



EGN WP8: EGN ArcGIS Extension

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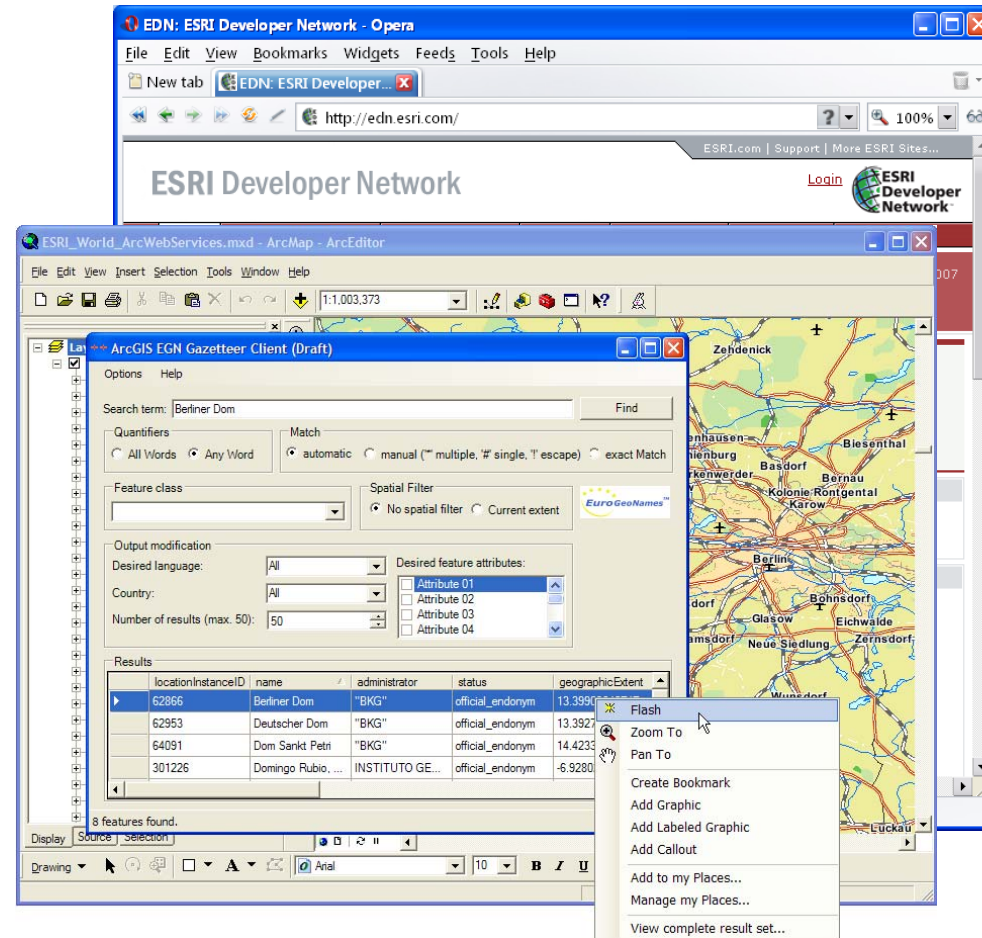
ESRI handelt.

Agenda

- Deliverables
- Main parts of implementation progress
- TODOs

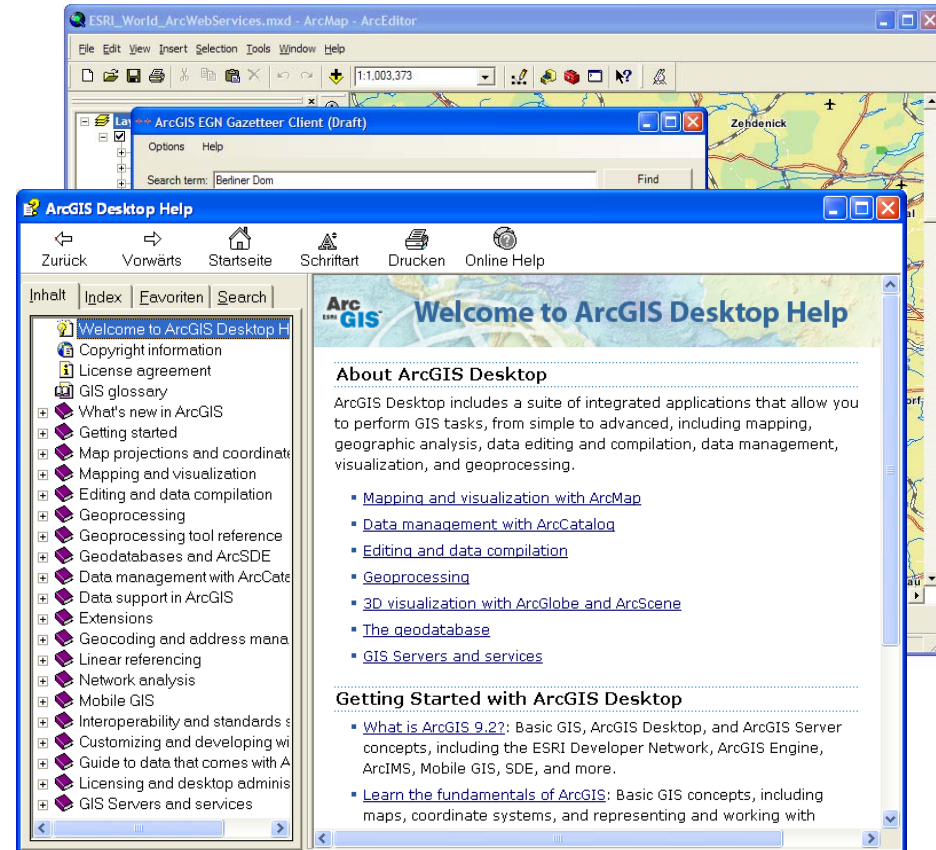
Deliverable 8.1: EGN ArcGIS Extension

- Downloadable extension for ArcGIS 9.2 and beyond
- Free download from EGN
 - Sources and binaries
- The extension allows the usage of the EGN Gazetteer for your ArcMap projects
 - Zoom to feature, ...
- Goal: Help to disseminate the EGN Web Service through the large ESRI user base



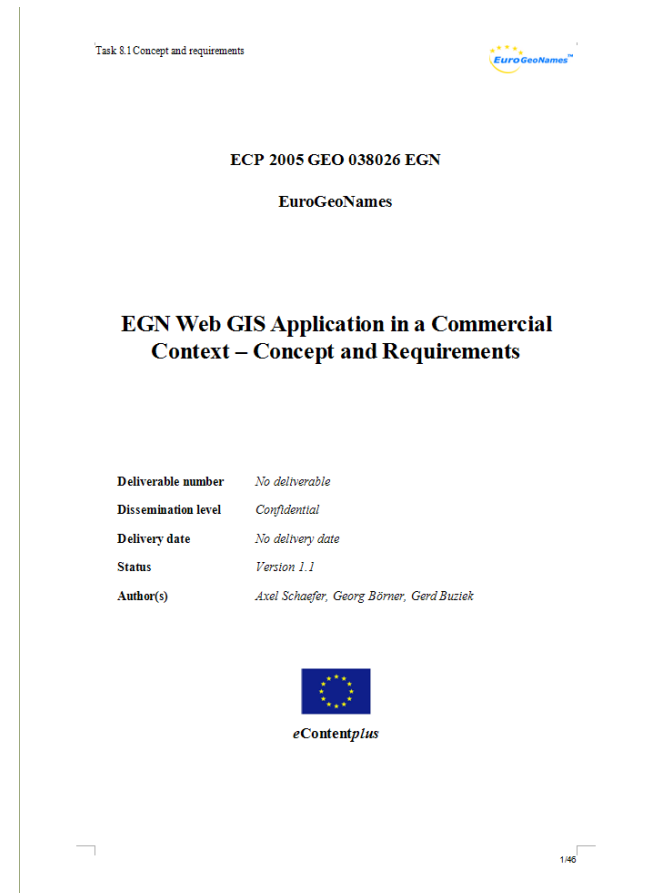
Deliverable 8.2: EGN ArcGIS Extension documentation

- Documentation of the ArcGIS Extension
 - Introduction to EGN service
 - Usage of extension
 - Interpretation of the results



Internal concept paper

- Presents conceptual technical background of Extension
- Presents interface and the functions it supports
- Specifies request-response communication to underlying EGN service.



Main parts of implementation progress

- Mapping the EGN service structure into objects
- Presenting the response in a table
- Mapping filter-functions in the user-interface

Mapping the EGN service structure into objects

- EGN service structure with unique content.
- The response is XML.
- Application has to parse the semantic logic of this XML.
 - „Shortcut-links“ to the information.
 - Dependencies and hierachies in internal structure.
- Lot of conceptual work, lot abstract code written. Some Serializer applications tested.
- → Done.

```

- <egn:IPAs>
  <![CDATA[ "" ]]>
</egn:IPAs>
<egn:lastUpdateDate>0001-01-01T00:00:00</egn:lastUpdateDate>
- <egn:locationType>
- <egn:FeatureClassification gml:id="FeatureClassification_2">
  - <egn:featureType>
    - <egn:FeatureClassification_featureType
      gml:id="FeatureClassification_featureType_2">
    - <egn:featureType>
      - <egn:PT_FreeText gml:id="PT_FreeText_13">
        <egn:languageCode>eng</egn:languageCode>
      - <egn:characterSetCode>
      - <egn:MD_CharacterSetCode
        gml:id="MD_CharacterSetCode_4">

```

```

/// <remarks/>
public string IPAs
{
  get
  {
    return this.iPAsField;
  }
  set
  {
    this.iPAsField = value;
  }
}

/// <remarks/>
[System.Xml.Serialization.XmlElementAttribute(DataType = "time")]
public System.DateTime lastUpdateDate
{
  get
  {
    return this.lastUpdateDateField;
  }
  set
  {
    this.lastUpdateDateField = value;
  }
}

/// <remarks />
public Name name
{
  get
  {
    return this.nameField;
  }
  set
  {
    this.nameField = value;
  }
}

/// <remarks />
public Status status
{
  get

```

egn:plainText>

n:classificationScheme>

ssification_1">

FeatureType_1">

FreeText_12">

languageCode>

de_4" />

trative areas



Presenting response in a table (1)

- Response from service has a tree structure.
 - Hierarchies
 - Inheritance
 - Branches (e.g. alternative names)
- Hard to present content in a table
 - You cannot foresee the structure of the resulting table (e.g. contains one or more alternative names?).

The screenshot shows XML Notepad with a tree view on the left and an XSL Output table on the right. The tree view shows a hierarchical structure of XML elements, including `egn:lastUpdateDate`, `egn:locationType`, `egn:FeatureClassification`, `egn:featureType`, `egn:PT_FreeText`, `egn:languageCode`, `egn:characterSetCode`, `egn:MD_CharacterSetCode`, and `egn:plainText`. The XSL Output table displays the corresponding values for these elements, such as `0001-01-01T00:00:00`, `FeatureClassification_2`, `FeatureClassification_featureType_2`, `PT_FreeText_13`, `eng`, `MD_CharacterSetCode_4`, `utf8`, and `Administrative units`.

Description	File	Line	Column
Type 'http://www.opengis.net/ows:ServiceType' is not declared, or is no...	C:\Documents a...	0	0
Undefined complexType 'http://www.opengis.net/ows:GetCapabilitiesT...	C:\Documents a...	0	0

Presenting response in a table (2)

- Why a table anyway?
 - User is used to get results presented in a table.
 - User can navigate easier through a table.
 - User can sort the results in the table.
- Present the mandatory and important attributes of the results in the table
- Present the advanced attributes of the results in the XML-Tree structure.
- Presentation is customizable with stylesheets.
- → Nearly done.

The screenshot shows the ArcGIS EGN Gazetteer Client (Draft) interface. The search term is 'Kreuzberg'. The results table displays the following data:

locationInstanceID	geographicIdentifier	temporalExtent	administrator
50870	Kreuzberg.DE.20000023021	01/01/2000-01/01/2000	...

Below the table, the XML view shows the following structure:

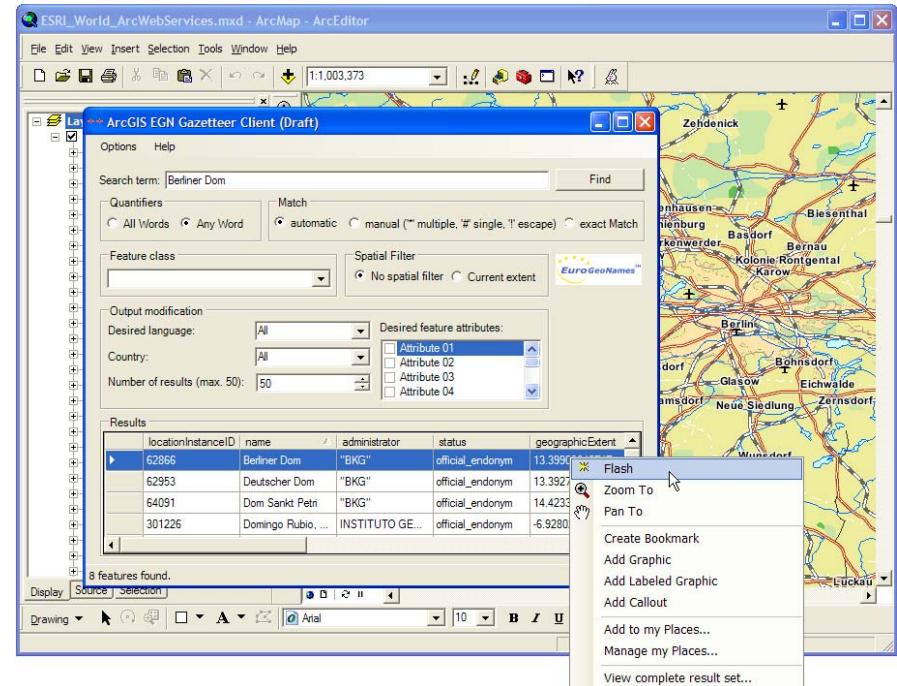
```

<-cwf:FeatureCollection
  numberOfFeatures="1" xsi:schemaLocation="http://www.eurogeonames.eu/egn
  http://www.eurogeonames.com:8080/gateway/gateto/VARI-VARI?
  SERVICE=WFS&VERSION=1.1.0&REQUEST=DescribeFeatureType&TYPENAME=
  (egn=http://www.eurogeonames.eu/egn) http://www.opengis.net/wfs
  http://schemas.opengis.net/wfs/1.1.0/wfs.xsd">
  <-gml:boundedBy>
  <-gml:Envelope srsName="EPSG:4258">
    <gml:pos srsDimension="2">13.386880874633789
    52.49332046508789</gml:pos>
    <gml:pos srsDimension="2">13.386881828308105
    52.493324279785156</gml:pos>
  </gml:Envelope>
  <-gml:boundedBy>
  <-gml:FeatureMember>
  <-egn:LocationInstanceName gml:id="LocationInstanceName_50870">
  <-gml:boundedBy>
  <-gml:Envelope srsName="EPSG:4258">
    <gml:pos srsDimension="2">13.386880874633789
    52.49332046508789</gml:pos>
    <gml:pos srsDimension="2">13.386881828308105
    52.493324279785156</gml:pos>
  </gml:Envelope>
  <-gml:boundedBy>
  <-egn:locationInstanceID=50870</egn:locationInstanceID>
  </gml:FeatureMember>
</cwf:FeatureCollection>
  
```

A context menu is open over the table, with the option 'View complete result set...' highlighted. A blue arrow points from this menu item to the XML view window.

Mapping filter-functions to the user-interface

- Based on discussions in the project.
- Based on structure and possibilities of WFS service.
- → Still in progress.



Other TODOs

- Finish implementation
 - Mapping Filter Functions
 - Coordinate transformation
 - ArcGIS integration (Bookmarks, MyPlaces)
- Tight up code
- Quality Assurance
- Documentation

DILBERT by Scott Adams

