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Characteristics; 2.4.2 IRIDIUMTM; 2.4.3 GLOBALSTARTM; 2.4.4 NEW ICOTTM; 2.4.5 CONSTELLATION COMMUNICATION^{STM}; 2.4.6 ELLIPSOTTM; References; 3 Constellation Characteristics and Orbital Parameters; 3.1 Satellite Motion; 3.1.1 Historical Context; 3.1.2 Equation of Satellite Orbit - Proof of Kepler's First Law; 3.1.3 Satellite Swept Area per Unit Time - Proof of Kepler's Second Law; 3.1.4 The Orbital Period - Proof of Kepler's Third Law; 3.1.5 Satellite Velocity; 3.2 Satellite Location; 3.2.1 Overview; 3.2.2 Satellite Parameters
3.2.3 Satellite Location in the Orbital Plane
3.2.4 Satellite Location with Respect to the Rotating Earth; 3.2.5 Satellite Location with Respect to the Celestial Sphere; 3.2.6 Satellite Location with Respect to Satellite-Centred Spherical Co-ordinates; 3.2.7 Satellite Location with Respect to the Look Angles; 3.2.8 Geostationary Satellite Location; 3.3 Orbital Perturbation; 3.3.1 General Discussion; 3.3.2 Effects of the Moon and the Sun; 3.3.3 Effects of the Oblate Earth; 3.3.4 Atmospheric Drag; 3.4 Satellite Constellation Design; 3.4.1 Design Considerations; 3.4.2 Polar Orbit Constellation
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5.3.4 Quadrature Amplitude Modulation (QAM)

Sommario/riassunto

Mobile satellite services are set to change with the imminent launch of satellite personal communication services (S-PCS), through the use of non-geostationary satellites. This new generation of satellites will be placed in low earth orbit or medium earth orbit, hence, introducing new satellite design concepts. One of the first texts to cover this rapidly evolving field, this text provides the reader with an overview of mobile satellite systems, from their initial introduction (Inmarsat), current satellite-PCS (referring to such systems as Globalstar), through to Satellite-UMTS and an understa
