

FUNDMAP

A mapApps based web application
for lost property management

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CONTENT

IDEA

DATA

APPLICATION

DEMO

OUTLOOK

IDEA



IDEA

- Lost property office of the city of Münster provides a list of found objects
- Additional information: location as address string
- Use this information for a map application that shows found objects filtered by categories and date

IDEA

- Users can quickly search for the lost object by place by interacting with a map
- Web application that also runs on mobile devices
- Contact lost property office not before application is nearly done

DATA



DATA



Amt für
Bürgerangelegenheiten



- >> Meldeangelegenheiten
- >> Ausweise und Pässe
- >> Führungszeugnis, Beglaubigungen und Sonstiges
- >> Rund ums Auto
- >> Staatsangehörigkeitsangelegenheiten
- >> **Fundsachen**
 - >> Fundbüros
 - >> Verloren
 - >> Gefunden
 - >> Fahrräder
 - >> Fundfahrradstation
 - >> Versteigerungen
 - >> Rechtliche Grundlagen
- >> **Versicherungsamt**
- >> **Wahlamt**
- >> **D115 / Telefonservice**
- >> **Gebührentabelle**
- >> **Formulare**
- >> **Virtuelles Bürgerbüro**
- >> **Pressemitteilungen**
- >> **Kontakt**



Fundbüro online: Suchergebnisse



Fundname	Funddatum	Fundort
223 Treffer in Kategorie Schlüssel		
Schlüsselbund 3	24.01.12	Gievenbeck Rüschausweg
2 Schlüssel	24.01.12	Rosenplatz
Kesoschlüssel	24.01.12	
Hundaischlüssel	24.01.12	Halle Münsterland
Schlüsselbund	24.01.12	Halle Münsterland
VW-Schlüssel	24.01.12	Halle Münsterland
Schlüssel (1)	23.01.12	Westfalenstraße Höhe Westfalen-Tankstelle
1 Schlüssel	23.01.12	meinertzstr.
Schlüsselbund	23.01.12	Domplatz
Schlüsselbund 12	22.01.12	Neuheim 19
Schlüsselbund 2	19.01.12	Bus 13
Sicherheitsschlüssel	18.01.12	markt olivenstand
Schlüsselbund 4	17.01.12	Goldene Brücke
Autoschlüssel	17.01.12	Jägerstr.
Schlüsselbund	17.01.12	Stadtwerke im Bus
Schlüsselbund	17.01.12	Kanalstr.

>> **Fundbüro online:**
Hier können Sie
online nachsehen,
welche Fundsachen
bei uns abgegeben
wurden.

DATA

- Parsing the website with an XML parser using PHP
- Storing the results in a database
- Script runs two times a day to collect updates

GEOCODING

- Finding geographic coordinates by street addresses
- Example:
“Hindenburgplatz”  51.96188, 7.61767
- Service: **mapquest** 

GEOCODING

- Caching the results in a database

query	latitude	longitude
Hammer Str.	51.95486	7.62626
Andreas-Hofer-Str.	51.95479	7.65283
Windthorststraße	51.95687	7.63401
Gemenweg	51.97415	7.58933
Martinistraße	51.96473	7.63092
Geiststrasse	51.95234	7.6198

GEOCODING

- Learning geocoding service
- Database storing provides the ability to manually correct wrong geocodes
- Extending the results

GEOCODING

- Problem: Lots of objects are found in business dealings
- No automatically geocoded business names
- Most important stores, places etc. can be added manually

query	latitude	longitude
C&A	51.958535	7.62816
Schwarzes Schaf	51.963445	7.629278
Send	51.96188	7.61767
Cineplex	51.950435	7.636764

REST SERVICE

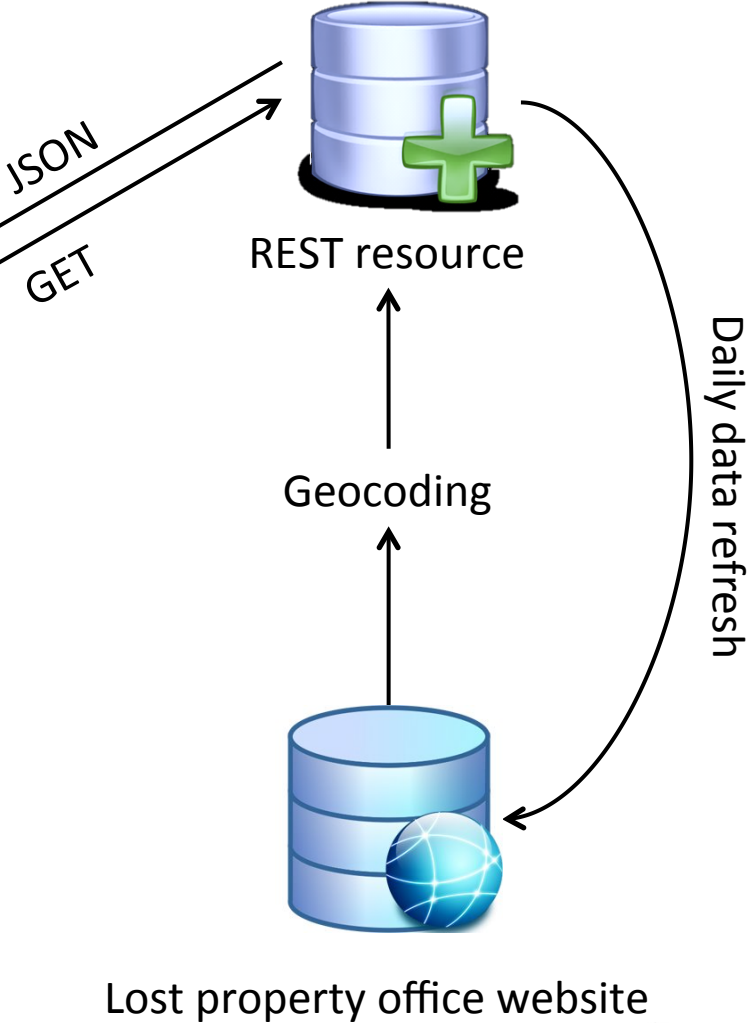
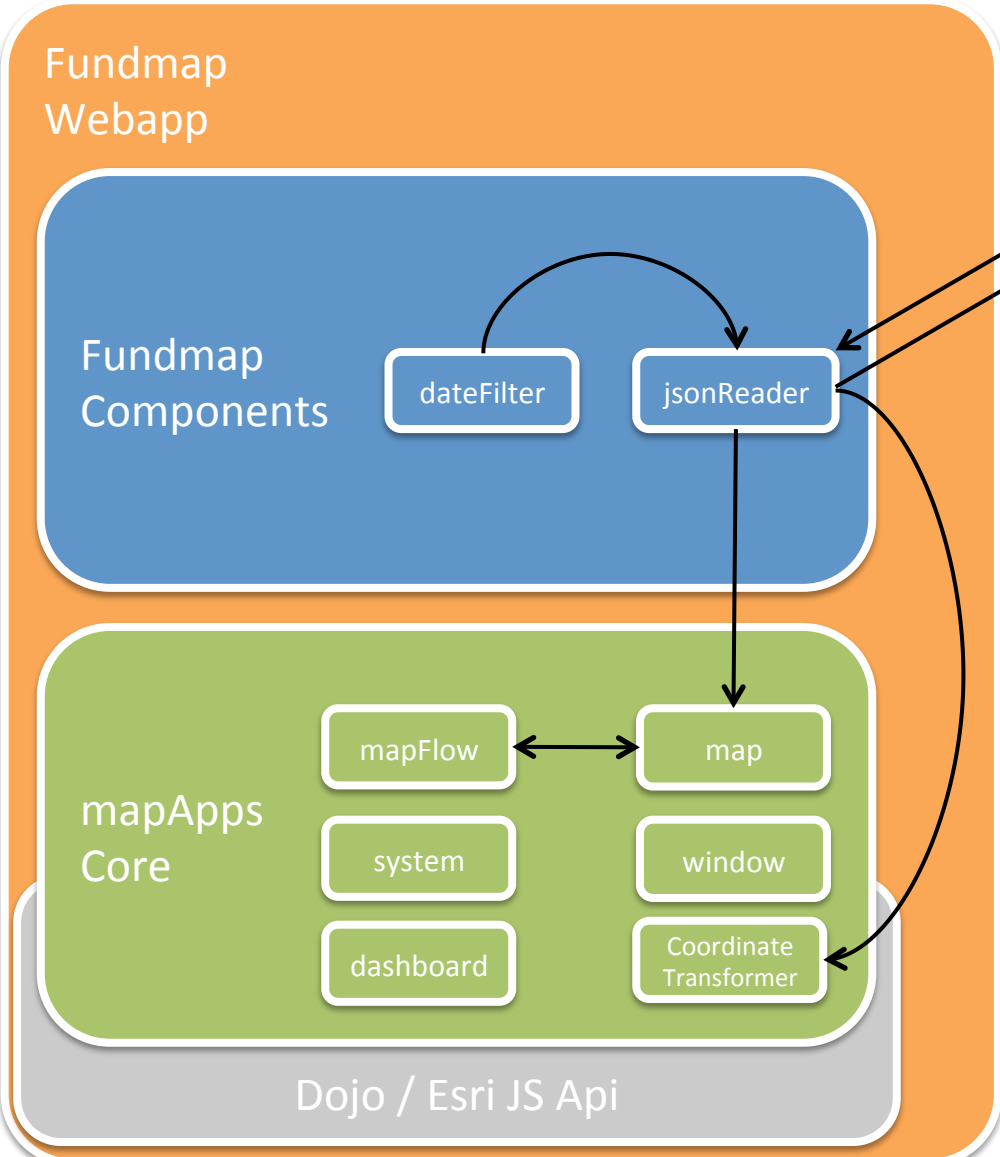
- HTTP resource for requesting list of objects from the database
- GET parameters:

parameter	type	values
output	String	"json" "html"
start	Date	e.g. "2012-01-20"
end	Date	e.g. "2012-01-26"
category	String	"technik" "schirme" "schluessel" "kleidung" "wertsachen" "koffer" "sonstiges"

APPLICATION



ARCHITECTURE



COORDINATE TRANSFORMER

- Lost property locations are geocoded in WGS84
- Basemap by OpenStreetMap (Pseudo Web Mercator)
- CoordinateTransformer transforms from WGS84 to Pseudo Web Mercator

CATEGORIES





MAPFLOW

- Provides ability to switch between categories
- Gets available categories from the item on the map

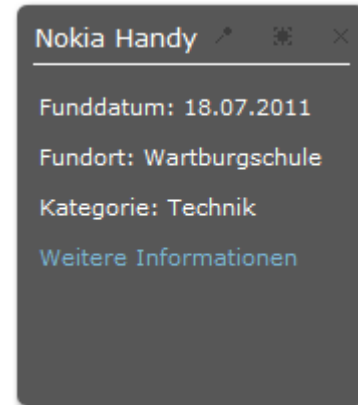


DATEFILTER

- Filters properties by date interval
- Different ways to use the dateFilter:
 - Click **Filter** button  instant result
 - Click **Play** button  aggregation of results day by day

INFOVIEWER

- Containing descriptive information about properties
 - Description
 - Finding date
 - Finding location
 - Item category
 - Link to the original website containing additional information



DEMO



OUTLOOK



OUTLOOK

- Handling of mobile locations (e.g. bus, taxi, ...)
- How to display multiple objects on the same location?
- How to deal with vague location information (e.g. park bench, playground, ...)

OUTLOOK

- Meeting with the IT responsables of the lost property office this week
- Improvement of data collection possible?
- Strong interest in linking the app from the official website as an additional service for the citizen



<http://giv-fundmap.uni-muenster.de>

**THANK YOU FOR YOUR
ATTENTION!**

