

AMT EXPERIMENT RESULTS

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Abstract

The Advanced Communications Technology Satellite (ACTS) Mobile Terminal (AMT) experiments have provided a terminal technology testbed for the evaluation of K- and Ka-band mobile satellite communications (satcom). Such a system could prove to be highly beneficial for many different commercial and government mobile satcom users. Combining ACTS' highly concentrated spotbeams with the smaller, higher-gain Ka-band antenna technology, results in a system design that can support a much higher throughput capacity than today's commercial configurations. To date, experiments in such diverse areas as emergency medical applications, enhanced Personal Communication Services (PCS), disaster recovery assistance, military applications, and general voice and data services have already been evaluated. Other applications that will be evaluated over the next year include telemedicine, ISDN, and television network return feed. Baseline AMT performance results will be presented, including both stationary and mobile Bit Error Rate (BER) curves, satellite transponder linearity tests, and mobile propagation data characterizing the K- and Ka-band mobile satcom channel. In addition, observations on many of the application-specific experiments will also be provided.