

Map**b**ender 3 - where are we going?

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FOSS4G Denver 2011

Astrid Emde

- Mapbender Developer Team since 2004
- PSC (Project Steering Committee)
- Work at [WhereGroup](#), Bonn
- Project management and a bit of development
- Trainings for MapServer, PostgreSQL/PostGIS, Mapbender, GeoServer
- Work with the OSGeo stack for many years
- Active member in FOSSGIS e.V. and OSGeo

WhereGroup



WhereGroup

- Major Mapbender sponsor
- Company in Bonn, Germany with 16 employees
- Service provider with experience in all fields of spatial data management with free software: WebGIS, SDI, database, relevant standards, trainings, conferences
- Open Source projects: Mapbender, PostNAS

Mapbender – where are we going?

- The concept of Mapbender
- Evaluation for Mapbender3
- What we chose
- Demo
- Getting started

What does Mapbender do?

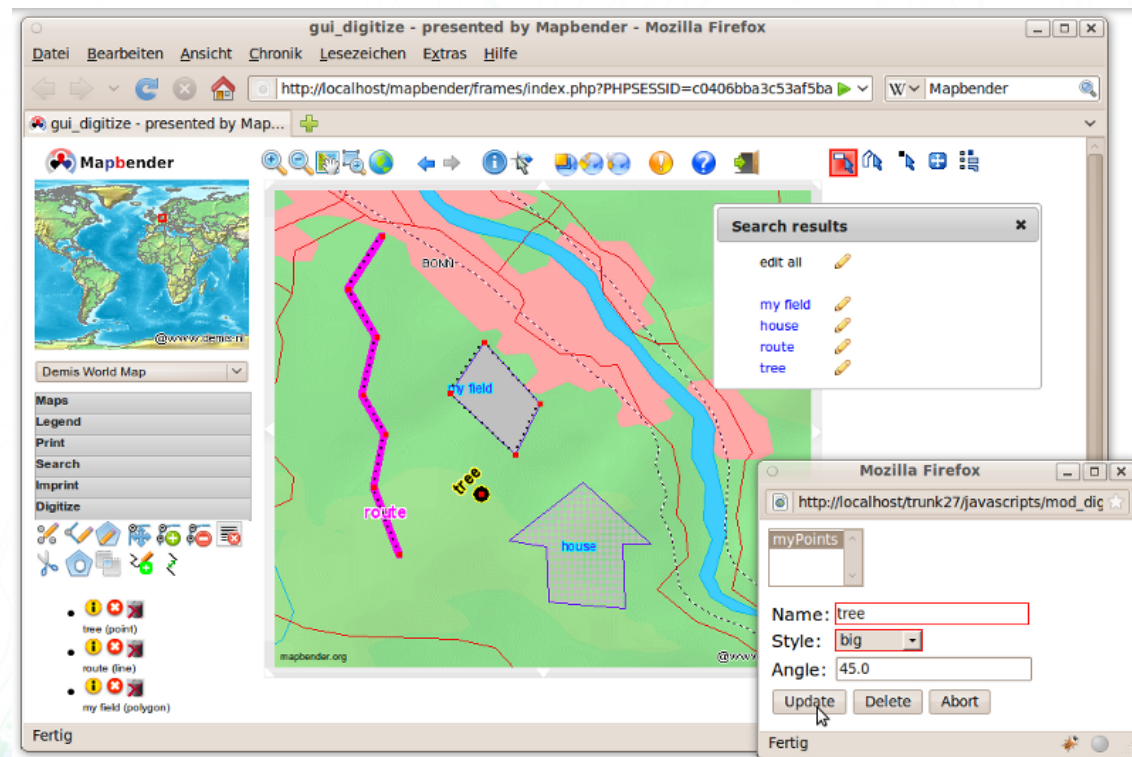
- Create **geospatial web applications** without writing a single line of code
- Create and maintain an **OWS repository** (focus on WMS, WFS)
- Distribute **configured services** among applications
- Grant **users and groups** access to applications and services
- → **These attributes make Mapbender special**

The Mapbender components

- **Applications**
- **OGC Web Services**
- **Users and groups**

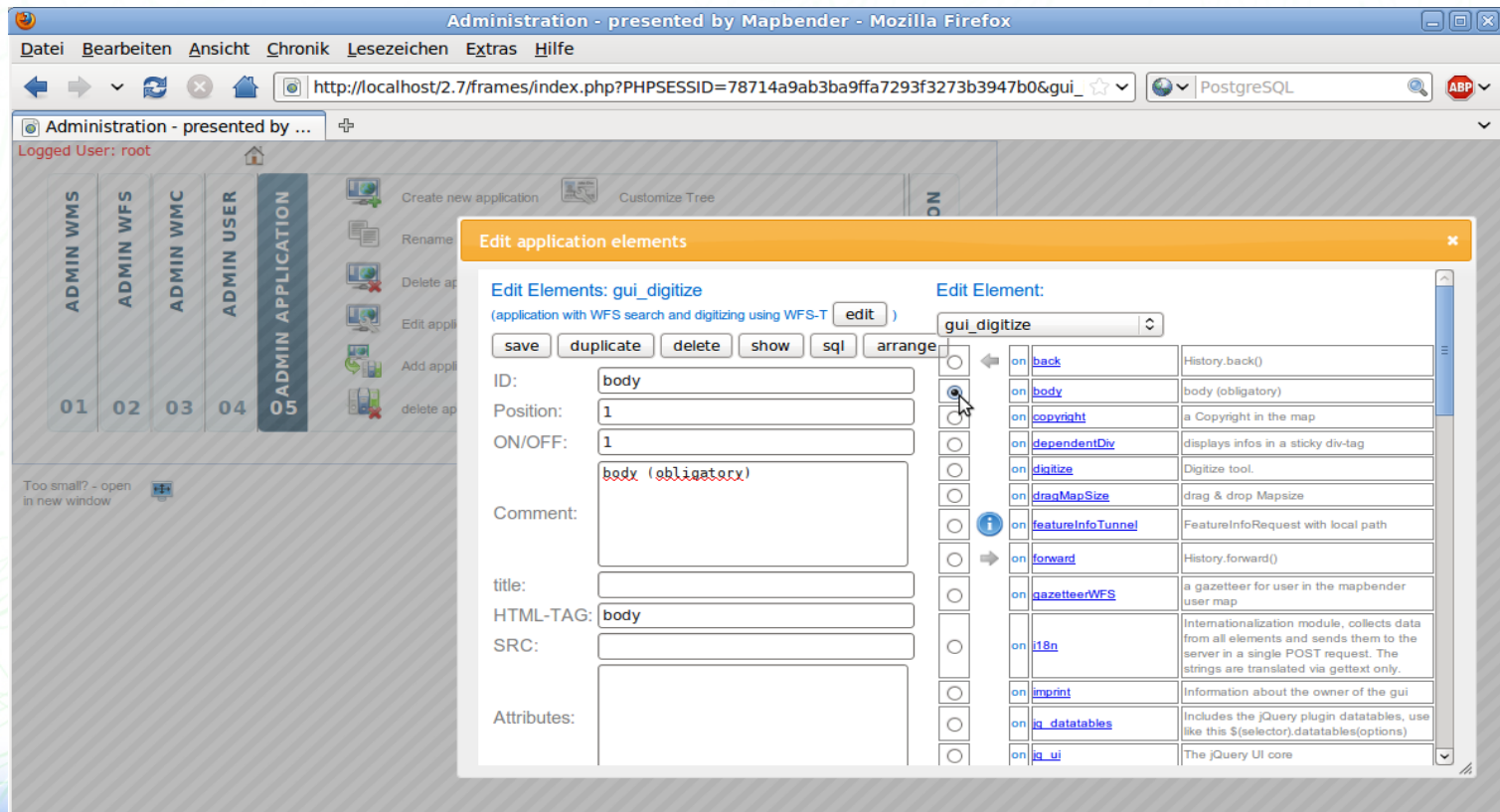
What does Mapbender do?

Typical Mapbender application (Mapbender 2.7.2):



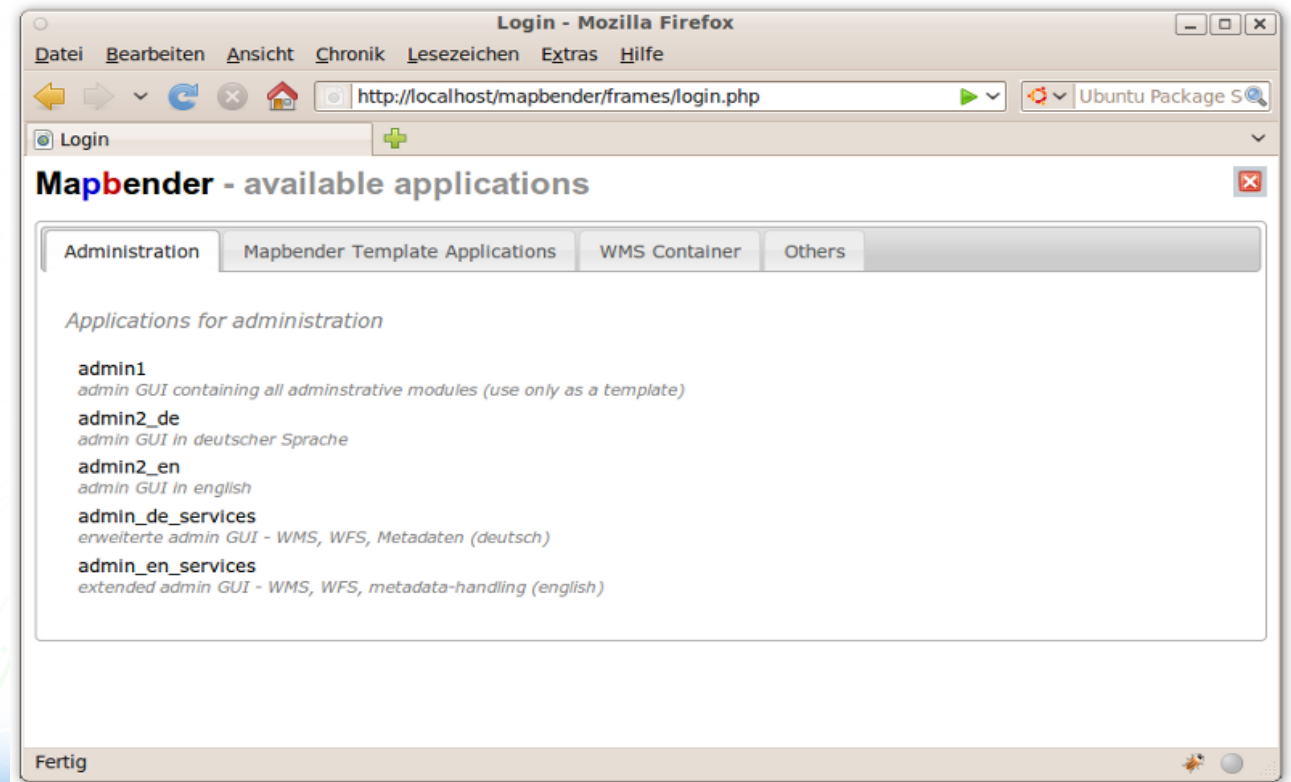
What does Mapbender do?

How is it created? By another Mapbender application!

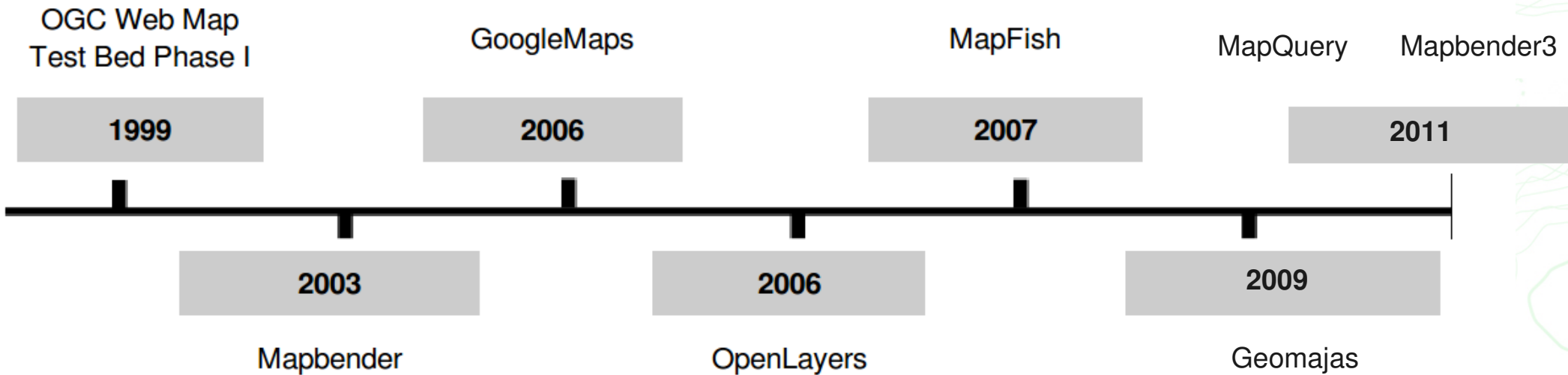


What does Mapbender do?

The concept is easy: Mapbender is written in Mapbender!



A History of Web Mapping



from C.Baudson and A. Christl 2010, modified

Map**b**ender History

Map**b**ender History

- 1999: experimental Perl client for OGC WMT 1.0
- 2001: re-implementation in PHP, operational users
- 2003: Adoption of Open Source license and development
- 2006: OSGeo foundation project, Incubation passed.
- 2007: Introduced jQuery-library to Mapbender
- 2008: Modularization, first steps using OpenLayers
- 2010: Version 2.7 with new features
- **2011: Version 3.0 re-engineering**

Project Organisation

- **Mapbender Project Page** <http://www.mapbender.org>
- **Mapbender3** <http://mapbender3.org>
- **Mapbender3 on github** <http://github.com/mapbender/>
- **Trac** <http://trac.osgeo.org/mapbender/report>
- **SVN** <https://svn.osgeo.org/mapbender/>
- **Mailing lists / IRC**
 - users@mapbender.osgeo.org
 - dev@mapbender.osgeo.org
 - <irc://irc.freenode.net#mapbender>

Map**b**ender3 Evaluation

Map**b**ender3 Evaluation

- No need to build everything ourselves
- Use existing software
- Use OpenLayers instead of reinventing the wheel
- Use a framework
 - serverside framework
 - clientside framework

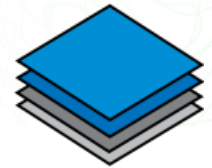
Map**b**ender3 – what we chose

The Components



Mapbender3

Client JavaScript



MapQuery

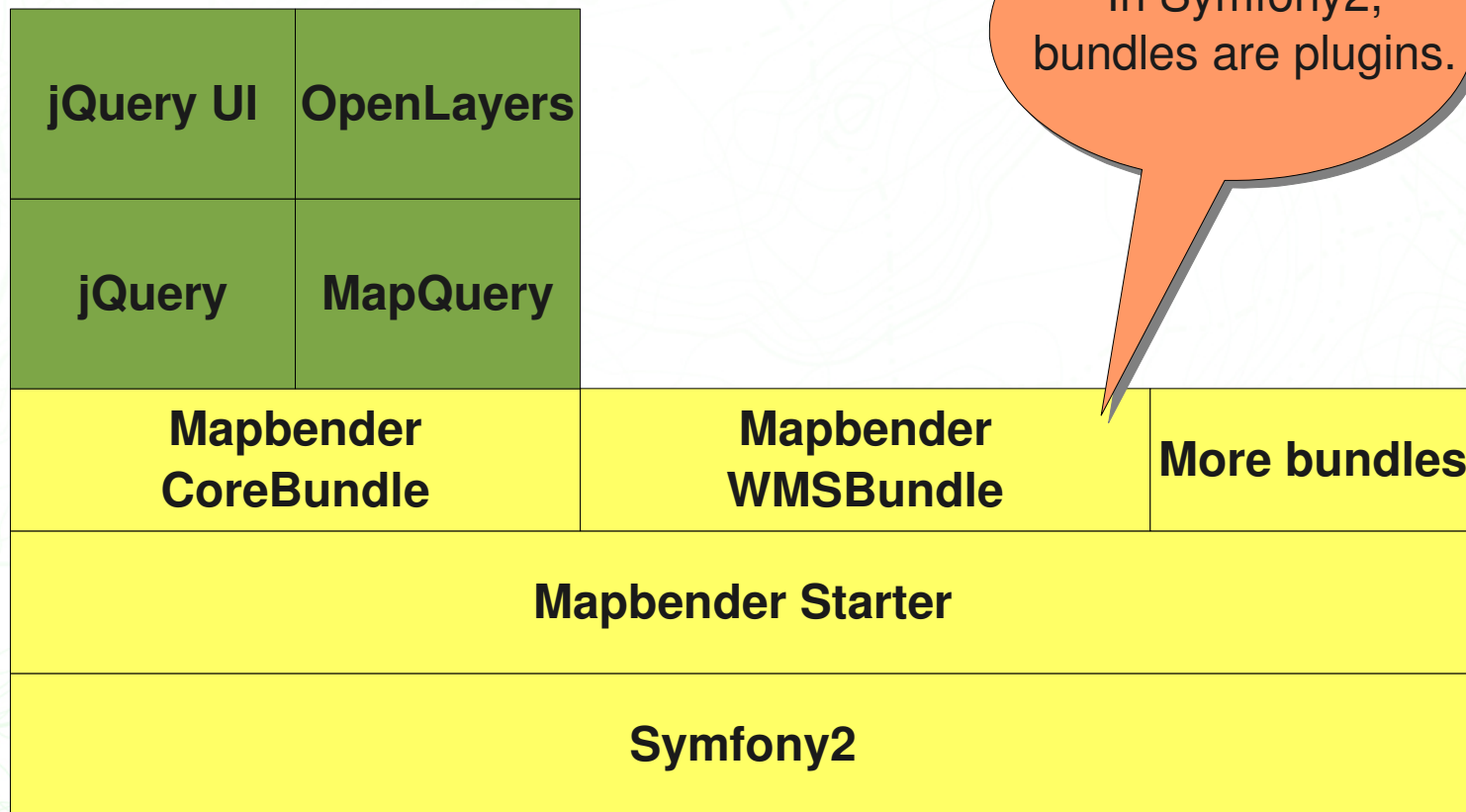
Server

PHP



Symfony

The Components



Symfony2

- Successor of Symfony 1, full OO PHP framework
- Fresh from the press, released stable as of 07/28/2011
- Building blocks for all modern web application needs
 - Database abstraction
 - User authentication, authorization
 - Templating
 - I18n (Internationalization)
 - and much more fun!



MapQuery

- MapQuery Version 0.1 was released in 2011
- Implements a jQuery interface to OpenLayers
- provides a set of mapping related widgets
- We use MapQuery to interact with OpenLayers

 **MapQuery**

Mapbender

- Collection of Symfony bundles
 - CoreBundle (mandatory)
 - Extension Bundles (optional)
 - WMSBundle
 - WMTSBundle
 - WMCBundle
 - More to come

Mapbender CoreBundle

- The base bundle for Mapbender
- Offers base classes for applications, elements, layers
- Provides jQuery, jQuery UI, OpenLayers and MapQuery for all other Mapbender bundles

Mapbender Starter

- A Symfony2 demo project which uses the Mapbender bundles to showcase a Mapbender3 application
- Contains demo applications with WMS, WMTS and authentication
- Can be used as a boiler template to start Mapbender3 projects

Requirements

- PHP 5.3.2 or newer - essential to run Symfony2
- PHP CLI for running command line operations for Symfony2 like database management
- Using Doctrine – Symfony's database abstraction layer (DBAL) – we aim to provide usability with more than just PostgreSQL

<https://github.com/mapbender/mapbender-starter/blob/master/README.rst>

Getting started

- Get the code (download package)

<http://mapbender3.org/Download>

- Try the demo

<http://mapbender3.org/index.php/Demo>

Installation

- Install with the bootstrap or step by step

- Installation with the bootstrap

```
curl https://raw.githubusercontent.com/mapbender/mapbender-starter/master/bin/bootstrap.sh -o - | sh
```

- Read more about the installation

<http://mapbender3.org/index.php/Handbook>

Step by Step Installation

```
git clone https://github.com/mapbender/mapbender-starter.git  
mapbender-starter
```

```
cd mapbender-starter
```

```
git submodule update --init --recursive
```

```
cd application
```

```
app/console doctrine:database:create
```

```
app/console doctrine:schema:create
```

```
app/console assets:install --symlink web
```

Map**b**ender3 – the Application


Start the Welcome Page

Welcome - Mapbender3 - Mozilla Firefox

Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

http://localhost/mapbender-starter/app.php

Welcome - Mapbender3



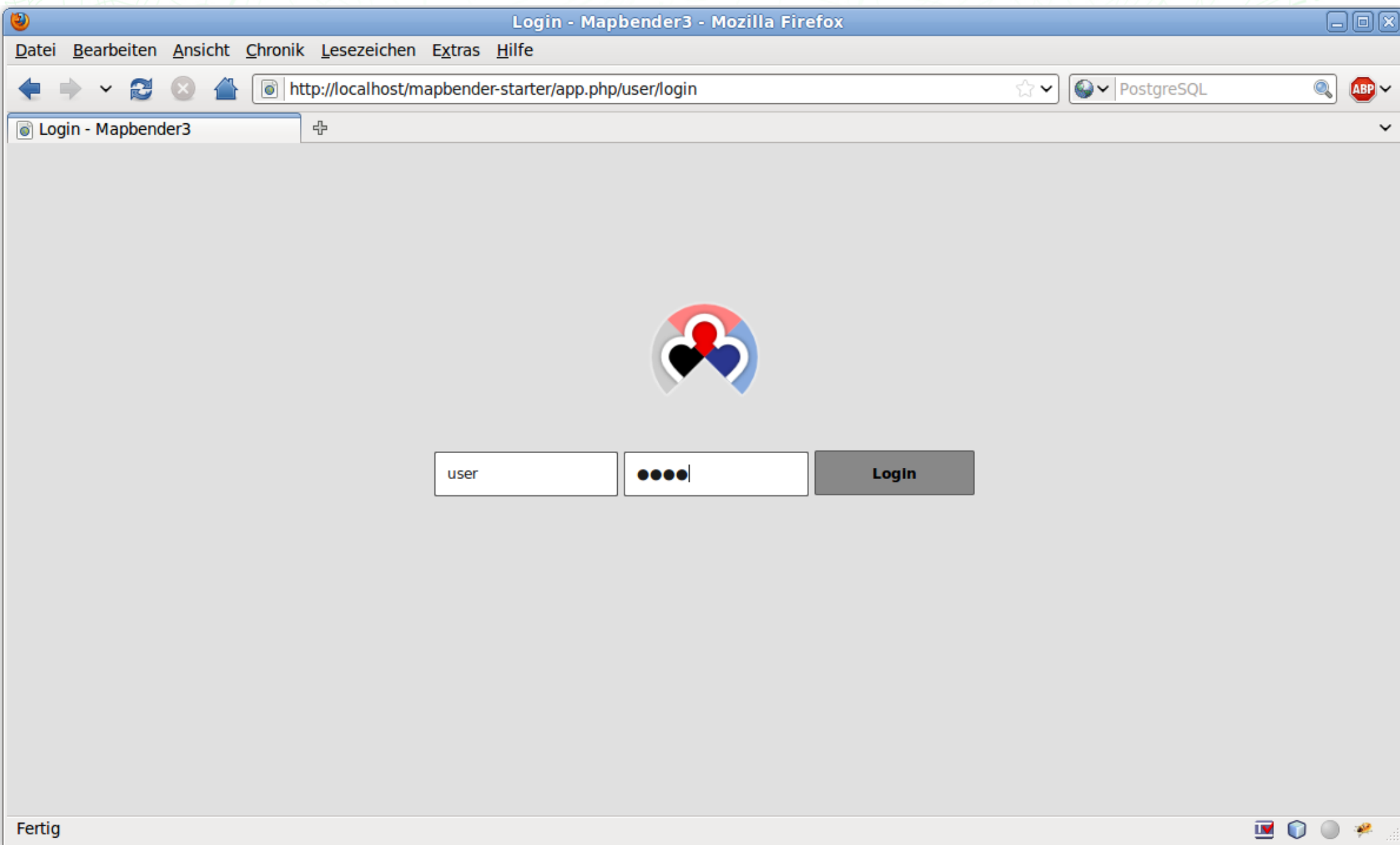
Apps Services Users Handbook Logout My Account

This is the overview page of Mapbender3.
Below you find a list of applications you can access:

Mapbender User Demo Map
Simple map showing WMS use.

OSM Denver Map
Simple map showing OSM with WMTS tiles.

Fertig



Mapbender User Demo Map - Mapbender3 - Mozilla Firefox

Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

http://localhost/mapbender-starter/app.php/application/mapbender_user PostgreSQL

Mapbender User Demo Map - ...

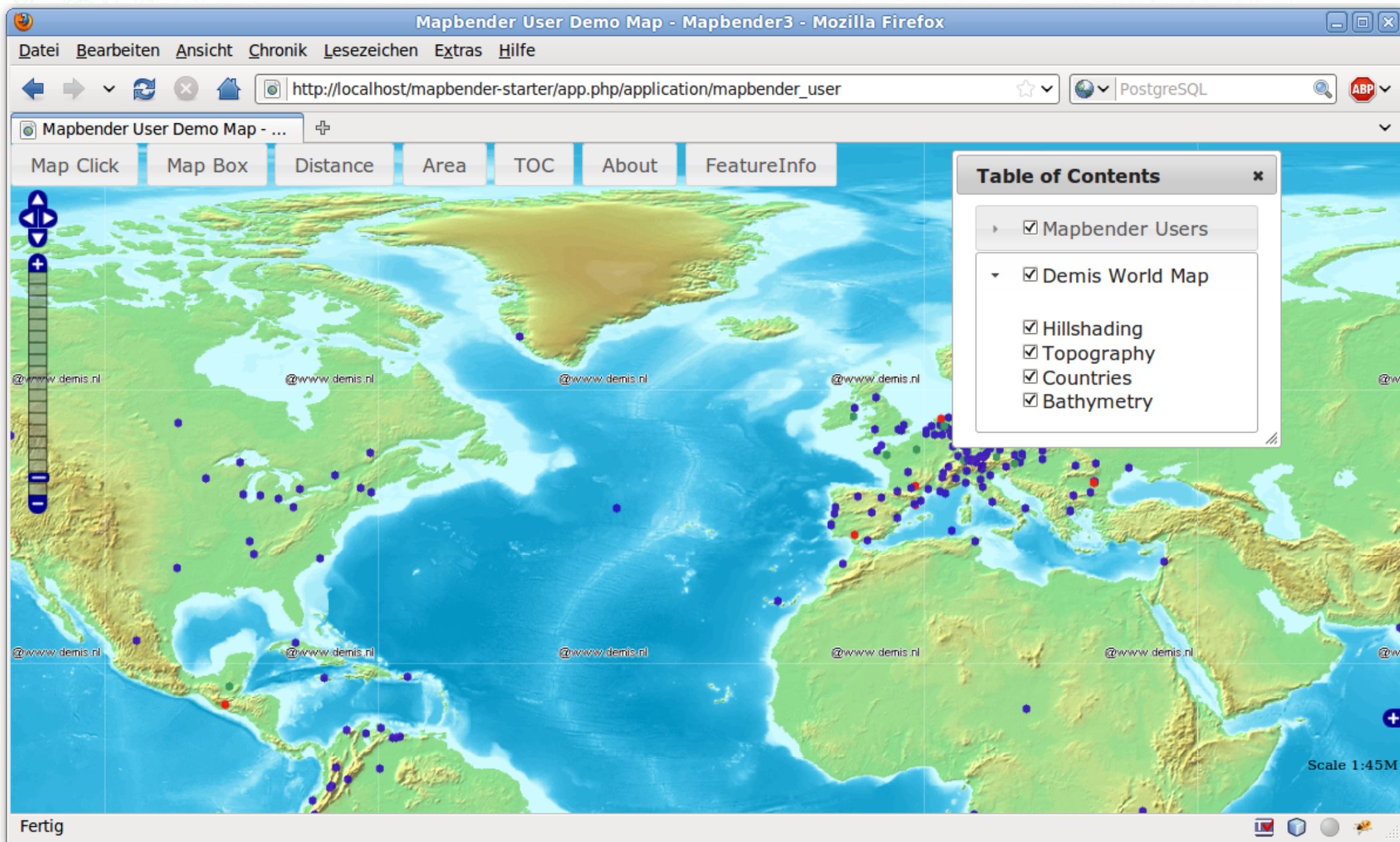
Map Click Map Box Distance Area TOC About FeatureInfo

Table of Contents

- ☒ Mapbender Users
- ☒ Demis World Map
 - ☒ Hillshading
 - ☒ Topography
 - ☒ Countries
 - ☒ Bathymetry

Scale 1:45M

Fertig



Calculate Area

Mapbender User Demo Map - Mapbender3 - Mozilla Firefox

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http://localhost/mapbender-starter/app.php/application/mapbender_user PostgreSQL

Mapbender User Demo Map - ...

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- ☒ Mapbender Users
- ☒ Demis World Map

Area

8629994.24 km²

Scale 1:45M

Fertio

Measure

Mapbender User Demo Map - Mapbender3 - Mozilla Firefox

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http://localhost/mapbender-starter/app.php/application/mapbender_user PostgreSQL

Mapbender User Demo Map - ...

Map Click Map Box Distance Area TOC About FeatureInfo

Distance x

8237.17 km

Table of Contents x

- ☒ Mapbender Users
- ☒ Demis World Map

Scale 1:45M

Fertig

Get the Map-Box

Mapbender User Demo Map - Mapbender3 - Mozilla Firefox

Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

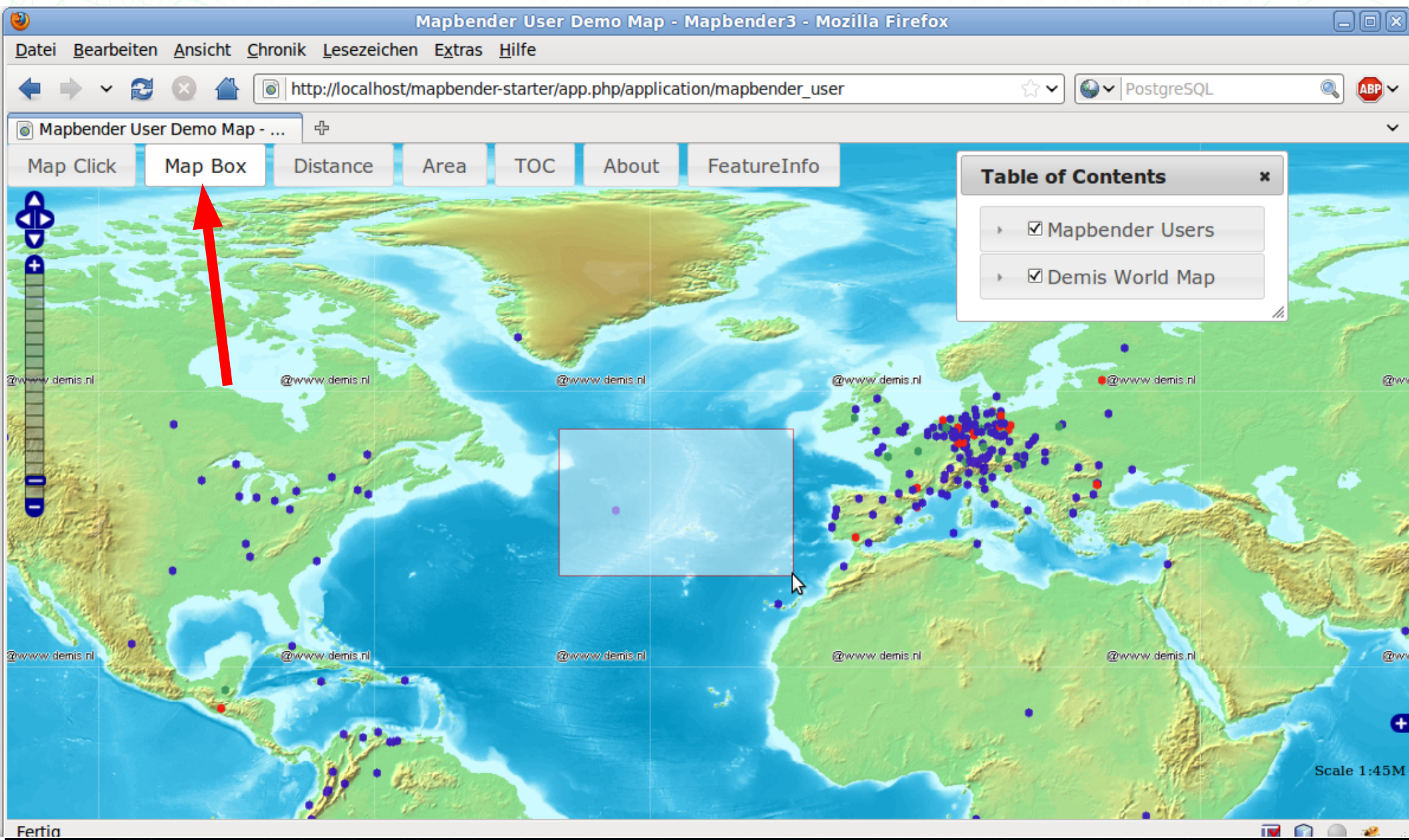
http://localhost/mapbender-starter/app.php/application/mapbender_user PostgreSQL

Mapbender User Demo Map - ...

Map Click **Map Box** Distance Area TOC About FeatureInfo

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Scale 1:45M

Fertig

Handle the Map-Box Results

Mapbender User Demo Map - Mapbender3 - Mozilla Firefox

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http://localhost/mapbender-starter/app.php/application/mapbender_user PostgreSQL


Mapbender User Demo Map - ...

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- ☒ Mapbender Users
- ☒ Demis World Map

Die Seite mit der Adresse http://localhost meldet:

 You clicked: [514,400 x 729,266] (Pixels), which equals
[-45.286624203822,32.531847133758 x -14.474522292994,51.735668789809] (World).

OK

Fertig


Scale 1:45M

Welcome - Mapbender3 - Mozilla Firefox

Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

http://localhost/mapbender-starter/app.php

Welcome - Mapbender3



[Apps](#) [Services](#) [Users](#) [Handbook](#) [Logout](#) [My Account](#)

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Simple map showing WMS use.

OSM Denver Map
Simple map showing OSM with WMTS tiles.


Fertig

Add WMS - Mapbender3 - Mozilla Firefox

Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

http://localhost/mapbender-starter/app.php/wms/add PostgreSQL ABP

Laden...



Apps Services Users Handbook Logout My Account

Capabilities-URL laden

Capabilities URL

HTTP User

HTTP Password

Load

Warten auf localhost...


WMS Metadata and Layer Information

Mapbender3 - Mozilla Firefox

Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

http://localhost/mapbender-starter/app.php/wms/preview PostgreSQL ABP

- Mapbender3



Apps Services Users Handbook Logout My Account

'http://www2.demis.nl/wms/wms.asp?wms=WorldMap&VERSION=1.1.1&REQUEST=GetCapabilities&SERVICE=WMS'

Save

[Metadata](#)
[Contact](#)
[Service](#)
[Layer](#)
[Preview](#)

Metadata

Title

Name

Alias

Abstract

OnlineResource [Open](#)

Fees

Access constraints

Contact

Person

Fertig

Map**b**ender3 – write your first demo

Generate an Element

- Generate an element using the generator
 - One-line generation of ready-to-use elements
 - Different types for different needs
 - We offer map-click and map-box

Generate your own element

```
app/console mapbender:generate:element  
--type=map-click 'Acme\DemoBundle'  
MyElement src
```

Summary of actions

- Your element AcmeDemoBundle\Element\MyElement has been created.
- The following files have been created:
 - PHP class (src/Acme/DemoBundle/Element/MyElement.php)
 - jQuery widget (src/Acme/DemoBundle/Resources/public/mapbender.element.myelement.js)

Follow up actions

Read about adapting your bare-bone element at <http://mapbender.org/3/cookbook/element-from-skeleton>

Generate your own element

- Modify the functions and add your code
- Add the element to the `mapbender_demo.yml` to add it to the application

Getting Help from Symfony Profiler

Mapbender User Demo Map - Mapbender3 - Mozilla Firefox

Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

http://localhost/mapbender-starter/app_dev.php/application/mapbender_user PostgreSQL

Map Click Map Box Distance Area TOC About FeatureInfo

/app_dev.php

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- ☒ Mapbender Users
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Scale 1:91M

2.0.0 PHP 5.3.2-1ubuntu4.9 | xdebug | accel | app|dev|debug|4e721c007a66f | ApplicationController::applicationAction|mapbender_application|200 | 246 ms | 8704 KB | user | 0

http://localhost/mapbender-starter/app_dev.php/_profiler/4e721c007a66f?panel=db

Profiler - Mozilla Firefox


Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

http://localhost/mapbender-starter/app_dev.php/_profiler/4e721b4d2afab?panel=config PostgreSQL

Profiler Handbook - Mapbender3 README.rst at master fro...

2.0.0 PHP 5.3.2-1ubuntu4.9 xdebug accel app|dev|debug|4e721b4d2afab ApplicationController::applicationAction|mapbender_application|200 728 ms 8704 KB user

0

 **Symfony profiler**

http://localhost/mapbender-starter/app_dev.php/application/mapbender user
by 127.0.0.1 at Thu, 15 Sep 2011 17:35:41 +0200

CONFIG

REQUEST

EXCEPTION

EVENTS

LOGS

Project Configuration

Key	Value
Symfony version	2.0.0
Application name	app
Environment	dev
Debug	enabled

PHP configuration

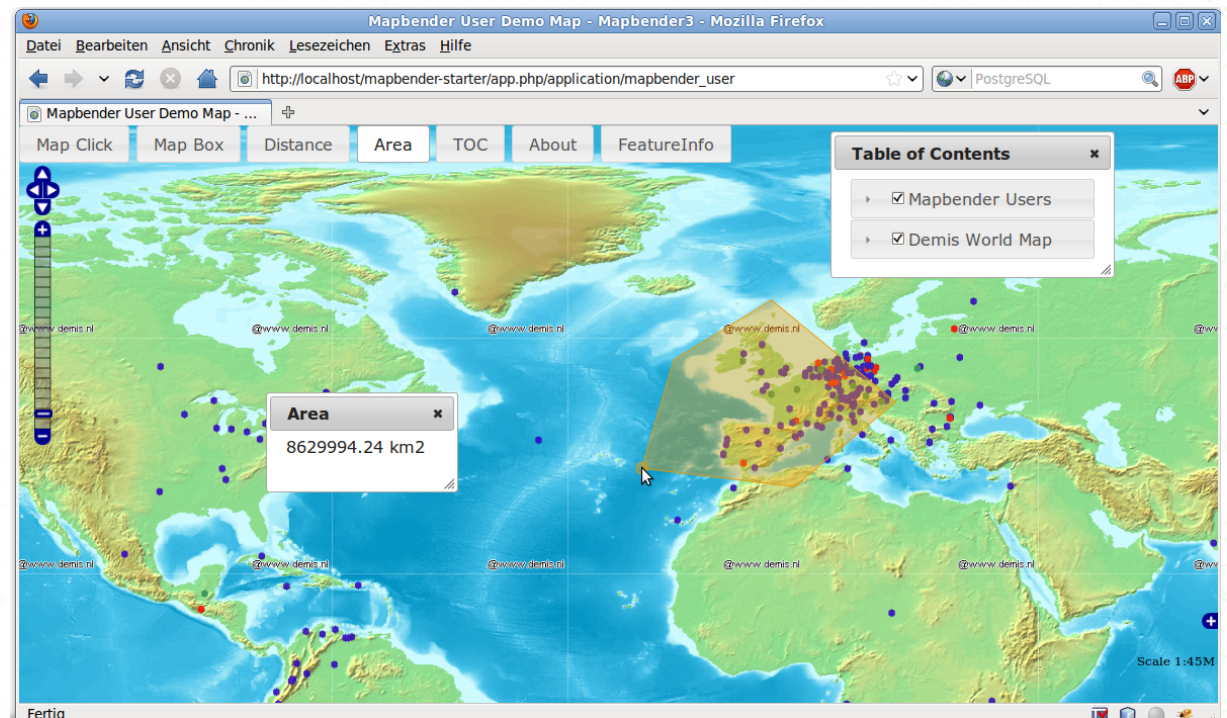
Fertig

Future Plans

- Combine the Service Repository and Application
- User and group management
- Storage of the user, service and application information in a database
- Provide flexible configuration through the client

Try Mapbender3 on your own

<http://mapbender3.org/Demo>



Thank you for your attention!

If you have any questions contact
Astrid Emde (astrid_emde@osgeo.org)

or write to

mapbender-users@list.osgeo.org

With friendly support by:



WhereGroup

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