DESIGNING IDENTIFIERS

THE APPROACH IN FRANCE IN GENERAL AND AT IGN FRANCE IN PARTICULAR

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European guidelines

- **Source document:**
  - ARE3NA Study on RDF and PIDs for INSPIRE (Deliverable D.TD.04)
    - A very comprehensive study

- 3 different PID governance approaches:

  - **A** Diversification
    - AS-IS
  - **B** Unification
  - **C** Coordination
At national level

- Publish national guidelines:
  - CNIG formed a group to write guidelines on URI

- Use a coordination approach

- Consider all kinds of resolvable URIs: HTTP URIs and identifier coupled with a resolver.
At national level

- Priority fixed to resource identifiers for this guideline (ie not object identifiers)
- Main objective: Solve issue about linking data metadata and service metadata!
At national level

- **One requirement:**
  - Resource identifier should point to resource metadata
At national level

- Only one requirements but many guidelines to answer common questions:
  - Which technologies should be chosen?
    - Presentation of HTTP URIs, DOI, URN, uuid
    - Details on different criteria (unicity, opacity, cost, etc)
    - Feedback from users
  - How to set up a URI governance?

- Guidelines available here:
At IGN France

- Defining URIs has been a never ending issue:
  - When setting up registers
  - To reach the world of linked data
  - Starting to transform our data to Inspire data

✓ Creation a new product was finally the occasion to start the process

- Do not start too big!
1. Identify resources that needed an identifier:
   - feature objects and dataset
   - vocabularies
   - Feature description (feature catalogs)
   - metadata
   - real-world concepts (e.g., monumented control point)
   - informational resource
   - document
2. Define a URL pattern for each resource:

- « feature » : feature objects and dataset
- « def » : vocabularies
- « fc » : feature catalogs
- « set » : metadata
- « id » : real-world concepts
- « doc » : informational resource
- document

Linked data world vs database oriented world :
- Difficulty to define vocabularies for our projects
- -> Decided to create a “fc” branch more database oriented and to keep “def” clean with what was existing in Datalift project.
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2. Define a URL pattern for each resource:
   - « feature » : feature objects and dataset
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Pattern: https://data.ign.fr/feature/{product-name}/{class-name}/{object-id}/{attribute-name}

Example: https://data.ign.fr/feature/bdparcellaire/parcelle/1132154
https://data.ign.fr/feature/INSPIRE_Hydrography_LOD2/Watercourse/216534
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Before:
Namespace FR_IGNF_BDTOPO_HY_MET
LocalID 216534

After: (not fixed yet)
LocalID https://data.ign.fr/feature/INSPIRE_Hydrography_LOD2/Watercourse/216534
Namespace ?
3. Accept that there are exceptions:
   - « feature » : feature objects and dataset
   - « def » : vocabularies
   - « fc » : feature catalogs
   - « set » : metadata
   - « id » : real-world concepts
   - « doc » : informational resource

   **Document** : many practices already exist, study if we can use an existing identifier system (e.g. DOI)
3. Accept that there are exceptions:
- « feature » : feature objects and dataset
- « def » : vocabularies
- « fc » : feature catalogs
- « set » : metadata
- « id » : real-world concepts : no responsible for real-world concepts excepts geodetic points
- « doc » : informational resource
- document
At IGN France

4. Be prepared for future work!
   - Build up a system that makes URL resolvable
     - To what should it point? Redirections? Content negotiation?

Example for features:

```
http://myURI/id  GetFeatureById  Redirection
```

Inspire direct download service (eg WFS)
Final advices

- Do not be too ambitious
  - Otherwise you will not succeed in your task (maybe not even start)
- Do not be too shy
  - Otherwise you will have a painful harmonisation later