

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Space Culture: Innovative Approaches for Public Engagement in Space (8)

Author: Prof. Chris Welch
International Space University (ISU), France, chris.welch@isunet.edu

Ms. Nelly Ben Hayoun
Royal Holloway, University of London, United Kingdom, hello@nellyben.com

THE INTERNATIONAL SPACE ORCHESTRA – PERFORMATIVE EXPERIENTIAL AND
EVENT-BASED SPACE PUBLIC OUTREACH

Abstract

The International Space Orchestra (ISO) is a team of space scientists from the NASA Ames Research Center, the SETI Institute, Singularity University and the International Space University. In the summer of 2012 in California, ISO performed *Ground Control: An Opera in Space* composed by a team including Damon Albarn, Bobby Womack, Arthur Jeffe, Maywa Denki, and two-time Grammy award winner Evan Price, with a libretto by science-fiction author Bruce Sterling. ISO members included a NASA Flight Controller (conductor), a Payload Officer (saxophone), a Capcom (triangle), a NASA center Deputy Director (gong) and an astronaut (percussion).

ISO's first performance took place in front of the world's largest wind-tunnel at the NASA Ames Research Center and its second in San José during the ZERO1 Biennial (North America's most significant showcase of work at the nexus of art and technology). In addition, public talks by leading NASA and SETI scientists were curated, giving insights into missions that inspired the musical composition. These included presentations by SETI Institute Director of Research Gerry Harp, NASA Ames Research Center Chief Scientist Jacob Cohen, Kepler Mission Manager Roger Hunter and LADEE/LCROSS NASA Flight Director Rusty Hunt. *Ground Control* was recorded at Skywalker Ranch, George Lucas' studio. In January 2013, the International Space Orchestra feature film had its world premiere at the Rotterdam International Film Festival and then started a world tour.

ISO extends the notion of the 'outreach' in terms of scope, scale, and methods of engagement towards architecture, installations, environments, social system, performances, experiences and narratives – as events. Public engagement and outreach has been opening its doors to these experiences – whether from the speculative end of the spectrum with fictions, stories and scenarios on one side, to the applied, authentic scripted reality of personas, usability simulations and narratives of design testing.

As well as being an unconventional public space outreach event, ISO also acted as an experiential and hybrid interdisciplinary research environment in which space scientists and engineers were invited to implement, deconstruct, perform, sing, mix, modify, and design musical acts in control rooms, acting as a provocation to imagine and human relationships with science and technology and the way in which they can relate to our creative needs.

This paper will describe the origins and development of ISO, its implementation and the production of the ISO film as well as assessing its impact on those involved, both in the orchestra and outside.