

Information on existing services and tools for federation of biodata

The following list is a compilation of international standards and projects relevant to the federation of biodata. BSS Participants are encouraged to study these standards and projects.
GBIF / Darwin Core / IPT - standards-based publishing of biodata

- Global Bio data Information Facility GBIF. <http://www.gbif.org/>
- Darwin Core: A standard / format for exchanging biodata. <http://rs.tdwg.org/dwc/terms/>
- GBIF Internet Publishing Toolkit IPT. free open source software tool written in Java that is used to publish and share biodiversity datasets through the GBIF network. <http://ipt.gbif.org/http://www.gbif.org/ipt>
Paper: [The GBIF Integrated Publishing Toolkit: Facilitating the Efficient Publishing of Biodiversity Data on the Internet](#)
- Darwin Core Tools and Applications. <https://code.google.com/p/darwincore/wiki/ToolsAndApplications>
- Create your own Darwin Core Archive, Step-by-Step Guide. <http://www.gbif.org/resources/2555>
- GBIF Darwin Core Archive, How-to Guide. <http://www.gbif.org/resources/2552>
- Darwin Core Archive Validator. <http://tools.gbif.org/dwca-validator/>
- Darwin Core Archive Reader (Java). <https://github.com/gbif/dwca-reader/>
- Getting started using IPT. <http://share.biodiversity.aq/training/Getting%20Started%20Using%20the%20IPT.pdf>
- Python-dwca-reader. <http://python-dwca-reader.readthedocs.org/en/latest/>
- Darwin Core Archive Assistant. A tool to assist in the publication of biodiversity data. <http://tools.gbif.org/dwca-assistant/>
- Ocean Biogeographic Information System OBIS with uses both Darwin Core and IPT. <http://www.iobis.org/>
- [Visualisation of Species-based Repositories](https://github.com/martingraham/vesper). <https://github.com/martingraham/vesper>
- <http://www.canadensys.net/> Canadian system for biodata publication using Darwin Core and IPT. Excellent resource with many useful guidelines.

OGC - standards-based publishing of geospatial data sources

- Open Geospatial Consortium OGC. consortium of **477** companies, government agencies and universities participating in a consensus process to develop publicly available interface standards. <http://www.opengeospatial.org/>
- Web Feature Service WFS. Web Feature Service Interface Standard provides an interface allowing requests for geographical features across the web using platform-independent calls. <http://www.opengeospatial.org/standards/wfs>
- Group on Earth Observations Biodiversity Observation Network GEO BON. Coordinate the gathering and delivery of biodiversity change information at the global scale. https://www.earthobservations.org/geobon_a.shtml

ISO8601 - Standardisation of datetime descriptors

- ISO 8601: http://en.wikipedia.org/wiki/ISO_8601

EPSG - standard code base for Spatial Reference Systems (SRS)

- EPSG Geodetic Parameter Dataset. <http://www.epsg-registry.org/>

This is just a start, see more under [BSS Infrastructure: Background material and references](#)

The BSS project has NOT the goal to 'reinvent the wheel' but to re-use existing work to define the best bio data sharing solution for NZ Inc.