## 620 -55th SIG; minutes

Proposal for a scope note (and FOL) reformulation of O13 triggers, in order to match the semantics of temporal precedence of the triggering event and ensuing influence to the triggered event (see figure 6 of the introduction section). The details of the proposal can be found below.

### NEW scope-note and FOL for O13 triggers (is triggered by)

Scope note:

This property associates an instance of E5 Event that triggers another instance of E5 Event with the latter. It identifies the interaction between events: an event can activate (trigger) other events in a target system that is in a situation of sustained tension, such as a trap or an unstable mountain slope giving way to a landslide after a rain or earthquake. In that sense the triggering event is interpreted as a cause. However, the association of the two events is based on their temporal proximity, with the triggering event ending before or when the triggered event starts.

In First Order Logic:

O13(x,y) ⇒ E5(x)

O13(x,y) ⇒ E5(y)

O13(x,y) ⇒ P182(x,y)

### OLD scope-note and FOL for O13 triggers (is triggered by)

Scope note:

This property associates an instance of E5 Event that triggers another instance of E5 Event with the latter. It identifies the interaction between events: an event can activate (trigger) other events in a target system that is in a situation of sustained tension, such as a trap or an unstable mountain slope giving way to a land slide after a rain or earthquake. In that sense the triggering event is interpreted as a cause.

In First Order Logic:

O13(x,y) ⇒ E5(x)

O13(x,y) ⇒ E5(y)

### Discussion points:

* O13 triggers vs O13 triggered. Why not in the past tense as stated in the intro to CIDOC CRM?
* The requirement for the triggering event to have finished before the beginning of the triggered event is not all too clear.

The O13(x,y) ⇒ P182(x,y) inference is contested.  
Especially in view of the type of event that can function as a trigger for some other mentioned in the scope note, which involve events evolving over a stretch of time:

* + An earthquake can be the cause for the surface giving in or for buildings collapsing, even if the triggered events (landslides, buildings collapsing, etc.) occur prior to its completion.
  + Wildfires that are triggered by a massive heatwave and draught, need not start after the triggering events (i.e., draught, massive heatwave) are concluded. If anything, they will probably only start as long as the triggering events are ongoing. It would be weird to not be able to list the heat and/or draught as a triggering event for a wildfire (like the ones in southern Europe in summer 2022).
* The types of examples mentioned in the scope note try to capture that the triggered event somehow results from a previous event, and the only way to express that is by assuming temporal precedence. Otherwise, triggered events could have predated their triggers (which is far from ideal).
* Since it is possible for multiple landslides to occur during the same phenomenon (excessive rainfall), the triggering event (excessive rainfall) can be subdivided into the bits that are relevant for each triggered event (lindeslide1, …, n). This should be reflected in the scope note.
* Splitting an event into multiple triggers is also suboptimal. It looks like the relevant part of the event gets its identity as a triggering event, based on the event that it caused. Needs reconsideration, because it postulates splitting up events into as many pieces as there are implications to them.

**Proposal** to add the clause “The association of the two events is based on their temporal proximity, with the triggering event ending before or when the triggered event starts” in the scope-note of O13. If there are objections to the overall semantics of the property, they can be discussed in a designated new issue:

The SIG voted on the proposal above.   
**Outcome of the vote.**  
In favor: 6 (3 in person, 3 online)  
Against: None  
(18 participants abstained)

**Decision**: Add clause to the scope-note