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GEOSTATIONARY SPACE STATION: NECESSARY NEXT STEP FOR THE SPACE ECOSYSTEM

Abstract

Over the past decade Gateway Earth Development Group (GEDG) has been conducting several strands of research into technical, economic and scientific case for a geostationary space station. This combines a modular architecture for access to geostationary orbit, a new opportunity for on-orbit satellite re/up-cycling and manufacture and analysis of the uncharted waters of using a geostationary station for deep space missions and space tourism. Above all, GEDG has been examining new, cheaper and more sustainable space engineering techniques and material and exploring the options to make this new asset more democratically accessible and financially sustainable without relying on the dominant space powers. With this objective in mind, we present a landmark White Paper summarising the key findings of more than a dozen technical papers we put forward and chart future RD objectives, as well as funding needs, organisational development and international legal framework.