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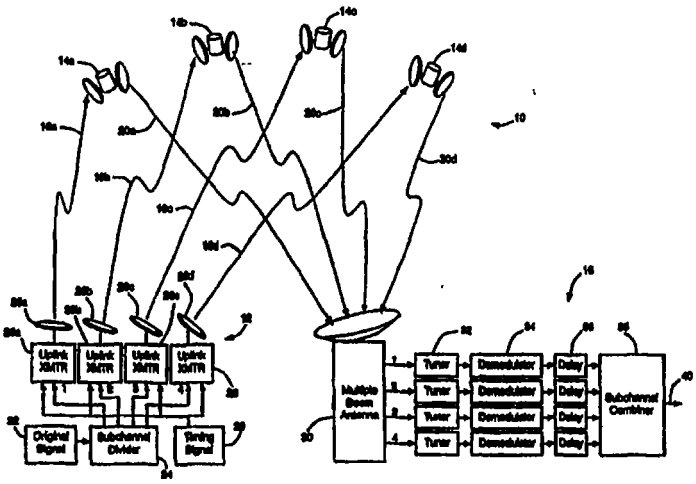

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(57) Abstract

A satellite communications system provides an information channel between remotely located transmitters and receivers. A virtual satellite system provides the same service, but divides the signal either in power or in data content into subchannels such that any particular signal is conducted to the intended receiver via a plurality of traditional satellite channels. The receiving terminal (16) accepts the plurality of signals (26A, 26B, 26C, 26D) simultaneously from a possible plurality of satellites (14A, 14B, 14C, 14D), combining the subchannels comprising the virtual channel into the original signal content as if conducted via a single channel. The receiving antenna system (16) receives satellite subchannel signals (14A, 14B, 14C, 14D) from a plurality of directions using multiple antennas or a single antenna (30) with multi-direction capability. Prior to signal combining, the receiver (16) necessarily time-synchronizes the plurality of subchannels by introducing time delay in some channels before combining the subsignals into the original composite.