Fair-EASE :
Data Provider around ERDDAP

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Last Time Resume :

localhost:8080/erddap/info/catalogs.html

localhost:8080/ .../dataset **.nc**
              .../dataset **.json**
              .../dataset **.csv**
              .../dataset **.html**
              .../dataset **.{format}**

localhost:8080/erddap/info/index.html**?page=1&itemsPerPage=1000**

"If it's possible, order them by the latest update date"
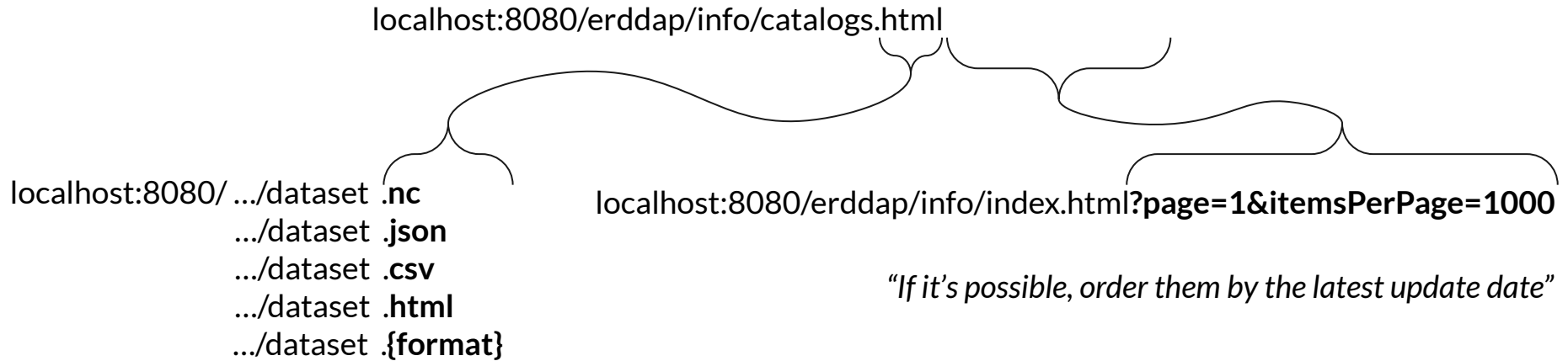
Progress since last time :


```xml
<?xml version="1.0" encoding="UTF-8"?>
<rss version="2.0" xmlns="http://backend.userland.com/rss2">
  <channel>
    <title>ERDDAP: AVHRR Pathfinder Version 5.3 L3-Collated (L3C) SST, Global, 0.0417°,
1981-present, Daytime (1 Day Composite), Lon0360</title>
    <description>This RSS feed changes when the dataset changes.</description>

<link>https://coastwatch.pfeg.noaa.gov/erddap/griddap/nceiPH53sstd1day_Lon0360.html</link>
    <pubDate>Tue, 01 Aug 2023 21:54:46 GMT</pubDate>
    <item>
      <title>This dataset changed 2023-08-01T21:54:46Z</title>

<link>https://coastwatch.pfeg.noaa.gov/erddap/griddap/nceiPH53sstd1day_Lon0360.html</link>
      <description>Previously, this dataset was (temporarily?) not available.  Perhaps ERDDAP
was just restarted.</description>
    </item>
  </channel>
</rss>
```
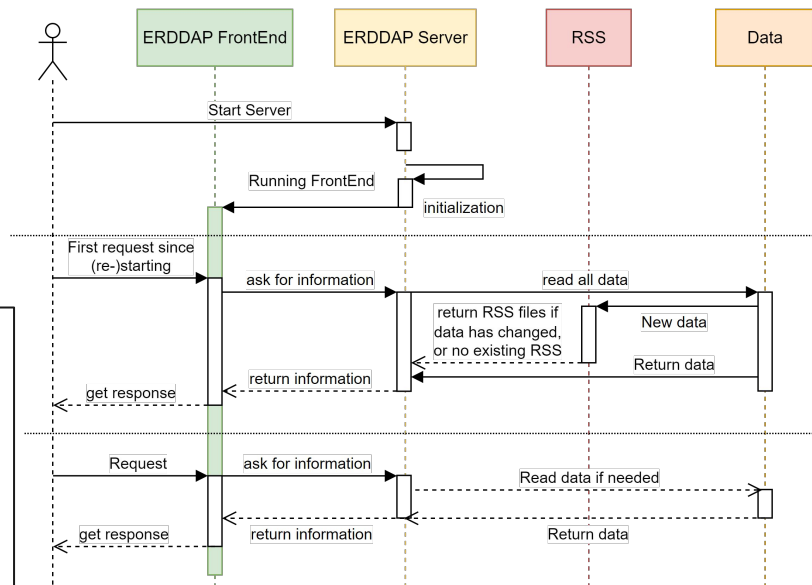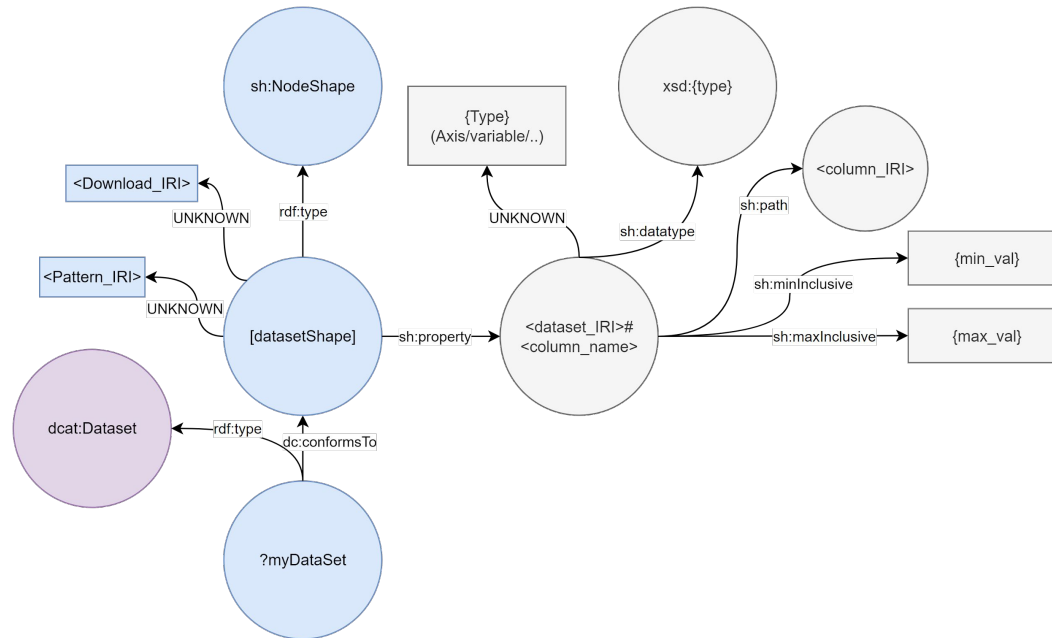
Progress since last time :

/erddapData/history.json

```
{
  "datasets_87d0_e08a_ce8e": [
    {
      "date": "2023-07-27T07:52:09",
      "description": "A combinedGlobalAttribute changed:",
      "old": " old line #12=\" infoUrl=???\",",
      "new": " new line #12=\" infoUrl=https://vliz.be\"."
    },
    {
      "date": "2023-07-27T07:51:29",
      "description": "The number of variables changed:",
      "old": " old=1,",
      "new": " new=2."
    },
    {
      "date": "2023-07-27T06:59:26",
      "description": "Initial init datasets_87d0_e08a_ce8e"
    }
  ],
  "datasets_87d0_e08a_d98e": [
    ...
  ]
}
```

Progress since last time :

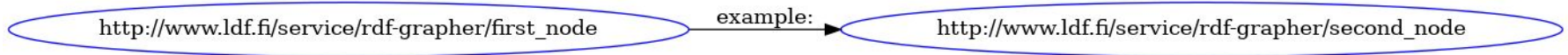# Progress since last time :

```java
Model graph = ModelFactory.createDefaultModel();

Map<String, String> prefixMap = new HashMap<String, String>() {{put("example", "http://example.org");}};
graph.setNsPrefixes(prefixMap);

Resource node = graph.createResource("first_node");
node.addProperty(
        graph.createProperty("http://example.org"),
        graph.createResource("second_node")
);
RDFDataMgr.write(outputStream, graph, Lang.TTL);
```

=>

```
@prefix example: <http://example.org> .

<first_node>  example:  <second_node> .
```

http://www.ldf.fi/service/rdf-grapher/first_node → example: → http://www.ldf.fi/service/rdf-grapher/second_node

Namespaces:
example: http://example.org

TTL => PNG :
https://www.ldf.fi/service/rdf-grapher

Progress since last time :

http://localhost:8080/erddap/test.{format}

.turtle
.ttl
.n3
.ntriples
.nt
.jsonld
.jsonld10
.jsonld11
.rdfjson
.trig
.nquads
.nq
.rdfproto
.rdfthrift
.shaclc
.csv
.tsv
.rdfxml

Issue :

Subsetting **TableDAP**

uri part	role
`http://localhost:9001/erddap/`	server base url
`tabledap/SDC_GLO_CLIM_TS_V2_2.nc?`	as {data type}/{dataset}.{format}? data type "tabledap" => Tabular Data raw dataset identifier (from) and export format (save-as)
`temperature,salinity,oxygen`	the list of columns (select)

`&longitude>=110`
`&longitude<=150`
`&latitude>=-30`
`&latitude<=-10`
`&time>=2023-01-01T00:00:00Z`
`&time<=2023-01-05T00:00:00Z`
	matching conditions (where)
	all AND

`&distinct()`	additional keywords
`&orderBy("z,longitude")`	additional keywords

http://localhost:9001/erddap/tabledap/SDC_GLO_CLIM_TS_V2_2.nc?temperature,salinity,oxygen&longitude>=110&longitude<=150&latitude>=
-30&latitude<=-10&time>=2023-01-01T00:00:00Z&time<=2023-01-05T00:00:00Z&distinct()&orderBy("z,longitude")

Issue :

Subsetting **GridDAP**

uri part	role
`http://localhost:9001/erddap/`	server base url
`griddap/SDC_GLO_CLIM_TS_V2_2.nc?`	as {data type}/{dataset}.{format}? data type "griddap" => Gridded Data raw dataset identifier (from) and export format (save-as)

`temperature`
`[(2023-01-01T00:00:00Z):1:(2023-01-05T00:00:00Z)]`
`[(110):1:(150)]`
`[(-30):1:(-10)]`
`[(-1):1:(1)],`
	as variable[axis_1][axis_2][..]
	
	for each axis :
	[
	  (starting <u>real</u> value),
	  step,
	  (stopping <u>real</u> value)
	  ]

`salinity`
`[(2023-01-01T00:00:00Z):1:(2023-01-05T00:00:00Z)]`
`[(110):1:(150)]`
`[(-30):1:(-10)]`
`[(-1):1:(1)],`	

`oxygen[...][...][...][...]`	

```
http://localhost:9001/erddap/griddap/SDC_GLO_CLIM_TS_V2_2.nc?temperature[(2023-01-01T00:00:00Z):1:(2023-01-05T00:00:00Z)][(110):1:(150)]
[(-30):1:(-10)][(-1):1:(1)],salinity[(2023-01-01T00:00:00Z):1:(2023-01-05T00:00:00Z)][(110):1:(150)][(-30):1:(-10)][(-1):1:(1)],oxygen[(
2023-01-01T00:00:00Z):1:(2023-01-05T00:00:00Z)][(110):1:(150)][(-30):1:(-10)][(-1):1:(1)]
```

Issue :

Insert the largest subsetting query with placeholder in the RDF Graph ?

```
http://localhost:9001/erddap/griddap/SDC_GLO_CLIM_TS_V2_2.{format}?
{temperature}[({date.beg}):{date.str}:({date.end})][({latitude.beg}):{latitude.str}:({latitude.end})][({longitude.beg}):{longitude.str}:({longitude.end})][({z.beg}):{z.str}:({z.end})],
{salinity}[({date.beg}):{date.str}:({date.end})][({latitude.beg}):{latitude.str}:({latitude.end})][({longitude.beg}):{longitude.str}:({longitude.end})][({z.beg}):{z.str}:({z.end})],
{oxygen}[({date.beg}):{date.str}:({date.end})][({latitude.beg}):{latitude.str}:({latitude.end})][({longitude.beg}):{longitude.str}:({longitude.end}][({z.beg}):{z.str}:({z.end})]
```

```
http://localhost:9001/erddap/tabledap/SDC_GLO_CLIM_TS_V2_2.{format}?temperature,salinity,oxygen&longitude>={longitude.min}&longitude<={longitude.max}&latitude>={latitu
de.min}&latitude<={latitude.max}&time>={time.min}&time<={time.max}&temperature>={temperature.min}&temperature<={temperature.max}&salinity>={salinity.min}&salinity<={sa
linity.max}&oxygen>={oxygen.min}&oxygen<={oxygen.max}.distinct().orderBy("temperature","oxygen")
```

Create a 3rd common ERDDAP Subsetting URL ?
   (Based on the RFC6570 : "Uri Template")

Other ?

Next Step ?

- Improve RDF Graph
- + subsettings
- Global catalog build, ordered by the modification date
- Improve History
- Caching / Update the RDF-Graph on data update
- Get the maximum and minimum value for each GridDAP variable
- Get the RDF-Graph in the common "Data Access Form"

(- Content Negotiation)
(- FAIR-Sign posting)

Thanks !

Let's talk