## Issue 549 -55th SIG meeting

AF walked the SIG through the redrafted modeling constructs. The proposed changes consist of:

* revising the scope note of [TXP7 has item](#_NEW),
* revising the scope note and example of [TXP17 has part](#_NEW_1),
* revising the scope note of [TXP18 read](#_NEW_2)
* updating the FOL statement for [TXP13 deciphered via the representation](#_NEW_3)
* revising the scope note and example for [TX3 Writing System](#_NEW_4)

**Decisions**

The SIG accepted the proposed changes –details of which can be found in the below.

The new version will be released shortly after the SIG meeting, following some minor, editorial revisions. It will bear the number 2.0, as it implements major changes in the model (new properties, redrafting of existing ones, etc.)

***Issue closed***

#### TXP7 has item

##### NEW

**TXP7 has item (is item of)**

Domain:

TX13 Script

Range:

TX8 Grapheme

Subproperty of:

P67 refers to (is referred to by)

Quantification:

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

Scope note:

This property associates an instance of TX13 Script with an instance of TX8 Grapheme employed by this script. Different instances of TX13 Script may have some graphemes in common.

Examples:

* The Latin script ([TX13](https://docs.google.com/document/d/1-ZjCKVmSAdjqLof61zwZdMMf6P_rja9T/edit%22%20%5Cl%20%22heading%3Dh.2pta16n)) *has item* the ideal capital letter “S”.

In First Order Logic:

TXP7(x,y) ⇒ [TX3](https://docs.google.com/document/d/1-ZjCKVmSAdjqLof61zwZdMMf6P_rja9T/edit#heading=h.2pta16n)(x)

TXP7(x,y) ⇒ TX8(y)

##### OLD

**TXP7 has item (is item of)**

Domain: TX3 Writing System

Range: TX8 Grapheme

Subproperty of P106 is composed of (forms part of)

Quantification: one to one (0,1:1,1)

Scope note: This property is used to state the (conceptual) belonging of a TX8 Grapheme to a given TX3 Writing System.

Examples:

* The Latin alphabet (TX3), used to encode the inscription (TX1) on South face of the Arch of Constantine, *has item* the grapheme <S> (TX8) used in this writing system to represent the /s/ sound.

In First Order Logic:

TXP7(x,y) ⊃ TX3(x)

TXP7(x,y) ⊃ TX8(y)

TXP7(x,y) ⊃ P106(x,y)

#### TXP17 has part

##### NEW

**TXP17 has part (forms part of)**

Domain:

TX12 Grapheme Sequence

Range:

TX12 Grapheme Sequence

Subproperty of:

P106 is composed of (forms part of)

Quantification:

one to many (0,n:0,1)

Scope note:

This property associates an instance of TX12 Grapheme Sequence with another instance of TX12 Grapheme Sequence appearing at a particular position of the sequence. The property can be also used by an instance of TX11 Grapheme Occurrence (subclass of TX12 Grapheme Sequence) for denoting that a grapheme occurrence has part another grapheme occurrence. Note that a grapheme occurrence may be a symbolic composite containing another grapheme occurrence, such as the minute character “e” on top of the character “u” in former German writing systems denoting the symbol for “ü”.

Examples:

* The “DIVINITATIS” grapheme sequence (TX12), corresponding to the glyph sequence of the inscription (TX1) on the Arch of Constantine, *has part* the “AT” grapheme sequence (TX12) [which appears to be damaged].

In First Order Logic:

TXP17(x,y) ⇒ TX12(x)

TXP17(x,y) ⇒ TX12(y)

TXP17(x,y) ⇒ P106(x,y)

TXP17(x,y) ∧ TX11(x) ⇒ ¬TX12(y)

#### TXP18 read

##### NEW

**TXP18 read (was read by):**

Domain:

TX14 Reading

Range:

TX1 Written Text

Subproperty of:

P16 used specific object (was used for)

Quantification:

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

Scope note:

This property associates an instance of TX14 Reading with an instance of TX1 Written Text whose linguistic meaning was interpreted/understood through the reading process. It is a shortcut of the fully developed path from TX14 Reading through *P9 consists of*, TX5 Text Recognition, *TXP10 deciphered tex*t, to TX1 Written Text.

Examples:

* Reading the Greek text present on the Derveni papyrus (TX14) *read* the papyrus (TX1) [interpreted the linguistic meaning that was carried by it]

In First Order Logic:

 TXP18(x,y) ⇒ TX14(x)

 TXP18(x,y) ⇒ TX1 (y)

 TXP18(x,y) ⇒ P16(x,y)

 TXP18(x,y) ⇒ (∃z) [TX5(z) ˄ P9(x,z) ˄ TXP10(z, y)]

#### TXP13 deciphered via the representation

##### NEW

**TXP13 deciphered via the representation (was representation used for deciphering)**

Domain:

TX5Text Recognition

Range:

E36 Visual Item

Subproperty of:

P16 used specific object (was used for)

Quantification:

one to one (0,1:0,n)

Scope note:

This property associates an instance of TX5 Text Recognition with an instance of E36 Visual Item, capturing the optical impression of an instance of TX1 Written Text by some mechanical method, that was used for recognizing the text without access to the original text and without an explicitly documented material copy or electronic display device that was used for the process.

If the text was actually recognized from an autoptic recognition or from a material reproduction, this property may not be used but the property “TXP10 deciphered text (was deciphered by)” should be used instead.

This property should also not be used, if the recognition of the text was actually carried out from the original text or a material copy of it together with an auxiliary instance of E36 Visual Item. In this case, the use of the auxiliary material should be documented with the more general property *P16 used specific object.*

Examples:

* The recognition of text in the Antikythera mechanism (TX5) *deciphered via the representation* produced using BTI imaging (E36).

In First Order Logic:

 TXP13(x,y) ⇒ TX5(x)

 TXP13(x,y) ⇒ [E36](https://docs.google.com/document/d/1-ZjCKVmSAdjqLof61zwZdMMf6P_rja9T/edit#heading=h.1d96cc0)(y)

 TXP13(x,y) ⇒ P16(x,y)

TXP13(x, y) ⇒ (∃z) [TXP14(x, z) ∧ P138(y, z) ^ ¬TXP10(x, z)]

#### TX3 Writing System

##### NEW

**TX3 Writing System**

Subclass of:

E29 Design or Procedure

Scope Note:

This class represents a conventional symbolic system designed to represent units of a natural language with the purpose of recording and transmitting information. A writing system consists of a set of symbols (graphemes, TX8), instantiated through physical signs of a visual or tactile nature (glyphs, TX9) representing linguistic units of any kind and the related syntactic (i.e., graphotactic) rules.

It is used to produce a TX1 Written Text during a TX2 Writing event.

Examples:

* The Latin alphabet used to encode the signs (TX1) composing the text (E33) of the inscription in Latin language occurring on the Arch of Constantine (E22).
* The Roman Latin writing system for creating public inscriptions.
* The Cypriot syllabary[[1]](#footnote-1) used in Iron Age Cyprus for codifying the Arcado-Cypriot dialect.
* The Chinese (Han) script used by Wang Xizhi to write the manuscript *Lanting Xu* (“Orchid Pavilion Preface”).

In First Order Logic:

TX3(x) ⇒ E29(x)

Properties:

TXP6 encodes (is encoding of): E56 Language

TXP16 employs script (is employed by): TX13 Script

##### OLD

**TX3 Writing System**

Subclass of: E29 Design or Procedure

Superclass of:

Scope Note: This class represents conventional, symbolic system consisting of set of visible or tactile signs (graphemes, TX8) designed to represent units of a natural language with the purpose of recording and transmitting information. A complete retrieval of the transmitted messages requires a shared knowledge, between writers and readers, of the encoded language, the writing system elements and its encoding rules.

It is used to produce a TX1 Written Text during a TX2 Writing event.

Examples:

* The Latin alphabet used to encode the signs (TX1) composing the text (E33) of the inscription in Latin language occurring on the Arch of Constantine (E22).
* The Cypriot syllabary used in Iron Age Cyprus for codifying the Arcado-Cypriot dialect.
* The Chinese (Han) script used by Wang Xizhi to write the manuscript *Lanting Xu* (“Orchid Pavilion Preface”).

In First Order Logic:

 TX3(x) ⊃ E29(x)

Properties:

TXP6 encodes (is encoding of): E33 Linguistic Object

TXP7 has item (is item of): TX8 Grapheme

1. <https://www.worldswritingsystems.org/> (accessed on 2023/06/06) [↑](#footnote-ref-1)