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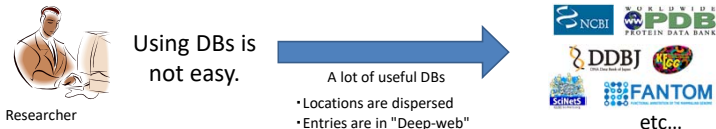
Abstract

"Life Science Database Cross Search" is a knowledge infrastructure for life science researchers. This service was originally developed in Database Center for Life Science (DBCLS), and was transferred to National Bioscience Database Center (NBDC) in 2011. It provides a web search service across more than 670 public databases (containing 15 million entries). This open infrastructure supports the research data to be "FAIR". For instance, on the point of principle F2 (provided rich meta data) and F3 (indexed in searchable resource), it is not simple to achieve by each data provider or general search engine, our search system can fulfill the terms. Our infrastructure also accelerates the utilization of semantically integrated life science data.

National Bioscience Database Center (NBDC)

<https://biosciencedbc.jp/en/>

Databases are important for research, but...

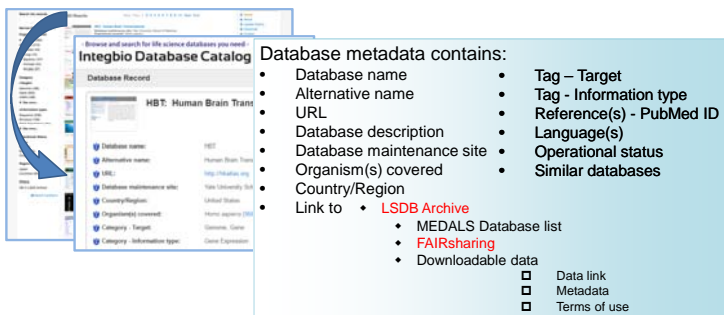


Various NBDC Services solve those problems.

Service: Integbio Database Catalog

<https://integbio.jp/dbcatalog/?lang=en>

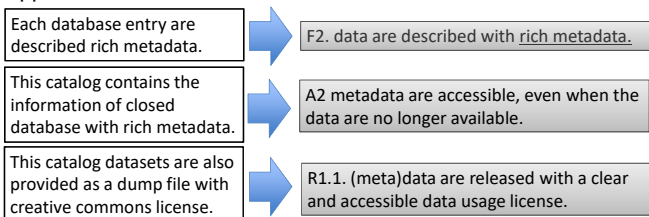
Integbio Database Catalog provides the information of life science databases (over 2,300).



International collaboration started from 2018

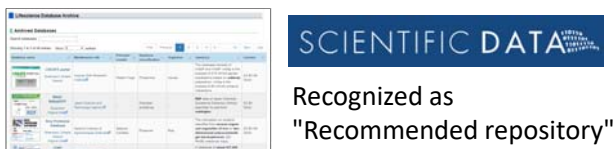


Approach to be "FAIR"



Service: Life Science Database Archive

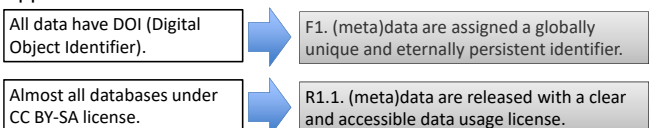
<https://dbarchive.biosciencedbc.jp/index-e.html>



- Over 140 databases are **downloadable**.
- Curated **metadata** helps you to reuse data.
- RDFization of Life Science Database Archive

LSDB Archive SPARQL endpoint
<https://dba-rdf.biosciencedbc.jp/sparql>

Approach to be "FAIR"



Service: Life Science Database Cross Search

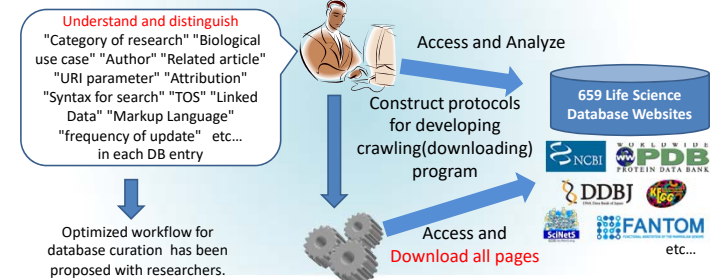
<https://biosciencedbc.jp/dbsearch/index.php?lang=en>

- Cross search among dispersed **659 DBs** (15 million entries).
- Deep-web entry search
(It is difficult for commercial search engines to find whole DB entries.)
- Specialized in Life science category

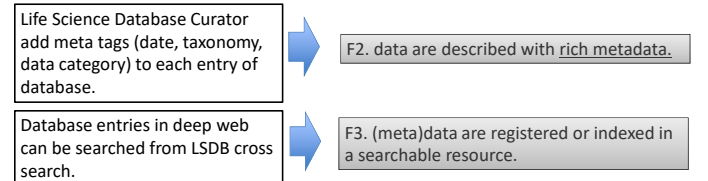


Database information were collected by...

Life Science Database Curator



Approach to be "FAIR"

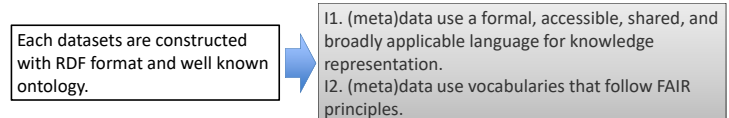


Integrated Search

The NBDC RDF Portal provides a collection of life science datasets (Integbio Database Catalog is also included) in RDF



Approach to be "FAIR"



Outreach activities

Educational activity for domestic researchers

Translation FAIR principle into Japanese
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Referred to by the Japanese government in a guideline for establishing data policies for a kind of research organizations.
<http://www8.cao.go.jp/cstp/stsonota/datapolicy/datapolicy.pdf>

Collaboration through international annual congresses



Discussion for standards and collaborative researches