E1 CRM Entity

Entity.

Examples:

* the earthquake in Lisbon 1755 (E5) (Chester, 2001)

E2 Temporal Entity

Examples:

* Bronze Age (E4) (Childe, 1963)
* the earthquake in Lisbon 1755 (E5) (Chester, 2001)
* the Peterhof Palace near Saint Petersburg being in ruins from 1944 – 1946 (E3) (Maddox, 2015)

E3 Condition State

Examples:

* the "reconstructed" state of the “Amber Room” in Tsarskoje Selo from summer 2003 until now (Owen, 2009)
* the "ruined" state of Peterhof Palace near Saint Petersburg from 1944 to 1946 (Maddox, 2015)
* the state of my turkey in the oven at 14:30 on 25 December, 2002 (*P2* *has type: E55* *Type* “still not cooked”)
* the topography of the leaves of Sinai Printed Book 3234.2361 on the 10th of July 2007 (described as: of type "cockled")

E4 Period

Examples:

* Jurassic (Hallam, 1975)
* Populated Period of Nineveh
* Imperial Rome under Marcus Aurelius
* European Bronze Age (Harrison, 2004)
* Italian Renaissance (Macdonald, 1992)
* Thirty Years War (Lee, 1991)
* Sturm und Drang (Berkoff, 2013)
* Cubism (Cox, 2000)

E5 Event

Examples:

* the birth of Cleopatra (E67) (Pomeroy, 1984)
* the destruction of Herculaneum by volcanic eruption in 79 AD (E6) (Camardo, 2013)
* World War II (E7) (Barber, 1994)
* the Battle of Stalingrad (E7) (*Hoyt*, 1993)
* the Yalta Conference (E7) (Harbutt, 2010)
* my birthday celebration 28-6-1995 (E7)
* the falling of a tile from my roof last Sunday
* the CIDOC Conference 2003 (E7)

E6 Destruction

Examples:

* the destruction of Herculaneum by volcanic eruption in 79 AD (Camardo, 2013)
* the destruction of Nineveh (E6, E7) (George, 2000)
* the breaking of a champagne glass yesterday by my dog

E7 Activity

Examples:

* the Battle of Stalingrad (Hoyt, 1993)
* the Yalta Conference (Harbutt, 2010)
* my birthday celebration 28-6-1995
* the writing of “Faust” by Goethe (E65) (Williams, 1987)
* the formation of the Bauhaus 1919 (E66) (Droste, 2006)
* calling the place identified by TGN ‘7017998’ ‘Quyunjig’ by the people of Iraq
* Kira Weber working in glass art from 1984 to 1993
* Kira Weber working in oil and pastel painting from 1993

E8 Acquisition

Examples

* the collection of a hammer-head shark of the genus *Sphyrna* (Carchariniformes) XXXtbc by John Steinbeck and Edward Ricketts at Puerto Escondido in the Gulf of Mexico on March 25th, 1940. (Steinbeck, 2000)
* the acquisition of El Greco’s painting entitled ‘The Apostles Peter and Paul’ by the State Hermitage in Saint Petersburg
* the loss of my stuffed chaffinch *‘Fringilla coelebs* Linnaeus, 1758’ due to insect damage last year

E9 Move

Examples:

* the relocation of London Bridge from the UK to the USA. (Clarke, 1992)
* the movement of the exhibition “Treasures of Tut-Ankh-Amun” 1976-1979 (Treasures *of Tutankhamun*, exhibition catalogue, 1972) .

E10 Transfer of Custody

Examples:

* the delivery of the paintings by Secure Deliveries Inc. to the National Gallery
* the return of Picasso’s “Guernica” to Madrid’s Prado in 1981 (Chipp, 1988)

E11 Modification

Examples:

* the construction of the SS Great Britain (E12)(Gregor, 1971)
* the impregnation of the Vasa warship in Stockholm for preservation after 1956(Håfors, 2010)
* the transformation of the Enola Gay into a museum exhibit by the National Air and Space Museum in Washington DC between 1993 and 1995 (E12, E81) (Yakel, 2000)
* the last renewal of the gold coating of the Toshogu shrine in Nikko, Japan(Cali and Dougil, 2012)

E12 Production

Examples:

* the construction of the SS Great Britain (Gregor, 1971)
* the first casting of the Little Mermaid from the harbour of Copenhagen (Dewey, 2003)
* Rembrandt’s creating of the seventh state of his etching “Woman sitting half dressed beside a stove”, 1658, identified by Bartsch Number 197 (E12,E65,E81) (Hind, 1923)

E13 Attribute Assignment

Examples:

* the assessment of the current ownership of Martin Doerr’s silver cup in February 1997
* the examination of MS Sinai Greek 418 by Nicholas Pickwoad in November 2003 (E13) (Honey and Pickwoad, 2010)

E14 Condition Assessment

Examples:

* last year’s inspection of humidity damage to the frescos in the St. George chapel in our village
* the condition assessment of the endband cores of MS Sinai Greek 418 by Nicholas Pickwoad in November 2003 (E14) (Honey and Pickwoad, 2010)
* the condition assessment of the cover of MS Sinai Greek 418 by Nicholas Pickwoad in November 2003 (E14) (Honey and Pickwoad, 2010)

E15 Identifier Assignment

Examples:

* Replacement of the inventory number TA959a by GE34604 for a 17th century lament cloth at the Museum Benaki, Athens
* Assigning the author-uniform title heading “Goethe, Johann Wolfgang von, 1749-1832. Faust. 1. Theil.” for the respective work
* On June 1, 2001 assigning the personal name heading “Guillaume, de Machaut, ca. 1300-1377” to Guillaume de Machaut

E16 Measurement

Examples:

* measurement of height of silver cup 232 on the 31st August 1997
* the carbon 14 dating of the “Schoeninger Speer II” in 1996 [an about 400.000 years old Palaeolithic complete wooden spear found in Schoeningen, Niedersachsen, Germany in 1995] (Kouwenhoven, 1997)
* The pixel size of the jpeg version of Titian’s painting Bacchus and Ariadne from 1520–3, as freely downloadable from the National Gallery in London’s web page <https://www.nationalgallery.org.uk/paintings/titian-bacchus-and-ariadne> is 581600 pixels.
* The scope note of E21 Person in the Definition of the CIDOC Conceptual Reference Model Version 5.0.4 as downloaded from <http://www.cidoc-crm.org/sites/default/files/cidoc\_crm\_version\_5.0.4.pdf> consists of 77 words.

E17 Type Assignment

Examples:

* the first classification of object GE34604 as Lament Cloth, October 2nd
* the determination of a cactus in Martin Doerr’s garden as ‘*Cereus hildmannianus* K.Schumann’, July 2003

E18 Physical Thing

Examples:

* the Cullinan Diamond (E19) (Scarratt and Shor, 2006)
* the cave “Ideon Andron” in Crete (E26) (Smith, 1844-49)
* the Mona Lisa (E22) (Mohem, 2006)

E19 Physical Object

Examples:

* John SmithAphrodite of Milos (Kousser, 2005)
* the Palace of Knossos (Evans, 1921-36)
* the Cullinan Diamond (Scarratt and Shor, 2006)
* Apollo 13 at the time of launch (Lovell and Kluger, 1994)

E20 Biological Object

Examples:

* me
* Tut-Ankh-Amun (Edwards, 1979)
* Boukephalas [Horse of Alexander the Great](Lamb, 2005)
* petrified dinosaur excrement PA1906-344

E21 Person

Examples:

* Tut-Ankh-Amun (Edwards, 1979)
* Nelson Mandela (Brown, 2006)

E22 Human-Made Object

Examples:

* Mallard (the World’s fastest steam engine) (Solomon, 2003)
* the Portland Vase (Walker, 2004)
* the Coliseum (Hopkins, 2005)

E24 Physical Human-Made Thing

Examples:

* the Forth Railway Bridge (E22)(The Forth Railway Bridge centenary 1890-1990 ICE Proceedings, 1990, Vol.88(6), pp.1079-1107).
* the Channel Tunnel (E25)(Holliday, I., Marcou, G., and Vickerman, R. W., 1991)
* the Historical Collection of the Museum Benaki in Athens (E78) (Georgoula, E., 2005)
* the Rosetta Stone (E22)
* my paperback copy of Crime & Punishment (E22) (fictitious)
* the computer disk at ICS-FORTH that stores the canonical Definition of the CIDOC CRM v.3.2 (E22)
* my empty DVD disk (E22) (fictitious)

E25 Human-Made Feature

 Examples:

* the Manchester Ship Canal (Famie, 1980)
* Michael Jackson’s nose following plastic surgery
* The laser-readable “pits” engraved June 2014 on Martin Doerr’s CD-R, copying songs of Edith Piaf’s.
* The carved letters on the Rosetta Stone

E26 Physical Feature

Examples:

* the temple in Abu Simbel before its removal, which was carved out of solid rock (Hawass, 2000)
* Albrecht Duerer's signature on his painting of Charles the Great (Strauss, 1974)
* the damage to the nose of the Great Sphinx in Giza (Temple, 2009)
* Michael Jackson’s nose prior to plastic surgery

E27 Site

Examples:

* the Amazon river basin (Hegen, 1966)
* Knossos (Evans, 1921-36)
* the Apollo 11 landing site (Siegler and Smrekar, 2014)
* Heathrow Airport (Wicks, 2014)
* the submerged harbour of the Minoan settlement of Gournia, Crete (Watrous, 2012)
* the island of Crete

E28 Conceptual Object

Examples:

* Beethoven’s “Ode an die Freude” (Ode to Joy) (E73) (Kershaw, 1999)
* the definition of “ontology” in the Oxford English Dictionary (E73) (Oxford University Press, 1988)
* the knowledge about the victory at Marathon carried by the famous runner (E89) (Lagos, C., Karyanos, F., 2020)

[explanation note: In the following examples we illustrate the distinction between a propositional object, its names and its encoded forms. The Maxwell equations are a good example, because they belong to the fundamental laws of physics and their mathematical content yields identical, unambiguous results regardless formulation and encoding]

* ‘Maxwell equations’ [preferred subject access point from LCSH] (E41) (Ball, D., 1962)

<http://lccn.loc.gov/sh85082387> [5], as of 19 November 2012]

\*\*explanation: This is only the name for the Maxwell equations as standardized by the Library of Congress and NOT the equations themselves.

* ‘Equations, Maxwell’ [variant subject access point, from the same source] (E41)

\*\*explanation: This is another name for the equation standardized by the Library of Congress and not the equations themselves

* Maxwell's equations (E89)

\*\* explanation: This is the propositional content of the equations proper, independent of any particular notation or mathematical formalism.

* The encoding of Maxwells equations as in <https://upload.wikimedia.org/wikipedia/commons/thumb/c/c4/Maxwell> [6]'s Equations.svg/500px-Maxwell'sEquations.svg.png (E73)

\*\* explanation: This is one possible symbolic encoding of the propositional content of the equations.

E29 Design or Procedure

Examples:

* the ISO standardisation procedure
* the musical notation for Beethoven’s “Ode to Joy”
* the architectural drawings for the Kölner Dom in Cologne, Germany
* The drawing on the folio 860 of the Codex Atlanticus from Leonardo da Vinci, 1486-1490, kept in the Biblioteca Ambrosiana in Milan

In First Order Logic:

E29(x) ⇒ E73(x)

E30 Right

Examples:

* copyright held by ISO on ISO/CD 21127
* ownership of the “Mona Lisa” by the Louvre

E31 Document

Examples:

* the Encyclopaedia Britannica (E32) (Kogan, 1958)
* The image content of the photo of the Allied Leaders at Yalta published by UPI, 1945 (E36)
* the Doomsday Book

E32 Authority Document

Examples:

* Webster's Dictionary (Herbert, 1994)
* Getty Art and Architecture Thesaurus (Getty Trust, 1990)
* the CIDOC Conceptual Reference Model (Gergatsoulis, M. et al., 2010)

E33 Linguistic Object

Examples:

* the text of the Ellesmere Chaucer manuscript (Hilmo, 2004)
* the lyrics of the song "Blue Suede Shoes" (Cooper, 2008)
* the text of the Jabberwocky by Lewis Carroll (Carroll, 1981)
* the text of "Doktoro Jekyll kaj Sinjoro Hyde" (an Esperanto translation of Dr Jekyll and Mr Hyde). (Stevenson, 1909)

E34 Inscription

Examples:

* “keep off the grass” on a sign stuck in the lawn of the quad of Balliol College
* The text published in Corpus Inscriptionum LatinarumV 895
* Kilroy was here

E35 Title

Examples:

* “The Merchant of Venice” (McCullough, 2005)
* “Mona Lisa” (Mohen, 2006)
* “La Pie or The Magpie” (Bortolatto, 1981)
* “Lucy in the Sky with Diamonds” (Lennon, 1967)

E36 Visual Item

Examples:

* the visual appearance of Monet’s “La Pie”
* the Coca-Cola logo (E34)
* the Chi-Rho (E37)
* the communist red star (E37)

E37 Mark

Examples:

* Minoan double axe mark (Lowe Fri, 2011)
* ©
* ☺

E39 Actor

Examples:

* London and Continental Railways (E40)
* the Governor of the Bank of England in 1975 (E21)
* Sir Ian McKellan (E21) (Gibson, 1986)

E41 Appellation

Examples:

* "Martin"
* “Aquae Sulis Minerva”
* "the Merchant of Venice" (E35) (McCullough, 2005)
* "Spigelia marilandica (L.) L." [not the species, just the name] (Hershberger, Jenkins and Robacker, 2015)
* "information science" [not the science itself, but the name through which we refer to it in an English-speaking context]
* “安” [Chinese “an”, meaning “peace”]
* “6°5’29”N 45°12’13”W” (example of spatial coordinate)
* “Black queen’s bishop 4” [chess coordinate] (example of spatial coordinate)
* “19-MAR-1922” (example of date)
* “+41 22 418 5571” (example of contact point)
* "weasel@paveprime.com" (example of contact point)
* “CH-1211, Genève” (example of place appellation)
* “1-29-3 Otsuka, Bunkyo-ku, Tokyo, 121, Japan” (example of address)
* “the poop deck of H.M.S Victory” (example of section definition)
* “the Venus de Milo’s left buttock” (example of section definition)

E42 Identifier

Examples:

* “MM.GE.195”
* “13.45.1976”
* “OXCMS: 1997.4.1”
* ISSN “0041-5278”
* ISRC “FIFIN8900116”
* Shelf mark “Res 8 P 10”
* “Guillaume de Machaut (1300?-1377)” [a controlled personal name heading that follows the French rules] (Reaney, 1974)
* “+41 22 418 5571”
* weasel@paveprime.com
* “1-29-3 Otsuka, Bunkyo-ku, Tokyo, 121, Japan”
* “Rue David Dufour 5, CH-1211, Genève”

E52 Time-Span

Examples:

* 1961
* From 12-17-1993 to 12-8-1996
* 14h30 – 16h22 4th July 1945
* 9.30 am 1.1.1999 to 2.00 pm 1.1.1999
* duration of the Ming Dynasty (*Chan*, 2011)

E53 Place

Examples:

* the extent of the UK in the year 2003
* the position of the hallmark on the inside of my wedding ring
* the place referred to in the phrase: “Fish collected at three miles north of the confluence of the Arve and the Rhone”
* here -> <-

E54 Dimension

Examples:

* The weight of the Luxor Obelisk [250 metric tons]
* The vertical height of the statue of David by Michaelangelo [5.17 metres]
* The weight of the Great Star of Africa diamond [530.2 carats]
* The calibrated C14 date for the Shroud of Turin [AD1262-1312, 1303-1384 ]
* The horizontal diameter of the Stonehenge Sarcen Circle [33 metres]
* The length of the sides of the Great Pyramid at Giza [755.9 feet]
* Christie’s hammer price for “Vase with Fifteen Sunflowers” in British Pounds (E97) -
* The duration of the time span of the Battle of Issos [333 B.C.E.]-
* Christie’s hammer price for Vincent van Gogh's "Still Life: Vase with Fifteen Sunflowers" in London on 1987/03/30 (E97) [GBP 24.75m]
* The duration of the time span of the Battle of Issos/Issus on 15th November 333 B.C.E.  [less than 12 hours]

E55 Type

Examples:

* weight, length, depth [types of E54]
* portrait, sketch, animation [types of E36]
* French, English, German [E56]
* excellent, good, poor [types of E3]
* Ford Model T, chop stick [types of E22]
* cave, doline, scratch [types of E26]
* poem, short story [types of E33]
* wedding, earthquake, skirmish [types of E5]

E56 Language

Examples:

* el [Greek] (*Palmer*, 1980)
* en [English] (*Wilson*, 1983)
* eo [Esperanto] (*Nuessel*, 2000)
* es [Spanish] (*Pineda*, 1993)
* fr [French] (*Rickard*, 1974)

E57 Material

Examples:

* Brick (*Gurcke*, 1987)
* Gold (*Watson*, 1990)
* Aluminium (*Norman*, 1986)
* Polycarbonate (*Mhaske*, 2011)
* Resin (*Barton*, 1992)

E58 Measurement Unit

Examples:

* cm [centimetre]
* km [kilometre]
* m [meter]
* m/s [meters per second] (Hau, 1999)
* A [Ampere]
* GRD [Greek Drachme] (Daniel, 2014) (E98)
* C [degrees centigrade] (Beckman, 1998)

E59 Primitive Value

Examples:

* ABCDEFG (E62)
* 3.14 (E60)
* 0
* 1921-01-01 (E61)

E60 Number

Examples:

* 5
* 3+2i
* 1.5e-04
* (0.5, - 0.7,88)

E61 Time Primitive

Examples:

* 1994 – 1997
* 13 May 1768
* 2000/01/01 00:00:59.7
* 85th century BC

E62 String

Examples:

* the Quick Brown Fox Jumps Over the Lazy Dog
* 6F 6E 54 79 70 31 0D 9E

E63 Beginning of Existence

Examples:

* the birth of my child
* the birth of Snoopy, my dog
* the calving of the iceberg that sank the Titanic
* the construction of the Eiffel Tower (Tissandier, 1889)

E64 End of Existence

Examples:

* the death of Snoopy, my dog
* the melting of the snowman
* the burning of the Temple of Artemis in Ephesos by Herostratos in 356BC (Trell, 1945)

E65 Creation

Examples:

* the framing of the U.S. Constitution (Farrand, 1913)
* the drafting of U.N. resolution 1441 (United Nations Security Council, 2002)

E66 Formation

Examples:

* the formation of the CIDOC CRM Special Interest Group
* the formation of the Soviet Union (Pipes, 1964)
* the conspiring of the murderers of Caesar (Irwin, 1935)

E67 Birth

Examples:

* the birth of Alexander the Great (Stoneman, 2004)

E68 Dissolution

Examples:

* the fall of the Roman Empire (Whittington, 1964)
* the liquidation of Enron Corporation (Atlas, 2001)

E69 Death

Examples:

* the murder of Julius Caesar (E69,E7) (Irwin, 1935)
* the death of Senator Paul Wellstone (Monast, 2003)

E70 Thing

Examples:

* my photograph collection (E78)
* the bottle of milk in my refrigerator (E22)
* the Riss A1 plan of the Straßburger Münster (French: *Cathédrale Notre-Dame de Strasbourg*) (E29) (Liess, R., 1985)
* the thing on the top of Otto Hahn’s desk (E19)
* the form of the no-smoking sign (E36)
* the cave of Dirou, Mani, Greece (E27) (Psimenos. 2005)

E71 Human-Made Thing

Examples:

* Beethoven’s 5th Symphony (E73) (Lockwood, 2015)
* Michelangelo’s David (Paoletti, 2015)
* Einstein’s Theory of General Relativity (E73) (Hartle, 2003)
* the taxon *‘Fringilla coelebs* Linnaeus,1758’ (E55) (Sinkevicius and Narusevicius, 2002)

E72 Legal Object

Examples:

* the Cullinan diamond (E19) (Scarratt and Shor, 2006)
* definition of the CIDOC Conceptual Reference Model Version 5.0.4 (E73) (ISO 21127: 2004)

E73 Information Object

Examples:

* image BM000038850.JPG from the Clayton Herbarium in London (E31)
* E. A. Poe's "The Raven" (Poe, 1869)
* the movie "The Seven Samurai" by Akira Kurosawa (Mellen, 2002)
* the Maxwell Equations (Huray, 2010)
* The Getty AAT as published as Linked Open Data, accessed 1/10/2014

E74 Group

Examples:

* the impressionists (Wilson, 1983)
* the Navajo (Correll, 1972)
* the Greeks (Williams, 1993)
* the peace protestors in New York City on February 15 2003
* Exxon-Mobil (‘*Exxon* Mobil Corp’, *Mergent's dividend achievers*, vol. 3, no. 3, 2006, pp. 97-97)
* King Solomon and his wives (Thieberger, 1947)
* The President of the Swiss Confederation
* Nicolas Bourbaki (Aczel, 2007)
* Betty Crocker (Crocker, 2012)
* Ellery Queen (*Wheat, 2005)*
* Greenpeace
* Paveprime Ltd
* the National Museum of Denmark

E77 Persistent Item

Examples:

* Leonard da Vinci (Strano, 1953)
* Stonehenge (Richards, 2005)
* the hole in the ozone layer (Hufford and Horwitz, 2005)
* the First Law of Thermodynamics (Craig and Gislason, 2002)
* the Bermuda Triangle (Dolan, 2005)

E78 Curated Holding

Examples:

* the John Clayton Herbarium
* the Wallace Collection (Ingamells, 1990)
* Mikael Heggelund Foslie’s coralline red algae Herbarium at Museum of Natural History and Archaeology, Trondheim, Norway
* The Digital Collections of the Munich DigitiZation Center (MDZ) accessible via <https://www.digitale-sammlungen.de/> at least in January 2018.

E79 Part Addition

Examples:

* the setting of the koh-i-noor diamond into the crown of Queen Elizabeth the Queen Mother (Dalrymple, 2017)
* the addition of the painting “Room in Brooklyn” by Edward Hopper to the collection of the Museum of Fine Arts, Boston

E80 Part Removal

Examples:

* the removal of the engine from my car
* the disposal of object number 1976:234 from the collection

E81 Transformation

Examples:

* The mummification of Tut-Ankh-Amun (E81, E12) [the mummification of the body of the deceased is a human production process and simultaneously preserves structures of the body at and before death]
* The death, carbonization and petrification of some people of Pompeii in 79AD by the intense heat of a pyroclastic cloud and ashes from the Eruption of Mount Vesuvius (E69,E81)
* The transformation of the Dominicanenkerk building in Maastricht from a church to a stable for the French cavalry in 1795 (E81,E12) [following Napoleon’s invasion]
* The transformation of the Dominicanenkerk building in Maastricht building from printing house to a bookshop in 2006 (E81,E12)

E83 Type Creation

Examples:

* creation of the taxon *'Penicillium brefeldianum (*B. O. Dodge', 1933)
* addition of class E85 Joining to the CIDOC CRM

E85 Joining

Examples:

* The election of Sir Isaac Newton as Member of Parliament for the University of Cambridge to the Convention Parliament of 1689 (Gleick,2003)
* The inauguration of Mikhail Sergeyevich Gorbachev as leader of the Union of Soviet Socialist Republics (USSR) in 1985 (Butson, 1986)
* The implementation of the membership treaty between EU and Denmark January 1. 1993

E86 Leaving

Examples:

* The end of Sir Isaac Newton’s duty as Member of Parliament for the University of Cambridge to the Convention Parliament in 1702 (Gleick, 2003)
* George Washington’s leaving office in 1797 (Jones, 1979)
* The implementation of the treaty regulating the termination of Greenland’s membership in EU between EU, Denmark and Greenland February 1. 1985

E87 Curation Activity

Examples:

* The curation of Mikael Heggelund Foslie’s coralline red algae Herbarium 1876 – 1909 (when Foslie died), now at Museum of Natural History and Archaeology, Norway

E89 Propositional Object

Examples:

* Maxwell’s Equations (Huray, 2010)
* The ideational contents of Aristotle’s book entitled ‘Metaphysics’ as rendered in the Greek texts translated in … Oxford edition…
* The underlying prototype of any “no-smoking” sign (E36)
* The common ideas of the plots of the movie "The Seven Samurai" by Akira Kurosawa and the movie “The Magnificent Seven” by John Sturges
* The image content of the photo of the Allied Leaders at Yalta published by UPI, 1945 (E36)
* The character "Little Red Riding Hood" variants of which appear amongst others in Grimm brothers’ ‘Rotkäppchen’, other oral fairy tales and the film 'Hoodwinked'
* The place "Havnor" as invented by Ursula K. Le Guin for her ‘Earthsea’ book series, the related maps and appearing in derivative works based on these novels

E90 Symbolic Object

Examples:

* ‘ecognizabl’
* The “no-smoking” sign (E36)
* “BM000038850.JPG” (E41)
* image BM000038850.JPG from the Clayton Herbarium in London (E36)
* The distribution of form, tone and colour found on Leonardo da Vinci’s painting named “Mona Lisa” in daylight (E36)
* The Italian text of Dante’s “Divina Commedia” as found in the authoritative critical edition *La Commedia secondo l’antica vulgata a cura di Giorgio Petrocchi*, Milano: Mondadori, 1966-67 (= Le Opere di Dante Alighieri, Edizione Nazionale a cura della Società Dantesca Italiana, VII, 1-4)(E33)

[E92](#bookmark=id.1ci93xb) Spacetime Volume

Examples:

* the extent in space and time of the Event of Caesar’s murder
* where and when the carbon 14 dating of the "Schoeninger Speer II" in 1996 took place
* the spatio-temporal trajectory of the H.M.S. Victory from its building to its actual location
* the extent in space and time defined by a polygon approximating the Danube river flood in Austria between 6th and 9th of August 2002

E93 Presence

Examples:

* The Roman Empire on 19 August AD 14
* Johann Joachim Winkelmann’s whereabouts in December 1775
* Johann Joachim Winkelmann’s whereabouts from November 19 1755 until April 9 1768

E94 Space Primitive

Examples:

* Coordinate Information in GML like <gml:Point gml:id="p21" srsName="http://www.opengis.net/def/crs/EPSG/0/4326"> <gml:coordinates>45.67, 88.56</gml:coordinates> </gml:Point>
* Coordinate Information in lat, long 48,2 13,3
* Well Known Text like POLYGON ((30 10, 40 40, 20 40, 10 20, 30 10))

E95 Spacetime Primitive

Examples:

* Spatial and temporal information in KML for the maximum extent of the Byzantine Empire
* <Placemark>
* <name> Byzantine Empire </name>
* <styleUrl>#style\_1</styleUrl>
* <TimeSpan>
* <begin>330</begin>
* <end>1453</end>
* </TimeSpan>
* <Polygon><altitudeMode>clampToGround</altitudeMode><outerBoundaryIs><LinearRing>
* <coordinates>18.452787460,40.85553626,0 17.2223187,40.589098,....0 17.2223,39.783
* </coordinates>
* </Polygon>
* </Placemark>

E96 Purchase

Examples:

* the purchase of 10 okka of nails by the captain A. Syrmas on 18/9/1895 in Thessaloniki

E97 Monetary Amount

Example:

* Christies’ hammer price for “Vase with Fifteen Sunflowers” (E97) has currency British Pounds (E98)

E98 Currency

Examples:

* “As” (Roman mid republic)
* “Euro”, (Temperton, 1997)
* “US Dollar” (Rose, 1978)

E99 Product Type

Examples:

* Volkswagen Type 11 (Beetle)
* Dragendorff 54 samian vessel
* 1937 Edward VIII brass threepenny bit
* Qin Crossbow trigger un-notched Part B (Bg2u)
* Nokia Cityman 1320 (The first Nokia mobile phone)

P1 is identified by (identifies)

Examples:

* the capital of Italy (E53) is identified by “Rome” (E41) (Leach, 2017)
* text 25014–32 (E33) is identified by “The Decline and Fall of the Roman Empire” (E35) (Gibbon, 1988)

P2 has type (is type of)

Examples:

* “enquiries@cidoc-crm.org” (E41) *has type* e-mail address (E55)

P3 has note

Examples: coffee mug – OXCMS:1983.1.1 (E19) *has note* “chipped at edge of handle” (E62) *has type* Condition (E55)

P4 has time-span (is time-span of)

Examples:

* the Yalta Conference (E7) *has time-span* Yalta Conference time-span (E52)(Harbutt, 2010)

In First Order Logic:

P4(x,y) ⇒ E2(x)

P4(x,y) ⇒ E52(y)

P5 consists of (forms part of)

* The Condition State of the ruined Parthenon (E3) *consists of* the bombarded state after the explosion of a Venetian shell in 1687 (E3) (Mommsen, 1941)

P7 took place at (witnessed)

Examples:

* the period “Révolution française” (E4) *took place at* the area covered by France in 1789 (E53) (Bertaud, 2004)

P8 took place on or within (witnessed)

Examples:

* the coronation of Queen Elizabeth II (E7) *took place on or within* Westminster Abbey (E19) (Strong, 2005)

P9 consists of (forms part of)

Examples:

* Cretan Bronze Age (E4) *consists of* Middle Minoan (E4) (Hood, 1971)

P10 falls within (contains)

Examples:

* the Great Plague (E4) *falls within* The Gothic period (E4) (Porter, 2012)

P11 had participant (participated in)

Examples:

* Napoleon (E21) *participated in* The Battle of Waterloo (E7) (Dawson, 2018)
* Maria (E21) *participated in* Photographing of Maria (E7)

P12 occurred in the presence of (was present at)

Examples:

* Deckchair 42 (E19) *was present at* The sinking of the Titanic (E5) (Aldridge, 2008)
* The rebuilding of the city walls of Heraklion by the Venetian rulers starting 1462 (E12) P12 had general purpose Preventing Conquest by Enemy (E55)
* The building of the seawall in Hamamatsu, Shizuoka, Japan between 2014 and 2020 (E12) P12 had general purpose Preventing  in-Land Flooding by Tsunami

P13 destroyed (was destroyed by)

Examples:

* the Tay Bridge Disaster (E6) *destroyed* The Tay Bridge (E22) (Thomas, 1972)

P14 carried out by (performed)

* the painting of the Sistine Chapel (E7) *carried out by* Michaelangelo Buonaroti (E21) *in the role of* master craftsman (E55) (Goldscheider, 1953)

P15 was influenced by (influenced)

Examples:

* the designing of the Sydney Harbour Bridge (E7) *was influenced by* the Tyne bridge (E22) (Long, 1932)

P16 used specific object (was used for)

* the writing of this scope note (E7) *used specific object* Nicholas Crofts’ computer (E22) *mode of use* Typing Tool; Storage Medium (E55)
* the people of Iraq calling the place identified by TGN ‘7017998’ (E7) used specific object “Quyunjig” (E41)*mode of use Current*; Vernacular (E55)

P17 was motivated by (motivated)

Examples:

* the resignation of the chief executive (E7) *was motivated by* the collapse of SwissAir (E68).
* the coronation of Elizabeth II (E7) *was motivated by* the death of George VI (E69) ) (Strong, 2005)

P19 was intended use of (was made for):

* Lady Diana Spencer’s wedding dress (E71) *was made for* Wedding of Prince Charles and Lady Diana Spencer (E7) *mode of use* To Be Worn (E55) (Betjeman, 1981)

P20 had specific purpose (was purpose of)

Examples:

* Van Eyck’s pigment grinding in 1432 (E7) *had specific purpose* the painting of the Ghent altar piece (E12) (Borchert, 2008)

P21 had general purpose (was purpose of)

* Van Eyck’s pigment grinding (E7) *had general purpose* painting (E55) (Borchert, 2008)
* The setting of trap 2742 on May 17th 1874 (E7) *had general purpose* Catching Moose (E55) (Activity type)
* The construction of the Berlin Wall starting 13. August 1961 (E12) P21 had general purpose Preventing Emigration (E55)
* The reinforcement of the Mexico-United States barrier between the United States of America and Mexico in Fall 2019 (E11) P21 had general purpose Preventing Immigration (E55)

P22 transferred title to (acquired title through)

Examples:

* acquisition of the Amoudrouz collection by the Geneva Ethnography Museum (E8) *transferred title to* Geneva Ethnography Museum (E74)

P23 transferred title from (surrendered title through)

Examples:

* acquisition of the Amoudrouz collection by the Geneva Ethnography Museum (E8) *transferred title from* Heirs of Amoudrouz (E74)

P24 transferred title of (changed ownership through)

Examples:

* acquisition of the Amoudrouz collection by the Geneva Ethnography Museum (E8) *transferred title of* Amoudrouz Collection (E78)

P25 moved (moved by)

Examples:

* Monet´s “Impression sunrise” (E22) *moved by* preparations for the First Impressionist Exhibition (E9) (Tucker, 1984)

P26 moved to (was destination of)

Examples:

* the movement of the Tut-Ankh-Amun Exhibition (E9) *moved to* The British Museum (E53) (British Museum, 1972)

P27 moved from (was origin of)

Examples:

* the movement of the Tut-Ankh-Amun Exhibition (E9) *moved from* The Egyptian Museum in Cairo (E53) (British Museum, 1972)

P28 custody surrendered by (surrendered custody through)

Examples:

* the Secure Deliveries Inc. crew (E74) *surrendered custody* *through* The delivery of the paintings by Secure Deliveries Inc. to the National Gallery (E10).

P29 custody received by (received custody through)

Examples:

* representatives of The National Gallery (E74) *received custody* *through.*  The delivery of the paintings by Secure Deliveries Inc. to the National Gallery (E10)

P30 transferred custody of (custody transferred through)

Examples:

* the delivery of the paintings by Secure Deliveries Inc. to the National Gallery (E10) transferred custody of paintings from The Iveagh Bequest (E19)

P31 has modified (was modified by)

Examples:

* rebuilding of the Reichstag (E11) *has modified* the Reichstag in Berlin (E24) (Foster, 2000)

P32 used general technique (was technique of)

Examples:

* ornamentation of silver cup 113 (E11) *used general technique* gold-plating (E55) (Design or Procedure Type)

P33 used specific technique (was used by)

Examples:

* Ornamentation of silver cup 232 (E11) *used specific technique* ‘Instructions for golden chase work by A N Other’ (E29)
* Rebuilding of Reichstag (E11) *used specific technique* Architectural plans by Foster and Partners (E29) (Foster, 2000)

P34 concerned (was assessed by)

* 1997 condition assessment of the silver collection (E14) concerned silver cup 232 (E22)
* the condition assessment of the cover of MS Sinai Greek 418 (E14) *concerned* the cover of MS Sinai Greek 418 (E22) (Honey and Pickwoad, 2010)
* the condition assessment of the endband cores of MS Sinai Greek 418 (E14) *concerned* the endband cores of MS Sinai Greek 418 (E22) (Honey and Pickwoad, 2010)

P35 has identified (was identified by)

Examples:

* 1997 condition assessment of silver cup 232 (E14) *has* *identified* oxidation traces were present in 1997 (E3) *has type* oxidation traces (E55)
* the condition assessment of the cover of MS Sinai Greek 418 (E13) *has identified* a condition state (E3) which *has type* fine (E55) (Honey and Pickwoad, 2010)
* the condition assessment of the endband cores of MS Sinai Greek 418 (E14) *has identified* a condition state (E3) which *has type* broken (E55) (Honey and Pickwoad, 2010)

P37 assigned (was assigned by)

Examples:

* 01 June 1997 Identifier Assignment of the silver cup donated by Martin Doerr (E15) *assigned* “232” (E42)

P38 deassigned (was deassigned by)

Examples:

* 31 July 2001 Identifier Assignment of the silver cup OXCMS:2001.1.32 (E15) *deassigned* “232” (E42)

P39 measured (was measured by)

Examples:

* 31 August 1997 measurement of height of silver cup 232 (E16) measured silver cup 232 (E22)

P40 observed dimension (was observed in)

Examples:

* 31 August 1997 measurement of height of silver cup 232 (E16) *observed dimension* silver cup 232 height (E54) *has unit* mm (E58), *has value* 224 (E60)

P41 classified (was classified by)

Examples:

* 31 August 1997 classification of silver cup 232 (E17) *classified* silver cup 232 (E22)

P42 assigned (was assigned by)

Examples:

* 31 August 1997 classification of silver cup 232 (E17) *assigned* goblet (E55)

P43 has dimension (is dimension of)

Examples:

* silver cup 232 (E22) *has dimension* height of silver cup 232 (E54) *has unit (P91)* mm (E58), *has value (P90)* 224 (E60)

P44 has condition (is condition of)

Examples:

* silver cup 232 (E22) *has* *condition* oxidation traces were present in 1997 (E3) *has type* oxidation traces (E55)

P45 consists of (is incorporated in)

Examples:

* silver cup 232 (E22) *consists of* silver (E57)

P46 is composed of (forms part of)

Examples:

* the Royal carriage (E22) *forms part of* the Royal train (E22)
* the “Hog’s Back” (E24) *forms part of* the “Fosseway” (E24)

P48 has preferred identifier (is preferred identifier of)

Examples:

* the pair of Lederhosen donated by Dr Martin Doerr (E22) *has preferred identifier* “OXCMS:2001.1.32” (E42)

P49 has former or current keeper (is former or current keeper of)

Examples:

* paintings from The Iveagh Bequest (E18) *has former or current keeper*  Secure Deliveries Inc. (E74) (Bequest, 1975)

P50 has current keeper (is current keeper of)

Examples:

* paintings from The Iveagh Bequest (E18) *has current keeper*  The National Gallery (E74) (Bequest, 1975)

P51 has former or current owner (is former or current owner of)

Examples:

* paintings from the Iveagh Bequest (E18) *has former or current owner*  Lord Iveagh (E21) (Bequest, 1975)

P52 has current owner (is current owner of)

Examples:

* paintings from the Iveagh Bequest (E18) *has current owner*  «English Heritage» (E74) (Bequest, 1975)

P53 has former or current location (is former or current location of)

Examples:

* silver cup 232 (E22) *has former or current location* Display Case 4, Room 23, Museum of Oxford (E53)

P54 has current permanent location (is current permanent location of)

Examples:

* silver cup 232 (E22) *has current permanent location* Shelf 3.1, Store 2, Museum of Oxford (E53)

P55 has current location (currently holds)

Examples:

* silver cup 232 (E22) *has current location* Display cabinet 23, Room 4, British Museum (E53)

P56 bears feature (is found on)

Examples:

* silver cup 232 (E22) *bears feature* 32 mm scratch on silver cup 232 (E26)

P57 has number of parts

Examples:

* chess set 233 (E22) *has number of* *parts* 33 (E60)

P59 has section (is located on or within)

Examples:

* HMS Victory (E22) *has section* HMS Victory section B347.6 (E53) (Goodwin, 2015)

P62 depicts (is depicted by)

Examples:

* The painting “La Liberté guidant le peuple” by Eugène Delacroix (E22) *depicts* the French “July Revolution” of 1830 (E7) (Delacroix, 1982)
* the 20 pence coin held by the Department of Coins and Medals of the British Museum under registration number 2006,1101.126 (E24) *depicts* Queen Elizabeth II (E21) *mode of depiction* Profile (E55)

P65 shows visual item (is shown by)

Examples:

* My T-Shirt (E22) *shows visual item* Mona Lisa (E36)

P67 refers to (is referred to by)

Examples:

* the eBay auction listing of 4 July 2002 (E73) refers to silver cup 232 (E22) has type item for sale (E55)

P68 foresees use of (use foreseen by)

Examples:

* procedure for soda glass manufacture (E29) *foresees use of* soda (E57) (Brooks, 1973)

P69 has association with (is associated with)

Examples:

* Procedure for glass blowing (E29) *has association with* procedure for glass heating (E29) (Brooks, 1973)
* The set of instructions for performing Macbeth in Max Reinhardt's production in 1916 in Berlin at Deutsches Theater (E29) has association with the scene design drawing by Ernst Stern reproduced at http://www.glopad.org/pi/fr/record/digdoc/1003814 (E29) has type has part (E55)
* Preparation of parchment (E29) *has association with* soaking and unhairing of skin (E29) *has type* ‘has part’ (E55). Preparation of parchment (E29) *has association with* stretching of skin (E29) *has type* ‘has part’ (E55). Stretching of skin (E29) *has association with* soaking and unhairing of skin (E29) *has type* ‘follows’ (E55). (Poole, 1962)
* The plan for reassembling the temples at Abu Simbel (E29) has association with the plan for storing and transporting the blocks (E29) has type 'follows' (E55)'. (Loubiere, 1995)

P70 documents (is documented in)

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Examples:

* the British Museum catalogue (E31) *documents* the British Museum’s Collection (E78)

P71 lists (is listed in)

Examples:

* the Art & Architecture Thesaurus (E32) *lists* alcazars (E55)

P72 has language (is language of)

Examples:

* the American Declaration of Independence (E33*) has language* 18th Century English (E56) (Perley, 2017)

P73 has translation (is translation of)

Examples:

* “Les Baigneurs” (E33) *has translation* “The Bathers” (E33)

P74 has current or former residence (is current or former residence of)

Examples:

* Queen Elizabeth II (E39) *has current or former residence* Buckingham Palace (E53) (Robinson, 2000) (Robinson, 2000)

P75 possesses (is possessed by)

Examples:

* Michael Jackson (E21) *possesses* Intellectual property rights on the Beatles’ back catalogue (E30)

P76 has contact point (provides access to)

Examples:

* RLG (E40) *has contact point* “bl.ric@rlg.org” (E41)

P79 beginning is qualified by

Examples:

* the time-span of the Holocene (E52) beginning is qualified by “The formal definition and dating of the GSSP (GlobalStratotype Section and Point) for the base of the Holocene using the Greenland NGRIP ice core, and selected auxiliary records” (E62) (Walker et al, 2009)

P80 end is qualified by

Examples:

* the time-span of the Holocene (E52) *end is qualified by* “still ongoing” (E62) (Walker et al, 2009)

P81 ongoing throughout

Examples:

* the time-span of the development of the CIDOC CRM (E52) *ongoing throughout* 1996-2002 (E61)
* The Time-Span of the Thirty Years War *P81 ongoing throughou*t  Mai 23, 1618AD until October 24, 1648AD
* The time-span of the First Intermediate Period of Ancient Egypt (7th to 10th dynasty) (E52) *P81 ongoing throughout* 2181BC - 2160BC (E61)

P82 at some time within

Examples:

* the time-span of the development of the CIDOC CRM (E52) *at some time within* 1992-infinity (E61)
* **The Battle in the Teutoburg Forest *P82 at some time within* September 9CE**
* The time-Span of the death of Tut Ankh Amun ***P82 at some time within***December 1324 BC to February 1323 BC
* The time-span of the First Intermediate Period of Ancient Egypt (7th to 10th dynasty) (E52) *P82 at some time within* 2475BC - 2125BC (E61)

P86 falls within (contains)

Examples:

* the time-span of the Apollo 11 moon mission (E52) *falls within* the time-span of the reign of Queen Elizabeth II (E52) ) (Riley, 2009), (Robinson, 2000)

P89 falls within (contains)

Examples:

* the area covered by the World Heritage Site of Stonehenge (E53) *falls within* the area of Salisbury Plain (E53) ) (Pryor, 2016)

P90 has value

Examples:

* height of silver cup 232 (E54) *has value* 226 (E60)
* Christie’s hammer price for “Vase with Fifteen Sunflowers” (E97) has value 24,750,000 (E60)

P91 has unit (is unit of)

Examples:

* height of silver cup 232 (E54) *has* *unit* mm (E58)

P92 brought into existence (was brought into existence by)

Examples:

* the birth of Mozart (E67*) brought into existence* Mozart (E21) (Deutshc, 1965)

P93 took out of existence (was taken out of existence by)

Examples:

* the death of Mozart (E69) *took out of existence* Mozart (E21) (Deutshc, 1965)

P94 has created (was created by)

Examples:

* the composition of “The Four Friends” by A. A. Milne (E65) *has created* “The Four Friends” by A. A. Milne (E28) (Milne, 1921)

P95 has formed (was formed by)

Examples:

* the formation of the CIDOC CRM SIG at the August 2000 CIDOC Board meeting (E66) *has formed* the CIDOC CRM Special Interest Group (E74)

P96 by mother (gave birth)

Examples:

* the birth of Queen Elizabeth II (E67) *by mother* Queen Mother (E21) (Parker, 2002)

P97 from father (was father for)

Examples:

* King George VI (E21) *was father for* the birth of Queen Elizabeth II (E67) (Parker, 2002)

P98 brought into life (was born)

Examples:

* the Birth of Queen Elizabeth II (E67) *brought into life* Queen Elizabeth II (E21) (Parker, 2002)

P99 dissolved (was dissolved by)

Examples:

* the end of The Hole in the Wall Gang (E68) *dissolved* The Hole in the Wall Gang (E74) (Patterson, 1998)

P100 was death of (died in)

Examples:

* Mozart’s death (E69) *was death of* Mozart (E21) (Sitwell, 2017)

P101 had as general use (was use of)

Examples:

* Tony Gill’s Ford Mustang (E22) *had as general use* transportation (E55)
* Egyptian unglazed vessel used in 2003 study (E22) *had as general use* camel milk preparation (E55) (Barnard et al 2007)

Work cited

Barnard, H., Ambrose, S.H., Beehr, D.E., Forster, M.D., Lanehart, R.E., Malainey, M.E., Parr, R.E., Rider, M., Solazzo, C. and Yohe, R.M. (2007). Mixed results of seven methods for organic residue analysis applied to one vessel with the residue of a known foodstuff. *Journal of Archaeological Science*, 34(1), pp.28–37.

P102 has title (is title of)

Examples:

* the first book of the Old Testament (E33) *has title* “Genesis” (E35) *has type* translated title (E55) (E55) (Brueggemann, 1986)
* Monet’s painting from 1868-1869 held by Musée d'Orsay, Paris, under inventory number RF 1984 164 (E24) has title “La Pie” (E35) has type creator’s title (E55) (Musée d'Orsay, 2006-2020)
* Monet’s painting from 1868-1869 held by Musée d'Orsay, Paris, under inventory number RF 1984 164 (E24) has title “The Magpie” (E35) has type translated title (E55) (Musée d'Orsay, 2006-2020)

P103 was intended for (was intention of)

Examples:

* this plate (E22) *was intended for* being destroyed at wedding reception (E55)

P104 is subject to (applies to)

Examples:

* Beatles back catalogue (E72) *is subject to* reproduction right on Beatles back catalogue (E30)

P105 right held by (has right on)

Examples:

* Beatles back catalogue (E73) *right held by* Michael Jackson (E21)

P106 is composed of (forms part of)

Examples:

* This Scope note P106 (E33) *is composed of* fragments of texts (E33)
* ‘recognizable’ P106 (E90) is composed of ‘ecognizabl’ (E90)

P107 has current or former member (is current or former member of)

Examples:

* Moholy Nagy (E21) *is current or former* *member of* Bauhaus (E74) (Moholy Nagy, 2005)
* National Museum of Science and Industry (E74) *has current or former member* The National Railway Museum (E74)
* The married couple Queen Elisabeth and Prince Phillip (E74) *has current or former member* Prince Phillip (E21) with P107.1 *kind of member* husband (E55 Type) (Brandreth, 2004)

P108 has produced (was produced by)

Examples:

* The building of Rome (E12) *has* *produced* Τhe Colosseum (E22) (Hopkins, 2011)

P109 has current or former curator (is current or former curator of)

Examples:

* the Robert Opie Collection (E78) *has current or former curator* Robert Opie (E39)
* the Mikael Heggelund Foslie’s coralline red algae Herbarium (E78) *has current or former curator* Mikael Heggelund Foslie (Woelkerling, 2005)

P110 augmented (was augmented by)

Examples:

* the final nail-insertion Event (E79) *augmented* Coffin of George VI (E24)

P111 added (was added by)

Examples:

* the insertion of the final nail (E79) *added* the last nail in George VI’s coffin (E18)

P112 diminished (was diminished by)

Examples:

* the coffin of Tut-Ankh-Amun (E22) *was* *diminished by* The opening of the coffin of Tut-Ankh-Amun (E80) (Carter, 2014)

P113 removed (was removed by)

Examples:

* the opening of the coffin of Tut-Ankh-Amun (E80) *removed* The mummy of Tut-Ankh-Amun (E20,E22) (Carter, 2014)

P121 overlaps with

Examples:

* the territory of the United States (E53) *overlaps with* the Arctic (E53)
* the maximal extent of the Kingdom of Greece (1832-1973) (E53) *overlaps with* the maximal extent of the Republic of Turkey (29 October 1923 to now) (E53)

P122 borders with

Examples:

* Scotland (E53) *borders with* England (E53)

P123 resulted in (resulted from)

Examples:

* the transformation of the Venetian Loggia in Heraklion into a city hall (E81) resulted in the City Hall of Heraklion (E22) (Municipality of Heraklion, 2020)
* the death and mummification of Tut-Ankh-Amun (E81) resulted in the Mummy of Tut-Ankh-Amun (E22 and E20) (Carter, H., and Mace A. C. (1977)
* The death, carbonization and petrification of some people of Pompeii in 79AD by the intense heat of a pyroclastic cloud and ashes from the Eruption of Mount Vesuvius (E69,E81) resulted in petrified bodies (E20) [Some of these bodies could later be preserved in plaster]
* The transformation of the Dominicanenkerk building in Maastricht into a stable (E81,E12) resulted in Stable for the French Cavalry (E24) [AND: P108 has produced Stable for the French Cavalry (E24)]
* The transformation of the Dominicanenkerk building in Maastricht into a bookstore (E81,E12) resulted in the Selexyz Dominicanen bookstore (E24) [AND: P108 has produced the Selexyz Dominicanen bookstore (E24)]

P124 transformed (was transformed by)

Examples:

* the transformation of the Venetian Loggia in Heraklion into a city hall (E81) transformed the Venetian Loggia in Heraklion (E22) (Municipality of Heraklion, 2020)
* the death and mummification of Tut-Ankh-Amun (E81) transformed the ruling Pharao Tut-Ankh-Amun (E21) (Carter, H., and Mace A. C. (1977)
* The death, carbonization and petrification of some people of Pompeii in 79AD by the intense heat of a pyroclastic cloud and ashes from the Eruption of Mount Vesuvius (E69,E81) transformed some people of Pompeii (E21) [AND: P100 was death of some people of Pompeii (E21) ]
* The transformation of the Dominicanenkerk building in Maastricht into a stable for the French cavalry (E81,E12) transformed the Dominicanenkerk building in Maastricht (E24).
* The transformation of the Dominicanenkerk building in Maastricht into a bookstore (E81,E12) transformed the Dominicanenkerk building in Maastricht (E24).

P125 used object of type (was type of object used in)

Examples:

* at the Battle of Agincourt (E7), the English archers *used object of type* long bow (E55) (Cartwright, M., 2020)

P126 employed (was employed in)

Examples:

* the repairing of the Queen Mary (E11) *employed* Steel (E57)
* distilled water (E57) *was employed in* the restoration of the Sistine Chapel (E11) (Pietrangeli, C., 1986)

P127 has broader term (has narrower term)

Examples:

* dime (E55) *has broader term* coin (E55)

P128 carries (is carried by)

Examples:

* Matthew’s paperback copy of Reach for the Sky (E18) *carries* the text of Reach for the Sky (E73) (Brickhill, 2001)

P129 is about (is subject of)

Examples:

* The text entitled ‘Reach for the sky’ (E33*) is about* Douglas Bader (E21) (Brickhill, 2001)

P130 shows features of (features are also found on)

Examples:

* Mary Lamb’s Cymbeline [from Charles and Mary Lamb’s Tales from Shakespeare] *shows features of* William Shakespeare’s Cymbeline
* The audio recording of Dante Alighieri's La divina commedia read by Enrico de Negri *shows features of* the text of Dante Alighieri's La divina commedia

P132 spatiotemporally overlaps with

Examples:

* the “Urnfield” period (E4*) spatiotemporally overlaps with* the “Hallstatt” period (E4)

P133 is spatiotemporally separated from

Examples:

* the “Hallstatt” period (E4) is spatiotemporally separated from the “La Tène” era (E4)
* Kingdom of Greece (1831-1924) (E92) *is spatiotemporally separated from* Ottoman Empire (1299-1922) (E92)
* The path of the army of Alexander (335-323 B.C.) (E92) *is spatiotemporally separated from* the Mauryan Empire (E92)

P134 continued (was continued by)

Examples:

* the construction of the Kölner Dom (Cologne Cathedral) (E7), abandoned in the 15th century, *was* *continued by* construction in the 19th century adapting the initial plans so as to preserve the intended appearance (E7) (Wolff, 1999)

P135 created type (was created by)

Examples:

* The description of a new ribbon worm species by Bürger (E83) *created type* ‘*Lineus coxinus* (Bürger, 1892)’ (E55)

P136 was based on (supported type creation)

Examples:

* the taxon creation of the plant species ‘*Serratula glauca* Linné, 1753.’ (E83) *was based on* Object BM000576251 of the Clayton Herbarium (E20) *in the taxonomic role* original element (E55)

P137 exemplifies (is exemplified by)

Examples:

* Object BM000098044 of the Clayton Herbarium (E20) *exemplifies Spigelia marilandica* (L.) L. (E55) *in the taxonomic role* lectotype

P138 represents (has representation)

Examples:

* the digital file found at <http://www.emunch.no/N/full/No-MM_N0001-01.jpg> (E36) represents page 1 of Edward Munch's manuscript MM N 1, Munch-museet (E22) mode of representation Digitisation(E55)
* The 3D model VAM\_A.200-1946\_trace\_1M.ply (E73) represents Victoria & Albert Museum’s Madonna and child sculpture (visual work) A.200-1946 (E22) mode of representation 3D surface (E55)

P139 has alternative form

Examples:

* "Martin Doerr" (E41) has alternative form "Martin Dörr" (E41) has type Alternate spelling (E55)
* "Гончарова, Наталья Сергеевна" (E41) has alternative form "Gončarova, Natal´â Sergeevna" (E41) has type ISO 9:1995 transliteration (E55)
* “Αθήνα” has alternative form “Athina” has type transcription.

P140 assigned attribute to (was attributed by)

Examples:

* February 1997 Current Ownership Assessment of Martin Doerr’s silver cup (E13) *assigned attribute to* Martin Doerr’s silver cup (E19)
* 01 June 1997 Identifier Assignment of the silver cup donated by Martin Doerr (E15) *assigned attribute to* silver cup 232 (E19)
* the examination (E13) of MS Sinai Greek 418 *assigned attribute to* MS Sinai Greek 418 (E22) (Honey and Pickwoad, 2010)

P141 assigned (was assigned by)

Examples:

* February 1997 Current Ownership Assessment of Martin Doerr’s silver cup (E13) *assigned* Martin Doerr (E21)
* 01 June 1997 Identifier Assignment of the silver cup donated by Martin Doerr (E15) *assigned* object identifier 232
* the examination (E13) of MS Sinai Greek 418 *assigned* unsupported (E55) (Honey and Pickwoad, 2010)

P142 used constituent (was used in)

Examples:

* On June 1, 2001 assigning the personal name identifier “Guillaume, de Machaut, ca. 1300-1377” (E15) *used constituent* “ca. 1300-1377” (E41)
* Assigning a uniform title to the anonymous textual work known as ‘The Adoration of the Shepherds’(E15) *used constituent* ‘Coventry’ (E41)
* Assigning a uniform title to Pina Bausch’s choreographic work entitled ‘Rite of spring’ (E15) *used constituent* ‘(Choreographic Work: Bausch)’(E90)
* Assigning a uniform title to the motion picture directed in 1933 by Merian C. Cooper and Ernest B. Schoedsack and entitled ‘King Kong’ (E15) *used constituent* ‘1933’ (E41)
* Assigning the corporate name identifier ‘Univerza v Ljubljani. Oddelek za bibliotekarstvo’ to The Department for library science of the University of Ljubljana (E15) *used constituent* ‘Univerza v Ljubljani’ (E42)

P143 joined (was joined by)

Examples:

* The election of Sir Isaac Newton as Member of Parliament to the Convention Parliament of 1689 (E85) *joined* Sir Isaac Newton (E21) ) (Iliffe, 2013)
* The inauguration of Mikhail Sergeyevich Gorbachev as leader of the Union of Soviet Socialist Republics (USSR) in 1985 (E85) *joined* Mikhail Sergeyevich Gorbachev (E21) (Galeotti, 1997)
* The implementation of the membership treaty January 1. 1973 between EU and Denmark (E85) joined Denmark (E74)

P144 joined with (gained member by)

Examples:

* The election of Sir Isaac Newton as Member of Parliament to the Convention Parliament of 1689 ([E85](#_heading=h.11si5id)) *joined with* the Convention Parliament (E74) (Iliffe, 2013)
* The inauguration of Mikhail Sergeyevich Gorbachev as Leader of the Union of Soviet Socialist Republics (USSR) in 1985 (E85) *joined with* the office of Leader of the Union of Soviet Socialist Republics (USSR) (E74) with *P144.1 kind of member* President (E55) (Galeotti, 1997)
* The implementation of the membership treaty January 1. 1973 between EU and Denmark (E85) *joined with* EU (E74)

P145 separated (left by)

Examples:

* The end of Sir Isaac Newton’s duty as Member of Parliament for the University of Cambridge to the Convention Parliament in 1702 *separated* Sir Isaac Newton (Iliffe, 2013)
* George Washington’s leaving office in 1797 *separated* George Washington (Unger, 2015)
* The implementation of the treaty regulating the termination of Greenland membership in EU between EU, Denmark and Greenland February 1. 1985 (E86) *separated* Greenland (E74)

P146 separated from (lost member by)

Examples:

* The end of Sir Isaac Newton’s duty as Member of Parliament for the University of Cambridge to the Convention Parliament in 1702 *separated from* the Convention Parliament(Iliffe, 2013)
* George Washington’s leaving office in 1797 *separated from* the office of President of the United States (Unger, 2015)
* The implementation of the treaty regulating the termination of Greenland membership in EU between EU, Denmark and Greenland February 1. 1985 *separated from* EU (E74)

P147 curated (was curated by)

Examples:

* The activities (E87) by the Benaki Museum *curated* the acquisition of dolls and games of urban and folk manufacture dating from the 17th to the 20th century, from England, France and Germany for the “Toys, Games and Childhood Collection (E78) of the Museum
* The activities (E87) of the Historical Museum of Crete, Heraklion, Crete, *curated* the development of the permanent Numismatic Collection (E78)
* The activities (E87) by Mikael Heggelund Foslie *curated* the Mikael Heggelund Foslie’s coralline red algae Herbarium

P148 has component (is component of)

Examples:

* Dante’s “Divine Comedy” (E89) *has component* Dante’s “Hell” (E89)

P150 defines typical parts of (defines typical wholes for)

Examples:

* Car motors (E55) *defines typical parts of* cars (E55)

P151 was formed from (participated in)

Examples:

* The formation of the House of Bourbon-Conti in 1581 (E66) *was formed from* House of Condé (E74)

P152 has parent (is parent of)

Examples:

* Gaius Octavius (E29) has parent Julius Caesar (E21)
* Steve Jobs (E29) has parent Joanne Simpson (biological mother) (E21)
* Steve Jobs (E29) has parent Clara Jobs (adoption mother) (E21)

P156 occupies (is occupied by)

Examples:

* The Saint Titus reliquary *occupies* the space of the Saint Titus reliquary [the reliquary is currently kept in the Saint Titus Church in Heraklion, Crete since 1966 and contains the skull of Saint Titus] (Fisher&Garvey, 2010)

P157 is at rest relative to (provides reference space for)

Examples:

* The spatial extent of the municipality of Athens in 2014 (E53) *is at rest relative to* The Royal Observatory in Greenwich (E25)
* The place where Lord Nelson died on H.M.S. Victory (E53) *is at rest relative to* H.M.S. Victory (E22)

P160 has temporal projection (is temporal projection of)

Example:

* the spatio-temporal trajectory of the H.M.S. Temeraire from its building in 1798 to its destruction in 1838 (E5) *has temporal projection* The Time-Span of the existence of H.M.S. Temeraire [P82 at some time within 1798-1838 (E61 Time Primitive)]
* The Battle of Waterloo 1815 (E7) *has temporal projection* the time-span of The Battle of Waterloo [P82 at some time within Sunday, 18 June 1815 (E61 Time Primitive)]

P161 has spatial projection (is spatial projection of)

Example:

* The Roman Empire has spatial projection all areas ever claimed by Rome.

P164 is temporally specified by (temporally specifies)

Examples:

* 2016-02-09 (E52) *was time-span of* the last day of the 2016 Carnival in Cologne (E93).
* Johann JoachimWinckelmann’s whereabouts in December 1755 (E93) *during* December 1755 (E52)
* Johann Joachim Winkelmann’s whereabouts from November 19 1755 until April 9 1768 (E93) *during* November 19 1755 until April 9 1768 (E52)

P165 incorporates (is incorporated in)

Examples:

* The content of Charles-Moïse Briquet’s ‘Les Filigranes: dictionnaire historique des marques du papier’ (E32) P165 incorporates the visual aspect of the watermark used around 1358-61 by some Spanish papermaker(s) and identified as ‘Briquet 4019’ (E37)
* The visual content of Jacopo Amigoni’s painting known as ‘The Singer Farinelli and friends’ (E36) *P165 incorporates* the musical notation of Farinelli’s musical work entitled ‘La Partenza’ (E73)
* The visual content of Nicolas Poussin’s painting entitled ‘Les Bergers d’Arcadie’ (E36) *P165 incorporates* the Latin phrase ‘Et in Arcadia ego’ (E33)

P166 was a presence of (had presence)

Examples:

* The Roman Empire on 19 August AD 14 (E93) *was a presence of* The Roman Empire (E4)

P167 was within (includes)

Examples:

* Johann Joachim Winkelmann’s whereabouts in December 1755 (E93) *at* Rome (E53)
* Johann Joachim Winkelmann’s whereabouts from November 19 1755 until April 9 1768 (E93) *at* Italy (E53)

P168 place is defined by (defines place)

Examples:

* the centroid from https://sws.geonames.org/735927 (E53) place *is defined by* 40°31'17.9"N 21°15'48.3"E (E94) [a single point for approximating the centre of the city of Kastoria, Greece]
* Martin’s coordinates for Kastoria (E53) place *is defined by* 40°30'23"N 21°14'53"E, 40°31'40"N 21°16'43"E (E94) [a square covering the built settlement structure of Kastoria, Greece]
* Martin’s centroid for Kastoria (E53) place *is defined by* 40°31'01.5"N 21°15'48"E (E94) [a point in the lake of Kastoria in the centre of the area covered by the city]
* the position measured by Alexander von Humboldt for the Plaza Mayor in Cumaná, Sucre,Venezuela 1799-1800AD (E53) place *is defined by* 10°27'52"N 66°30'02"W (E94) [actually 260km west of Cumaná] -> the position measured by Alexander von Humboldt for the Plaza Mayor in Cumaná, Sucre,Venezuela 1799-1800AD (E53) place is defined by 10°27'52"N 66°30'02"W (E94) [west of the Observatory of Paris = 64°09'51"W of Greenwich, actually 1,1km east of today’s Plaza Andrés Eloy Blanco of Cumaná]

(from: Alexander von Humboldt, Reise in die Aequinoctial-Gegenden des neuen Continents. (Translated by Hermann Hauff). The only translation authorized by Alexander von Humboldt; editor: J. G. Cotta, Stuttgart 1859–60)

P169 defines spacetime volume (spacetime volume is defined by)

Examples:

* {40°30'23"N 21°14'53"E, 40°31'40"N 21°16'43"E, 200BC-2020AD} (E95) *defines spacetime volume* Martin’s spatiotemporal enclosure 2020 for the evolution of the settlement of today’s city of Kastoria, Greece, since its conquest by the Romans (E92) [a square covering the current built settlement structure of Kastoria, Greece, through the years 200BC to 2020AD, which includes the extents of earlier phases of the city]

P170 defines time (time is defined by)

Examples:

* (1800/1/1 0:00:00 – 1899/31/12 23:59:59)(E61) *defines time* The 19th century (E52)
* (1968/1/1 – 2018/1/1)(E61) *defines time* “1968/1/1 – 2018/1/1” (E52) [an arbitrary time-span during which the Saint Titus reliquary was present in the Saint Titus Church in Heraklion, Crete]

P171 at some place within

Examples:

* the spatial extent of the Acropolis of Athens (E53) is *at some place within* POLYGON ((37.969172 23.720787, 37.973122 23.721495 37.972741 23.728994, 37.969299 23.729735, 37.969172 23.720787)) (E94)

P172 contains

Examples:

* the spatial extent of the Acropolis of Athens (E53) *contains* POINT (37.971431 23.725947) (E94)

P173 starts before or with the end of (ends after or with the start of)

Examples:

* The legendary run from Marathon to Athens 490BC (E7) *starts before or with the end of* The Battle of Marathon 490BC (E7)

P174 starts before the end of (ends after the start of

New proposed examples

* The settlement of the city of Assur (Ashur) (E7) P174 starts before the end of The Tenth Dynasty of Egypt. (E4) [There are some 200 - 300 years differences in the chronology of the First Intermediate Period, and Assur is dated to "about 2500 BC”]

P175 starts before or with the start of (starts after or with the start of)

No example

P176 starts before the start of (starts after the start of)

No example

P177 assigned property type

Examples

* February 1997 Current Ownership Assessment of Martin Doerr’s silver cup (E13) assigned property type P52 has former or current owner (is former or current keeper of) (E55)
* 01 June 1997 Identifier Assignment of the silver cup donated by Martin Doerr (E15) assigned property type P48 has preferred identifier (is preferred identifier of) (E55)
* the examination (E13) of MS Sinai Greek 418 *assigned property type* binding structure type (E55) (Honey and Pickwoad, 2010)
* the condition assessment (E14) of the endband cores of MS Sinai Greek 418 *assigned property type* damage (E55) (Honey and Pickwoad, 2010)
* the condition assessment (E14) of the cover of MS Sinai Greek 418 *assigned property type* quality (E55) (Honey and Pickwoad, 2010)

P179 had sales price (was sales price of)

Examples:

* the sale of Vincent van Gogh’s “Vase with Fifteen Sunflowers” on 1987/03/30 (E96) *had sales price* Christies’ hammer price for “Vase with Fifteen Sunflowers” (E97).
* the purchase of 10 okka of nails by the captain A. Syrmas on 18/9/1895 (E96) *had sales price* 20 piastre (grosi) (E97)

P180 has currency (was currency of)

Examples:

* Christie’s hammer price for “Vase with Fifteen Sunflowers” (E97) *has currency* British Pounds (E98).

P181 has amount

Examples:

* Christie’s hammer price for “Vase with Fifteen Sunflowers” (E97) has amount 24,750,000 (E60).

P182 ends before or with the start of (starts after or with the end of)

P183 ends before the start of (starts after the end of)

Examples:

* Gisle taking office as Bishop of Linköping 1139 AD (E7) *ends before the start of* The Guta saga composition (E65)
* Troy VII (E7) P183 ends before the start of Troy VIII (E7) [uninhabited for some 200 years] (new proposed)

P184 ends before or with the end of (ends with or after the end of)

P185 ends before the end of (ends after the end of)

P186 produced thing of product type (is produced by)

Examples:

* The production activity of the Volkswagen factory during 1949-1953 (E12) produced thing of product type Volkswagen Type 11 (Beetle) (E99).

P187 has production plan (is production plan for)

Examples:

* the production plans (E29) for Volkswagen Type 11 (Beetle) (E99)

P188 requires production tool (is production tool for)

Examples:

* the luggage compartment lid mould (E19) for the Volkswagen Type 11 (Beetle) (E99) (https://upload.wikimedia.org/wikipedia/commons/thumb/b/b5/Volkswagen\_Type\_1\_(Auto\_classique\_St.\_Lazare\_%2710).jpg/220px-Volkswagen\_Type\_1\_(Auto\_classique\_St.\_Lazare\_%2710).jpg)

P189 approximates (is approximated by)

Examples:

* [40°31'17.9"N 21°15'48.3"E] *approximates* Kastoria, Greece, TGN ID: 7010880. (coordinates from <https://sws.geonames.org/735927>)
* [40°31'00.1"N 21°16'00.1"E] *approximates* Kastoria, Greece, TGN ID: 7010880. (coordinates from <http://vocab.getty.edu/page/tgn/7010880>)
* [40°04'60.0"N 22°21'00.0"E] *approximates* Mount Olympus National Park, Greece (coordinates from <https://www.geonames.org/6941814>)

P190 has symbolic content

Examples:

* The materials description (E33) of the painting has symbolic content “Oil, French Watercolors on Paper, Graphite and Ink on Canvas, with an Oak frame.”
* The title (E35) of Einstein’s 1915 text has symbolic content “Relativity, the Special and the General Theory “
* The story of Little Red Riding Hood (E33) has symbolic content “Once upon a time there lived in a certain village …”
* The inscription (E34) on Rijksmuseum object SK-A-1601 has symbolic content “B”

P191 had duration (was duration of)

Examples:

* the time span of the Battle of Issos 333 B.C.E. (E52) had duration Battle of Issos duration (E54)

P195 was a presence of (had presence)

Examples:

* Johann Joachim Winckelmann’s whereabouts in December 1755 (E93) was a presence of Johann Joachim Winckelmann (E21)
* Johann Joachim Winckelmann’s whereabouts from November 19 1755 until April 9 1768 (E93) was a presence of Johann Joachim Winckelmann (E21)

P196 defines (is defined by)

**New proposed by Steve**

* H.M.S. Temeraire (E22) *P196 defines* the spacetime volume of H.M.S. Temeraire [it was built, during 1798, in Chatham and destroyed, during 1838, in Rotherhithe] (Willis 2010)

 [Reference: Willis, S. (2010). The “Fighting Temeraire” : legend of Trafalgar. London: Quercus.]

I think Martin’s example needs tweaking

ORIGINAL

The Saint Titus reliquary (E22) P196 defines the spacetime volume of the Saint Titus reliquary [the reliquary is currently kept in the Saint Titus Church in Heraklion, Crete since 1966 and contains the skull of Saint Titus]

REVISED

The Saint Titus reliquary (E22) P196 defines the spacetime volume of the Saint Titus reliquary [the reliquary has been kept in the Saint Titus Church in Heraklion, Crete since 1966 and contains the skull of Saint Titus] (Fisher&Garvey, 2010)

P197 covered parts of (was partially covered by)

Examples

* Johann Joachim Winckelmann’s whereabouts from November 19 1755 until April 9 1768 (E93) *covered parts of* Paestum, Italy (E53)
* The Byzantine Empire 1013 AD (E93) *covered parts* of The Italian Peninsula (E53)

P198 holds or supports

Examples:

* Archival folder “1” (E22) holds or supports the piece of paper (E22) carrying the text of a letter from Alloway to Sleigh written in 1953
* Archival box "6" (E22) *holds or supports* the archival folder "1" (E22)
* Bookshelf “GRI.L2.c.1” (E22 *holds or supports* the copy "N582.M25 A627 2015" of the book titled “The J. Paul Getty Museum handbook of the collection” (E22)

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