

Observed Property Naming Rule - Concept and Detail -

This reference shows naming rules of observed property for agro-environmental data. It was a selection of slides from conference materials. Original reference should be shown for further citation.

Observable Property Naming Rule

- Concept -

From: Interoperable platform of agricultural decision support,
WG5 AGRICULTURE AND FOOD SECURITY GEOSS TOKYO 12
January 2017, HONDA, K., Chinnachodteeranun, R.

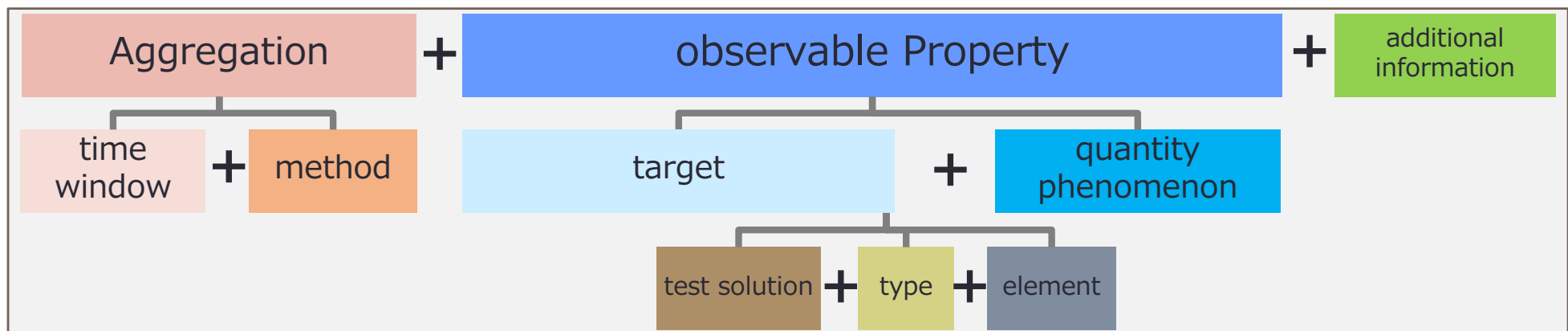
- SOS – have to describe observable property
- how to describe Observable Property is not defined
- MachineReadable - > Machine Understandable Semantic Web Service
- TimeWindow+TimWindowUOM+Agregation_Target_PhysicalProperty
- 10minutes_maximum_wind_speed [UCUM UOM]
- Going to be announced to as a guideline from a Ministry in Japan

集約時間数値		×	集約時間単位		×	集約方法		×	計測項目(計測対象_物理現象)	
timewindow value			timewindow uom			aggregation			observableProperty	
JPN	ENG		JPN	ENG		JPN	ENG		JPN	ENG
数値	numeric		秒	second		瞬時値*			気温	air_temperature
			分	minute		積算	accumulated		土壌温度	soil_temperature
			時間	hour		積算	cumulative		地表面温度	land_surface_temperature
			日	day		合計	amount_of		海面温度	sea_surface_temperature
			週	week		持続時間	duration_of		水温	water_temperature
			月	month		合計	sum		全天日射	solar_irradiance
			年	year		平均	average		降水量	precipitation
			1年間の	annual*		平均	mean		雨量	rainfall
						最大	maximum		他多数	to be filled by many others
						最高	maximum			
						最小	minimum			
						最低	minimum			

Naming rule detail

From: Japanese standard about agro-ENVIRONMENTAL data exchange, Kyohei Ohtsuka, PAIL session, AgGateway Annual Meeting, 9 Nov 2017

- First: Set quantity / phenomenon. this is the base of the name. Quantity indicate its unit. (temperature: ° C, mass-fraction: [%])
- Second: Choose target or element and set on the left of quantity.
- Third: If observed property is calculated value, set time window and aggregation method on the left of observable property
- Forth: If you want to show the condition or other additional information, set it last.
- All words are basically small character and connected with “_(under bar)” to treat and process easily with computer. (“space” is not allowed some program languages)



exp.1) **daily** **average** **greenhouse** **air** **temperature** **height1.5m**
daily_average_greenhouse_air_temperature_height1.5m

exp.2) **soil** **hot-water** **extractable** **nitrogen** **mass-fraction**
soil_hot-water_extractable_nitrogen_mass-fraction

Published as a guideline

- naming rules, UOM, metadata format -

http://www.kantei.go.jp/jp/singi/it2/senmon_bunka/nougyou.html

WG Page: <http://www.hondalab.net/sos20>

• Ministry of Internal Affairs and Communication, Japan

• < H28-GL2 > Guidelines on environment information data items in agricultural IT System
(recommended for implementation) (31 Mar 2016) ([PDF](#)) ([Word](#))

Table 1 UOM as Reference ([Excel](#) / [CSV](#))

Table 2 Base names and UOM ([Excel](#) / [CSV](#))

Table 3 Examples of names with aggregation information ([Excel](#) / [CSV](#))

Table 4 Metadata format on TOR for data use ([Excel](#))

Table 5 Metadata format on sensor specification and observation conditions ([Excel](#))

Table 6 Metadata format on data ([Excel](#))

• < H28-GL2 > Guidelines on environment information data items in agricultural IT System (recommended for implementation)

• 農業ITシステムで用いる環境情報のデータ項目に関する個別ガイドライン (本格運用版)

(平成28年3月31日取りまとめ) ([PDF形式](#))

※ガイドラインの本文やデータをご利用される方はこちら本文 ([Word形式](#))

別表1 基準となる単位表 ([Excel形式](#) / [CSV形式](#))

別表2 基本項目名・単位表 ([Excel形式](#) / [CSV形式](#))

別表3 集計・追加情報を付加した項目名例 ([Excel形式](#) / [CSV形式](#))

別表4 サービス利用条件のメタ情報記録フォーマット ([Excel形式](#))

別表5 センサーの仕様及び計測条件のメタ情報記録フォーマット ([Excel形式](#))

別表6 計測結果のメタ情報記録フォーマット ([Excel形式](#))

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