

An introduction to modelling societal and mental issues

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59th CRM-SIG meeting
Plovdiv 25th September

Social/human mind models 2

- CRMsoc – extension of CIDOC CRM to support social documentation
 - V 0.1 March 2019 (sketch) – (social) bonds and plans
 - V 0.2 October 2020 (completely new document) – (social) bonds
 - expanding the expressivity of the standard relative to the representation of conventionally grounded, socially constructed facts and their foundation in intentionality
- CRMact – extension of CIDOC-CRM to support activity plans
 - V 0.2 February 2022
 - Alternative to the plans part of CRMsoc v 0.1 (?)

Social/human mind models 2

- CRMaaa – Art and Architectural Argumentation Conceptual Model
 - V 1.0 Fall 2020
 - Influenced by CRMsoc V 0.2
- CRMinfluence – A multi-causal ontology model
 - Summer 2023
 - Independent draft
- Related to the problem complex:
 - CRMinf models state of mind (Beliefs)

Phase B: Ontology Constructs Definition

(from Principles for Modelling Ontologies: A Short Reference Guide)

STEP 5. Provide identity conditions to the classes, answer the questions:

- By what something be determined as instance of this class?
- Is there something that is and that definitely is not an instance of this class?
- What makes an instance distinct from another and be the same after some time?
- What belongs to it as extent or part? How do instances come into being/ end being?

CRMsoc v.0.1 on cidoc-crm.org

- Introduction with three informative diagrams
- 17 classes
- 16 properties

CRMsoc v.01 on cidoc-crm.org – plans

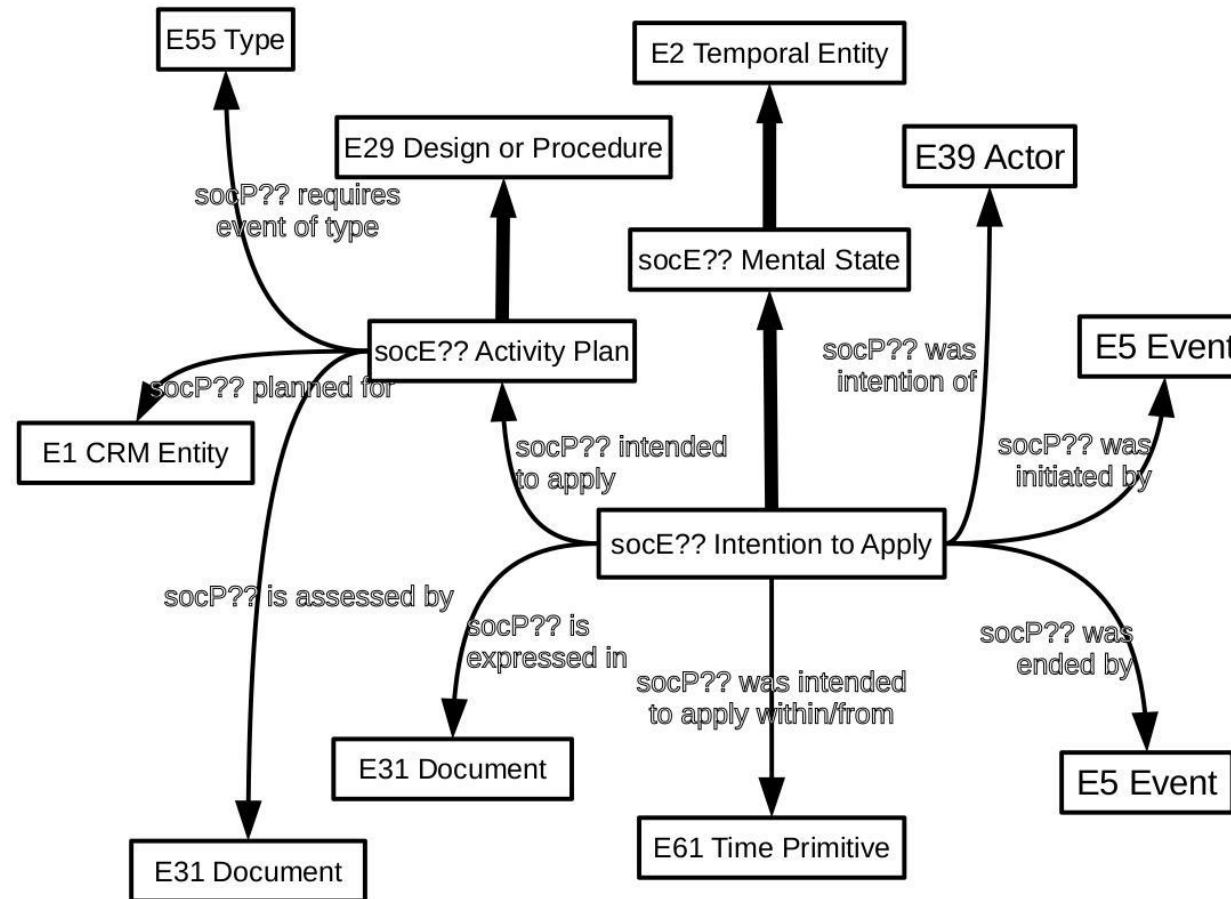


Fig. 2: Plans in CRMsoc

CRMsoc v.01 on cidoc-crm.org – social bonds

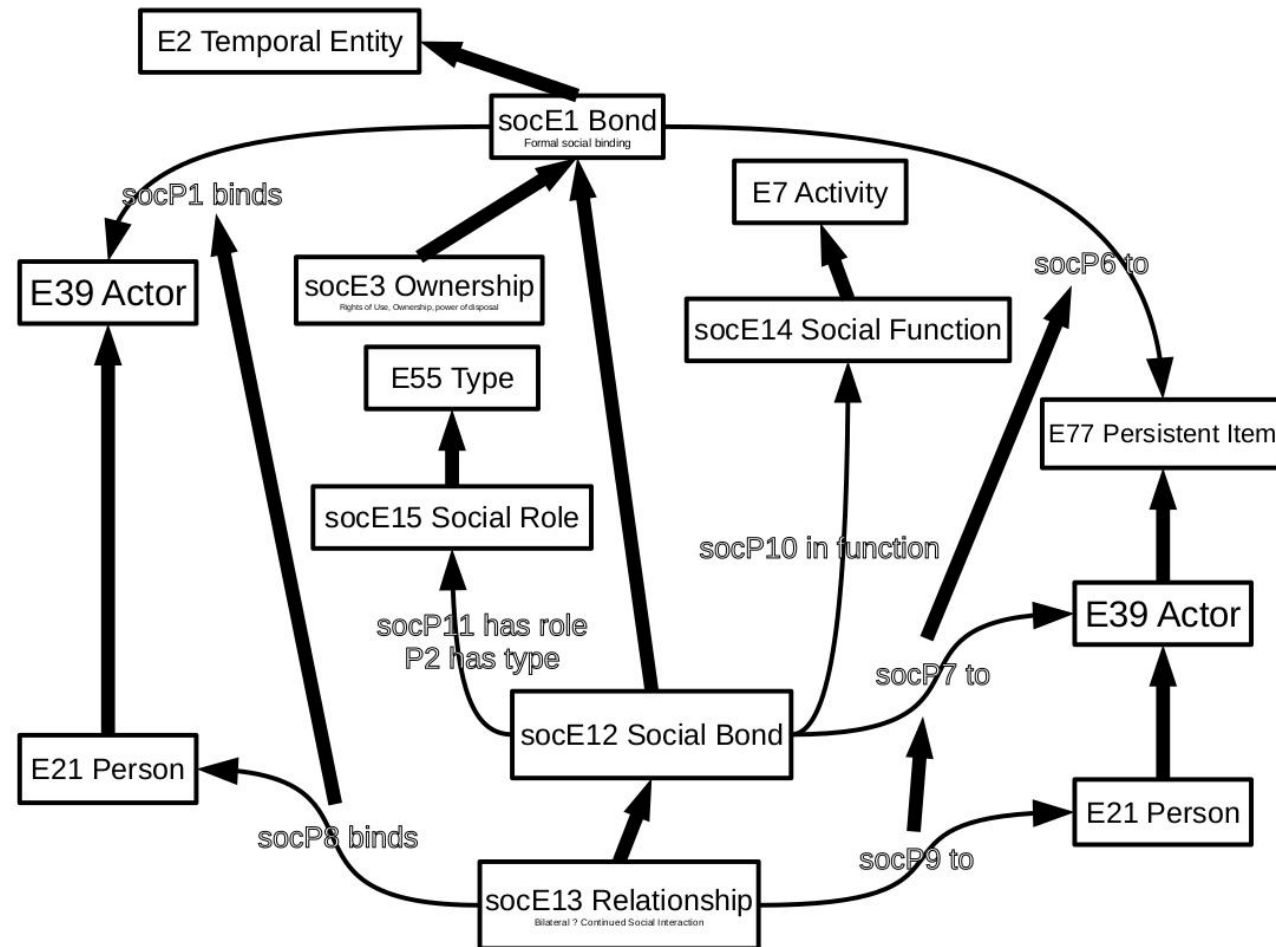
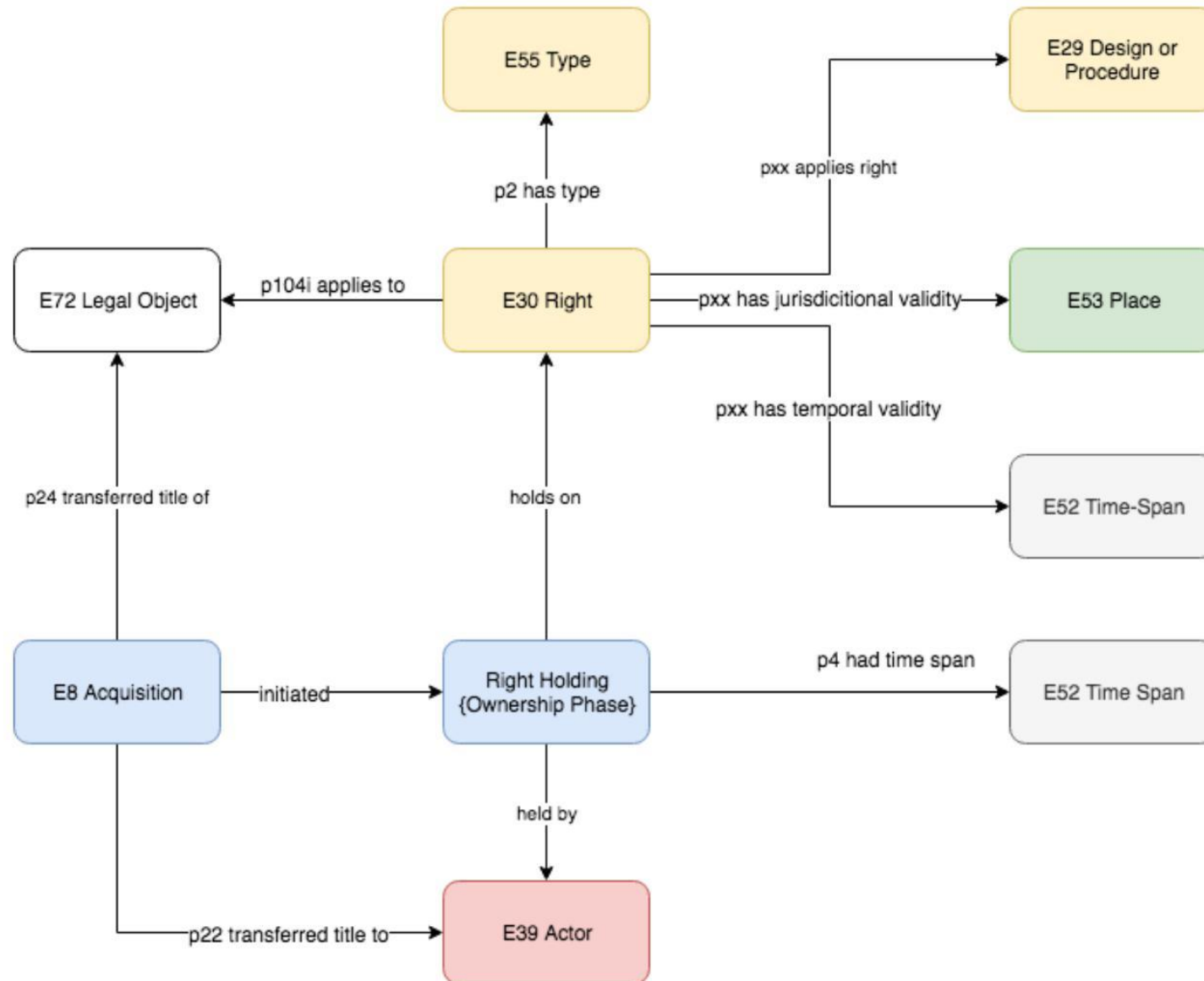
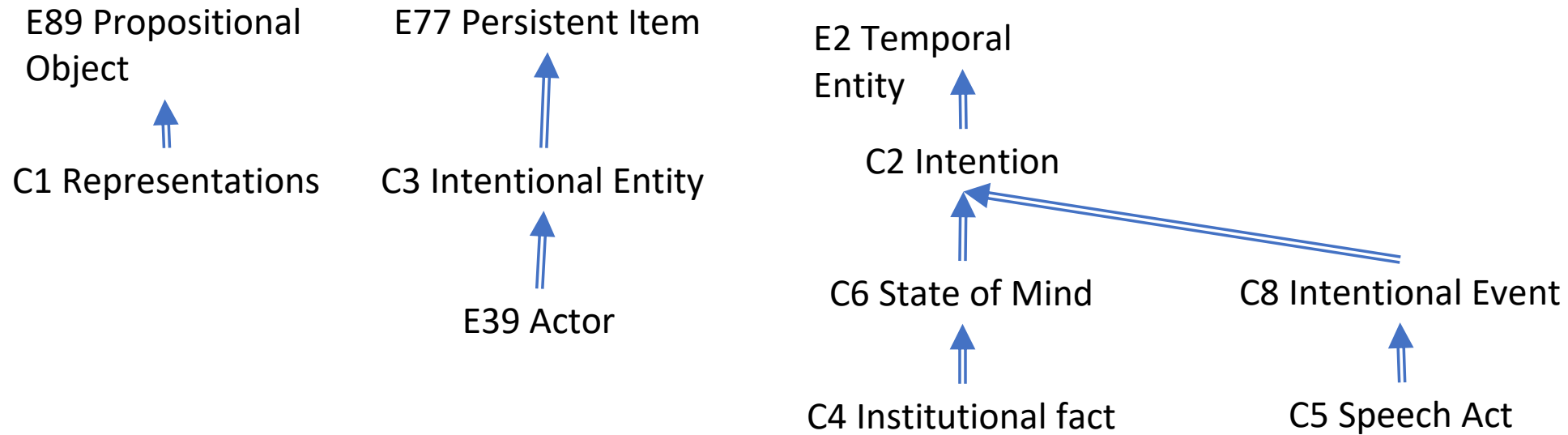


Fig. 3: Social bonds in CRMsoc

CRMsoc v.01 on cidoc-crm.org – rights




CRMsoc v.0.2 – Classes




CRMaaa – Main Classes

E28 Conceptual
Object




ZE Notational Set

E2 Temporal
Entity




Z1 Institutional fact




17 (in)direct subclasses

E7 Activity



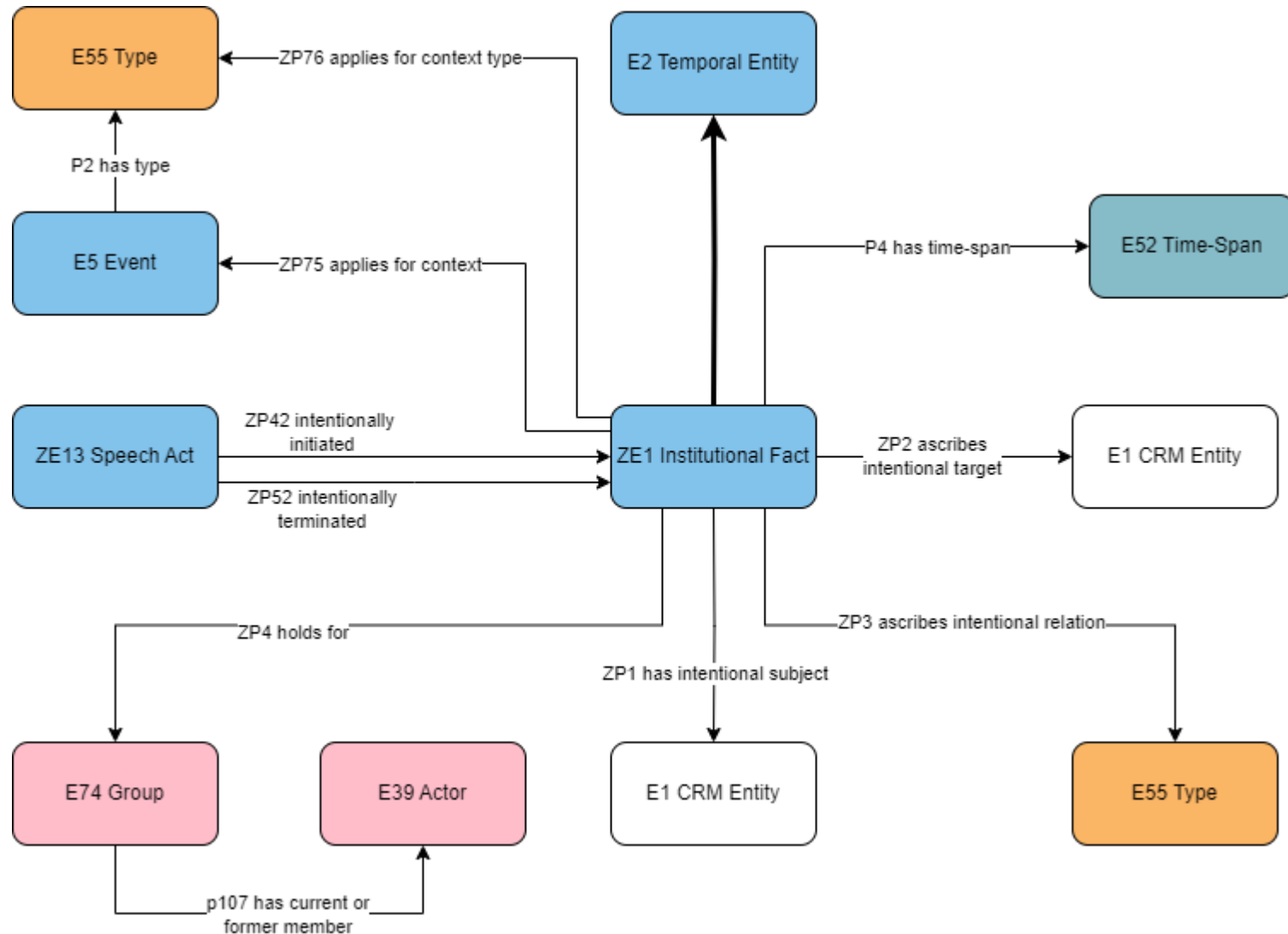
Z13 Speech Act



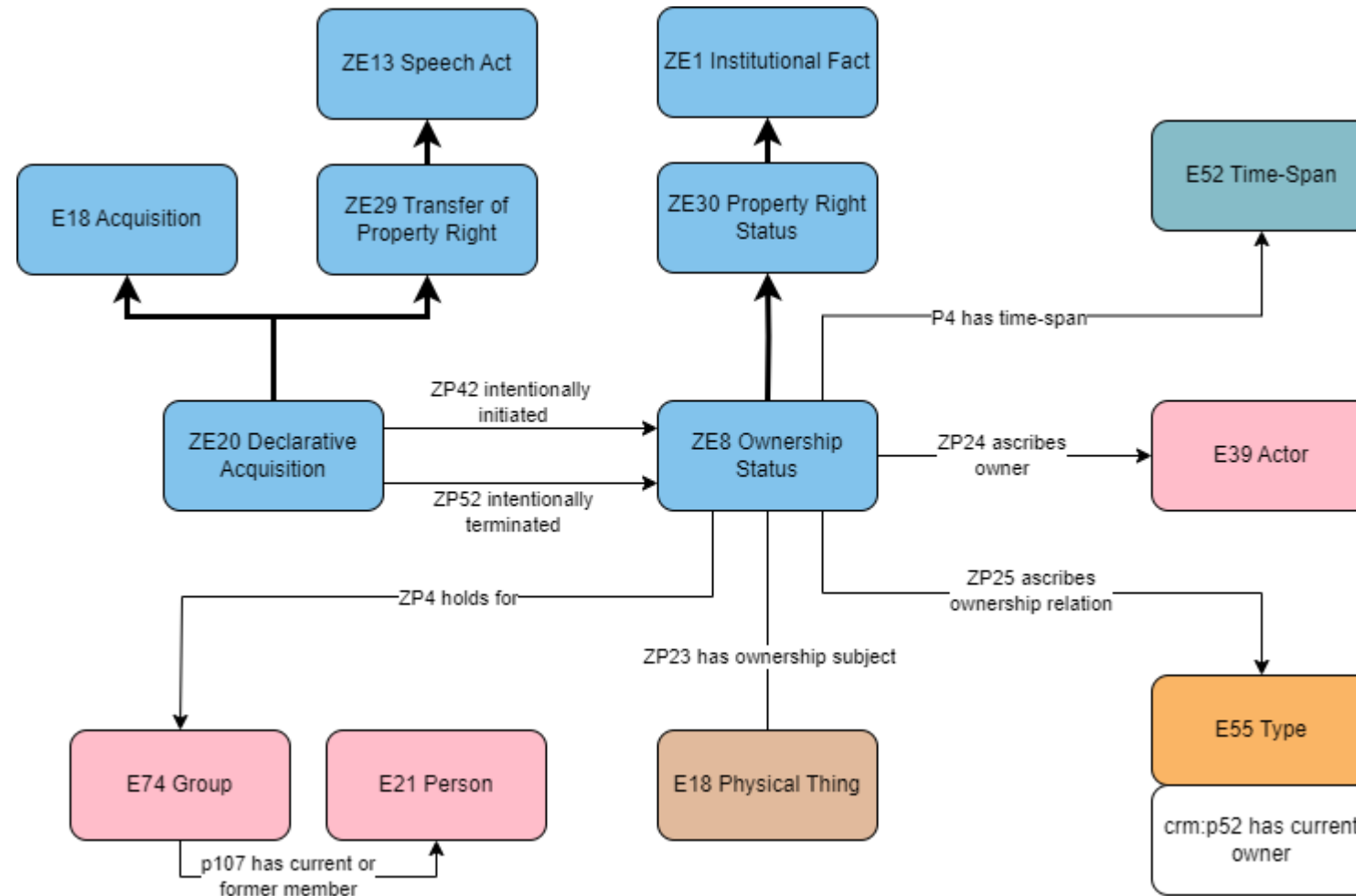
12 (in)direct subclasses

...

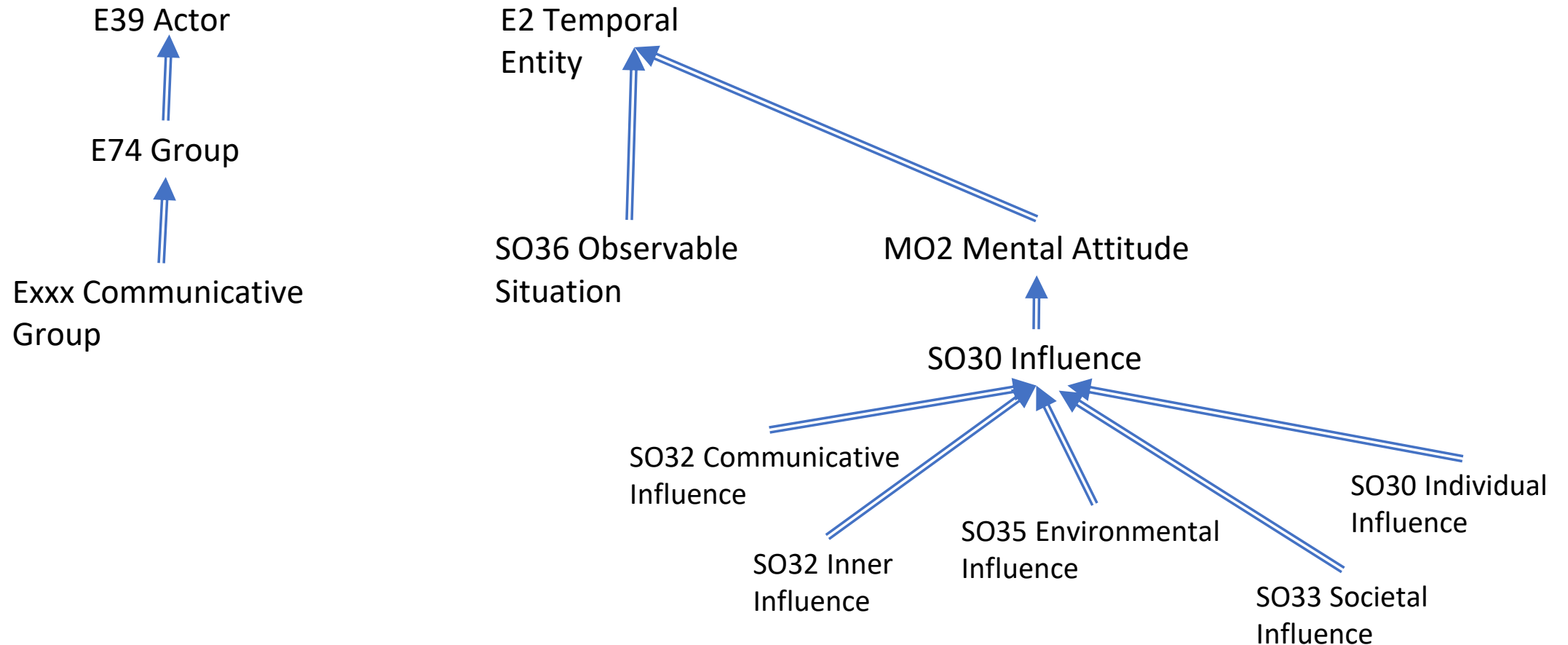
CRMaaa – basic pattern for Institutional Facts



CRMaaa – Transfer of property right



CRMinfluence – Classes



CRMinf – belief

I2 Belief

Subclass of: E2 Temporal Entity

Superclass of: [...]

This class comprises the notion that the associated I4 Proposition Set is held to have a particular I6 Belief Value by a particular E39 Actor. This can be understood as the period of time that an individual group holds a particular set of propositions to be true, false, or somewhere in between.

Examples:

- Ian Hodder's belief from 1996 on, that Floor B was earlier than wall C of building 1 in the north area of Catalhöyük (Hodder 1999).
- Tacitus' belief(?) : Tiberius was as a sly and bloodthirsty tyrant. (The Annals) [added by CEO]

Newer research has to a large degree rehabilitated Tiberius. Did Tacitus write against his own knowledge? It was a tradition in Rome to discredit deceased emperors to glorify their successors (Mary Beard). Can be solved by the use of I13 Intended Meaning Belief. I12 Adopted Belief is more problematic.

I13 Intended Meaning Belief

Subclass of: I2 Belief

Scope note:

This class comprises beliefs on the part of an instance of E39 Actor that a particular I4 Proposition Set formally represents (in part or in its entirety) the intended meaning that was created by another instance of E39 Actor, without considering an opinion yet about its truth or trustworthiness.

The belief constitutes an interpretation of the source. The respective proposition set can be documented using the property *J16 assumed meaning (is supposed meaning in)*, whereas the respective source can be documented via the property *J17 about (has interpretation)* and holds as being true or in some way likely to be true.

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Summing up

- Common issue in all the models mentioned, is what can be perceived and what can be observed
 - Is it possible to model what is going on inside human minds?
 - Must a conceptual model based on humanists'/social scientists' analytic methods and practice be an ontology, that is, describing a part of reality?
 - CRMinf's concept of Belief is also a little problematic since we here assume that somebody believes something only on the basis of what they have written or said (cf. CRMinfluence)
 - Part ownership to a ship, building, land is common. Does there exist an abstract ownership that can be divided into parts independently of the structure of the physical thing?