

33rd IAA SYMPOSIUM ON SPACE AND SOCIETY (E5)  
Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach (3)

Author: Mr. Olivier Boisard  
Consulting engineer OB-Conseil, and professor at Ecole Centrale de Lille, France,  
olivier@olivier-boisard.net

Dr. Frédéric Bousquet  
France, frederic@bousquet.as

COSMOS, A MUSICAL AND SPATIAL ELECTRO OPERA

**Abstract**

The project of "*Musical and Spatial Electro Opera*" COSMöS was initiated in 2019 by composer and musician Frédéric Bousquet, founder of the musical ensemble INVENTöR, with the engineer and space designer Olivier Boisard, co-creator with Pierre Marx (former prospective director at CNES), of the concept of space station "*Apogaios*" (presented at IAC 2012, IAC-12-E5.2.1).

There are fundamentally two different ways of considering space: the first one as an observer or explorer, facing the beauty and diversity of the universe, trying to understand its meaning as a philosopher, describe and explain it as a scientist, or express and dream it as an artist. The second way is proposed by engineers or architects, motivated first by the *will to build* new human creations in space - villages on the Moon or Mars, giant inhabited spaces stations, manned spaceships sailing to the farthest points of the solar system...

These two approaches combine and do not oppose each other. The purpose of COSMöS is to stage the diversity and complexity of this human aventure, and share it with the public in a multi-faceted / multi-media show : texts and music are performed by the group INVENTöR whose originality is to bring together exclusively creators (*Inventors*) and musicians playing on new original musical instruments - either acoustic or digital - issued from contemporary instrumental craftsmanship; on this music is built a space universe presented in 3D computer graphics, complemented by interactive animations piloted in real time.

The COSMöS musical and spatial show was composed over a period of 3 years, from 2019 to 2021, and performed on several occasions, notably at "*La Seine Musical*" (île Seguin, near Paris, 2019 and 2021), "*Le Reacteur*" (Issy-les-Moulineaux, near Paris, 2019), "*La Genette Verte*" (Florac, in the French Cevennes Natural Parc, 2021), and during an exceptional concert organized in August 2021 at the *Royal Castle of Amboise*, as a *Tribute to Leonardo da Vinci*.

Our paper describes the genesis of this project, its concept, its developments during the creation and staging phase, its possible developments using Augmented or Virtual Reality techniques during the show, and - first of all - the way this live multi-media performance interacts with the public - of all generations - and communicate on the space adventure and its challenges through the emotion of music and images.