Data Format Analysis:
BIBFRAME

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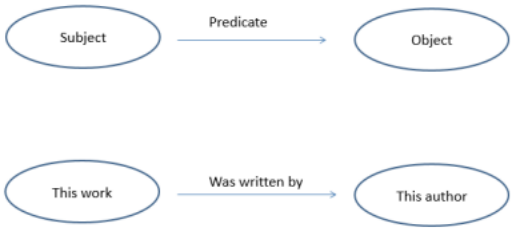
BIBFRAME, or the Bibliographic framework initiative, is a data model created to replace MARC21 as the standard data format; it is intended to shed the design assumptions MARC inherited from card catalogue systems and function as a fully "born-digital" alternative (Steele, 2019).

The project began in 2012 when the Library of Congress (LOC) commissioned a data management company, Zepheira, to develop the new format (Steele, 2019). It was first implemented in 2014 by the LOC and a number of United States universities, including Cornell, Princeton, and Columbia. Since then it has been implemented in various other government and military institutions, as well as seeing some scattered adoption overseas in institutions such as the German National Library, the Hungarian National Museum, and the Library of Alexandria (Library of Congress, n.d.-b).

Unlike MARC, BIBFRAME is meant to reflect and take full advantage of the digital context that bibliographic records are now produced in; whereas MARC was designed for systems with memory, storage, and processing power, all of which are now relatively abundant. It is designed with ease of both human and computer readability in mind; it is compatible with a range of serializations for computer encoding, including Turtle, N-Triples, N-Quads, JSON-LD, N3, and RDF/XML. It can be thought of as a descendent of the FRBR model (Steel, 2019).

BIBFRAME formats data in "triple statements," or subject-predicate-object relationships (see diagram). Each element of these relationships - subjects, objects, and predicates - is drawn from a controlled vocabulary of terms that can be accessed online in the LOC's BIBFRAME database. (Library of Congress, n.d.-a)



(Library of Congress, 2020)

Overall, BIBFRAME represents an admirable effort to reimagine data formatting for a contemporary context, improving convenience, compatibility, and ease of use over MARC. However, despite claims of it to be the future of data formatting, it has not yet supplanted MARC as the prevailing standard, and librarians are unlikely to encounter it outside of early-adopter institutions. This of course may change over time.

A possible issue with BIBFRAMEis that, by building assumptions of data, storage, and processing abundance into its design, the format makes itself dependent on ongoing access to certain technologies, which could present difficulties for groups for whom that access is disrupted or difficult to maintain.

References

Library of Congress (n.d.-a). BIBFRAME Ontology. *LC Linked Data Service.* https://id.loc.gov/ontologies/bibframe.html

Library of Congress (n.d.-b). BIBFRAME Implementation Register. *LC BIBFRAME.* https://www.loc.gov/bibframe/implementation/register.html

Library of Congress. (2020). The BIBFRAME Editor and BIBFRAME Database. *Library of Congress BIBFRAME Manual: Public Version.* https://www.loc.gov/catworkshop/bibframe/BIBFRAME-PublicManual.pdf

Steele, T. D. (2019). What comes next: Understanding BIBFRAME. *Library Hi Tech, 37*(3), 513-524. doi:https://doi.org/10.1108/LHT-06-2018-0085