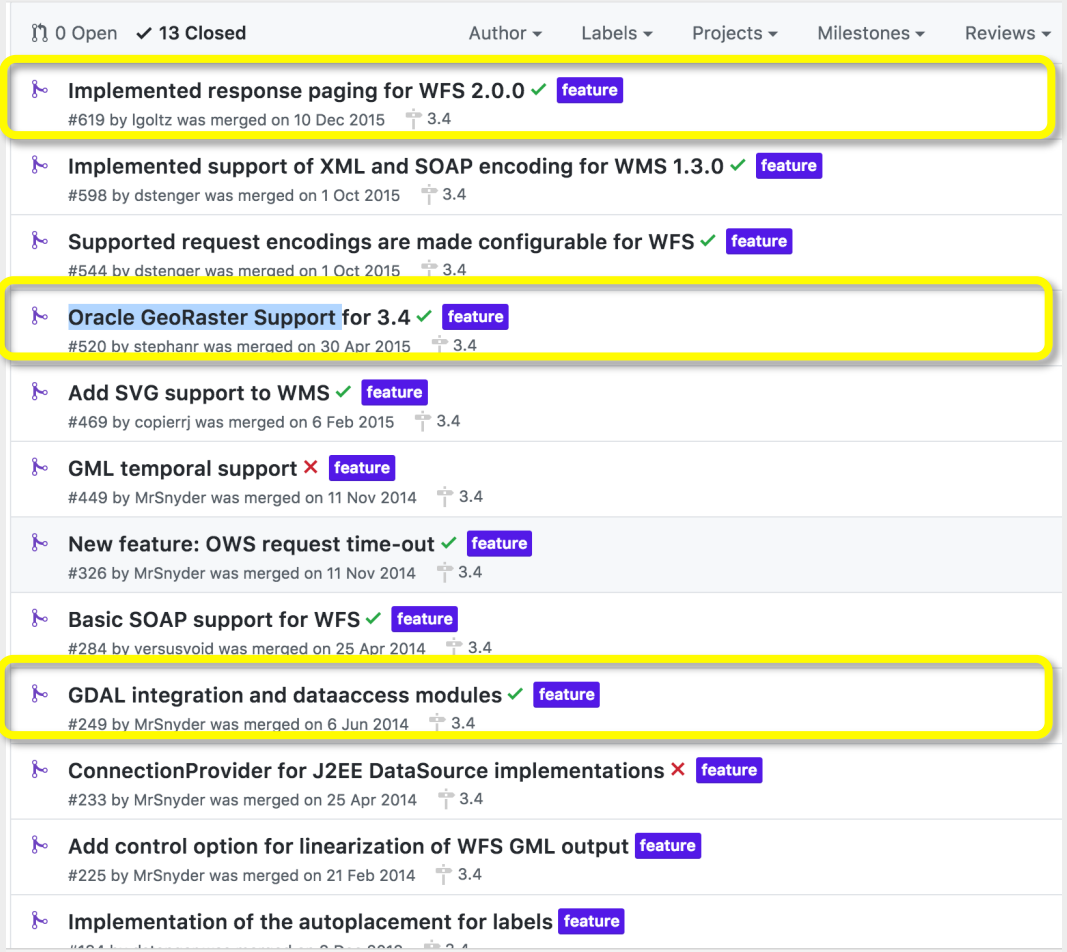
- Version **3.4-RC7** in Zahlen
- feature — **13** neue Features
- enhancement — **112** Verbesserungen
- bug — **173** behobene Fehler (*)

* Im Vergleich zu Version 3.3

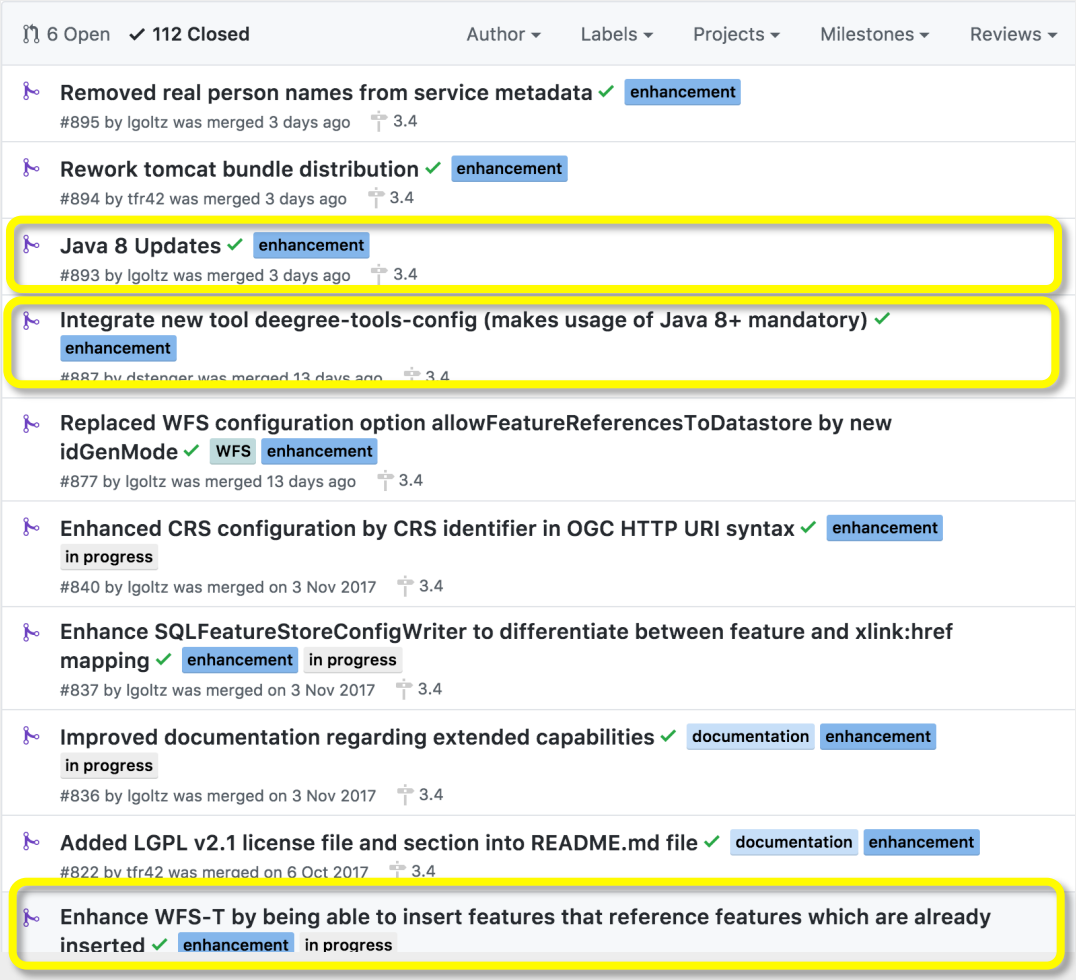


Icon made by http://www.flaticon.com/authors/ctrlastudio from www.flaticon.com

# Neue Features (Auswahl) in 3.4



# Erweiterungen (Auswahl) in 3.4



# deegree CLI Werkzeug in deegree 3.4-RC7

- https://github.com/deegree/deegree3/tree/master/deegree-tools/deegree-tools-config

## deegree-cli-utility

build passing

Command line utility based on deegree3 to generate `DDL` and `deegree SQLFeatureStore` from GML application schemas.

You can download the latest release here or build it yourself.

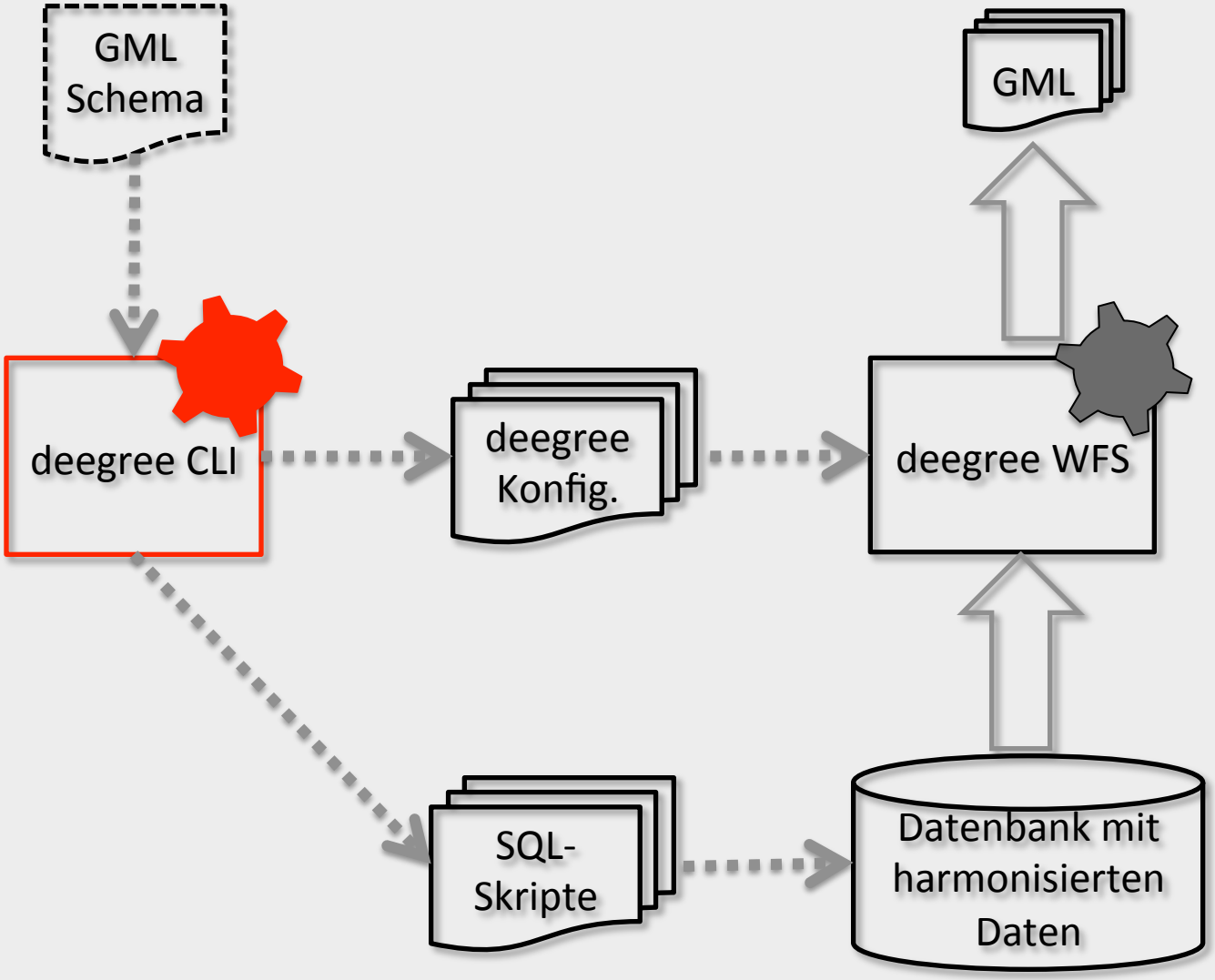
```
git clone https://github.com/lat-lon/deegree-cli-utility.git
cd deegree-cli-utility/
git checkout deegree-3.4
mvn clean package -Pjar-with-dependencies
```

### Usage

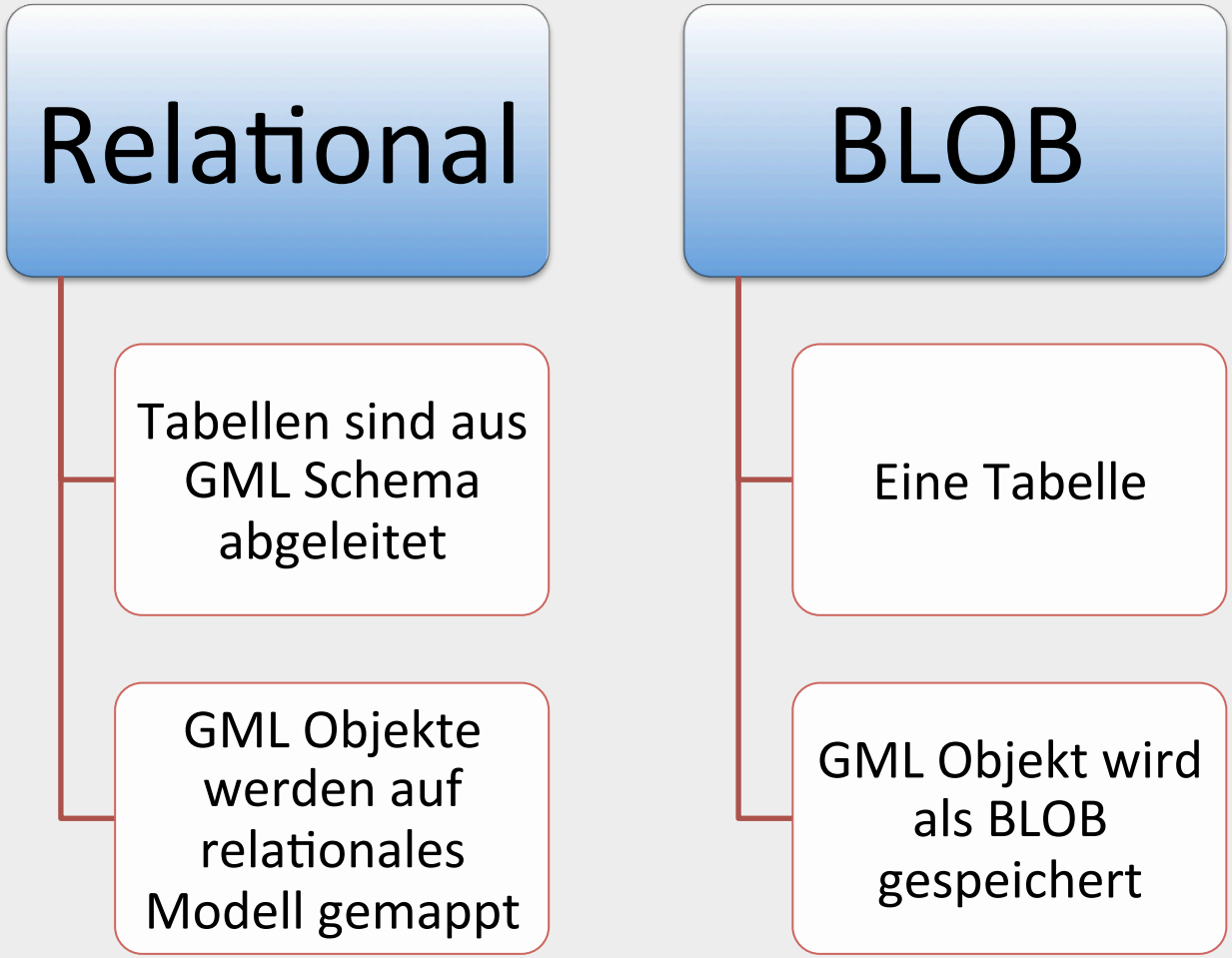
```
Usage: java -jar deegree-cli-utility.jar [options] schema_url

options:
 --format={deegree|ddl|all}, default=deegree
 --srid=<epsg_code>, default=4258
 --idtype={int|uuid}, default=int
 --mapping={relational|blob}, default=relational
 --dialect={postgis|oracle}, default=postgis
```

# Bereitstellung von Daten mit deegree WFS



# GML Schema-driven SQLFeatureStore

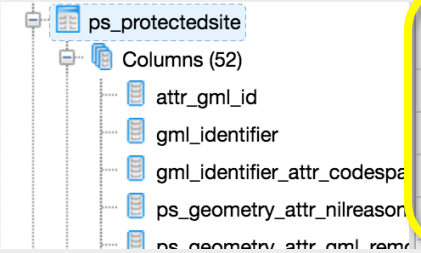


# Relationales Mapping der GML Objekte

- deegree SQLFeatureStore Konfiguration

```
<SQLFeatureStore configVersion="3.1.0" xmlns="http://www.deegree.org/datasource/feature/sql“>
 <JDBCConnId>postgresDS_canonical</JDBCConnId>
 <StorageCRS srid=“-1" dim="2D">EPSG:4326</StorageCRS>
 <GMLSchema>../../appschemas/ProtectedSites.xsd</GMLSchema>
<FeatureTypeMapping name="ps:ProtectedSite" table="ps_protectedsite">
 <FIDMapping prefix="PS_PROTECTEDSITE_">
  <Column name="attr_gml_id" type="string" />
</FIDMapping>
 <Complex path="gml:identifier">
  <Primitive path="text()" mapping="gml_identifier" />
  <Primitive path="@codeSpace" mapping="gml_identifier_attr_codespace" />
 </Complex>....
```

- GML Objekte als Relationen



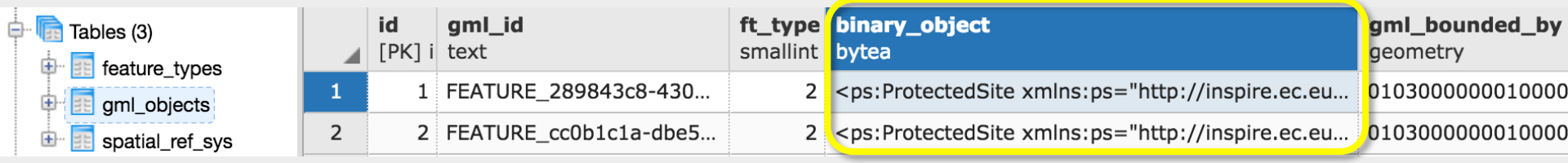

| | attr_gml_id text | ps_inspireid_base_identifier_base_local text | ps_inspireid_base_identifier_base_namespac text | ps_geometry_valu geometry |
|---|---|---|---|---|
| 1 | 024aa61e-a9... | vo_ps_8089 | AT.0025.PS.ProtectedSite | 0106000020E61000. |
| 2 | 8044bccc-9d8... | vo_ps_8086 | AT.0025.PS.ProtectedSite | 0106000020E61000. |
| 3 | 438f81c9-094... | vo_ps_8084 | AT.0025.PS.ProtectedSite | 0103000020E61000. |
| 4 | 22c6ce8b-a07... | vo_ps_8015 | AT.0025.PS.ProtectedSite | 0103000020E61000. |

# GML Objekte werden als BLOB abgebildet

- deegree SQLFeatureStore Konfiguration

```
<SQLFeatureStore configVersion="3.4.0" xmlns="http://www.deegree.org/datasource/feature/sql">
 <JDBCConnId>postgresDS_blob</JDBCConnId>
   <StorageCRS srid="-1" dim="2D">EPSG:4258</StorageCRS>
   <GMLSchema>../../appschemas/ProtectedSites.xsd</GMLSchema>
   <BLOBMapping/>
</SQLFeatureStore>
```

- GML Objekte als BLOB



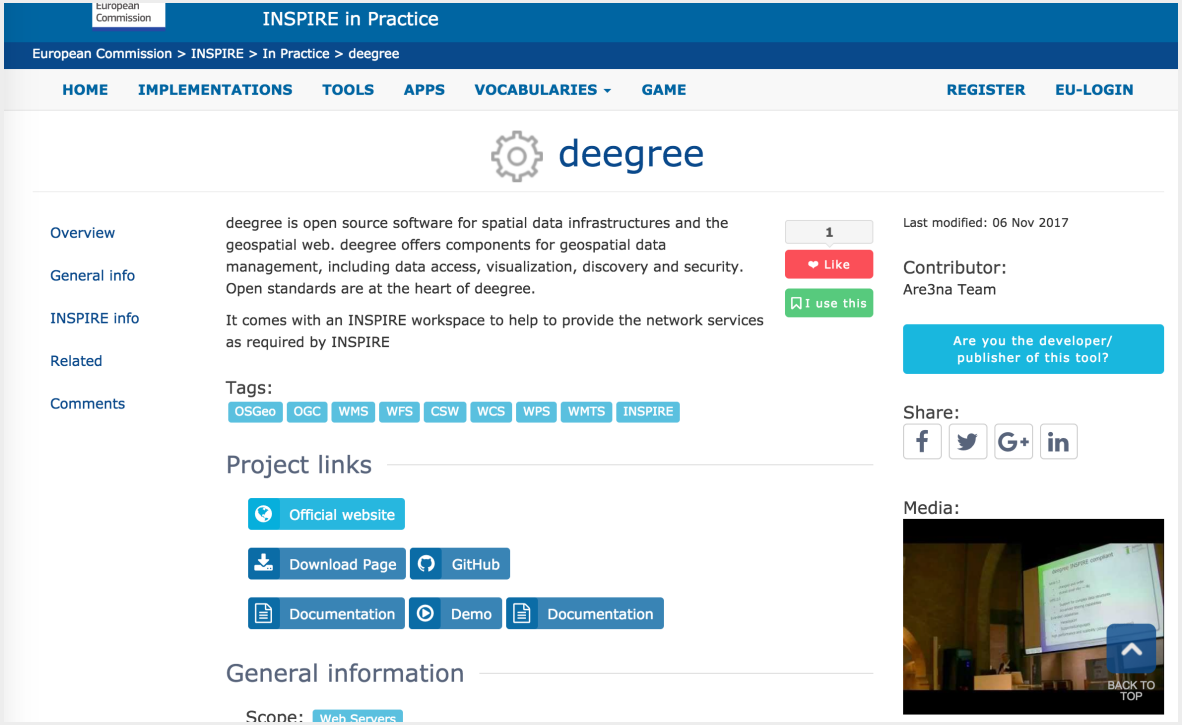

| | id [PK] i | gml_id text | ft_type smallint | binary_object bytea | gml_bounded_by geometry |
|---|---|---|---|---|---|
| 1 | 1 | FEATURE_289843c8-430... | 2 | <ps:ProtectedSite xmlns:ps="http://inspire.ec.eu... | 0103000000010000 |
| 2 | 2 | FEATURE_cc0b1c1a-dbe5... | 2 | <ps:ProtectedSite xmlns:ps="http://inspire.ec.eu... | 0103000000010000 |

# Comparision between Relational and BLOB

| | Relational | BLOB |
|---|---|---|
| Storage as | Multiple Tables | Single Table |
| Supported Geometry types | Database Types | GML (ISO) Geometry Types |
| Filter Expression to Query | SQL | In-Memory on XML instance |
| Filter on BBox and GML ID | Using DB Spatial Functions | Using DB Spatial Functions |
| Response Time (for first byte) | Fair (enough for INSPIRE) | Better |

# INSPIRE in Practice

- INSPIRE in Practice
- Toolbeschreibung unter https://inspire-reference.jrc.ec.europa.eu/tools/deegree



# Beispiele für INSPIRE mit deegree

- Online-Tutorial mit Beispielen für Annex 1 Themen Protected Sites und Cadastral Parcels: https://github.com/lat-lon/deegree-workshop

- Weitere INSPIRE Konfigurationen auf github: https://github.com/de-bkg/deegree-workspace-dlm250-inspire
- https://github.com/DirkThalheim/deegree-elf
- https://github.com/eENVplus/deegree-workspace-eenvplus

# Support the community project

- contributions welcome **49 offene Issues**
  - Wir suchen Tester, Technical Writer und SW-Entwickler

- funding welcome **23 Issues**
  - Wir suchen Sponsoren für die Weiterentwicklung

https://github.com/deegree/deegree3/issues

# Ausblick

- Migration der Mailing Listen von Sourceforge nach OSGeo
- Neuer Release Zyklus
- Geplante Anpassungen:
  - Java 9/10 Unterstützung
  - Apache Tomcat 9 Unterstützung

# Q & A

http://www.deegree.org
Twitter: @deegree_org

# PR #820 – Erweiterter WFS-T

- WFS-T kann bei INSERT-Aktion Feature-Referenzen innerhalb der Datenbank auflösen
- Mehr unter: https://github.com/deegree/deegree3/pull/820

deegree Enterprise Edition
ist die
**Produktversion** von deegree

Weitere Infos unter:

http://www.deegree-enterprise.com
http://www.deegree-enterprise.de