### 559: Scope note of O12 has dimension (is dimension of)

#### OLD

**O12 has dimension (is dimension of)**

Domain: S15 Observable Entity

Range: E54 Dimension

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

Scope note: This property associates an instance of S15 Observable Entity with an instance of E54 Dimension

that the observable entity has.

It offers no information about how and when an E54 Dimension was established.

Examples:

* The earthquake of Mexico city in 2017 (E7) *has dimension* magnitude 6.2 Richter (Mindock, 2017, <http://www.independent.co.uk/news/world/americas/mexico-earthquake-today-latest-mexico-city-magnitude-6-tremordamage-a7963211.html>).
* The landslide that was activated in Parnitha in 1999 after the earthquake (E26), *has dimension* crest length > 70 (InGeoCloudS - INspiredGEOdata CLOUD Services D2.2 2012; D2.3 2013)[[1]](#footnote-1)

In First Order Logic:

O12(x,y) ⊃ S15(x)

O12(x,y) ⊃ E54(y)

[O12(x,y) ∧ E18(x)] ⇒ P43(x,y)

[P43(x,y) ∧ E18(x)] ⇒ O12(x,y)

#### NEW

**O12 has dimension (is dimension of)**

Domain: S15 Observable Entity

Range: E54 Dimension

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

Scope note: This property associates an instance of S15 Observable Entity with an instance of E54 Dimension

that the observable entity has.

It offers no information about how and when an E54 Dimension was established.

In case the instance of S15 Observable Entity is more specifically an instance of E18 Physical Thing, using the property *O12 has dimension (is dimension of)* is equivalent to using the property *P43 has dimension (is dimension of).* In other words, using the one implies the other.

Examples:

* The earthquake of Mexico city in 2017 (E7) *has dimension* magnitude 6.2 Richter (Mindock, 2017, <http://www.independent.co.uk/news/world/americas/mexico-earthquake-today-latest-mexico-city-magnitude-6-tremordamage-a7963211.html>).
* The landslide that was activated in Parnitha in 1999 after the earthquake (E26), *has dimension* crest length > 70 (InGeoCloudS - INspiredGEOdata CLOUD Services D2.2 2012; D2.3 2013)[[2]](#footnote-2)

In First Order Logic:

O12(x,y) ⊃ S15(x)

O12(x,y) ⊃ E54(y)

[O12(x,y) ∧ E18(x)] ⇒ P43(x,y)

[P43(x,y) ∧ E18(x)] ⇒ O12(x,y)

1. Fictitious example [↑](#footnote-ref-1)
2. Fictitious example [↑](#footnote-ref-2)