Paper ID: 28977
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66th International Astronautical Congress 2015

26th IAA SYMPOSIUM ON SPACE AND SOCIETY (E5)
Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach (4)

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HOW TO DESIGN AND FLY YOUR HUMANLY SPACE OBJECT?

Abstract

Today's space exploration, both robotic- and human-exploration driven, is dominated by objects and artifacts which are mostly conceived, designed and built through technology and engineering approaches. They are functional, reliable, safe, and expensive. Building on considerations and concepts established in an earlier paper, we can state that the current approach leaves very little room for art and design based objects, as organizations—typically led by engineers, project and business managers—see the inclusion of these disciplines and artifacts as nice to have instead of a genuine need, let alone requirement. In this paper we will offer initial discussions about where design and engineering practices are different or similar and how to bridge them. Highlight the benefits that domains such as design or art can offer to space exploration. Some of the design considerations and approaches will be demonstrated through the double diamond of divergence-convergence cycles of design, leading to an experimental piece called a "cybernetic astronaut chair", which was designed as a form of abstraction and discussion point to highlight a subset of concepts and ideas that designers may consider when designing objects for space use, with attention to human-centered or humanly interactions. Although there are few suggested functional needs for chairs in space, they can provide reassuring emotional experiences from home, while being far away from home. In zero gravity, back-to-back seats provide affordances—or add variety in a cybernetic sense—to accommodate two astronauts simultaneously, while implying the circularity of cybernetics in a rather symbolic way. The cybernetic astronaut chair allows us to refine the three-actor model proposed in a previous paper, defining the circular interactions between the artist or designer; object or process; and user or observer. We will also dedicate a brief discussion to the process of navigating through the complex regulations of space agencies, from solicitations through development and testing, to space flight. The provided insights to designers and artists, related to agency-driven processes and requirements, may help to deconvolute the steps and may lead to flying their objects or artifacts in space.