Overall System Modelling

OSMoSE

For Space System Engineering

cnes
CENTRE NATIONAL D'ÉTUDES SPATIALES

MBSE-2021 – Space System Ontology Workshop

INTRODUCING OSMOSE AT CNES

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CNES

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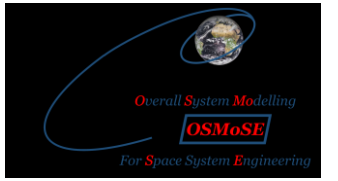
WHY IS CNES INTERESTED IN THE OSMoSE PROJECT?



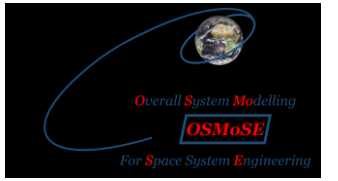
As a KM actor at CNES and European level

- by the ORM modeling
    - Evolution from information search (Corporate Memory search engine, technology watch) toward the transmission and sharing of knowledge (Wikis, semantically interoperable engineering models)
- By improving the editorial quality of the requirements provided by the OSMoSE results (Object-types, Fact-types & Constraints)
- By the collective process of developing an ontology of space systems
    - The development of semantic resources is a long process
    - Along with the maintenance of the semantic resources produced.
    - The covering of all activities

    which require the collaboration of space agencies and organizations that have an interest in having such resources.

As a stakeholder in the MB4SE project

WHAT CAN CNES CONTRIBUTE TO OSMoSE?



As a KM actor

- Will take part in the collective effort by producing parts of Space System Ontology (corresponding to different Universes of Discourse)
- Actively participating to the Requirement Management UoD as of the ECSS master DB
- Integrating this perspective into its current methodology:
  - by evolving its NLP tools for the automatic extraction of *nouns* and *verbs* (for the production of fact types of ORM) for both *French* and *English*.

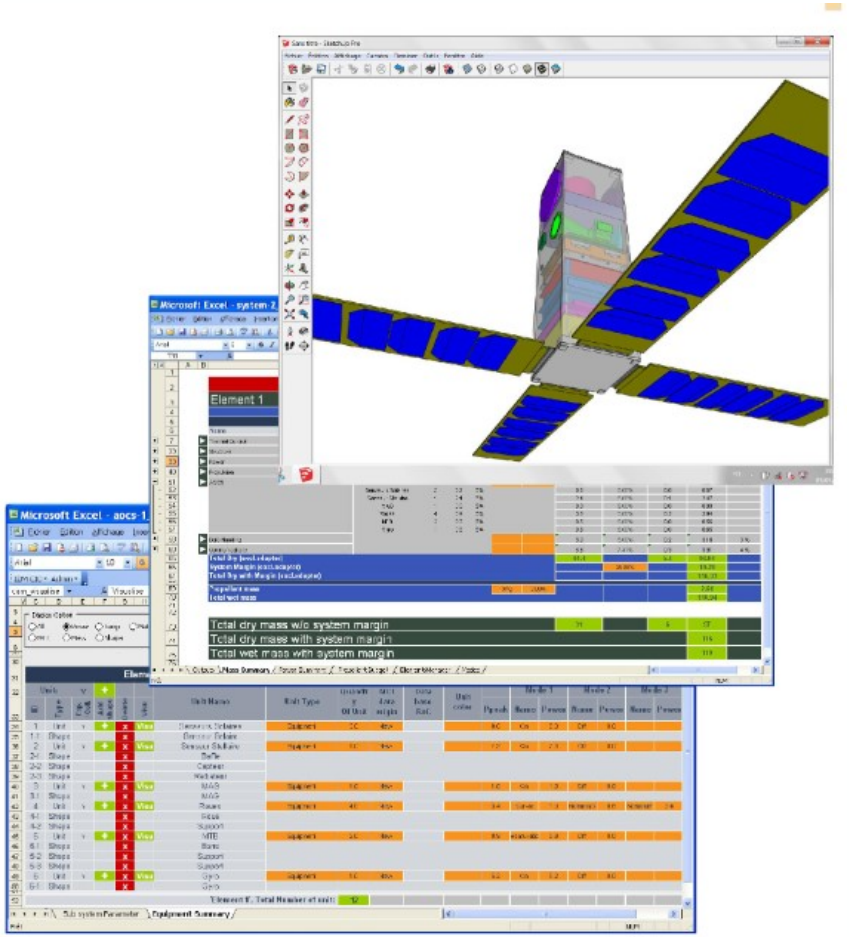
As a stakeholder in the MB4SE project

- Ontology is one of the main tasks of the MB4SE working group
- CNES interfaces with French space actors involved in MBSE and ontology : industries (LSI, SME), agencies (AFIS, GIFAS, AFNET, etc.), institutes (IRT, laboratories) or organizations.
- CNES federates System Engineering community of experts community through its COMET events. Ontology can be address through those events.

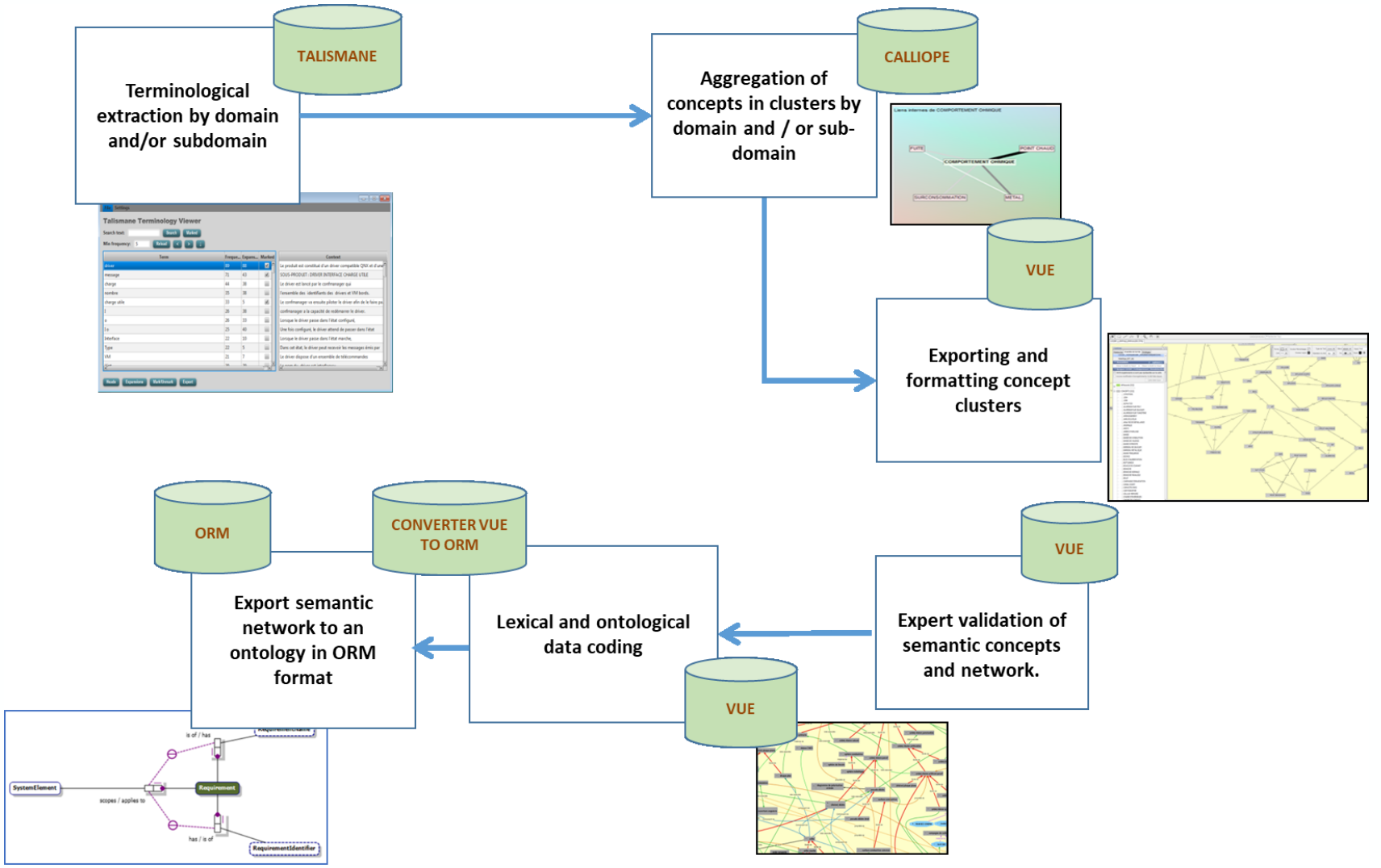
MBSE AT CNES

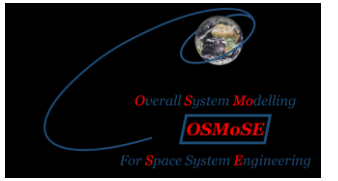
MBSE

- IDM-CIC: a Concurrent Design Facility, that offers structured and shared Views of the satellite, describing its equipment, sub-systems, payload, platform and mission phases for budget definitions. »



AN IMPROVED METHODOLOGY FOR ONTOLOGY PRODUCTION





TO BE CONTINUED …

Thanks