

# Space System Ontology for Europe

## Space System Ontology 1<sup>st</sup> brainstorming workshop 25 & 26 June 2019

<https://indico.esa.int/event/310>

*ESA/ESTEC  
Erasmus Auditorium  
Keplerlaan 1 2201AZ Noordwijk The Netherlands*

# Achieving a common understanding !

One of the major problems in the collaboration between stakeholders is *achieving a common understanding*<sup>1</sup>

ISO TR9007 Helsinki principle:

*Any meaningful exchange of utterances depends on the prior existence of an agreed set of semantics and syntactic rules.*

*The recipients of the utterances must use only these rules to interpret the received utterances, if it is to mean the same as that which was meant by the utterer*<sup>2</sup>.

[Oxford] utterance

▶ noun

*a spoken word, statement, or vocal sound*

[mass noun]

*the action of saying or expressing something aloud*

Linguistics

*an uninterrupted chain of spoken or written language*

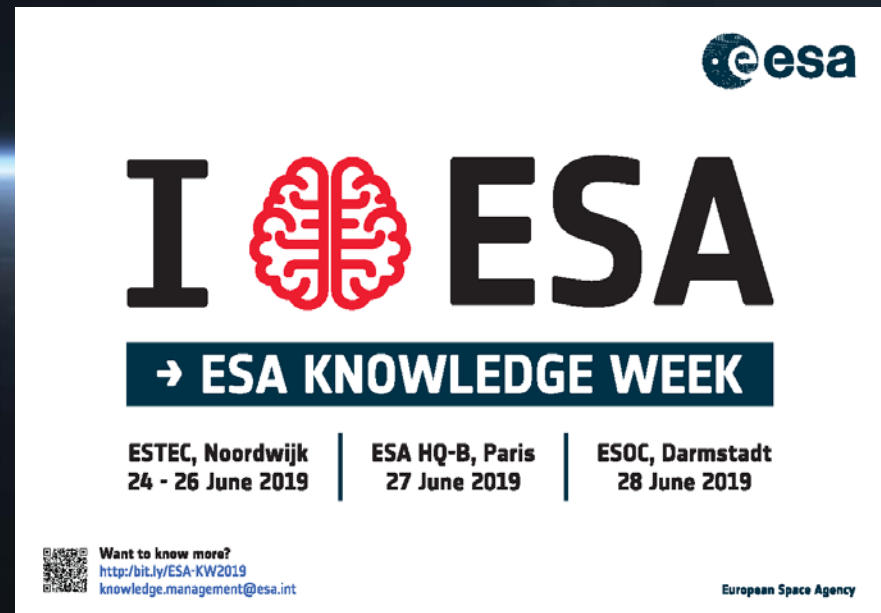
# Space System Ontology for Europe

## Space System Ontology

1<sup>st</sup> brainstorming workshop

25 & 26 June 2019

*AS IF "done on purpose" !*



The poster features the ESA logo in the top right corner. The main title 'I [brain icon] ESA' is centered, with the brain icon in red. Below this, a dark blue banner contains the text '→ ESA KNOWLEDGE WEEK'. The event schedule is listed in three columns: ESTEC, Noordwijk (24-26 June 2019); ESA HQ-B, Paris (27 June 2019); and ESOC, Darmstadt (28 June 2019). A QR code and contact information are at the bottom left, and the ESA name is at the bottom right.

**esa**

**I [brain icon] ESA**

**→ ESA KNOWLEDGE WEEK**

<b>ESTEC, Noordwijk</b> 24 - 26 June 2019	<b>ESA HQ-B, Paris</b> 27 June 2019	<b>ESOC, Darmstadt</b> 28 June 2019
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Want to know more?  
<http://bit.ly/ESA-KW2019>  
knowledge.management@esa.int

European Space Agency

Workshop interaction ?

slide

# Space System Ontology 1<sup>st</sup> Brainstorming Workshop

Organizing committee:

Kathleen Gerlo

Jean Loup Terrailon

Hans-Peter de Koning




Serge Valera

**AGENDA**

# Tuesday 25<sup>th</sup> June

08:00	→ 09:00	<b>Registration</b>	🕒 1h
09:00	→ 09:10	<b>Welcome</b> <b>Speaker:</b> Serge Valera (ESA/ESTEC)	🕒 10m
09:10	→ 09:30	<b>Model based for System Engineering (MB4SE) advisory group</b> <b>Speaker:</b> Jean-Loup TERRAILLON (ESA)	🕒 20m
09:30	→ 10:10	<b>ECSS-E-TM-10-23A / ECSS-E-TM-10-25A and their recommendations on how to address Information modelling and Interoperability</b> <b>Speakers:</b> Mr Hans-Peter de Koning (ESA/ESTEC), Serge Valera (ESA/ESTEC)	🕒 40m
10:10	→ 10:50	<b>Foundations and Methodologies for conceptual modelling</b> <b>Speaker:</b> Prof. Giancarlo Guizzardi (Free University of Bozen-Bolzano)	🕒 40m
10:50	→ 11:20	<b>Coffee Break</b>	🕒 30m
11:20	→ 11:50	<b>Introduction to ORM “Object Role Modelling” language</b> <b>Speaker:</b> Prof. Enrico Franconi (Free University of Bozen-Bolzano)	🕒 30m
11:50	→ 12:20	<b>Introduction to OWL “Web Ontology Language”</b> <b>Speaker:</b> Prof. Enrico Franconi (Free University of Bozen-Bolzano)	🕒 30m
12:20	→ 12:50	<b>Applying ECSS-E-TM-10-23A – Lessons learned</b> <b>Speakers:</b> Mr Claude Cazenave (Airbus DS), Mr Harald Eisenmann (Airbus DS)	🕒 30m
12:50	→ 14:00	<b>Lunch Break</b>	🕒 1h 10m

# Tuesday 25<sup>th</sup> June

14:00	→ 14:30	<b>Satellite products ontology development in DLR</b> <b>Speaker:</b> Dr Kobkaew Opasjumruskit (DLR)  Abstract - Kobkaew ...	🕒 30m
14:30	→ 15:00	<b>Applying Ontology learning to the generation of a Space Mission Ontology</b> <b>Speaker:</b> Ms Audrey Berquand (University of Strathclyde)  Abstract - Audrey B...	🕒 30m
15:00	→ 15:30	<b>Development of a universal ontology for the global space supply chain</b> <b>Speaker:</b> Mr Kartik Kumar (SatSearch)  Abstract - Kartik Ku...	🕒 30m
15:30	→ 16:00	<b>Thesauri WS for EO data description and discovery</b> <b>Speaker:</b> Mr Andrea della Vecchia (ESA/ESRIN)	🕒 30m
16:00	→ 16:30	<b>Coffee Break</b>	🕒 30m
16:30	→ 17:00	<b>ECSS eGlossary WG and eGlossary proof of concept</b> <b>Speaker:</b> Mr Marcel Henriquez (RedData Search)	🕒 30m
17:00	→ 17:30	<b>Inter-Agency cooperation for the sharing and production of Semantic resources</b> <b>Speaker:</b> Mr Daniel Galarreta (CNES)	🕒 30m
17:30	→ 18:00	<b>SAVOIR Electronic Data Sheet: A digital capability for avionics architecture co-design + Teepee</b> <b>Speakers:</b> Ms Marie-Hélène Deredempt (Airbus DS), Mr Pierre Gauffillet (Airbus DS)	🕒 30m
18:00	→ 19:00	<b>Cocktail Drink</b>	🕒 1h

# Wednesday 26<sup>th</sup> June

08:30	→ 09:00	<b>Registration</b>	🕒 30m
09:00	→ 09:30	<b>EGNOR – Reverse engineering EGS-CC data model</b> Speaker: Mr Félix Chatte (Thales Alenia Space)	🕒 30m
09:30	→ 10:00	<b>Model-Based Requirements Verification Lifecycle – MARVL</b> Speaker: Mr Sam Gerené (RHEA Group)	🕒 30m
10:00	→ 10:30	<b>SysML and on-going SysML v2 evolution</b> Speaker: Mr Hans-Peter de Koning (ESA/ESTEC)	🕒 30m
10:30	→ 11:00	<b>Coffee Break</b>	🕒 30m
11:00	→ 11:30	<b>Learning from NASA JPL's Ontology development using OWL and OML</b> Speaker: Mr Hans-Peter de Koning (ESA/ESTEC)	🕒 30m
11:30	→ 12:00	<b>Conceptualizing requirements- Developing a requirements meta-model for European Space with ORM</b> Speaker: Ms Katharina GROSSER (University of Koblenz)	🕒 30m
12:00	→ 12:30	<b>ECORE to ORM - Reverse Engineering Capella</b> Speakers: Mr Gérald Garcia (Thales Alenia Space), Mr Kaiton Buitendijk (GorillaIT)	🕒 30m
12:30	→ 14:00	<b>Lunch Break</b>	🕒 1h 30m
14:00	→ 14:30	<b>OWL-based reasoning supporting ORM conceptual modelling with rules</b> Speaker: Prof. Enrico FRANCONI (Free University of Bozen-Bolzano)	🕒 30m
14:30	→ 15:30	<b>Space System Ontology TRP and OSMoSE governance</b> Speakers: Jean-Loup TERRAILLON (ESA), Serge Valera (ESA/ESTEC)	🕒 1h
15:30	→ 16:00	<b>Conclusion</b> Speakers: Mr Hans-Peter de Koning (ESA/ESTEC), Jean-Loup TERRAILLON (ESA), Serge Valera (ESA/ESTEC)	🕒 30m
16:00	→ 16:30	<b>Closing Coffee</b>	🕒 30m