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EQUATOR-SAR: A CONSTELLATION OF SMALL SATELLITES AT THE SERVICE OF
DEVELOPING NATIONS

Abstract

The dense cloud-cover over and around the equator is a major limitation for Earth Observation satellites. However, it can be argued that most nations within the equatorial region would inherently hardly or directly utilise the data gathered from an Earth observation satellite due to technological limitations, inadequate knowledge and lack of expertise. In other cases, the space-faring nations within and around the Equatorial region are mainly owners, who at best operate passive remote sensing satellites. To this end, this paper proposes a paradigm shift that encourages the involvement of most / all developing nations within the equatorial region, in the space race. The work starts by identifying the nature of the issues experienced within the equatorial region; and then highlights the geographical locations of the developing nations. Furthermore, the paper discusses why a SAR satellite is a promising feat; and then cross-examines past and present Earth observation satellites mission fly in the equatorial orbit. The paper final concludes with a technical description of the Equator-SAR and the constellation.