**To:**　　　　RDA Steering Committee (RSC)

**From:**　　　Gordon Dunsire, Chair

**Subject:**　　Issues on IFLA-LRM alignment for serials and other continuing resources

This is a discussion paper developed by the RSC and ISSN International Centre.

**Context**

The Joint Steering Committee for Development of RDA (JSC, now RDA Steering Committee or RSC) and ISSN International Centre (ISSN IC) agreed on June 4, 2015, on a protocol intended "to support the maintenance and development of functional interoperability between data created using the RDA and ISSN instructions and element sets" (http://rda-jsc.org/sites/all/files/6JSC-Chair-22.pdf). This protocol was renewed and slightly amended on January 28, 2016 (http://www.rda-jsc.org/sites/all/files/RSC-Chair-13.pdf).

This protocol formalizes and recognizes the long-standing relationships between the RSC and the ISSN IC, which have existed since at least the RDA/ISBD/ISSN harmonization discussions held during a JSC meeting that took place in Glasgow in 2011. Several discussion documents have been issued since then, available at http://www.rda-rsc.org/issn_summary.

The need to ensure functional interoperability is deemed critical because there are frequent exchanges of data between institutions using RDA and ISSN instructions and element sets. It is especially the case between the ISSN National Centres that have adopted RDA and the ISSN IC, when the data from National Centres are ingested in the ISSN Register, the database that stores and gives access to ISSN authoritative data.

The recent release of the IFLA Library Reference Model (or LRM), endorsed by IFLA Professional Committee in August 2017, provides a unique occasion to proceed further on RDA and ISSN harmonization. The LRM is a high-level conceptual reference model developed within an enhanced entity-relationship modelling framework. It is the consolidation of the separately developed IFLA conceptual models: FRBR, FRAD, FRSAD[1]. It is intended to influence major international cataloguing instructions:

- The RSC agreed, during its meeting (held in Frankfurt from November 7-11, 2016) to adopt the draft IFLA Library Reference Model (LRM) with the goal of developing the RDA text by the June 2018 release of a restructured RDA Toolkit;
- The ISBD Review Group (ISBD RG) agreed during its meetings held during the IFLA General Conference (Wrocław, 19-25 August 2017) to produce a revised version of the ISBD, aligned with the IFLA-LRM. Because the ISBD has traditionally been used as the basis of the ISSN Manual, which states the ISSN instructions and elements, the decision of the ISBD RG has a direct impact on the ISSN Manual.

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[1] The August 2017 version as amended and corrected through December 2017 is used in the present document: https://www.ifla.org/files/assets/cataloguing/frbr-lrm/ifla-lrm-august-2017_rev201712.pdf.

The LRM, compared to its predecessors and especially the FRBR model, brings out some radically new approaches to the different issues related to continuing resources – a continuing resource being defined by the ISSN Manual as "A publication, in any medium, that is issued over time with no predetermined conclusion and made available to the public". Several of these approaches were inspired by PRESS$_{OO}$, the IFLA conceptual model for bibliographic information pertaining to serials and other continuing resources[2].

The implications require thorough identification. First discussions were held during a meeting dedicated to the "Impact of the IFLA Library Reference Model on ISBD, RDA and Other Bibliographic Standards" which took place on August 25, 2017, at Wrocław University Library, Poland.

The present document is an outcome of this meeting. Its objective is to list the questions raised by the LRM and to provide a common RSC and ISSN IC view on implications for the bibliographic treatment of continuing resources.

It should also be noted that the ISSN standard itself (ISO 3297) has been submitted to a revision process launched in 2016. The ISSN standard is not directly affected by the publication of the LRM and is not expected to align with the LRM; however, the discussions outlined in the present document should provide some topics and guidance to the ISO working group on ISSN standard revision.

**Serials and other continuing resources in IFLA-LRM**

The LRM recognizes, in a dedicated section (5.8), that serials are "complex constructs". They present characteristics that make them particularly hard to model:

- they aggregate several levels of content (at least serial title / issue / article levels);
- as they are dynamic resources, description of serial works "does not limit itself to a description of the past, but is also intended to allow end-users to make assumptions about what the behaviour of a serial work will be, at least in the near future";
- therefore, it is not possible to state that e.g., two serials in different language editions are two expressions of the same work; or even that two serials in different medium versions (for example print and online) are two manifestations of the same expression, "as it is impossible to predict that this relationship will hold in the future".

Practically, these statements mean that collocation based on commonality of content is not applicable to serials: "It ensues that any serial work can be said to have only one expression and only one manifestation." This restriction may be referred to as the "WEM lock".

However, the LRM opens the door to extensions that can be specific to serials and other continuing resources, "by defining additional entities that comprise, say, the paper edition of a journal and its edition on the web; all linguistic editions of a journal that is published in more than one language as separate editions; all local editions of a journal…". These

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[2] PRESS$_{OO}$ is an extension of FRBR$_{OO}$, the object-oriented version of FRBR. See https://www.ifla.org/publications/node/11408.

extensions can build on the existing network of relationships between serial works to define larger entities, or "super-works".

**RDA and ISSN common views**

RSC and ISSN International Centre agree that the radical approach expressed in the LRM, and summarized above, will have a significant impact on the RDA and ISSN instructions and elements respectively.

These are the points where a common point of view on the practical implications of the LRM has been reached:

*Recognizing the specific characteristics of resources without a pre-determined conclusion*

The LRM clearly acknowledges the specific characteristics of "serials", to which a dedicated section is devoted. Their modelling is so complex that the WEM collocation based on commonality of content is deemed impossible, even though collocation is, practically, one of the major outcomes of the FRBR model and subsequently of the LRM.

RSC and ISSN IC intend first to clarify the terminology used in the LRM, and the scope of what is called "serials". The LRM is using the term "serials", but the major statements expressed in the 5.8 section dedicated to serials (e.g., the "WEM lock") are applicable to all resources issued over time with no predetermined conclusion (including also integrating continuing resources such as loose-leaf publications, websites or databases).

To get a clearer definition of what is described in section 5.8 of the LRM, the RSC and the ISSN IC propose to use the "extension termination" attribute provided by the RDA/ONIX framework (ROF)[3]. The resources whose extension termination is "indeterminate" are subject to the statements expressed in section 5.8 of the LRM.

These resources are labelled "continuing" resources in ISSN (and ISBD) instructions; the use of this label could be re-introduced in RDA if necessary.

Second, it is agreed that the significant characteristics of continuing resources make it relevant, at the beginning of the bibliographic treatment process, to distinguish between resources with and without a pre-determined conclusion, and to create specific instructions for the second kind of resources. That statement should mostly have an impact on the RDA Toolkit, the ISSN Manual being already dedicated to continuing resources.

*Describing the characteristics of serials and other continuing resources*

The second main outcome of the LRM approach towards resources without a pre-determined conclusion is that most data elements should be related to the level of the work.

This has a direct effect on the "mode of issuance": in the current RDA, the "mode of issuance" is a manifestation-level element (see 2.13): the mode of issuance covers different

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[3] RDA/ONIX for resource categorization: http://www.rda-jsc.org/archivedsite/docs/5chair10.pdf.

aspects such as the "extension termination" (determinate or indeterminate), the "extension mode" (succession or integration) or the number of units or carriers. It is recognized by RSC and ISSN IC that the two first aspects are related to the work, while only the third is related to the manifestation.

It is therefore proposed to distinguish between:

- "*Extension expectation*", at work level, which covers "extension termination", "extension mode", or "extension requirements", which are all ROF attributes;
- "*Mode of issuance*", related to the number of units or carriers under which the resource is issued.

Besides, a "serial work" is not, according to the LRM (and contrary to common usage) the work realised in the aggregated expression embodied in the sequence of already published manifestations. A "serial work" is actually a *publication plan*, the plan to publish a serial (or another type of continuing resource) with certain characteristics. For example, the language of a serial work may be multilingual, because it is the objective of its publisher, even though all the articles already published are in English. There is thus a need to re-examine the different elements describing serials and other continuing resources in RDA, e.g., from manifestation to work.

The ISSN identifier itself should be considered as an identifier for the work. As an ISSN identifies a serial title in a specific medium (print, online, digital carrier), it is currently associated in RDA with the manifestation entity. However, the "WEM lock" principle states that each medium version (that is, each different manifestation) is a different work in its own right. For example, the print version and the online (PDF) version of the international edition of the *New York Times* are considered different (even though related) works. Each of them has a specific ISSN: each serial work is therefore identified by only one ISSN. The one-and-only-one cardinality between a serial work, expression, and manifestation means that an identifier for any of the levels is an identifier for all of the WEM "stack". In practice, an ISSN identifies a manifestation, expression, and work, but in the context of the LRM it should identify the top, not the bottom, of the stack.

Finally, it is recognized that the differences between the description of a serial work and of a specific manifestation should be more thoroughly examined. Cataloguers may only infer the publication plan of a serial work from the analysis of a specific manifestation (an issue or a set of issues). Thus, there is a long-standing confusion between the description of a specific manifestation and of the serial as a whole. Some classical issues in the cataloguing of continuing resources, such as the conflict between the description of the first entry (or first issue) and latest entry, directly arise from that confusion. A more granular approach of the description, which clearly distinguishes the different levels where data elements shall be recorded, should help solving that issue. It may ultimately demonstrate that the two approaches are less contradictory than complementary.

Discussions should also be held about the status of some elements specific to the ISSN system, such as the key-title (inseparably attached to the ISSN identifier), and its role as Authorized Access Point for a continuing resource.

### *Work transformation*

As a serial work is a plan to publish a work, a new serial work is generated if the plan changes. A change of plan is indicated when the manifestation of the latest expression indicates a change in the value of one or more component elements of the plan.

However, it would be impractical to consider each modification of an element of the publication plan as significant enough to be considered as a modification of the global plan. Further instructions should be provided to define what kinds of change, and to what degree, would require the description of a new serial work in practice. RSC and ISSN IC should work together in order to harmonize the general guidance and/or specific instructions provided to cataloguers.

### *Identifying clusters of transformed works*

The LRM states that "all relationships between serials can be modelled as work-to-work relationships". More specifically, they are sub-properties of the LRM property LRM-R22 « Work *is a transformation* of Work ». This include:

- transformations where the original serial work is not published anymore: e.g., continuation, merge, split, etc.;
- transformations where the publication of the original serial work does not cease: e.g., publication on another medium version, publication in another language, addition of a new local edition, etc.

A serial work is therefore generally part of a network of serial works – again, this is applicable to other continuing resources. As such, it is possible to group together some works in specific clusters: the "additional entities" mentioned by IFLA-LRM. These clusters should be designed according to the needs of the different end-users (library users, librarians, publishers…). For example, the linking ISSN or ISSN-L is an identifier which groups serial works linked together with an "other medium version" relationship. Other clusters may be identified: for example, a cluster relating the different local editions of a newspaper and the main edition; a cluster grouping together all former and successor titles; etc. A discussion about the creation of "family ISSNs", identifying these clusters, is currently under way within the working group on the revision of the ISSN standard. In any case, this kind of clustering would somehow, for serials and other continuing resources, play a role similar to the collocation for resources with a pre-determined conclusion.