

ABSTRACT: Some mathematical problems of satellite networks*

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Economic forces and technology development have made low-earth-orbit satellite constellations extremely attractive to the emergent personal communications industry. These constellations range from 2 to nearly 1000 satellites. Even though none of the constellations are as yet completely deployed, design on second generation constellations have already begun. The satellite coverage and network links provide some interesting mathematical problems. We examine some of the geometric and combinatorial problems associated with these networks.

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