

Linked Data Developments in SeaDataCloud



SeaDataCloud

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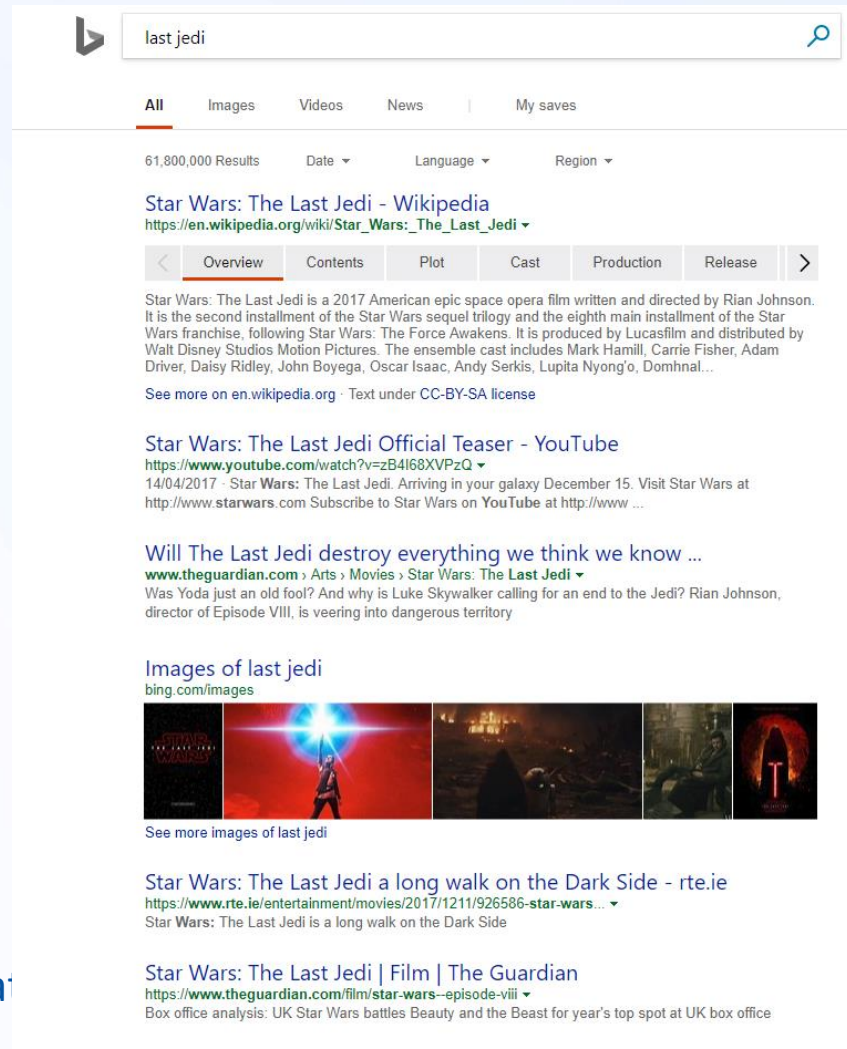


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www.seadatanet.org

Why Linked Data for SeaDataNet?



Why Linked Data for SeaDataNet?



The screenshot shows a search engine results page for the query "last jedi". The search bar at the top contains the text "last jedi" and a magnifying glass icon. Below the search bar, there are tabs for "All", "Images", "Videos", "News", and "My saves", with "All" selected. The search results are displayed in a list format. The first result is "Star Wars: The Last Jedi - Wikipedia" with a URL and a "Wikipedia" icon. Below the title is a navigation bar with tabs for "Overview", "Contents", "Plot", "Cast", "Production", and "Release", with "Overview" selected. The main text of the result describes the film as a 2017 American epic space opera film written and directed by Rian Johnson. The second result is "Star Wars: The Last Jedi Official Teaser - YouTube" with a URL and a "YouTube" icon. The main text of the result is a short paragraph about the film's release date and a link to the official website. The third result is "Will The Last Jedi destroy everything we think we know ..." with a URL and a "The Guardian" icon. The main text of the result is a short paragraph about the film's director and its potential impact on the franchise. Below the search results is a section titled "Images of last jedi" with a "bing.com/images" link. This section contains a row of five small images related to the film. Below the images is a link to "See more images of last jedi". The fourth result is "Star Wars: The Last Jedi a long walk on the Dark Side - rte.ie" with a URL and a "rte.ie" icon. The main text of the result is a short paragraph about the film's release date and a link to the official website. The fifth result is "Star Wars: The Last Jedi | Film | The Guardian" with a URL and a "The Guardian" icon. The main text of the result is a short paragraph about the film's release date and a link to the official website.

last jedi

All Images Videos News My saves

61,800,000 Results Date Language Region

Star Wars: The Last Jedi - Wikipedia
https://en.wikipedia.org/wiki/Star_Wars:_The_Last_Jedi

< Overview Contents Plot Cast Production Release >

Star Wars: The Last Jedi is a 2017 American epic space opera film written and directed by Rian Johnson. It is the second installment of the Star Wars sequel trilogy and the eighth main installment of the Star Wars franchise, following Star Wars: The Force Awakens. It is produced by Lucasfilm and distributed by Walt Disney Studios Motion Pictures. The ensemble cast includes Mark Hamill, Carrie Fisher, Adam Driver, Daisy Ridley, John Boyega, Oscar Isaac, Andy Serkis, Lupita Nyong'o, Domhnal...

See more on en.wikipedia.org - Text under CC-BY-SA license


Star Wars: The Last Jedi Official Teaser - YouTube
<https://www.youtube.com/watch?v=zB4168XVPzQ>

14/04/2017 - Star Wars: The Last Jedi. Arriving in your galaxy December 15. Visit Star Wars at <http://www.starwars.com> Subscribe to Star Wars on YouTube at [http://www ...](http://www...)

Will The Last Jedi destroy everything we think we know ...
www.theguardian.com > Arts > Movies > Star Wars: The Last Jedi

Was Yoda just an old fool? And why is Luke Skywalker calling for an end to the Jedi? Rian Johnson, director of Episode VIII, is veering into dangerous territory

Images of last jedi
bing.com/images



See more images of last jedi

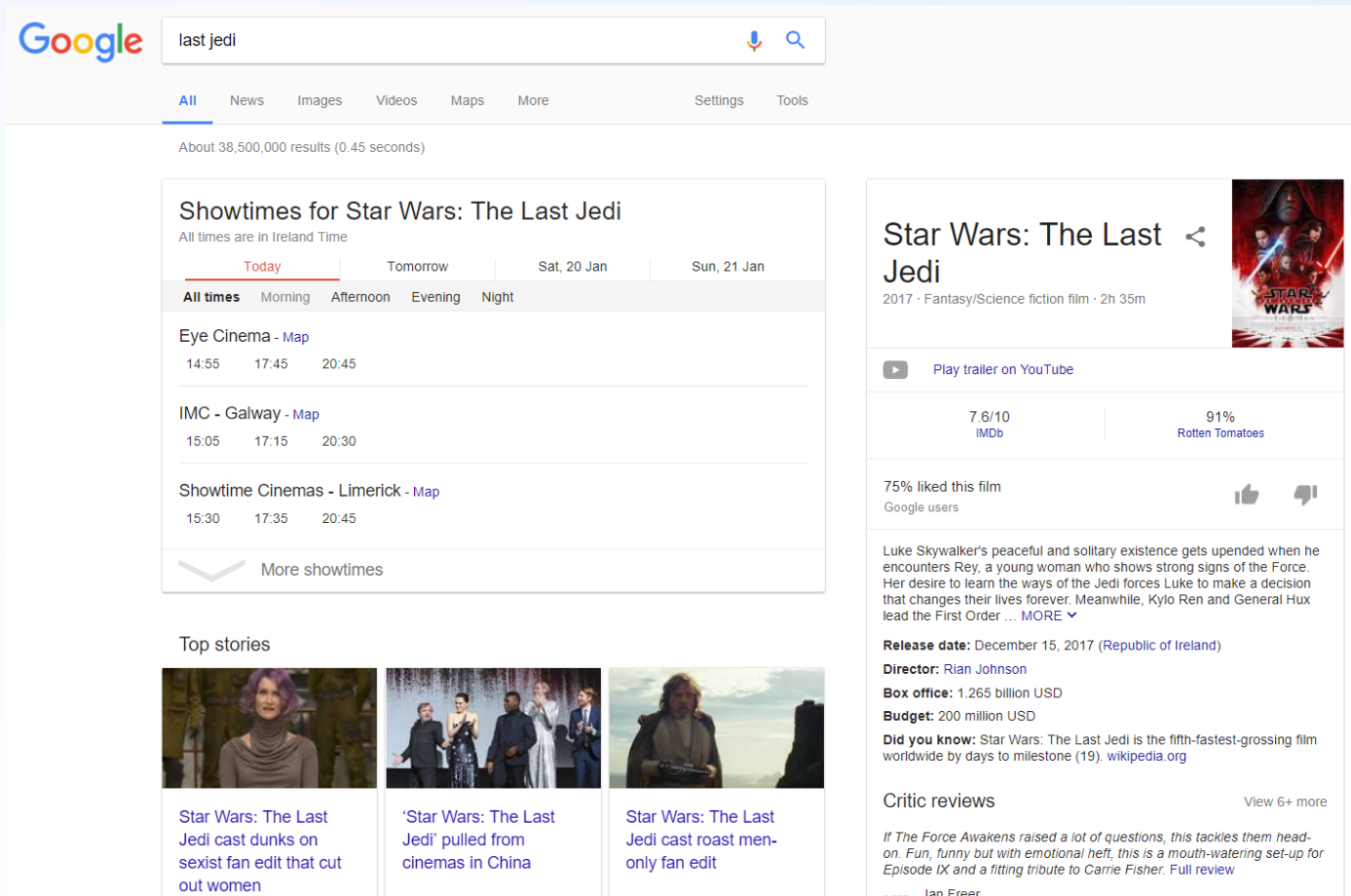
Star Wars: The Last Jedi a long walk on the Dark Side - rte.ie
<https://www.rte.ie/entertainment/movies/2017/1211/926586-star-wars...>

Star Wars: The Last Jedi is a long walk on the Dark Side

Star Wars: The Last Jedi | Film | The Guardian
<https://www.theguardian.com/film/star-wars-episode-viii>

Box office analysis: UK Star Wars battles Beauty and the Beast for year's top spot at UK box office

Why Linked Data for SeaDataNet?



Google last jedi

All News Images Videos Maps More Settings Tools

About 38,500,000 results (0.45 seconds)

Showtimes for Star Wars: The Last Jedi

All times are in Ireland Time

	Today	Tomorrow	Sat, 20 Jan	Sun, 21 Jan
All times	Morning	Afternoon	Evening	Night
Eye Cinema - Map	14:55	17:45	20:45	
IMC - Galway - Map	15:05	17:15	20:30	
Showtime Cinemas - Limerick - Map	15:30	17:35	20:45	

More showtimes

Star Wars: The Last Jedi

2017 · Fantasy/Science fiction film · 2h 35m

7.6/10 IMDb 91% Rotten Tomatoes

75% liked this film
Google users

Luke Skywalker's peaceful and solitary existence gets upended when he encounters Rey, a young woman who shows strong signs of the Force. Her desire to learn the ways of the Jedi forces Luke to make a decision that changes their lives forever. Meanwhile, Kylo Ren and General Hux lead the First Order ... [MORE](#)

Release date: December 15, 2017 (Republic of Ireland)
Director: Rian Johnson
Box office: 1.265 billion USD
Budget: 200 million USD
Did you know: Star Wars: The Last Jedi is the fifth-fastest-grossing film worldwide by days to milestone (19). [wikipedia.org](#)




Critic reviews

View 6+ more

If The Force Awakens raised a lot of questions, this tackles them head-on. Fun, funny but with emotional heft, this is a mouth-watering set-up for Episode IX and a fitting tribute to Carrie Fisher. Full review

EMERGE Ian Freer

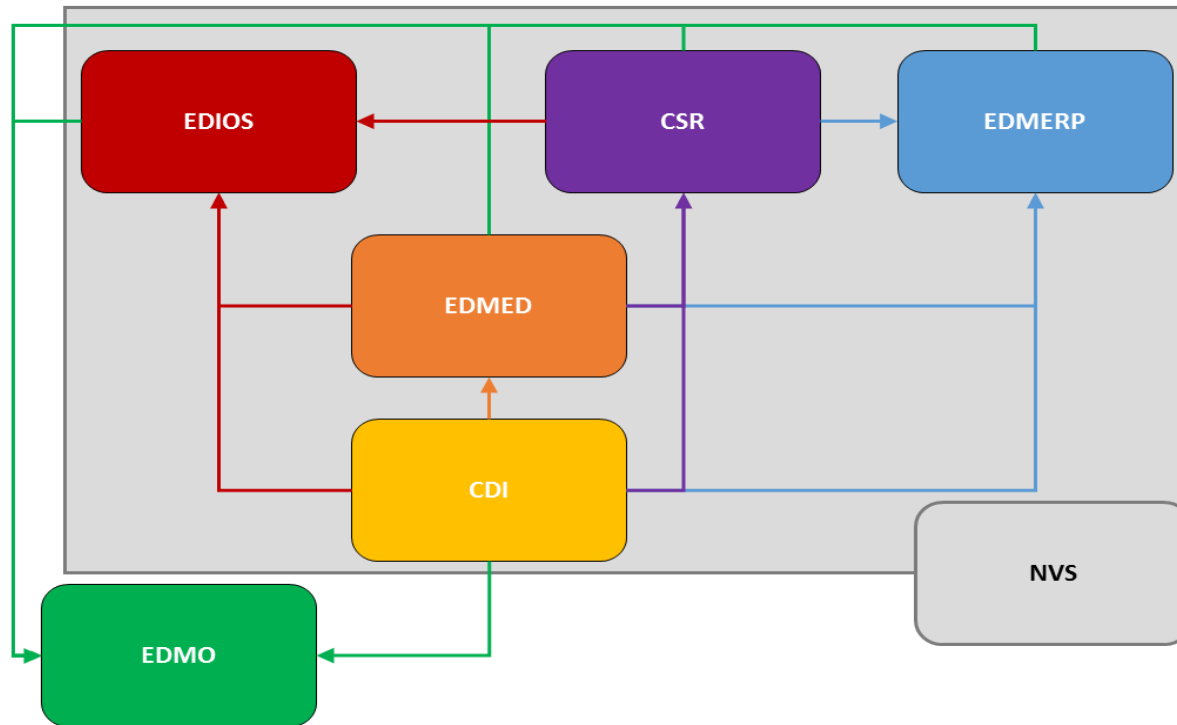
Top stories

 <p>Star Wars: The Last Jedi cast dunks on sexist fan edit that cut out women</p>	 <p>'Star Wars: The Last Jedi' pulled from cinemas in China</p>	 <p>Star Wars: The Last Jedi cast roast men-only fan edit</p>
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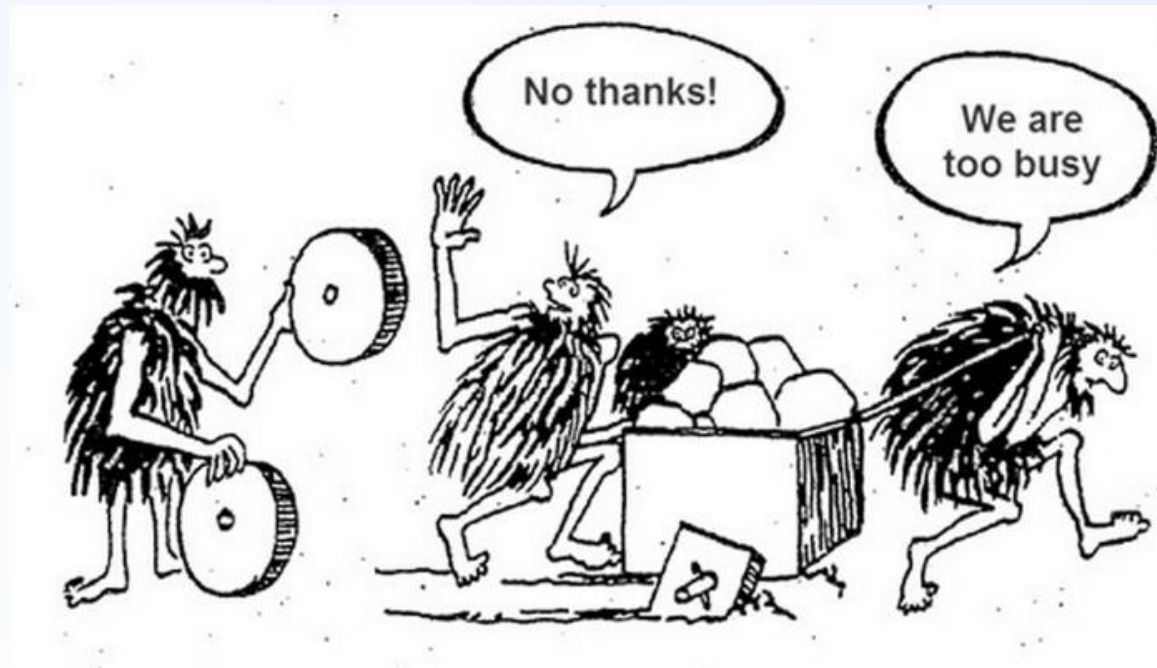
Why Linked Data for SeaDataNet?

- **Types of questions we can ask...**
 - **“Which cruises have physical oceanographic data?”**
 - **“Give me all temperature data for the Celtic Seas for 2015”**

Why Linked Data for SeaDataNet?



What we didn't want to do



What we did about it

- **Reusing existing patterns**
 - **Better understanding outside of SDN**
 - **Better interoperability with other organisations**
 - **Better INSPIRE compliance**

What we did about it

- **Reusing existing patterns**
 - **EDMO**
 - **EDMED**
 - **EDMERP**
 - **CDI**
 - **CSR**
 - **EDIOS**

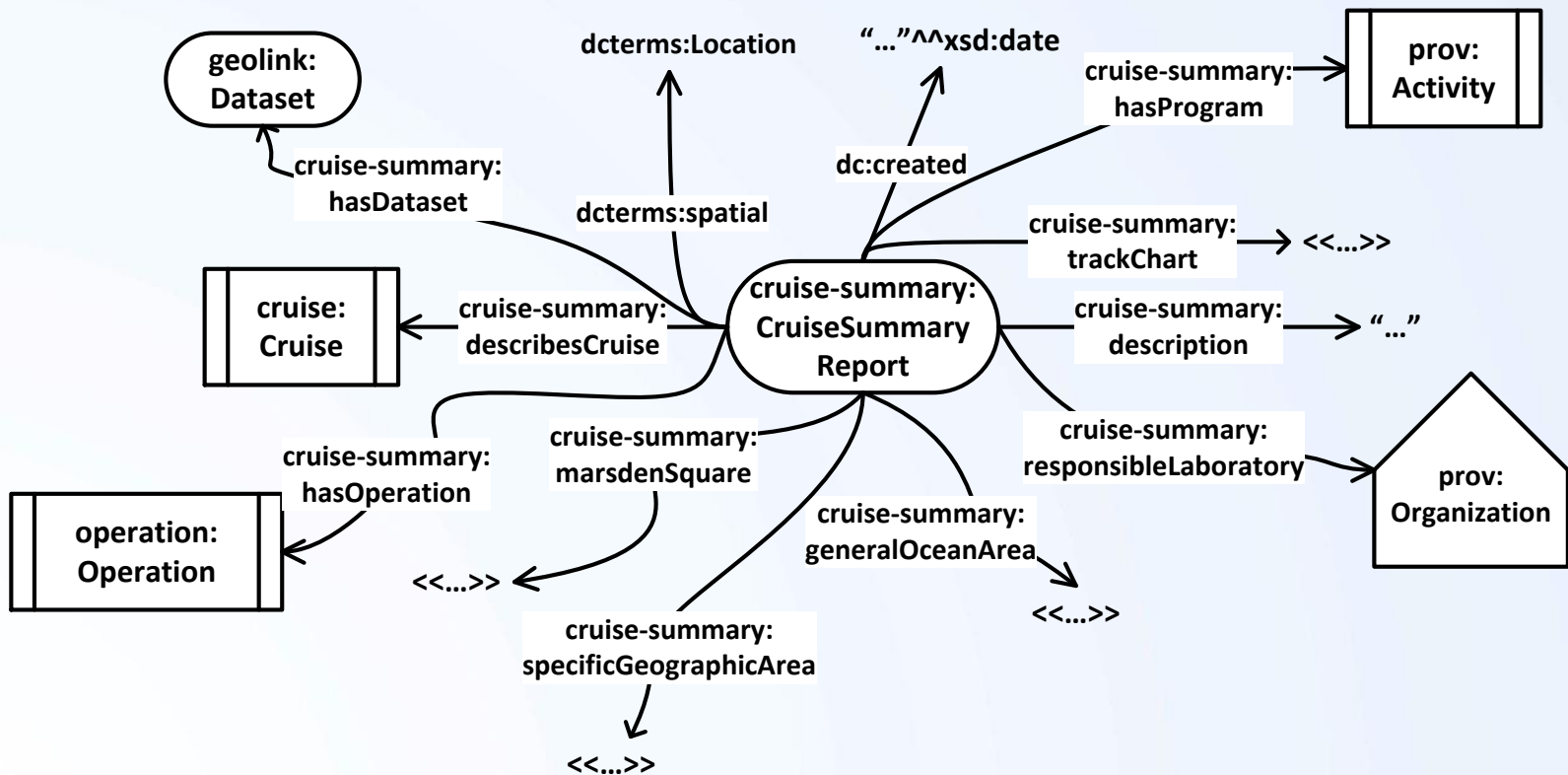
What we did about it

- **Reusing existing patterns**
 - **EDMO – W3C Organisation**
 - **EDMED – W3C DCAT**
 - **EDMERP – W3C Prov / DBPedia Research Project**
 - **CDI – W3C DCAT**
 - **ODV metadata to INSPIRE / ISO O&M**
 - **CSR - ...**
 - **EDIOS – INSPIRE Environmental Monitoring Facilities**

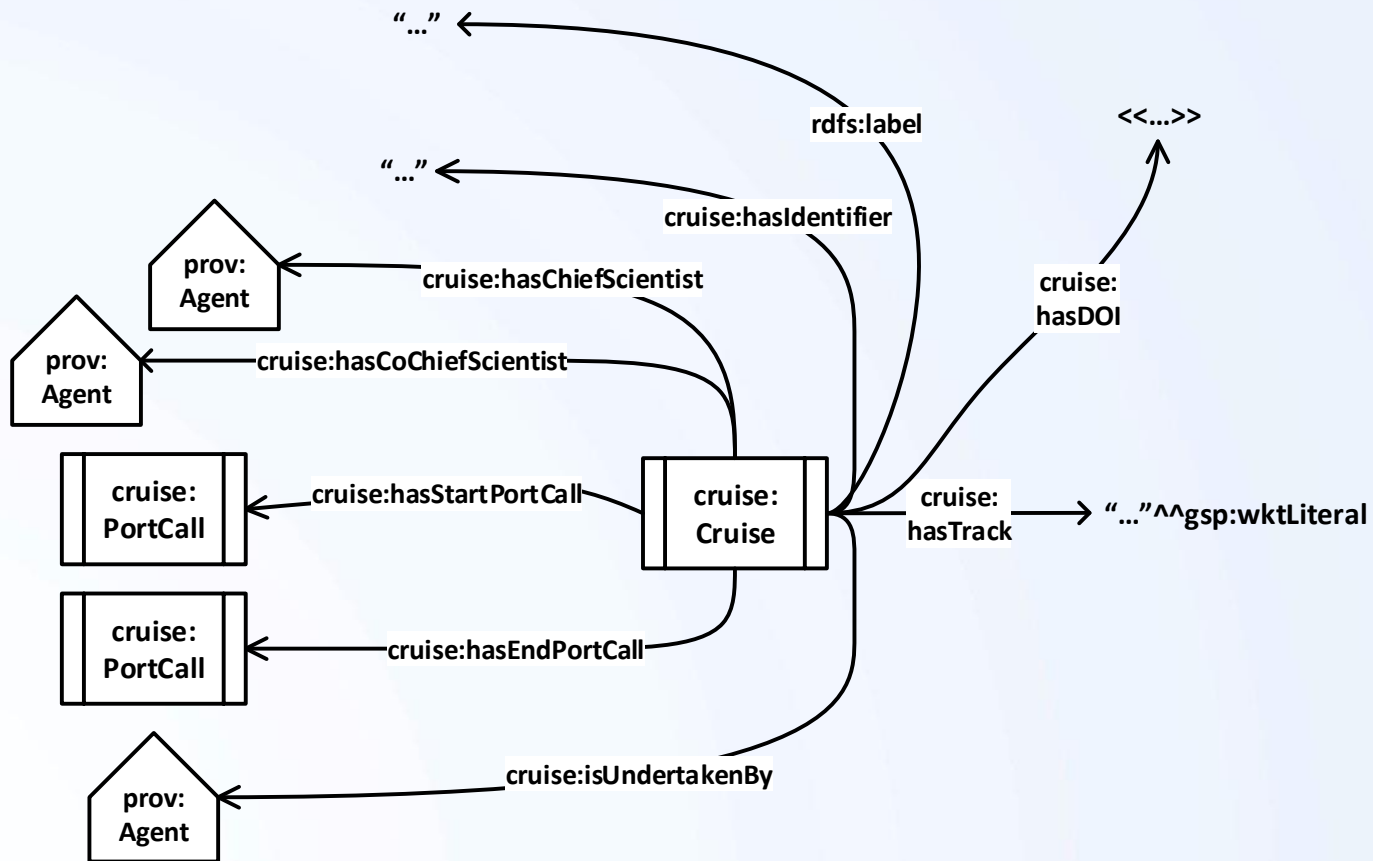
What we did about it

- **Reusing existing patterns**
 - **Also**
 - **Sextant catalogue to W3C DCAT**

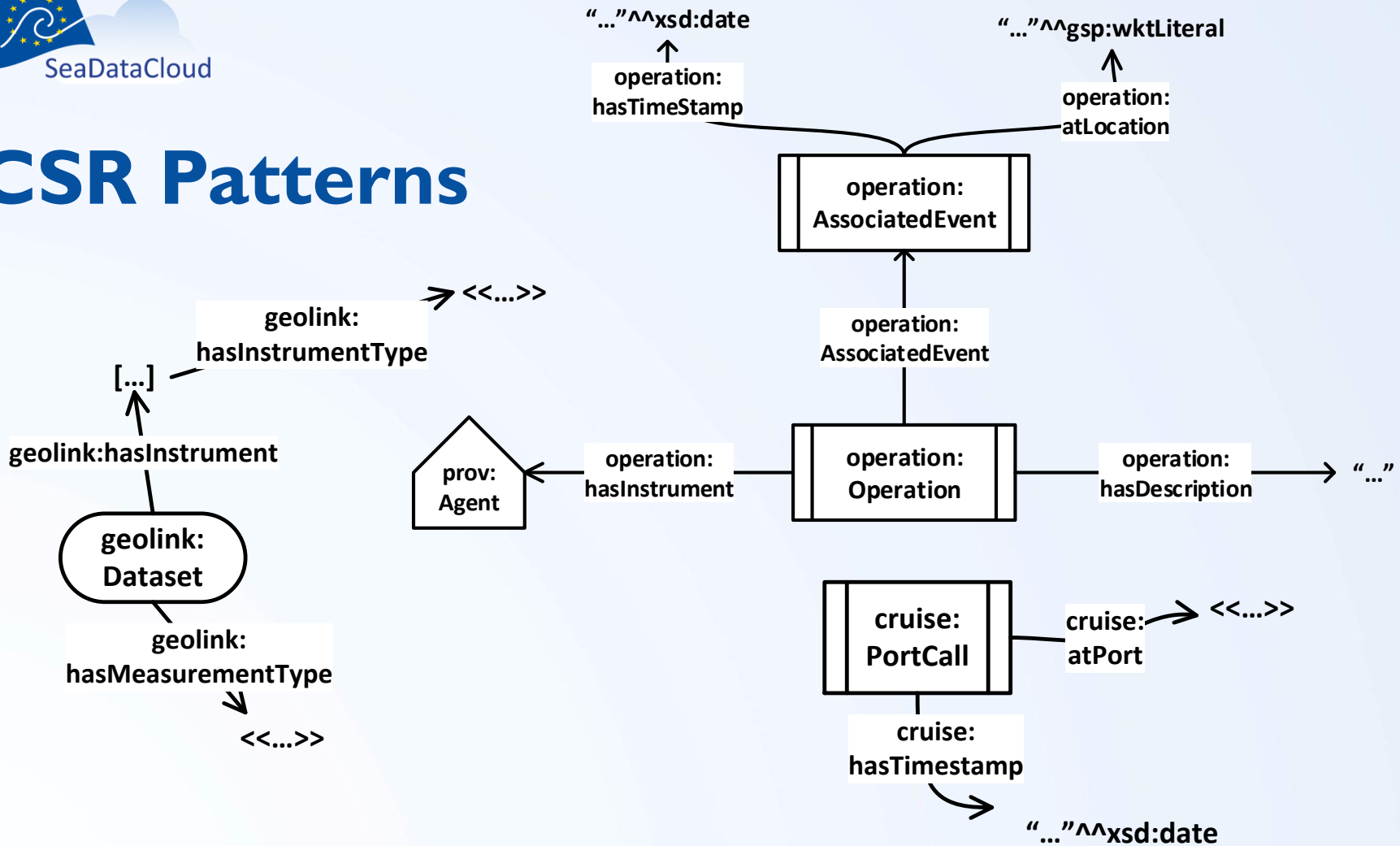
CSR Patterns

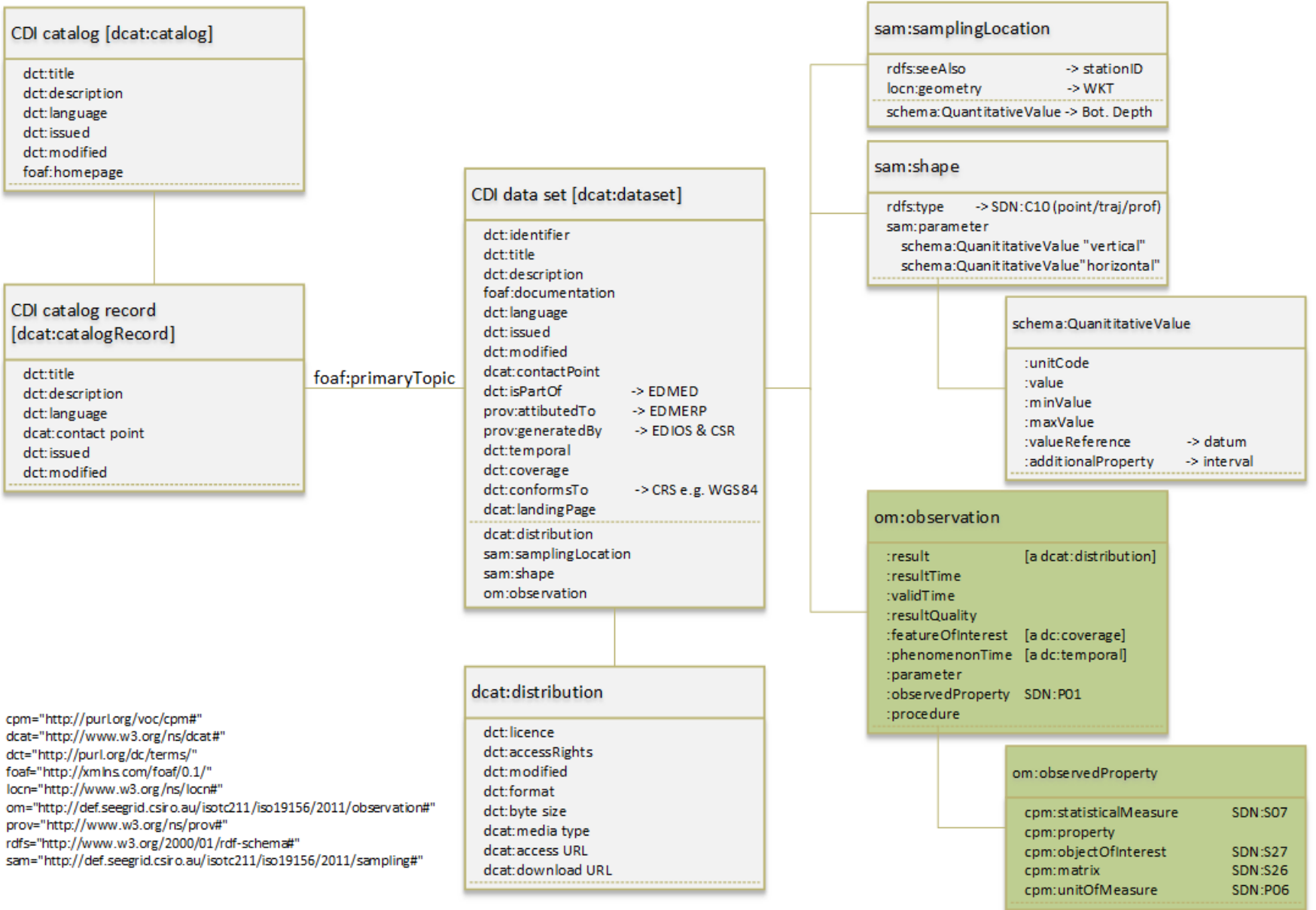


CSR Patterns



CSR Patterns





Issues

- Creation of a SeaDataNet Linked Data ontology.
- **Clean URIs for each catalogue**
- Content negotiation
- NERC Vocabulary Server v.1 is deprecated.
- **EDMO links to external vocabularies**
- All terms in C19 are equated to prov:Location.
- **A register of individuals and publications.**
- Project record to an associated research programme links to another EDMERP record not an XML snippet.
- Dbpedia to PROV-O alignment.
- CDIs with EDMED codes included should be used to populate the DCAT Distribution information.
- Consider alignments in the DCAT keywords specification to the research classification vocabularies.
- **A non-SDN/SDC namespace is used for the publication of the Linked Data terms.**
- Port entries in C38 should be given an RDF linkage to their countries.
- Port entries in C38 should be made instances of geolink:Place and prov:Location.
- Research vessels entries in C17 should be made instances of prov:Entity.
- A CDI SKOS scheme should be set up on the NVS incorporating the P02, L05 and C19 vocabularies.
- **Include links to ICES station dictionary URIs.**
- Include links to terms from the BODC Series Feature Type vocabulary (C10).



Issues – URLs

[http://seadata.bsh.de/Cgi-csr/retrieve_sdn2/viewReport.pl?csrref=\[csr_code\]](http://seadata.bsh.de/Cgi-csr/retrieve_sdn2/viewReport.pl?csrref=[csr_code])

[http://www.bodc.ac.uk/data/information_and_inventories/edmed/report/\[edmed_code\]/](http://www.bodc.ac.uk/data/information_and_inventories/edmed/report/[edmed_code]/)

[http://seadatanet.maris2.nl/v_edmo/print.asp?n_code=\[n_code\]](http://seadatanet.maris2.nl/v_edmo/print.asp?n_code=[n_code])

[http://seadatanet.maris2.nl/v_edmerp/print.asp?n_code=\[n_code\]](http://seadatanet.maris2.nl/v_edmerp/print.asp?n_code=[n_code])

[http://seadatanet.maris2.nl/v_cdi_v3/print_ajax.asp?n_code=\[n_code\]](http://seadatanet.maris2.nl/v_cdi_v3/print_ajax.asp?n_code=[n_code])

[http://seadatanet.maris2.nl/v_edios_v2/print_ajax.asp?screen=0&n_code=\[n_code\]](http://seadatanet.maris2.nl/v_edios_v2/print_ajax.asp?screen=0&n_code=[n_code]) prog

[http://seadatanet.maris2.nl/v_edios_v2/print_ajax.asp?screen=1&n_code=\[n_code\]](http://seadatanet.maris2.nl/v_edios_v2/print_ajax.asp?screen=1&n_code=[n_code]) serie

Issues – URLs

<http://cruise-summary.seadatanet.org/> [csr_code]

<http://edmed.seadatanet.org/> [edmed_code]

<http://edmo.seadatanet.org/> [n_code]

<http://edmerp.seadatanet.org/> [n_code]

<http://cdi.seadatanet.org/> [n_code]

<http://edios.seadatanet.org/programme/> [n_code]

<http://edios.seadatanet.org/series/> [n_code]



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Issues – URLs

[http://cruise-summary.seadatanet.org/\[csr_code\]](http://cruise-summary.seadatanet.org/[csr_code])



[http://seadata.bsh.de/Cgi-csr/retrieve_sdn2/viewReport.pl?csrref=\[csr_code\]](http://seadata.bsh.de/Cgi-csr/retrieve_sdn2/viewReport.pl?csrref=[csr_code])

Issues – EDMO interoperability

<http://vocab.aodn.org.au/def/organisation/entity/I> a skos:Concept;
skos:inScheme <http://vocab.aodn.org.au/def/organisation/I>.

???



<http://edmo.seadatanet.org/I> a org:Organization.

Issues – EDMO interoperability



Issues – EDMO interoperability



Issues – EDMO interoperability



Issues – EDMO interoperability

`rdfs:seeAlso`



Issues – EDMO interoperability

so:claimsIdentical

rdfs:seeAlso

owl:sameAs

skos:exactMatch



Issues – EDMO interoperability

so:claimsIdentical

rdfs:seeAlso

owl:sameAs



Recommended reading:
When owl:sameAs isn't the Same by Halpin et al
<http://iswc2010.semanticweb.org/pdf/261.pdf>

Next Steps

- **Address pre-requisites in the issues**
- **Develop Schema.org mappings**
 - Done for EDMED
- **Develop Linked Data representation of IODE Ocean Expert entries**