

SYNCHRONIZATION OF SS/TDMA ON-BOARD CLOCKS*

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ABSTRACT

Satellite switching of TDMA traffic is now recognized as the next step of implementation to be introduced in the evolution of digital satellite communications. The satellite switch must of course be synchronized with the TDMA burst transmissions of the terminals.

This paper addresses this synchronization problem. It considers in particular the problem of achieving plesiochronous operation at the satellite/terrestrial network interface and discusses methods which can be used to accomplish such operation. In particular, two methods of implementation are discussed, the first involving control of an onboard clock by feedback from a cooperating earth station via telemetry and the second involving on-board demodulation of the TDMA frame synchronization burst.

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