

SPACE OPERATIONS SYMPOSIUM (B6)
New Space Operations Concepts and Advanced Systems (2)

Author: Mr. Meidad Pariente
Sky and Space Global (UK) Ltd, United Kingdom

Mrs. Maya Glickman-Pariente
Sky and Space Global (UK) Ltd, United Kingdom

Mr. Meir Moalem
Sky and Space Global (UK) Ltd, Israel

SPACE ROBOTS - A FULLY AUTONOMOUS NANOSATELLITE CONSTELLATION

Abstract

Sky and Space Global UK is building a narrowband communication infrastructure for rural areas of the globe. With 200 satellites to manage, it is very unlikely to try and control 200 satellites and 200 payloads in the same manner industry did it before. What SSG came up with is a new cost-effective approach based on Inter Satellite Links (ISL) that allows the members of the constellation to be considered as autonomous robots. This approach is used for: • Orbit control (relative distances within an orbit) • Network management • Optimal communication routing All of the above will be demonstrated with three satellites (the Three Diamonds) that will be launched in Q2 2017. This paper will elaborate and demonstrate how we will build a space communication infrastructure that literally can operate without any ground management.