

Ingres Geospatial

GIUA 2009

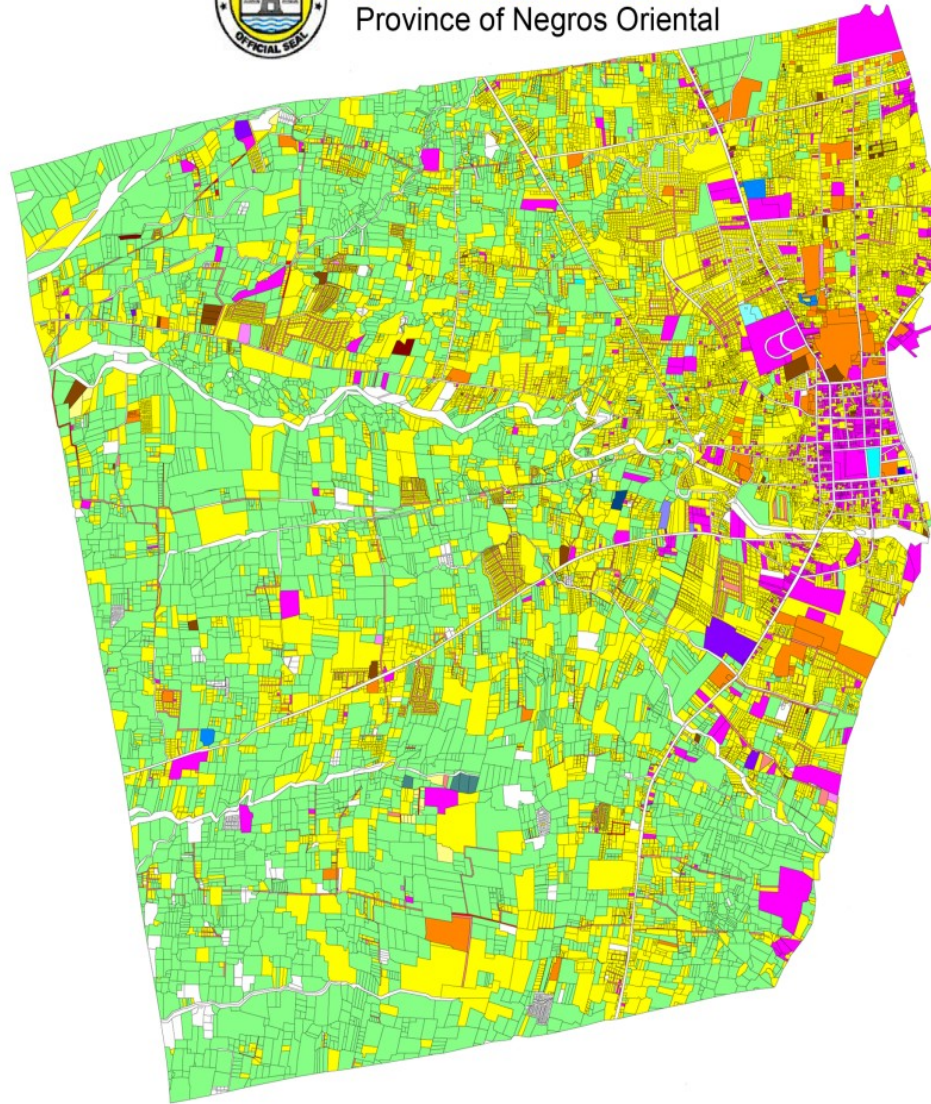


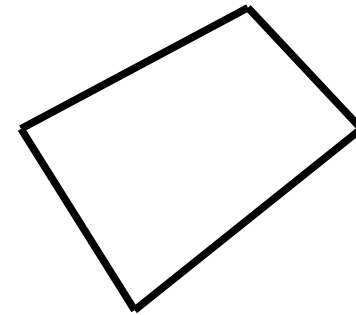
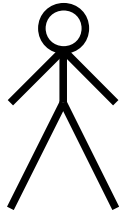
info@ **4stone**.de

Michael Keller
mke@4stone.de



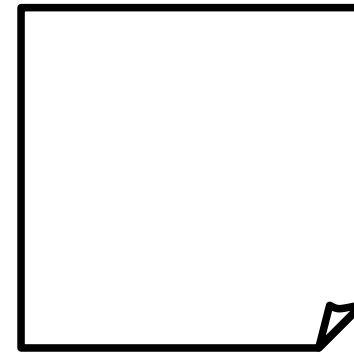
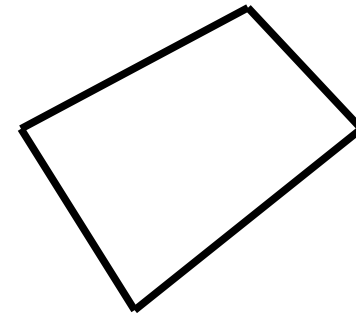
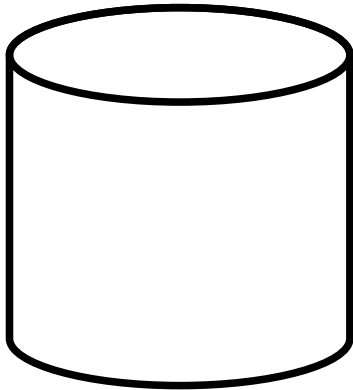
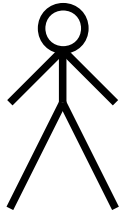
DUMAGUETE CITY
Province of Negros Oriental





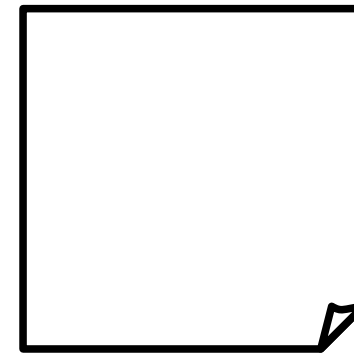
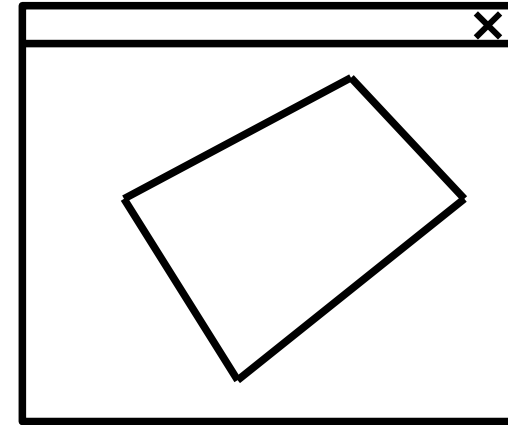
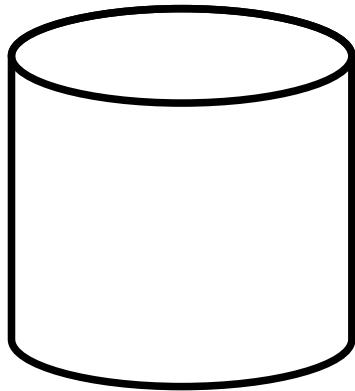
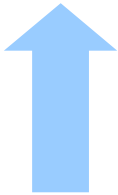
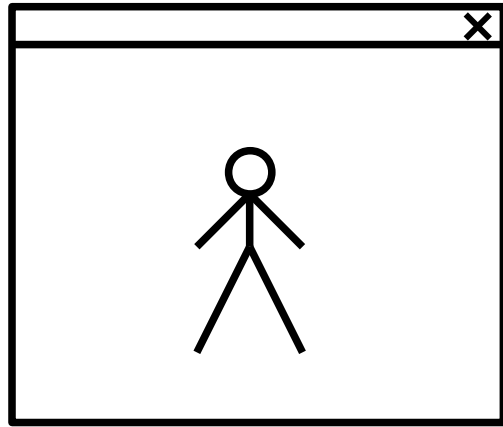
Geoinformationssysteme (GIS)





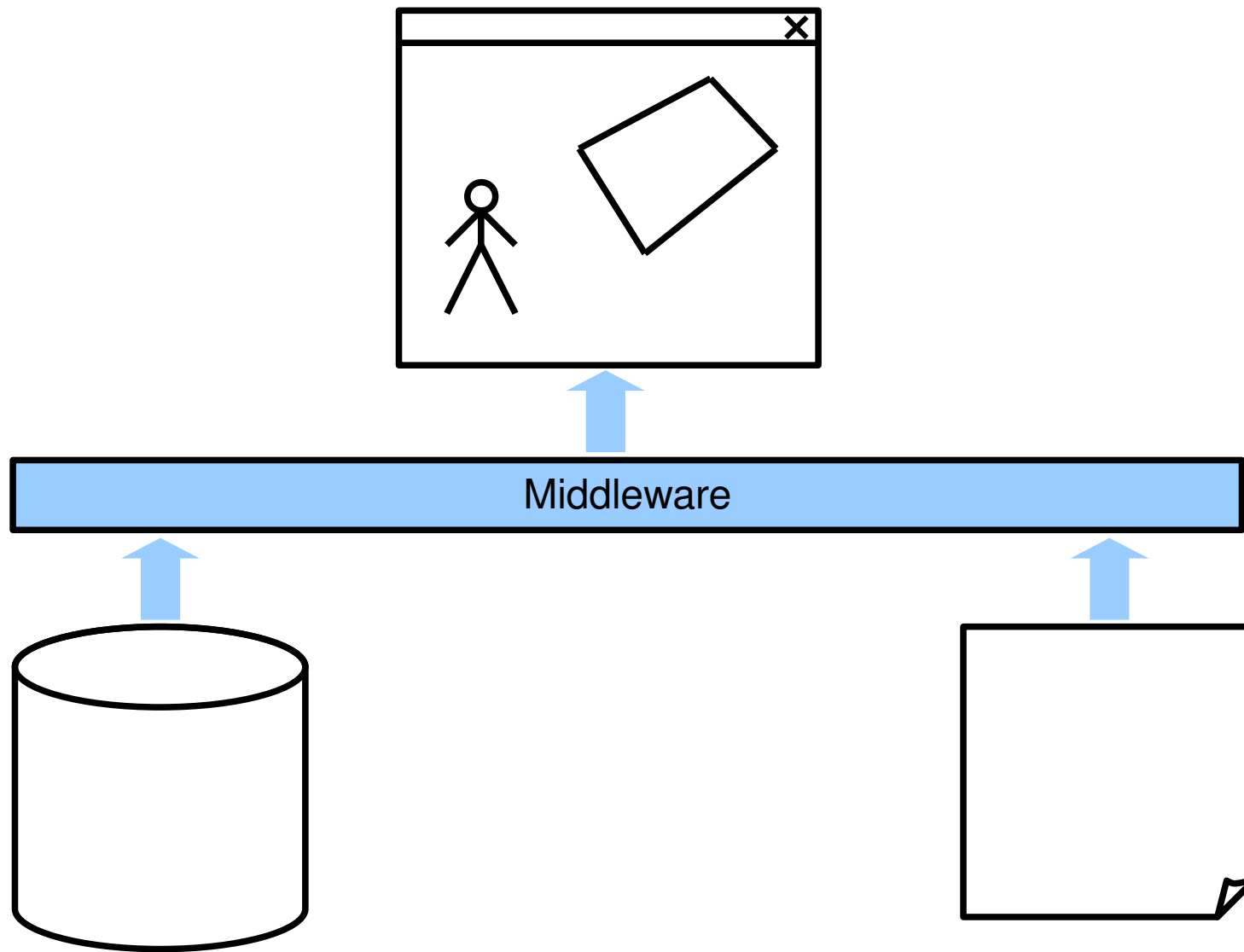
Geoinformationssysteme (GIS)





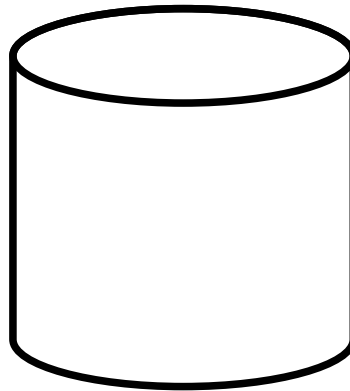
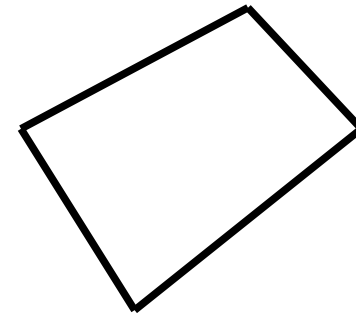
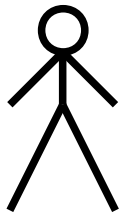
Geoinformationssysteme (GIS)





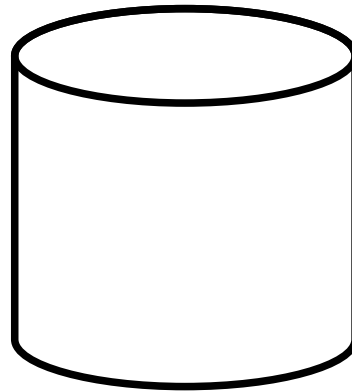
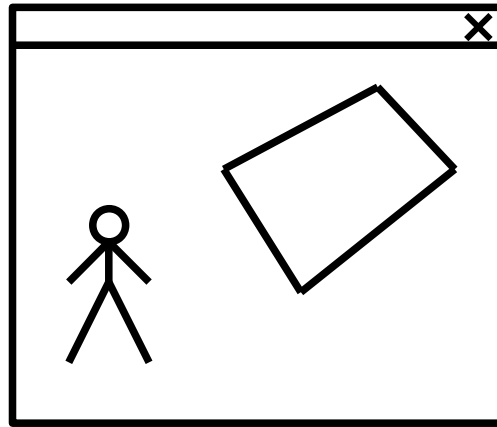
Geoinformationssysteme (GIS)





Geoinformationssysteme (GIS)





Geoinformationssysteme (GIS)



Spatial Objects Library (alt)



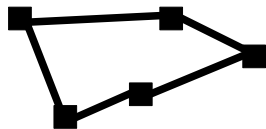
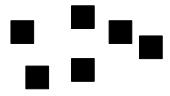
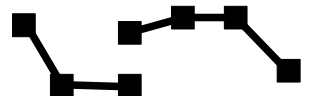
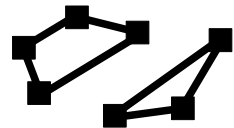
- Kein OpenSource
- Entspricht nicht den Standards
- Keine Unterstützung für Koordinatensysteme

Ingres Geospatial (neu)

- OpenSource
- Entwicklung mit Hilfe von GEOS (Geometry Engine Open Source)
- Standardkonform
- Koordinatensysteme (Proj.4)

Ingres mit Geodaten



	Alt	Neu	
Point	✓	✓	
Linestring	✓	✓	
Polygon	✓	✓	
Multipoint	✗	✓	
Multilinestring	✗	✓	
Multipolygon	✗	✓	

Geodatentypen



```
create table strasse (  
    id integer primary key,  
    art integer not null,  
    name varchar(50),  
    verlauf linestring(4955) not null );
```

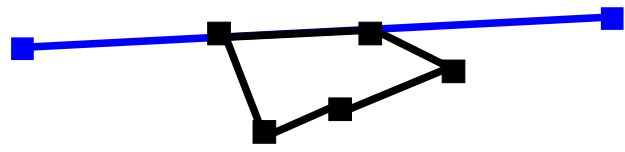
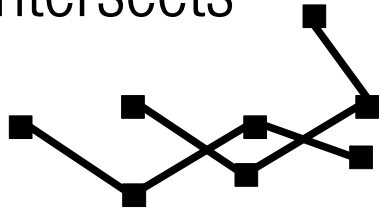
```
insert into strasse (id, art, name, verlauf)  
values (  
    122,  
    1,  
    'Hauptstraße',  
    '((45.567 , -47.454) , (34.676 , -54.676) , (23.876 , -98.676))' );
```

```
select id, art, name, verlauf from strasse where id = 122;
```

Beispiel DDL/DML



Intersects

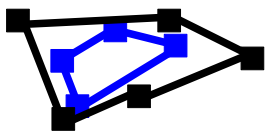


Touches

Area

Distance

Contains



Equals



Length

Operatoren / Funktionen



OpenGIS

<http://www.opengeospatial.org>

Ingres:

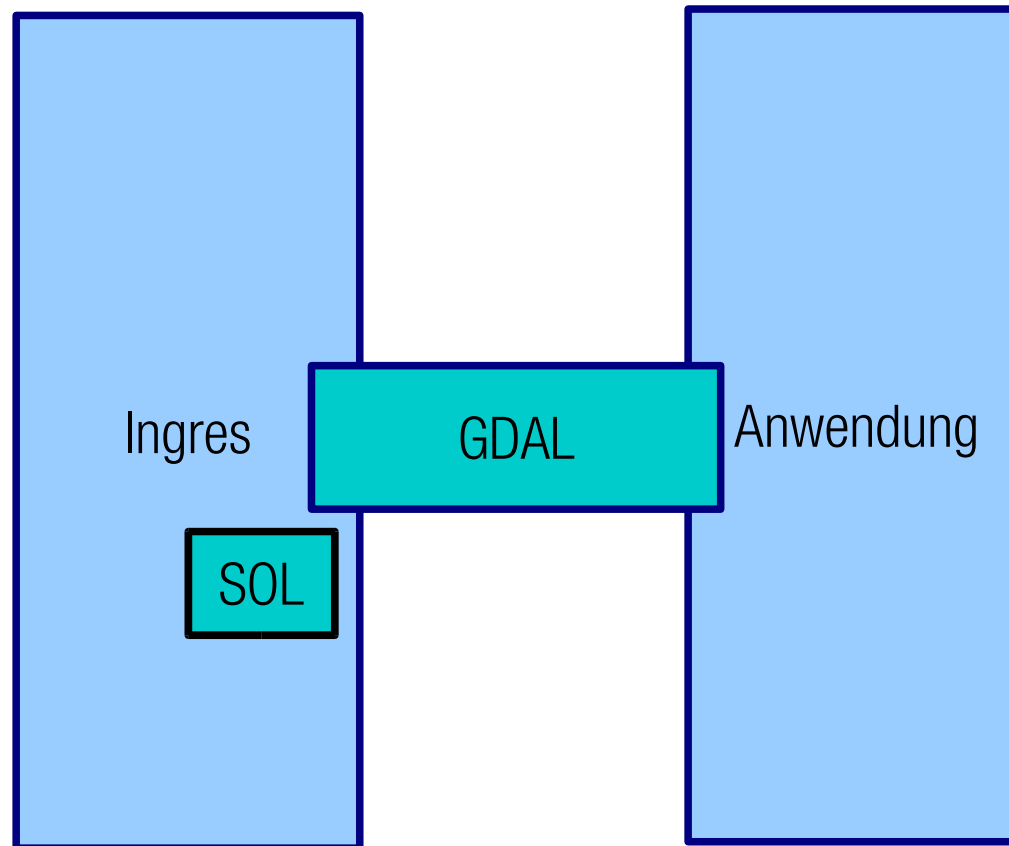
- Simple Features SQL

Middleware/Anwendung:

- Web Coverage Service
- Web Feature Service
- Web Map Service

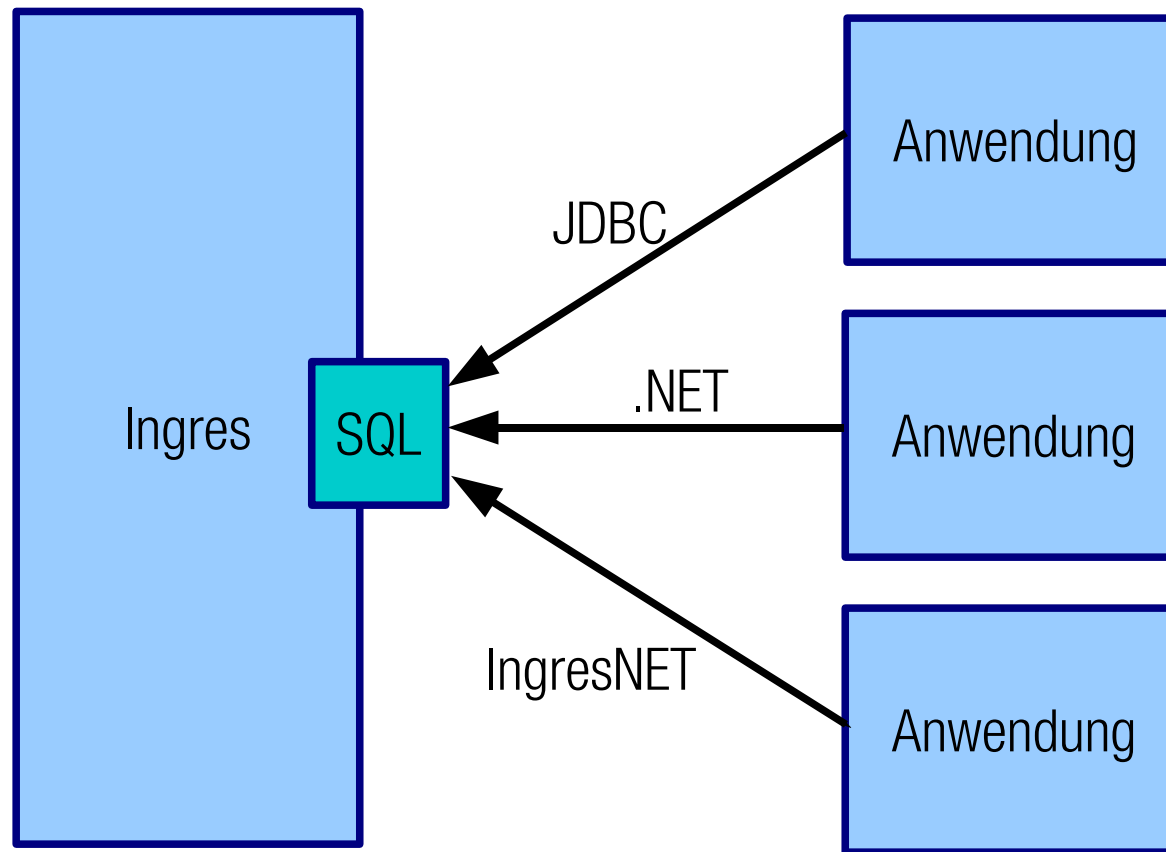
Standards





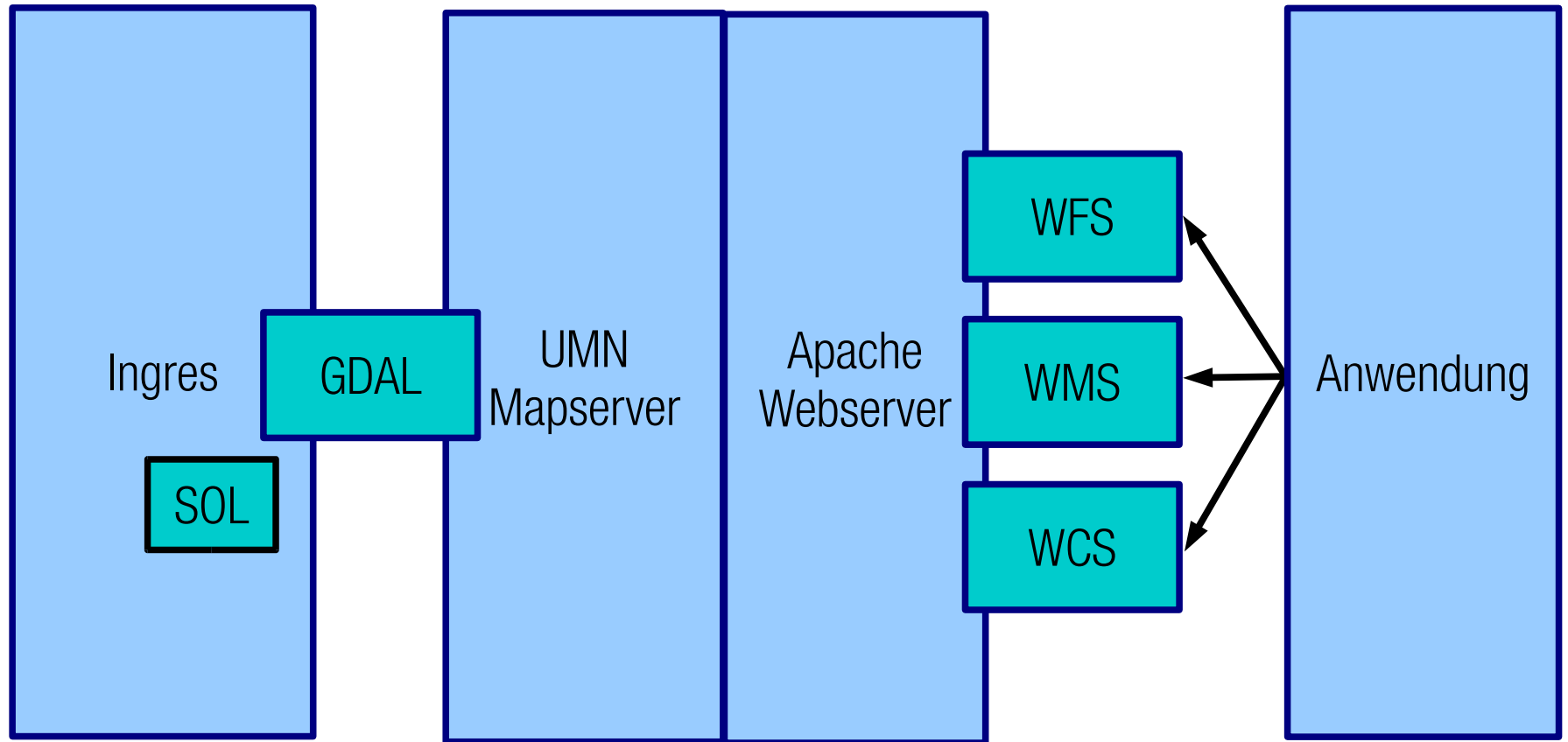
Spatial Objects Library





Geospatial Library





Architekturbeispiel



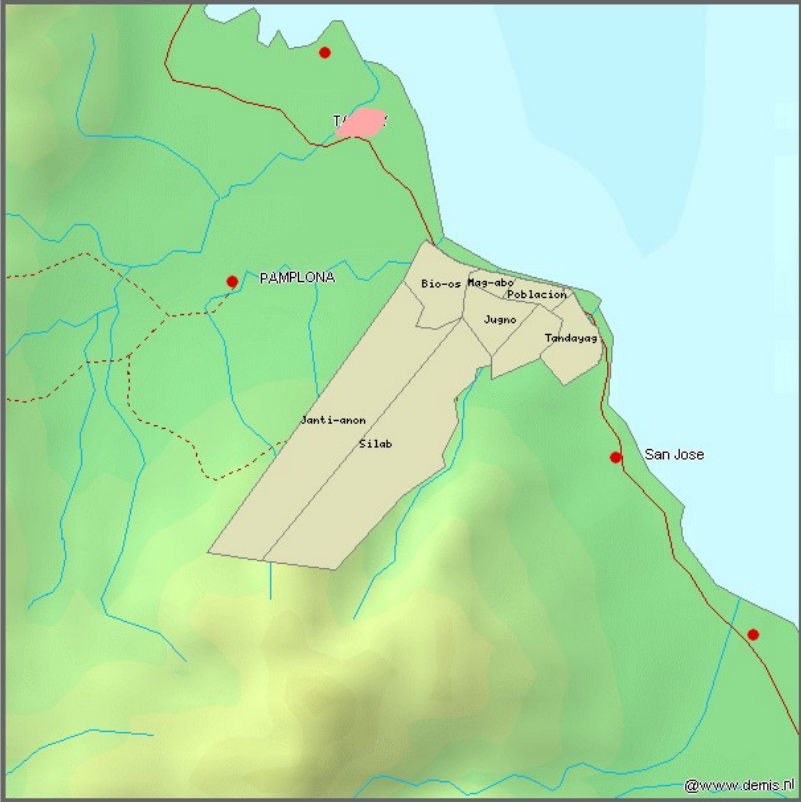
MapServer - Test - Mozilla Firefox 3 Beta 5

File Edit View History Bookmarks Tools Help

http://localhost/cgi-bin/mapserv?img.x=198&img.y=423&zoomdir=-1&zoomsize=2&layer=amlan&layer=world&imgxy=300.0

Smart Bookmarks Release Notes Fedora Project Red Hat Free Content

MapServer - Test



Zoom In Pan Zoom Out

Zoom Size

Amlan World

Done

The image shows a web browser window displaying a MapServer test page. The browser title is "MapServer - Test - Mozilla Firefox 3 Beta 5". The address bar shows the URL "http://localhost/cgi-bin/mapserv?img.x=198&img.y=423&zoomdir=-1&zoomsize=2&layer=amlan&layer=world&imgxy=300.0". The page content features a map titled "MapServer - Test". The map displays a geographical area with various labels: "PAMPLONA", "San Jose", "Bio-os", "Mag-abo", "Poblacion", "Jugno", "Tandayas", "Janti-anon", and "Silab". The map includes a legend with "Amlan" and "World" layers. Below the map, there are navigation controls: "Zoom In", "Pan", "Zoom Out", and "Zoom Size" (set to 2). The browser status bar at the bottom shows "Done".



Phase 1

- * OGC SFS SQL (v1.1) compliance
- * Rtree indexing
- * GDAL/OGR support for Ingres
- * Coordinate system support (using Proj.4)
- * WKT / WKB support

Phase 2

- * GeoServer/GeoNetwork support for Ingres.
- * Storage engine enhancements to speed up performance
- * Increased portion of OGC SFS SQL (v1.2) compliance.
- * FDO driver.
- * Research project: Affects of applying VectorWise techniques to geospatial data.

Roadmap

