

IAF EARTH OBSERVATION SYMPOSIUM (B1)
Future Earth Observation Systems (2)

Author: Mr. Marco Filipe Romero
Space Generation Advisory Council (SGAC), Angola

ANALYSIS OF PSEUDO SATELLITES POTENTIAL IN AFRICA: THE BEST COMPROMISE
BETWEEN THE HIGH INVESTMENT IN LARGE SATELLITES, THE CAPACITY BUILDING AND
DEMONSTRATION OF THE NANO SATELLITES AND THE ENORMOUS EXPERIENCE AT
AVIATION.

Abstract

Conventional satellites are expensive to build and launch and any changes to their orbit requires expending their extremely limited Propellant on the other end Small satellites are in fact far more accessible but they are not always able to attend the needs of a more robust mission. Latterly solution for a continent where the internet penetration rate is below 20

Nowadays Africa is the growing stage for some Drone Academies, Government and private sector initiatives either for drones and Space based Earth Observation. Countries like Malawi, South Africa, Angola, Nigeria, Egypt , Algeria and several other are investing have slid structures and experience on that. This study allowed to confirm that and to answer the starting question that Africa should take advantage of the Pseudo Satellites. This paper market Analysis rises the economic point of an Airbus Zephyr unit costs around 5millionwhencomparedtotheAngolanfirstSatellitewitchwasapproximately100million.

The first take away of here is that African Space Strategy, must involve viable and imminent solutions to urgently take the most out of the Space Economy Downstream. Africa countries could meet the best of the space applications in the middle, investing in “atmospheric satellites” or pseudo-satellites. They provide various services more economically, even for earth observation since are more versatile than current low earth orbit satellites. More than identifying a need this paper showcase the first steps taken from Angolan on that direction. Primarily used for communications, High-Altitude Pseudo-Satellites (HAPS) are also being looked at for maritime monitoring and surveillance, environmental observation and military intelligence gathering and border patrol. HAPS are even being used for missile detection. They use high-definition optical and infra-red cameras to produce real-time visuals in any lighting. Connectivity, flexibility and durability are linked to the HAPS. Although they have they have been in development for over a decade, recent technological advancements have meant and they’ve become more viable than previous iterations. Improvements to the battery life, weight and navigations systems mean the model has more long-term sustainability within a market that is expected to grow by 15