

# RDA/RDF to BIBFRAME Mapping

University of Washington Libraries, Cataloging and Metadata Services

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The mapping is presented in a series of spreadsheet tabs, each including properties for use with a given class of RDA entity. The current work addresses the four “WEMI” resource entities and properties for use with each.

These classes, along with the BIBFRAME classes identified as equivalent in this project, are given below as links to each tab.

- [RDA Work \(rdac:C10001\) | BIBFRAME Work](#)
- [RDA Expression \(rdac:C10006\) | BIBFRAME Work](#)
- [RDA Manifestation \(rdac:C10007\) | BIBFRAME Instance](#)
- [RDA Item \(rdac:C10003\) | BIBFRAME Item](#)

A number of deprecated properties are included. Many properties (elements) which are described in the beta RDA Toolkit and/or RDA Registry, but not yet widely in use, are also included; many of these have not yet been mapped.

We invite interested parties and colleagues outside the University of Washington to provide feedback on this project. Viewers may use the comment feature in the mapping spreadsheets, and/or submit comments or inquiries using the contact information below.

**Theodore Gerontakos**

Interim Head, Metadata and Cataloging Initiatives Unit

[tjis@uw.edu](mailto:tjis@uw.edu)

## Mapping RDA Expression in BIBFRAME

Our ruling on the treatment of RDA Expression in BIBFRAME<sup>1</sup>:

- **Map RDA Work (rdac:C10001) to BIBFRAME Work**
- **Map RDA Expression (rdac:C10006) to BIBFRAME Work**
- **Relate individuals of RDA Expression/BIBFRAME Work to the appropriate RDA Work/BIBFRAME Work using the BIBFRAME *expressionOf* property**

No novel classes outside the [BIBFRAME ontology version 2.0.1](#), such as SuperWork, Opus, or Hub, are used to accommodate RDA Expression.

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<sup>1</sup> For an explanation of the problem, see p. 397, 401 of Shoichi Taniguchi (2017) Examining BIBFRAME 2.0 from the Viewpoint of RDA Metadata Schema, *Cataloging & Classification Quarterly*, 55:6, 387-412, DOI: 10.1080/01639374.2017.1322161.

# Syntaxes used in the mapping

As detailed above, the RDA WEMI entities have been mapped to BIBFRAME Work, Instance, and Item. Where the subjects of triples in each spreadsheet tab are resources of the corresponding BIBFRAME class, these subjects are not shown in mappings.

Language tags have been omitted from literal values in mappings to save space, but appending language tags to literal values with linguistic content is strongly encouraged as a best practice for publishing semantic web data.

See [Mapping Syntaxes: Example Statements](#) below for detailed syntax examples.

## Pseudo-Turtle syntax

- As in [Turtle syntax](#), square brackets are used to indicate blank nodes
- Where included in mappings, the `rdf:type` property is indicated by “a”
- Often two (or sometimes more) alternative mappings have been provided, for example one to output an IRI value and one a literal value coming from RDA/RDF data; in these cases only the second (and third, etc., if applicable) mapping is preceded by a commented line (`# ...`) to indicate that it is an alternative mapping
- Line breaks have been minimized to save space

## Kiegel syntax

- `>>` indicates a resource following, which may be an IRI or a blank node
- `>` indicates a property following, creating a triple with the preceding resource as subject
- `*` following a property indicates that the object of a triple is an IRI
- `; >` indicates a property following, creating a triple not with the preceding resource as subject, but the one before it
- `;` indicates a new triple or set of triples not with the preceding resource as subject, but with a subject of type corresponding to the spreadsheet tab (`bf:Work`, `bf:Instance`, or `bf:Item`)
- `or` indicates an alternate mapping, for example to accommodate a literal vs. IRI value in source data
- Text used to denote properties and classes within the BIBFRAME namespace does not include prefixes
- Text denoting properties begins with a lowercase letter, text denoting classes begins with an uppercase letter
- IRIs, where included in mappings, are enclosed in angle brackets (`< >`)
- Literal values, where included in mappings, are enclosed in double quotes (“ ”)

# Mapping Syntaxes: Example Statements

The following three sets of example triples, shown in graphical form and Turtle, pseudo-Turtle, and Kiegel syntaxes, illustrate the syntaxes used in this mapping.

## Example One



The first set illustrates the use of the BIBFRAME property *digitalCharacteristic* with an IRI (URI) value, presented here as <P30202value>, indicating an IRI value originally provided in RDA/RDF data for the property *has encoded bitrate*.

### Turtle syntax

```
@prefix bf: <http://id.loc.gov/ontologies/bibframe/> .  
  
<http://example.com/iri1> a bf:Instance ;  
    bf:digitalCharacteristic <http://example.com/P30202value> .
```

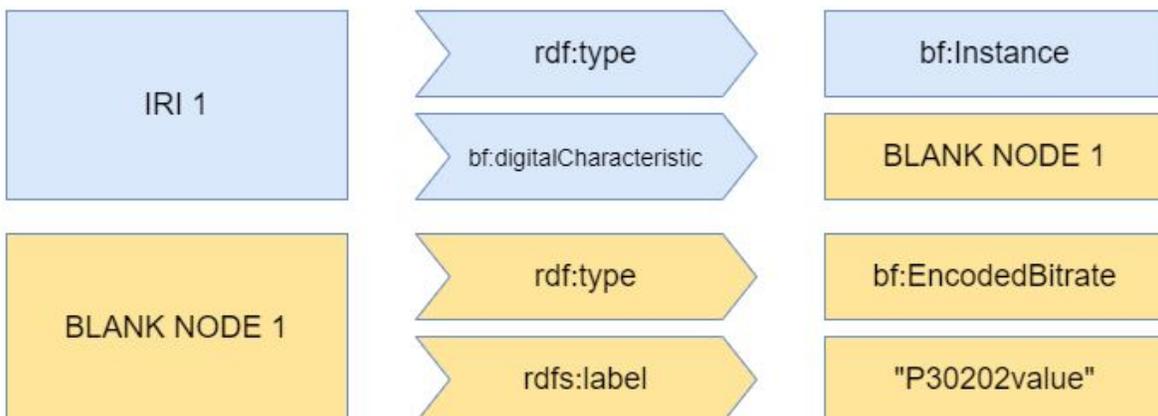
### Pseudo-Turtle syntax

```
bf:digitalCharacteristic <P30202value> .
```

### Kiegel syntax

```
digitalCharacteristic*
```

## Example Two



The second set illustrates the use of the BIBFRAME *digitalCharacteristic* property with a blank node value. This blank node is typed with the BIBFRAME class *EncodedBitrate* and given a literal label value. Here the literal is "P30202value," indicating a literal value originally provided in RDA/RDF data.

#### Turtle syntax

```
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix bf: <http://id.loc.gov/ontologies/bibframe/> .

<http://example.com/iri1> a bf:Instance ;
    bf:digitalCharacteristic [ a bf:EncodedBitrate ;
        rdfs:label "P30202value" ] .
```

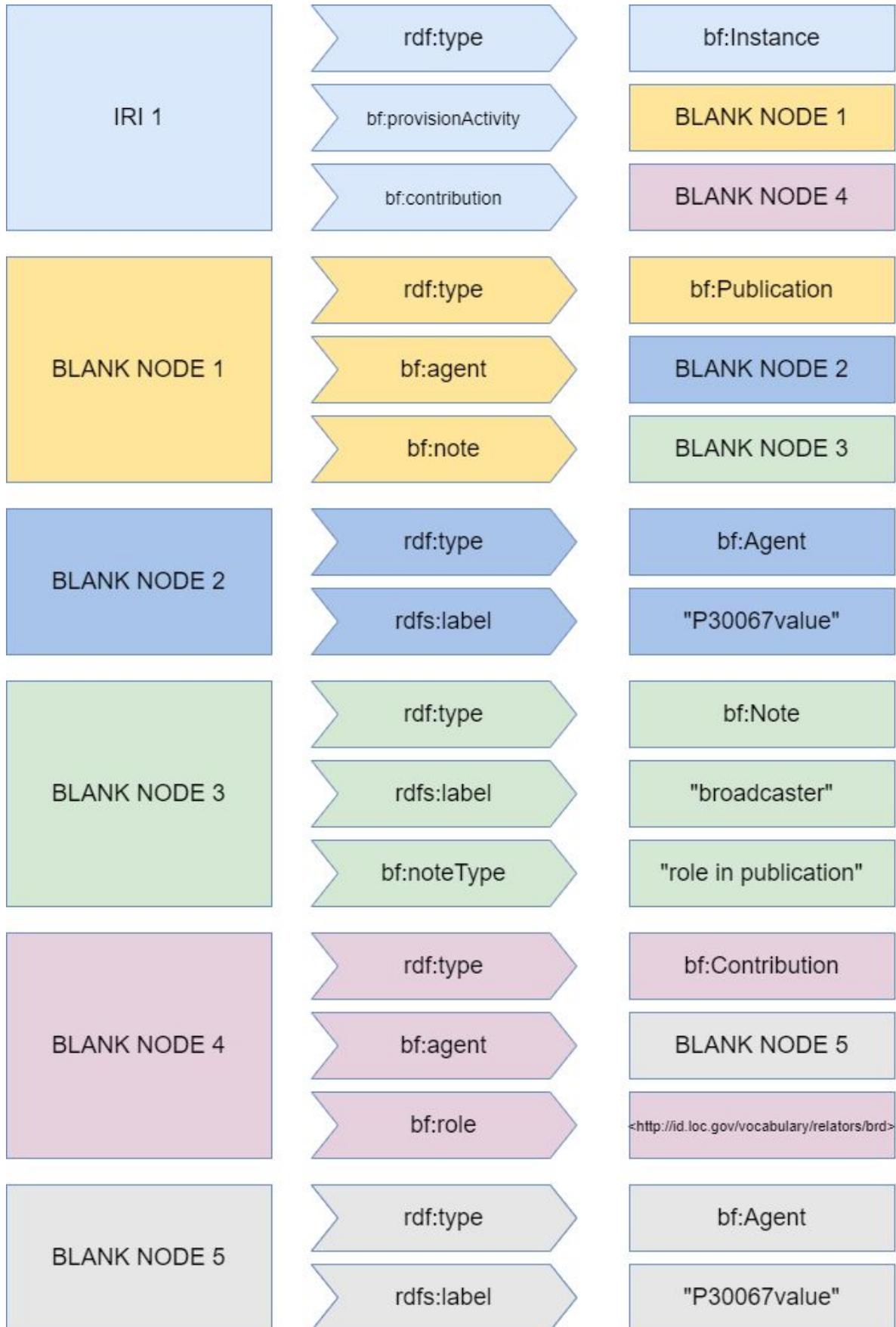
#### Pseudo-Turtle syntax

```
bf:digitalCharacteristic [ a bf:EncodedBitrate ;
    rdfs:label "P30202value" ] .
```

#### Kiegel syntax

```
digitalCharacteristic >> EncodedBitrate > rdfs:label
```

### Example Three



The third set illustrates the use of nested blank nodes, as well as a mix of IRI and literal values.

### Turtle syntax

```
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix bf: <http://id.loc.gov/ontologies/bibframe/> .

<http://example.com/iri1> a bf:Instance ;
  bf:provisionActivity [ a bf:Publication ;
    bf:agent [ a bf:Agent ;
      rdfs:label "P30067value" ] ;
    bf:note [ a bf:Note ;
      rdfs:label "broadcaster" ;
      bf:noteType "role in publication" ] ] ;
  bf:contribution [ a bf:Contribution ;
    bf:agent [ a bf:Agent ;
      rdfs:label "P30067value" ] ;
    bf:role <http://id.loc.gov/vocabulary/relators/brd> ] .
```

### Pseudo-Turtle syntax

```
bf:provisionActivity [ a bf:Publication;
  bf:agent [ a bf:Agent ;
    rdfs:label "P30067value" ] ;
  bf:note [ a bf:Note ;
    rdfs:label "broadcaster" ;
    bf:noteType "role in publication" ] ] ;
bf:contribution [ a bf:Contribution ;
  bf:agent [ a bf:Agent ;
    rdfs:label "P30067value" ] ;
  bf:role <http://id.loc.gov/vocabulary/relators/brd> ] .
```

### Kiegel syntax

```
provisionActivity >> Publication > agent >> Agent > rdfs:label ; > note >> Note >
rdfs:label="broadcaster" > noteType="role in publication" ; contribution >> Contribution > agent >>
Agent > rdfs:label ; > role=<http://id.loc.gov/vocabulary/relators/brd>
```