



Regesta Imperii with XML and other cool stuff

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Web Data and Interoperability, 2016

Regesta Imperii

- Coding da Vinci and Regesta Imperii
- The Data

The Work

- Data Preprocessing
- Web Application
- Additional Processing

Live Demo

Coding da Vinci

- ▶ Germany's first culture Hackathon
- ▶ organized by Deutsche Digitale Bibliothek
- ▶ goal: developing digital applications based on cultural data.

Coding da Vinci and Regesta Imperii

Coding da Vinci

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Regesta Imperii

- ▶ chronologically records documents of
 - ▶ Roman-German kings/emperors (751–1519)
 - ▶ popes of early and High Middle Ages
- ▶ took part in Coding da Vinci 2015
 - ▶ to develop new applications/services from open data

The Data

- ▶ 130,000 papal regesta
- ▶ each as XML file

something like this:

```
<?xml version="1.0" encoding="UTF-8"?>
<cei xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:noNamespaceSchemaLocation="http://www.cei.lmu.de/schema/cei060122.xsd">
  <teiHeader>
    <fileDesc>
      <titleStmt>
        <title>Friedrich III. – [RI XIII] H. 14 n. 7</title>
      </titleStmt>
      <editionStmt>
        <p n="volume">[RI XIII] H. 14 – Friedrich III., Nürnberg 1 (1440–1449)</p>
        <p n="repository">Regesta Imperii Online: <ref type="external" target="http://www.
          regesta-imperii.de/cei/013-014-000/sources/1440-05-16_1_0_13_14_0_7_7"></
          ref></p>
      </editionStmt>
      <publicationStmt>
        <p n="authority">
          Deutsche Kommission für die Bearbeitung der Regesta Imperii e.V. bei der Akademie
            der Wissenschaften und der Literatur | Mainz
        </p>
        <publisher>Akademie der Wissenschaften und der Literatur | Mainz – Digitale
          Akademie</publisher>
```



Regesta Imperii



Inhaltsangaben von Kaiser-, König- und Papsturkunden vom 8. bis ins 16. Jahrhundert in modernem Deutsch (sog. Regesten) -> 130.000 Stück

www.regesta-imperii.de

Ein **Regest** als XML-Datei

Aus Urkunden



werden **Regesten**

und

Regestentext mit allen
rechtlich relevanten
Inhalten

mit

Herrscherangabe



Datumsangabe



im ISO-Format

Ortsangabe



mit Geokoordinaten



All regesta XML files were transformed into a single XML file.

- ▶ using Python? Bash?
- ▶ some code?

The new XML file can be validated via XSD?

- ▶ some code?

- ▶ web standards + PHP
- ▶ possible to search for

- ▶ title
- ▶ date
- ▶ place
- ▶ issuer

and any combination of them of each regesta

- ▶ using XPath in SimpleXML

- ▶ output with additional info/links to resources

```
$xml = simplexml_load_file("index.xml");
```

```
// XML: <list><document><title>...</title>...</document></list>
```

```
$document = $xml->xpath("/list/document");
```

```
foreach ($document as $node) {  
    if (stripos ($node->title, $_POST['TitleInput']) > -1) { $elem[] = $pos; }  
    $pos += 1;  
}
```


Something for XQuery

- ▶ Foobar Foobar
- ▶ some code?

Result?

- ▶ something else

We used SPARQL to retrieve information about Johann Friedrich Böhmer from DBpedia.

- ▶ founder of Regesta Imperii

Via PHP:

```
$person = "<http://dbpedia.org/resource/Johann_Friedrich_Böhmer>";
```

```
$sparql = "SELECT ?birthDate ?deathDate ?abstract WHERE {
```

```
    OPTIONAL {" . $person . " dbo:birthDate ?birthDate.}
    OPTIONAL {" . $person . " dbp:birthDate ?birthDate.}
    OPTIONAL {" . $person . " dbo:deathDate ?deathDate.}
    OPTIONAL {" . $person . " dbp:deathDate ?deathDate.}
    OPTIONAL {" . $person . " dbo:abstract ?abstract.}
```

```
    FILTER (lang(?abstract) = 'en')
```

```
} LIMIT 1";
```

Something about Web Services

- ▶ Foobar Foobar
- ▶ some code?

DBpedia?

- ▶ something else

Microdata was used

- ▶ to arrange results into pages for CSS

```
foreach ($elem as $num) {  
    if ($pos % 5 == 0) { echo '<section id="", ($pos / 5), "">'; }  
  
    // found regesta  
  
    if ($pos % 5 == 4) { echo '</section>'; }  
    $pos += 1;  
}
```

- ▶ to insert vCards with very sensitive personal data into the website

```
<address class="vcard">  
  <span class="givenName">Numerius</span>  
  <span class="familyName">Negidius</span><br>  
  <a class="email" href="mailto:spam@hotmail.com">n.nescio@nn.gov</a><br>  
  <span class="category">Management</span>,  
  <span class="org">Freie Universität Bärln</span>  
</address>
```

Let's have a look...

- ▶ The **first main message** of your talk in one or two lines.
- ▶ The **second main message** of your talk in one or two lines.
- ▶ Perhaps a **third message**, but not more than that.

- ▶ Outlook
 - ▶ Something you haven't solved.
 - ▶ Something else you haven't solved.