

FAIR Metric FM-I1

Mark D. Wilkinson, Susanna-Assunta Sansone,
Erik Schultes, Peter Doorn,
Luiz Olavo Bonino da Silva Santos, Michel Dumontier

July 4, 2018

<i>FIELD</i>	<i>DESCRIPTION</i>
Metric Identifier	FM-I1: https://purl.org/fair-metrics/FM_I1
Metric Name	Use a Knowledge Representation Language
To which principle does it apply?	I1 - (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation
What is being measured?	use of a formal, accessible, shared, and broadly applicable language for knowledge representation.
Why should we measure it?	The unambiguous communication of knowledge and meaning (what symbols are, and how they relate to one another) necessitates the use of languages that are capable of representing these concepts in a machine-readable manner.
What must be provided?	URL to the specification of the language
How do we measure it?	<ul style="list-style-type: none"> - The language must have a BNF (or other specification language) - The URL resolves (accessible) - The document has an IANA media-type (i.e. it is sufficiently widely-accepted and shared that it has been registered) - The language can be arbitrarily extended (e.g. PDBml can be used to represent knowledge, but only about proteins)
What is a valid result?	BNF (or other?) found, Media-type of the document is registered in FAIRSharing. Future: FAIRSharing has tags to indicate constrained vs. extendable languages?
For which digital resource(s) is this relevant?	All
Examples of their application across types of digital resource	None

Comments	<p> michel: there must be a syntax and associated semantics for that language. This is sufficient mark: there needs to be some identity or denotation in the language; ('vanilla') xml and json are not FAIR, so should fail this test </p> <p> *** can you (i) identify elements and (ii) make statements about them, and iii) is there a formally defined interpretation for that -¿ HTML fails; PDF fails shared </p> <p> -¿ that there are many users of the language . acknowledged within your community -¿ hard to prove. . could we use google to query for your filetype (can't discriminate between different models) -¿ has a media type </p> <p> -¿ This SHOULD be stated as a IANA code [IANA-MT] </p> <p> standardization of at least this listing process is a good measure of "sharedness" </p> <p> broadly applicable . that the language is extensible to a domain of interest . you can define your own elements in accordance with the semantics of the language </p> <p> gff3 is not in the IANA list -¿ what steps would the community need to execute to be listed here? cases like GFF, PDB are not broadly applicable biopax -¿ is defined vnd.biopax.rdf+xml and built on rdf -¿ allows users to create new elements and relate them jpg -¿ widely used, registered, but primarily for image content pdf -¿ registered, enables users to create their own dictionary. </p>
----------	---