R10 has member & R67 has part

Background

The role of R10 has member has been discussed several times in the development of LRMoo. The last time it was discussed was at SIG #53, May 2022, under issue 593. There was a vote to retain it (a vote against a proposal to deprecate it, after an e-vote to deprecate was vetoed). The issue was closed.

Issue

For the IFLA commenters, the use of R10 remains difficult, as can be seen by F. Leresche's comments.

- That it is difficult to see examples of R10 that are not also examples of R67 (that is, parts of a larger work)
- That the final sentences of the R10 scope note (about works with common members) are difficult to understand.
- That it calls to mind the deprecated classes F14 Individual Work and F15 Complex Work
- That it leads to confusion about the implementation of F2 Expression (which is seen to be the same as F14), particularly the reference to translations
- That the role of gathering expressions of a work together is fulfilled by R3 realises

Discussion

There have been multiple previous discussions and revisions to R10. At this point in the development of LRMoo, the main role of R10 is to permit integration of different databases, established with different decisions about work boundaries, so that in one database certain instances are recorded as expressions of a single work, and in another database some of them are viewed as being expressions of related works. This is a particularly difficult concept to illustrate with examples under R10, particularly as a reader of the model is likely to assume that all examples are consistent with each other.

Some specific edits to R10 and R67 can be considered to offer some improvements.

1) R10, addition to scope note and explanation for last example

R10 has member (is member of)

Domain: F1 Work

Range: F1 Work

Subproperty of: E89 Propositional Object. P148 has component (is component of): E89 Propositional Object

Superproperty of: F1 Work. R67 has part (is part of): F1 Work

Quantification:	many to many (0,n:0,n)

Scope note: This property associates an instance of F1 Work with another instance of F1 Work that forms a part of it. In contrast to its subproperty *R67 has part (is part of)*, the property *R10 has member (is member of)* may, for instance, also associate with the overall instance of F1 Work free translations, adaptations and other derivative works that do not form a logical whole with sibling parts. This property is transitive, asymmetric and irreflexive.

An instance of F1 Work may neither directly nor indirectly be a member of itself. Instances of F1 Work that are not members of one another may not share a common member.

Examples:

- Ursula K. Le Guin's textual work 'The Earthsea trilogy' (F1) *has member* Ursula K. Le Guin's textual work 'The tombs of Atuan' (F1).
- Johann Sebastian Bach's musical work 'Goldberg Variations' (F1) *has member* the musical work entitled 'Variatio 1. a 1 Clav' (F1).
- Dante Alighieri's textual work entitled 'Divina Commedia' (F1) *has member* Dante Alighieri's textual work entitled 'Inferno' (F1).
- Miguel de Cervantes' textual work entitled 'Don Quixote' (F1) *has member* Miguel de Cervantes' textual work entitled 'El ingenioso hidalgo Don Quixote de la Mancha' (F1).
- Miguel de Cervantes' textual work entitled 'Don Quixote' (F1) *has member* Miguel de Cervantes' textual work entitled 'Segunda Parte del Ingenioso Cavallero Don Quixote de la Mancha' (F1).
- J.R.R. Tolkien's textual work 'The Lord of the Rings' (F1) *has member* J.R.R. Tolkien's textual work 'The Two Towers' (F1).
- Cormac McCarthy's textual work 'The Border Trilogy' (F1) *has member* Cormac McCarthy's textual work 'All the Pretty Horses' (F1).
- Giovanni Battista Piranesi's graphic work entitled 'Carceri' (F1) *has member* Giovanni Battista Piranesi's graphic work entitled 'Carcere XVI: the pier with chains' (F1)
- Ludwig van Beethoven's musical work entitled 'Symphony No. 9' (F1) *has member* Ludwig van Beethoven's musical work 'Finale' (4th movement) (F1).
- Auguste Rodin's 'La porte de l'Enfer' (F1) *has member* Auguste Rodin's 'Le penseur'(F1). [In original size this sculpture *is part of* (R67) Rodin's 'La porte de l'Enfer', in monumental size it is an autonomous work]

2023-05-11: rewrite the scope of R10 to explicitly refer to this integration usage, and the superwork concept. Remove the examples of R67 from R10.

Further idea: revise R10 to have domain E89 Propositional Object, so that a object (likely broader than an F1 Work) can serve as a gathering point of instances of F1 Work. This conceptual object functions as a "superwork". It can gather broadly works set in a specific fictional universe that are not sequels or parts of a larger work: video, games, novels all set in the same universe but without any clear derivation path between the works.

2)   R67, add one word to the scope note, to stress the work boundary concept of translations
2023-05-11: this addition agreed and considered editorial

R67 has part (forms part of)

Domain:	F1 Work
Range:	F1 Work

Subproperty of: F1 Work. R10 has member (is member of): F1 Work

Quantification: many to many (0,n:0,n)

Scope note: This property associates an instance of F1 Work with another instance of F1 Work that forms part of it in a complementary role to other sibling parts, conceived at some point in time to form together a logical whole, such as the parts of a trilogy. This property is transitive, asymmetric and irreflexive.

In contrast, the property *R10 has member (is member of)* may, for instance, also associate with the overall instance of F1 Work <mark>free</mark> translations, adaptations and other derivative works that do not form a logical whole with sibling parts.

Examples:

- Dante Alighieri's textual work entitled 'Divina Commedia' (F1) *has part* Dante Alighieri's textual work entitled 'Inferno' (F1).
- Miguel de Cervantes' textual work entitled 'Don Quixote' (F1) *has part* Miguel de Cervantes' textual work entitled 'El ingenioso hidalgo Don Quixote de la Mancha' (F1).
- Miguel de Cervantes' textual work entitled 'Don Quixote' (F1) *has part* Miguel de Cervantes' textual work entitled 'Segunda Parte del Ingenioso Cavallero Don Quixote de la Mancha' (F1).
- J.R.R. Tolkien's textual work 'The Lord of the Rings' (F1) *has part* J.R.R. Tolkien's textual work 'The Two Towers' (F1).
- Cormac McCarthy's textual work 'The Border Trilogy' (F1) *has part* Cormac McCarthy's textual work 'All the Pretty Horses' (F1).
- Giovanni Battista Piranesi's graphic work entitled 'Carceri' (F1) *has part* Giovanni Battista Piranesi's graphic work entitled 'Carcere XVI: the pier with chains' (F1)
- Ludwig van Beethoven's musical work entitled 'Symphony No. 9' (F1) *has part* Ludwig van Beethoven's musical work 'Finale' (4th movement) (F1).

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