**OrbitML, The Spacecraft Flight Dynamics Mark-up Language**

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**OrbitML**, The Spacecraft Flight Dynamics Mark-up Language (XML) application for the representation of information objects in the spacecraft Flight Dynamics problem domain. **OrbitML** encompasses all the range of space missions (scientific, telecommunications, earth observation, navigation, ...) and phases (LEOP, commissioning, routine, end of life, ...).

By providing a standard definition of the involved concepts, their structure, relationships and interfaces based on an extensively used and well known underlying technology (XML), **OrbitML** allows easy interaction between different operators and agencies in the space field.

XML was designed to describe data and, thus, structure, store and send information. Its use has extensively spread with the strong support of the Internet community as a self-descriptive means for data representation. Since its creation, it has been amazing to see how quickly the XML standard has been developed and how quickly a large number of software vendors have adopted the standard.

Since a huge number of commercial tools has been developed to work with XML and coping with the XML standard, **OrbitML** will take advantage of a wide set of utilities for its use and development.

Considering all these premises, **OrbitML** could represent in the Flight Dynamics Operations scenario a widely used standard exchange data format. In the same way XML standard has evolved (and other mark-up languages derived from XML such as MathML or DrawML), it is expected that **OrbitML** will grow to fulfil main space operations related requirements.

The initial implementation of **OrbitML** aims to the operations support of a variety of satellite missions while allowing the extension of its coverage to incorporate new requirements for navigation missions, constellations, interplanetary scenarios and beyond.

The full initial specification of the **OrbitML** language standard can be consulted ([http://www.orbitml.com](http://www.orbitml.com)) and, therefore, **OrbitML** compliant files can be generated, distributed and even validated against an **OrbitML** definition schema describing the standard specification. This schema is currently available via web ([http://www.orbitml.com/specification/orbitML.xsd](http://www.orbitml.com/specification/orbitML.xsd)).

After the definition of the **OrbitML** standard, GMV has started to use this standard for the generation of **OrbitML** compliant files. **OrbitML** has been considered as part of the **focusSuite® 2nd Generation** family (GMV’s generic multi-mission framework for Flight Dynamics software). It is expected that **OrbitML** will be main part of the future implementations in this framework for the definition of interfaces (external and internal files) and even for the generation of MMIs.