

TELEMATICS AND SATELLITES



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ABSTRACT

Today's European Data Communications Networks, independent of whether the network is packet or circuit switched, are mainly designed to serve interactive terminal generated operations at information rates compatible with voice grade channels. The satellite link on the other hand, possesses some unique but versatile properties when used as a data communication medium. In fact, the satellite link in conjunction with modest sized Earth stations located close to, or on the premises of the users would provide a desirable complement to European Data Communications facilities adding, among others, high speed and multidestination capabilities to the existing data networks. The capability to transfer computer files and record messages containing large volumes of binary information, via fast and efficient satellite links enables a range of new applications for telematics systems to be realized. For example, electronic mail types of systems requiring the fast transfer of digital document records would benefit especially from the capabilities of the satellite link.

The present efforts of CEPT and other European organizations preparing for the introduction of the future Integrated Services Digital Network (ISDN) points to another important role of the specialized satellite link in Europe. The ISDN would be accessible at the premises of the users providing capacity for not only conventional data and voice services but, in addition, capacity for high speed data, facsimile and image transmission systems. The satellite link would provide an early facility, already within this decade, for the introduction of the services considered for the future ISDN. However, the growth and the capabilities of future terrestrial networks such as ISDN would point to increasing specialization of the use of the satellite link, transforming the role of the satellite link to that of a component in a future integrated satellite and terrestrial network.