



Abstract #1680

English

OffWorld's Solar System Robotic Workforce

The overarching purpose of OffWorld is to enable human settlement of space by developing a new generation of small, smart, learning industrial robots. We need a robotic workforce to do the heavy lifting: build landing pads, excavate underground habitats, extract water ice and materials, make drinkable water, breathable air and rocket propellant, manufacture basic structures and solar cells, produce electricity--in short, we need thousands of robots that could mine, manufacture and build on Moon, asteroids and Mars. This paper introduces the design philosophy behind OffWorld's robotic workforce and lays out the masterplan for developing space-bound systems by first maturing them in large scale deployments in terrestrial industries.

French

No abstract title in French

No French resume

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Profile of Mr. Jim Keravala

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Biographies

Biography submitted with the abstract

Jim is co-founder and Chief Executive Officer of OffWorld, building an industrial robotic workforce to undertake mining, manufacturing and construction on planetary surfaces and in space. The robotic workforce will be able to build space based solar power stations, propellant depots and entire settlements. He brings 30 years of experience and visionary leadership in innovation in multidisciplinary areas such as aerospace engineering, space systems, robotics and machine intelligence, manufacturing and construction, computer science, synthetic biology and molecularly precise control systems. Jim is a prolific technologist and an accomplished entrepreneur able to constantly identify new acceleration ramps in the technological landscape. Jim started his career in the space launch industry managing launch programs overseeing over a dozen successful orbital launches on Russian, European and US launch vehicles. Satellite design, integration engineering and program management were part of this process. Jim also architected major space programs including new space agencies and launches at Surrey Satellite Technology and Shackleton Energy space propellant depots utilizing requiring lunar mining and a continuous supply of fuel in space. Jim studied aerospace engineering, spacecraft engineering and physics at University of London, Surrey University, Aachen Technical University and International Space University, was previously faculty at Singularity University and is on advisory boards and Board of Directors of a number of space institutes including Board Member of the National Space Society.

Biography in the user profile

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