IFLA LRM
Library Reference Model 简介

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LFLA-LRM的发展

- FRBR模型的统一版

- FRBR (1998) + FRAD (2009) + FRSAD (2011) ---------

  → IFLA LRM

- IFLA-LRM的全球评审于2016年5月1日结束

- 2017年8月版本

IFLA官网上的介绍

▶ **国际图联图书馆参考模型（LRM）**

▶ 获专业委员会审查通过，国际图联图书馆参考模型（LRM）现已在国际图联网站发布。

▶ 国际图联LRM是在实体-关系模型框架下开发的高层概念参考模型，是对FRBR、FRAD、FRSAD这三个独立发展的国际图联概念模型的整合。

▶ 国际图联LRM的推出旨在解决这三个独立模型之间的不一致之处。新的模型对原有三个模型中涉及的每一项用户任务、实体、属性和关系都进行了审核，也对相关概念做了修订，但同时也需要进行重构，以构建有意义的整合。整合结果便是目前这个单一、简化且逻辑一致的模型，它涵盖了书目数据的所有方面，同时也适用于当前的概念模型实践。

▶ 国际图联LRM旨在应用于关联数据环境，支持并推动关联数据环境下的书目数据使用。

IFLA

International Federation of Library Associations and Institutions

IFLA Library Reference Model

A Conceptual Model for Bibliographic Information

Pat Riva, Patrick Le Bœuf, and Maja Žumer

Consolidation Editorial Group
of the IFLA FRBR Review Group

Definition of a conceptual reference model to provide a framework for the analysis of non-administrative metadata relating to library resources

August 2017
Revised after world-wide review
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为什么叫IFLA LRM

▶ **IFLA Library Reference Model**
　　A Conceptual Model for　Bibliographic Information
　　Definition of a conceptual reference model to provide a framework for the analysis of non-administrative metadata relating to library resources

▶ 为什么叫LRM？
　IFLA LRM, as its name indicates, remains a model issuing from the library community for library data.

▶ 为什么从FRBR-LRM改成了IFLA-LRM？

IFLA-LRM正式版笔记

▶ —— 关于名称中**FR**丢失的疑问 ——
作为"功能需求"（FR）系列的统一版，LRM在2016年全球评审时标题是FRBR-LRM，最终改成了IFLA-LRM。
RDA-L论坛有人疑惑，为什么FR家族发展到最后，FRBR不见了？
[RDA-L] Why FRBR-LRM to LRM? (2017-5-29)
一位同仁引用2.1"范围与目标"一节中强调书目"数据"而非包装，认为因此需要将LRM与FRBR的"书目记录"脱钩。
然而LRM中并没有明确的说明文字，也尚未在其他地方看到官方解释。
可以看到LRM有一个副标题"书目信息的概念模型"——用的是"书目信息"，既没有用较早FRBR的"书目记录"，也没有依后来FRAD/FRSAD用"书目数据"。

IFLA LRM 与 CIDOC CRM

▶ CIDOC CRM

▶ 国际博物馆理事会（ICOM）下属的国际文献工作委员会（CIDOC）
1.1 背景

……自2003年起，FRBR审查小组与负责维护CIDOC CRM的国际博物馆理事会（ICOM）文件委员会（CIDOC）联合举行会议。 这项联合工作导致了FRBR 采用了与CIDOC CRM 相同的面向对象的模型框架，并同意以此模型作为CIDOC CRM的官方扩展。 改造后的FRBR，被称为FRBRoo（FRBR面向对象），在2009年首次被批准为1.0版本，直接对应于原FRBR模型。 随着FRAD和FRSAD模型的后续发布，从FRBRoo 2.0版开始，FRBRoo扩展到包括来自FRAD和FRSAD模型的实体、属性和关系。

IFLA ~~FRBR~~ LRM

Chapter 1   Introduction

1.1   Background

Since the initial publication of the *Functional Requirements for Bibliographic Records* (FRBR) in 1998, the FR family of conceptual models grew to include three separate models for specific aspects of the bibliographic universe. In addition to FRBR for bibliographic data, the FR family of conceptual models included *Functional Requirements for Authority Data* (FRAD) and the *Functional Requirements for Subject Authority Data* (FRSAD).

These models were prepared independently over many years by different working groups:

- FRBR was the final report of the IFLA Study Group on the Functional Requirements for Bibliographic Records. The Study Group was constituted in 1992, and the report was approved by the Standing Committee of the Section on Cataloguing on September 5, 1997.
- FRAD was the outcome of the IFLA Working Group on Functional Requirements and Numbering of Authority Records (FRANAR). FRANAR was established in April 1999 by the Division of Bibliographic Control and the Universal Bibliographic Control and International MARC Programme (UBCIM). The report was approved by the Standing Committees of the Cataloguing Section and the Classification and Indexing Section in March 2009.
- FRSAD was the report of the IFLA Working Group on the Functional Requirements for Subject Authority Records (FRSAR), which was formed in 2005. The report was approved by the Standing Committee of the IFLA Section on Classification and Indexing in June 2010.

Section 3.2.2 of the FRBR *Final report*, concerning the definition of the entity *expression*, was amended as a result of the adoption of the recommendation of the Working Group on the Expression Entity (2003-2007). Additionally, the Working Group on Aggregates, established by the FRBR Review Group in 2005, was tasked to consider the modelling of various types of aggregates. Its recommendations were adopted by the FRBR Review Group in August 2011, in San Juan, Puerto Rico, and its final report was submitted in September 2011.

Starting in 2003, the FRBR Review Group has held joint meetings with the group within the International Council of Museums (ICOM) Committee on Documentation (CIDOC) responsible for maintaining the museum community's internationally agreed-upon conceptual model, the CIDOC Conceptual Reference Model (CIDOC CRM). This joint work resulted in the development of a formulation using the same object-oriented modelling framework as the CIDOC CRM, of the FRBR model and the approval of this model as an official extension of the CIDOC CRM. This reformulation of FRBR, known as FRBR$_{OO}$ (FRBR object-oriented), was first approved in 2009 as version 1.0 which corresponded directly to the original FRBR model. With the subsequent publication of the FRAD and FRSAD models, FRBR$_{OO}$ was expanded to include the entities, attributes and relationships from the FRAD and FRSAD models, starting with FRBR$_{OO}$ version 2.0.

Inevitably the three FR models, although all created in an entity-relationship modelling framework, adopted different points of view and differing solutions for common issues. Even though all three models are needed in a complete bibliographic system, attempting to adopt the three models in a single system required solving complex issues in an ad hoc manner with little guidance from the models. Even as FRAD and FRSAD were being finalized in 2009 and 2010, it became clear that it would be necessary to combine or consolidate the FR family into a single coherent model to clarify the understanding of the overall model and remove barriers to its adoption.

Chapter 8   Conceptual Models Consulted

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(CIDOC CRM 6.2.2) Definition of the CIDOC Conceptual Reference Model / produced by the ICOM/CIDOC Documentation Standards Group, continued by the CIDOC CRM Special Interest Group ; current main editors: Patrick Le Bœuf, Martin Doerr, Christian Emil Ore, Stephen Stead. Version 6.2.2. January 2017. Available at: http://www.cidoc-crm.org/sites/default/files/2017-01-25%23CIDOC%20CRM_v6.2.2_esIP.pdf (accessed 2017-08-01)

(FRBR$_{OO}$ 2.4) Definition of FRBRoo : a conceptual model for bibliographic information in object-oriented formalism / International Working Group on FRBR and CIDOC CRM Harmonisation ; editors: Chryssoula Bekiari, Martin Doerr, Patrick Le Bœuf, Pat Riva. Version 2.4. November 2015. Available at: http://www.ifla.org/files/assets/cataloguing/FRBRoo/frbroo_v_2.4.pdf (accessed 2017-08-01) and as FRBR : object-oriented definition and mapping from FRBR$_{ER}$, FRAD and FRSAD, at: http://www.cidoc-crm.org/frbroo/sites/default/files/FRBRoo_V2.4.pdf (accessed 2017-08-01)

(FRAD) Functional requirements for authority data : a conceptual model / edited by Glenn E. Patton, IFLA Working Group on Functional Requirements and Numbering of Authority Records (FRANAR). München : K.G. Saur, 2009. (IFLA series on bibliographic control ; vol. 34). As amended and corrected through July 2013. Available at: http://www.ifla.org/files/assets/cataloguing/frad/frad_2013.pdf (accessed 2017-08-01)

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(PRESS$_{OO}$) PRESSoo : extension of CIDOC CRM and FRBR$_{OO}$ for the modelling of bibliographic information pertaining to continuing resources / editor: Patrick Le Bœuf. Version 1.2. January 2016. Available at: http://www.ifla.org/files/assets/cataloguing/PRESSoo/pressoo_v1.2.pdf and at: http://www.cidoc-crm.org/pressoo/sites/default/files/pressoo_v1.2.pdf (accessed 2017-08-01)

Transition mappings : user tasks, entities, attributes, and relationships in FRBR, FRAD, and FRSAD mapped to their equivalents in the IFLA Library Reference Model / Pat Riva, Patrick Le Bœuf and Maja Žumer. 2017. Available at: https://www.ifla.org/publications/node/11412 (accessed 2017-08-01)

目 录

第3章 用户和用户任务

- 3.1 考虑的用户人群

- 考虑的用户：

  - 终端用户 (end-users)：读者、学生、研究者和其他终端用户

  - 为终端用户提供服务的"中介"（intermediaries working on behalf of end-users）

- 不考虑图书馆内部管理和运行的需求
administrative and rights metadata, ……and its associated administrative tasks are not in the scope or orientation of the model.
 Rights metadata is only in scope insofar as it relates to the user's ability to carry out the *obtain* task.

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第3章 用户和用户任务

3.2 用户任务概要

用户任务		定义
查找	Find	To bring together information about one or more resources of interest by searching on any relevant criteria
识别	Identify	To clearly understand the nature of the resources found and to distinguish between similar resources
选择	Select	To determine the suitability of the resources found, and to be enabled to either accept or reject specific resources
获取	Obtain	To access the content of the resource
探索	Explore	To discover resources using the relationships between them and thus place the resources in a context

Table 3.2   Definitions of User Tasks

Task	Definition	Comment
Find	To bring together information about one or more resources of interest by searching on any relevant criteria	The *find* task is about searching. The user's goal is to bring together one or more instances of entities as the result of a search. The user may search using an attribute or relationship of an entity, or any combination of attributes and/or relationships. To facilitate this task, the information system seeks to **enable effective searching** by offering appropriate search elements or functionality.
Identify	To clearly understand the nature of the resources found and to distinguish between similar resources	The user's goal in the *identify* task is to confirm that the instance of the entity described corresponds to the instance sought, or to distinguish between two or more instances with similar characteristics. In "unknown item" searches, the user also seeks to recognize the basic characteristics of the resources presented. To facilitate this task, the information system seeks to **clearly describe the resources** it covers. The description should be recognizable to the user and easily interpreted.
Select	To determine the suitability of the resources found, and to be enabled to either accept or reject specific resources	The *select* task is about reacting to possible options. The user's goal is to make choices, from among the resources presented, about which of them to pursue further. The user's secondary requirements or limitations may involve aspects of content, intended audience, etc. To facilitate this task, the information system needs to **allow/support relevance judgements** by providing sufficient appropriate information about the resources found to allow the user to make this determination and act on it.
Obtain	To access the content of the resource	The user's goal in the *obtain* task is to move from consulting a surrogate to actually interacting with the library resources selected. To fulfill this task, the information system needs to either provide direct links to online information, or location information for physical resources, as well as any instructions and access information required to complete the transaction or any restrictions on access.
Explore	To discover resources using the relationships between them and thus place the resources in a context	The *explore* task is the most open-ended of the user tasks. The user may be browsing, relating one resource to another, making unexpected connections, or getting familiar with the resources available for future use. The *explore* task acknowledges the importance of serendipity in information seeking. To facilitate this task the information system seeks to **support discovery** by making relationships explicit, by providing contextual information and navigation functionality.

▶ 删除了

FRAD
阐明关系 (contextualize)
提供依据 (justify）

（用于建立规范数据，不与终端用户直接相关）

第4章 模型定义

- ◆ **4.1实体**
  - ✓ 4.1.1介绍
  - ✓ 4.1.2实体的类或"IsA"层次结构
  - ✓ 4.1.3实体详细定义
- ◆ **4.2属性**
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  - ✓ 4.2.4属性详细定义
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  - ✓ 4.3.1介绍
  - ✓ 4.3.2关系的层次结构
  - ✓ 4.3.3关系详细定义
  - ✓ 4.3.4按域排序的关系

Figure 4.1 Alternative Entity-Relationship Models for Nomens

实体-关系模型中：
实体
关系
属性

4.1.2 实体的类或"IsA"层次结构

▶ "超类"和"子类"关系，可以表示为IsA

例如："个人"实体作为行为者的子类，可以表示为

个人 IsA 行为者

▶ 制定规则时，不必对子类再单独定义，仅需对超类进行定义。超类 的属性和关系同样适用于子类。

例如：所有的"个人"都是"行为者"，则适用于"行为者"的所有关系或属性同样适用于"个人"，无需再将这部分关系和属性对"个人"重复定义。

4.1 实体

Table 4.1 Entity Hierarchy		
Top Level	**Second Level**	**Third Level**
LRM-E1 Res		
--	LRM-E2 Work	
--	LRM-E3 Expression	
--	LRM-E4 Manifestation	
--	LRM-E5 Item	
--	LRM-E6 Agent	
--	--	LRM-E7 Person
--	--	LRM-E8 Collective Agent
--	LRM-E9 Nomen	
--	LRM-E10 Place	
--	LRM-E11 Time-span	

Res

▶ "Res"在拉丁语中意为 "thing"，是新增的实体。

▶ Res位于顶层，是其他10个实体的超类，相当于FRSAD中的实体 "Thema"。
"Thema"指 "用作作品主题的任何实体"
"Res"指模型中的 "任何实体"

▶ "Res"涵盖所有实体

▶ Res与Nomen的区别与联系，即：
Res是事物本身，而Nomen是事物的命名

Examples:

- {Homer's Odyssey} [ancient Greek *work*]

  {Codex Sinaiticus} [manuscript containing, among others, the Christian Bible in Greek]

  {Henry Gray} [*person*, physician, author of medical *works*]

  {Agatha Christie} [*person*, author of detective novels]

  {Miss Jane Marple} [character in numerous Agatha Christie novels and stories]

  {Lassie} [fictional female dog of the Rough Collie breed,title character in the novel *Lassie come-home* by Eric Knight, first published in 1940, and appearing in numerous film and television spin-offs]

  {Pal} [lived June 4, 1940-June 1958, a male dog of the Rough Collie breed who portrayed the character Lassie on film from 1 943 to 1954 (several of Pal's male descendants portrayed Lassie in subsequent films and television shows)]

  {the International Federation of Library Associations and Institutions} [an association]

  {the Romanov family} [the Russian imperial family]

  {Italian-Canadians} [a group of people who are not a *collective agent*]

  {Job} [the Biblical figure]

  {Horus} [the ancient Egyptian deity]

  {graduates of Queen's University between 1980-1990}
[a group of people who are not a *collective agent*]

WEMI被完整保留

- ▶ LRM-E2 Work
  - ▶ LRM-E3 Expression
    - ▶ LRM-E4 Manifestation
      - ▶ LRM-E5 Item

ID	Name	Definition	Constraints
LRM-E2	Work	The intellectual or artistic content of a distinct creation	Superclass: *res* The entities *work, expression, manifestation, item* are disjoint

▶ **Scope notes**

▶ **Examples**

LRM-E6 agent

► Agent： An entity capable of deliberate actions, of being granted rights, and of being held accountable for its actions。一个能被授权并对其行为负有责任的、实施有目的行动的实体。

► 牛津词典，主要两个义项，一是代人行事者，就是代理了；另一是发挥主动作用，或产生特定效果的人或事，这就是我们所要表达的含义了。词典里还有它的拉丁文原意，那就是"做"，doing。

► ICP的定义仍限定在个人、家族、团体责任者的范围内；而LRM的定义更宽泛些。

► 目前的译法："行为主体"、"行为者"、"施事者"、"实施者"……

LRM-E6 agent

ID	Name	Definition	Constraints
LRM-E6	Agent	An entity capable of deliberate actions, of being granted rights, and of being held accountable for its actions	Superclass: *res* Subclasses: *person, collective agent*
	Scope notes	The entity *agent* is a superclass strictly equivalent to the union of the entities *person* and *collective agent*. It is defined to reduce redundancy in the model by providing a single entity to serve as the domain or range of certain relationships that apply to all specific types of *agents*. Being an *agent* requires having, or having had, the potential of intentional relationships with instances of entities of bibliographic interest (*works, expressions, manifestations, items*), whether that specific *agent* has ever done so or not. Human beings are directly or indirectly the motive force behind all such actions taken by all *agents*.	
		Automatons (such as, weather recording devices, software translation programs, etc.), sometimes referred to as technological agents, are in this model viewed as tools used and set up by an actual *agent*.	
	Examples	• {Margaret Atwood} • {Hans Christian Andersen} • {Queen Victoria} • {the Borromeo family} • {BBC Symphony Orchestra} • {Symposium on Glaucoma}	

▶ Automatons (such as, weather recording devices, software translation programs, etc.), sometimes referred to as technological agents, are in this model viewed as tools used and set up by an actual *agent*.

LRM-E7 Person

- 限定为真的人

- 虚幻或者传说中的例子，不属于person实体

  ~~fictional，Kermit the Frog~~

  ~~literary，Miss Jane Marple~~

  ~~purely legendary，the wizard Merlin~~

LRM-E8 Collective Agent

- A gathering or organization of *persons* bearing a particular name and capable of acting as a unit

- Bearing particular name
- Capable of acting as a unit

4.1 实体

Table 4.1 Entity Hierarchy		
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--	--	LRM-E7 Person
--	--	LRM-E8 Collective Agent
--	LRM-E9 Nomen	
--	LRM-E10 Place	
--	LRM-E11 Time-span	

LRM-E9 Nomen

- An association between an entity and a designation that refers to it
- 一串符号只有用于命名事物时才是nomen
- 字符串本身并不构成nomen这个实体的一个例子，在模型中，作为nomen实体一个例子的属性之一 "nomen string"

Examples	
Nomens for a *person*: 'Agatha Christie' as a way of referring to {the *person* Dame Agatha Christie, Lady Mallowan} 'Agatha Mary Clarissa Miller' as a way of referring to {the *person* Dame Agatha Christie, Lady Mallowan} 'Lady Mallowan' as a way of referring to {the *person* Dame Agatha Christie, Lady Mallowan} 'Mary Westmacott' as a way of referring to {the *person* Dame Agatha Christie, Lady Mallowan} 'Christie, Agatha, 1890-1976' as a way of referring to {the *person* Dame Agatha Christie, Lady Mallowan} [preferred access point according to RDA for her detective novels and stories] 'Westmacott, Mary, 1890-1976' as a way of referring to {the *person* Dame Agatha Christie, Lady Mallowan} [preferred access point according to RDA for her romance novels] *Nomens* for an international organization in several languages: 'United Nations' as a way of referring to {the *collective agent* United Nations} in English 'Nations Unies' as a way of referring to {the *collective agent* United Nations} in French 'Nazioni Unite' as a way of referring to {the *collective agent* United Nations} in Italian 'Vereinigte Nationen' as a way of referring to {the *collective agent* United Nations} in German *Nomens* for a *work*: 'Christie, Agatha, 1890-1976. Murder with mirrors' as a way of referring to {the *work Murder with mirrors* by Agatha Christie} [preferred access point in the LC/NACO authority file] 'Christie, Agatha, 1890-1976. They do it with mirrors' as a way of referring to {the *work Murder with mirrors* by Agatha Christie} [variant access point in the LC/NACO	*Nomens* for the one day *time-span* 2015-03-01: 'March 1, 2015' as a way of referring, in English and within the Gregorian calendar scheme, to the *time-span* that elapsed between zero o'clock on the 1st of March 2015 and midnight on the 1st of March 2015 '1 marzo 2015' as a way of referring, in Italian and within the Gregorian calendar scheme, to the *time-span* that elapsed between zero o'clock on the 1st of March 2015 and midnight on the 1st of March 2015 '01/03/2015' as a way of referring, in the DD/MM/YYYY notation convention and within the Gregorian calendar scheme, to the *time-span* that elapsed between zero o'clock on the 1st of March 2015 and midnight on the 1st of March 2015 '10 adar 5775' as a way of referring, in Romanized Hebrew and within the Hebrew calendar scheme, to the *time-span* that elapsed between zero o'clock on the 1st of March 2015 and midnight on the 1st of March 2015 '1936 Phalguna 10' as a way of referring, in Romanized Hindi and within the Indian civil calendar scheme, to the *time-span* that elapsed between zero o'clock on the 1st of March 2015 and midnight on the 1st of March 2015 *Nomens* for a subject concept: 'Music' as a way of referring to music in LCSH [valid term in LCSH] '780' as a way of referring to music in the DDC [classification number for the topic {music} in DDC] 'Music' as a way of referring to music in LCGFT [valid genre term in LCGFT]

LRM-E10 Place

- Place：A given extent of space
- Place name 所指示的区域边界可以是模糊的，也可以随着时间改变
- Place是一个文化概念
- FRBR definition (a location) 似乎仅仅限于空间坐标

Place和Location

▶ Place是实体（LRM-E10)，定义为"给定的空间范围"，是对地理区域或空间范围的人类认同。例如，{格陵兰}、{意大利}、{非洲}、{圣 劳伦斯河}、{休伦湖} 等等。

▶ Location是属性，在LRM中出现了两次，分别表示Item和Place两个实体的属性。

▶ location作为单件的属性（LRM-E5-A1)时，表示该单件被保存、存储或可供访问的馆藏和/或机构，翻译为"馆藏地"，例如在MARC 21字段中可表示为：

▶ 852 01 $a ViBlbV $b Main Lib $b MRR $k Ref$h HF5531.A1 $i N4273

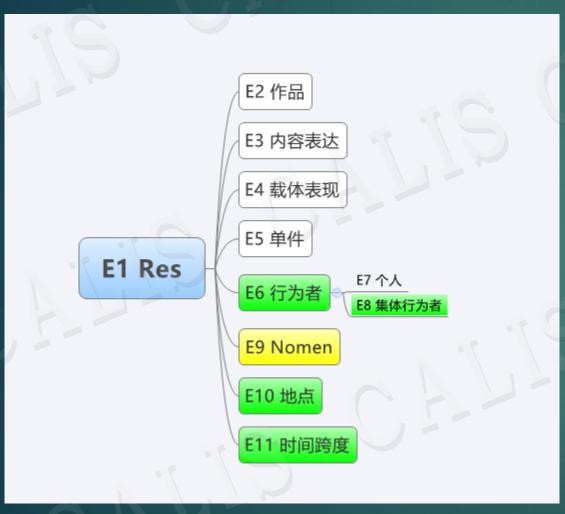▶ location作为Place 的属性（LRM-E10-A2）时，表示"地点的实体领土划定"，例如在UNIMARC字段中可表示为：

▶ 123 ## $d E1444300 $e E1482200 $f S0403900$g S0433900（表示具体的经度、纬度）

LRM-E11 Time-span 时间跨度

▸ Time-span ： A temporal extent having a beginning, an end and a duration 存在开始、结束和持续时间的时间范围。

▸ 即使是短暂的时间（比如一天）也有一个范围。

▸ Dates是时间跨度的一种"Nomen"

Examples	• {the period of time beginning on 1st January 2015, ending on 31 December 2015, and having a duration of one year} [may be referred to as '2015 A.D.' (using *Anno Domini*) or as '2015 CE' (using common era)} • {2015-03-01} [*time-span* of a day expressed in the Gregorian calendar in YYYY-MM-DD format] • {20120808094025.0} [*time-span* of one-tenth of a second expressed in YYYYMMDDHHMMSS.S format] • {Twentieth Century} • {Ordovician Period} [*time-span* lasting from 488.3 to 443.7 million years before present] • {488.3 million years before present} [*time-span* of the beginning of the Ordovician period] • {Ming Dynasty} • {Bronze Age} [a *time-span* although the exact time covered will vary depending on location] • {Age of Enlightenment}

- 5个实体来自FRBR
- 1个来自FRSAD (Res=Thema)
- 1个来自FRAD+FRSAD (Nomen）
- 4个新实体（行为者、集体行为者、地点、时间跨度）
- 取消了10个实体: 家族、团体、标识符、受控检索点、规则、机构、概念、物体、事件、地点

FRBR   *Place: location*
The entity defined as place encompasses a comprehensive range of locations: terrestrial and extra-terrestrial; historical and contemporary; geographic features and geo-political jurisdictions.

IFLA-LRM   *Place: A given extent of space*
The entity place, as relevant in a bibliographic context, is a cultural construction, it is the human identification of a geographic area or extent of space.

4.2 属性

▶ 当特性是连接了模型中的两个实体的时候，就用关系来表述

▶ 当特性是提供了实体的其他重要信息时，就用属性来定义。

▶ 这一信息可以是：

    ▶ 受控词表的值

    ▶ 转录的数据

    ▶ 自由文本

4.2 属性

- ▶ 10个实体定义了37项属性
- ▶ 目标是只列出重要或者具有代表性的属性
- ▶ 并非穷尽了所有可能的属性
- ▶ 应用时可添加必要的属性

Table 4.3   **Attribute Hierarchy**

Entity Top Level	Entity Lower Levels	Attribute Top Level	Attribute Lower Level
LRM-E1 Res		LRM-E1-A1 Category 类别	LRM-E2-A1 Category
--	LRM-E2 Work	--	LRM-E3-A1 Category
--	LRM-E3 Expression	--	LRM-E4-A1 Category of carrier
--	LRM-E4 Manifestation	--	
--	LRM-E9 Nomen	--	LRM-E9-A1 Category
--	LRM-E10 Place	--	LRM-E10-A1 Category
LRM-E1 Res		LRM-E1-A2 Note 注释	
--	LRM-E2 Work	LRM-E2-A2 Representative expression attribute 代表性的内容表达属性	
--	LRM-E3 Expression	LRM-E3-A2 Extent 数量 ✓	
--	LRM-E3 Expression	LRM-E3-A3 Intended audience 读者对象 ✓	
--	LRM-E3 Expression	LRM-E3-A4 Use rights 使用权利 ✓	
--	LRM-E3 Expression	LRM-E3-A5 Cartographic scale 地图尺	
--	LRM-E3 Expression	LRM-E3-A6 Language 语言	
--	LRM-E3 Expression	LRM-E3-A7 Key 调	
--	LRM-E3 Expression	LRM-E3-A8 Medium of performance 表演媒介	
--	LRM-E4 Manifestation	LRM-E4-A2 Extent 数量 ✓	
--	LRM-E4 Manifestation	LRM-E4-A3 Intended audience 读者对象 ✓	
--	LRM-E4 Manifestation	LRM-E4-A4 Manifestation statement 单件表现说明	
--	LRM-E4 Manifestation	LRM-E4-A5 Access conditions 获取条件	
--	LRM-E4 Manifestation	LRM-E4-A6 Use rights 使用权利 ✓	
--	LRM-E5 Item	LRM-E5-A1 Location 馆藏地 位置	
--	LRM-E5 Item	LRM-E5-A2 Use rights 使用权利 ✓	
--	LRM-E6 Agent	LRM-E6-A1 Contact information 联系信息	
--	LRM-E6 Agent	LRM-E6-A2 Field of activity 活动领域	
--	LRM-E6 Agent	LRM-E6-A3 Language 语言	
--	LRM-E7 Person	LRM-E7-A1 Profession / Occupation 职业/工作	
--	LRM-E9 Nomen	LRM-E9-A2 Nomen string Nomen字符串	
--	LRM-E9 Nomen	LRM-E9-A3 Scheme 体系	
--	LRM-E9 Nomen	LRM-E9-A4 Intended audience 读者对象	
--	LRM-E9 Nomen	LRM-E9-A5 Context of use 使用背景	
--	LRM-E9 Nomen	LRM-E9-A6 Reference source 参考源	
--	LRM-E9 Nomen	LRM-E9-A7 Language 语言	
--	LRM-E9 Nomen	LRM-E9-A8 Script 文字	
--	LRM-E9 Nomen	LRM-E9-A9 Script conversion 文字转换	
--	LRM-E10 Place	LRM-E10-A2 Location 位置	
--	LRM-E11 Time-span	LRM-E11-A1 Beginning 开始	
--	LRM-E11 Time-span	LRM-E11-A2 Ending 结束	

Table 4.4	Attributes		
ID	**Entity**	**Attribute**	**Definition**
LRM-E1-A1	RES	Category	A type to which the *res* belongs
	Scope notes		
	Examples	• object • work • concept • event • family • corporate body	
ID	**Entity**	**Attribute**	**Definition**
LRM-E1-A2	RES	Note	Any kind of information about a *res* that is not recorded through the use of specific attributes and/or relationships
	Scope notes		
	Examples	• Imprint stamped on verso of t.p. [general *note* on a manifestation] • Fourth manned mission in the Apollo program. [part of general *note* on an object, namely the Apollo 10 spacecraft, in the Library of Congress Authorities] • Surgery performed on an outpatient basis. May be hospital-based or performed in an office or surgicenter. [general *note* on a concept] • Deacidified copy. [general *note* on an *item*] • 317 ## $a Inscription on the title page in sixteenth century hand, 'Iohannes Wagge me	

▶ # RES的属性

▶ ## 类别

- ✓ RES从属的类型
- ✓ 可以创建子类实体

▶ ## 注释

- ✓ 任务未通过使用特定属性或关系记录的res的信息

▶ 两项属性均适用于模型中所有实体，无需重复。

作品的属性

- 类别
- 有代表性的内容表达属性

作品类别属性举例：

▶ Categorization as to termination intention:
  monograph
  serial

▶ Categorization as to creative domain:
  literature
  music
  fine arts

▶ Categorization as to form / genre:
  novel
  play
  poem
  essay
  symphony
  concerto
  sonata
  fnk [UNIMARC code for: funk]
  sou [UNIMARC code for: soul music]
  drawing
  painting
  photograph

作品的有代表性的内容表达属性举例：

► For textual *works*:
  Language: English
  Intended audience: children

► For musical *works*:
  Key: B flat minor
  Medium of performance: violin

► For cartographic *works*:
  Cartographic scale: 1:10,000
  Projection: Albers equal-area conic projection

► For moving image *works*:
  Aspect ratio: 16:9
  Colourization: hand-colouring

► For art *works*:
  Medium of execution: sculpture

5.6 Representative Expression Attributes

代表性内容表达属性

▶ 新的作品属性

▶ 描述作品所必须的属性，取值来自作品具有代表性或者典型的内容表达

▶ 一般有多个取值，选择的属性取决于作品的类别

▶ 每个属性的源内容表达可能不同，由编目标准确定准则
比如文本作品—语言，地图—比例尺，音乐—调

内容表达的8个属性

- 类别
- 数量
- 读者对象
- 使用权利
- 比例尺
- 语言
- 调
- 表演媒介

载体表现的6个属性

- 载体类别
- 数量
- 读者对象
- 载体表现说明
- 获取条件
- 使用权利

馆藏的2个属性

- ▶ 馆藏地
- ▶ 使用权利

WEMI过去的属性

▶ 替代为关系

✓ 与Nomen的关系：题名

✓ 与Nomen的关系：数字标识（音乐作品）

✓ 与地点的关系：……的地点

✓ 与时间跨度的关系：……的日期

✓ 与Nomen的关系：标识符

✓ 与行为者的关系：出版者、发行者等

▶ 替代为载体表现说明
替代了FRBR中大部分载体表现的转录属性

行为者的属性

- LRM-E6-A1 联系信息

- LRM-E6-A2 活动领域

- LRM-E6-A3 语言

个人的属性

- LRM-E7-A1 职业/工作

集体行为者的属性

Nomen的属性（9个）

- LRM-E9-A1 类别
- LRM-E9-A2 字符串
- LRM-E9-A3 方案
- LRM-E9-A4 目标受众
- LRM-E9-A5 使用背景
- LRM-E9-A6 参考源
- LRM-E9-A7 语言
- LRM-E9-A8 文字
- LRM-E9-A9 文字转换

5.5 Modelling of Bibliographic Identities

地点

- LRM-E10-A1 类别
  例如town, country,continent

- LRM-E10-A2 位置 Location

时间跨度

- ▶ LRM-E11-A1 开始
- ▶ LRM-E11-A2 结束

4.3 关系 LRM-R₁₋₃₆

- ▶ 36种不同的关系（包括互逆的关系）
- ✓ 核心的WEMI关系
- ✓ 行为者责任关系
- ✓ 主题关系
- ✓ 命名关系
- ✓ 行为者之间的关系
- ✓ 相关的关系
- ✓ 地点和时间跨度关系
- ✓ 其他作品关系
- ✓ 其他内容表达关系
- ✓ 其他载体表现和单件关系

Table 4.6   Relationship Hierarchy

Top Level		Second Level	
LRM-R1	RES is associated with RES		
"		LRM-R2	WORK is realized through EXPRESSION
"		LRM-R3	EXPRESSION is embodied in MANIFESTATION
"		LRM-R4	MANIFESTATION is exemplified by ITEM
"		LRM-R5	WORK was created by AGENT
"		LRM-R6	EXPRESSION was created by AGENT
"		LRM-R7	MANIFESTATION was created by AGENT
"		LRM-R8	MANIFESTATION was manufactured by AGENT
"		LRM-R9	MANIFESTATION is distributed by AGENT
"		LRM-R10	ITEM is owned by AGENT
"		LRM-R11	ITEM was modified by AGENT
"		LRM-R12	WORK has as subject RES
"		LRM-R13	RES has appellation NOMEN
"		LRM-R14	AGENT assigned NOMEN
"		LRM-R15	NOMEN is equivalent to NOMEN
"		LRM-R16	NOMEN has part NOMEN
"		LRM-R17	NOMEN is derivation of NOMEN
"		LRM-R18	WORK has part WORK
"		LRM-R19	WORK precedes WORK
"		LRM-R20	WORK accompanies / complements WORK
"		LRM-R21	WORK is inspiration for WORK
"		LRM-R22	WORK is a transformation of WORK
"		LRM-R23	EXPRESSION has part EXPRESSION
"		LRM-R24	EXPRESSION is derivation of EXPRESSION
"		LRM-R25	EXPRESSION was aggregated by EXPRESSION
"		LRM-R26	MANIFESTATION has part MANIFESTATION
"		LRM-R27	MANIFESTATION has reproduction MANIFESTATION
"		LRM-R28	ITEM has reproduction MANIFESTATION
"		LRM-R29	MANIFESTATION has alternate MANIFESTATION
"		LRM-R30	AGENT is member of COLLECTIVE AGENT
"		LRM-R31	COLLECTIVE AGENT has part COLLECTIVE AGENT
"		LRM-R32	COLLECTIVE AGENT precedes COLLECTIVE AGENT
"		LRM-R33	RES has association with PLACE
"		LRM-R34	PLACE has part PLACE
"		LRM-R35	RES has association with TIME-SPAN
"		LRM-R36	TIME-SPAN has part TIME-SPAN

第5 模型概述

谢谢！