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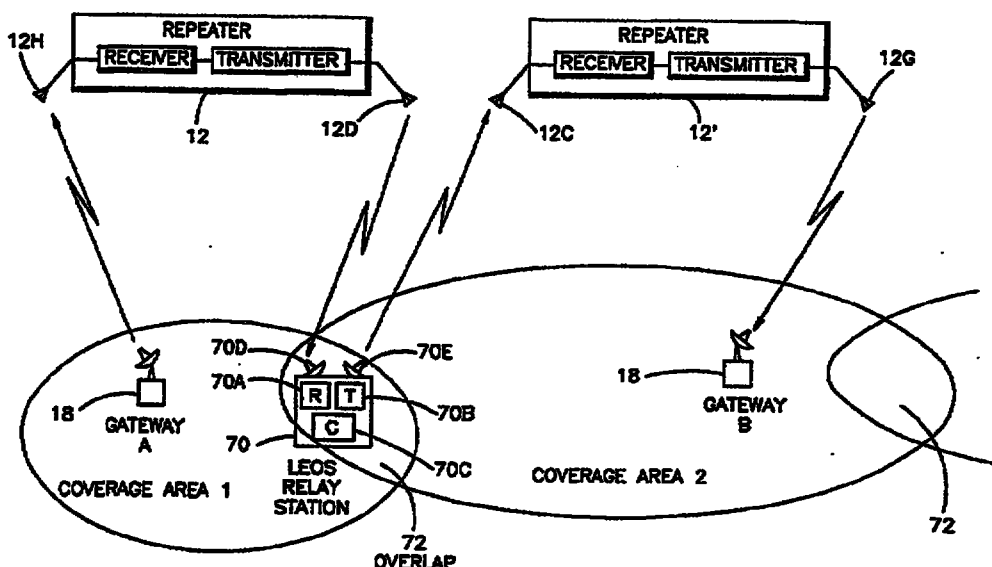
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(54) Title: LOW EARTH ORBIT COMMUNICATION SATELLITE GATEWAY-TO-GATEWAY RELAY SYSTEM



(57) Abstract

This invention teaches the use of overlapping footprints in a LEO satellite communications system to increase the overall connectivity of the system, thus providing a wide service availability. In particular, this invention teaches the use of at least one terrestrial LEOS relay station (70) that is positioned within an overlap of at least two satellite coverage areas for relaying a communication from a gateway (18A) associated with a first coverage area to a gateway (18B) associated with a second coverage area. A plurality of LEOS relay stations can be so provided to enable a communication, such as a voice communication, to be routed through a plurality of coverage areas and gateways, thereby bypassing a substantial portion of an underlying terrestrial communication system.