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(54) Title: PACKET BASED COMMUNICATIONS



Overall concept

(57) Abstract: This invention is applicable to packet based, rate limited radio links, such as satellite or terrestrial wireless digital communications systems. These communications networks concurrently carry time-critical traffic, such as voice or multimedia, and non time-critical traffic, such as generic data traffic, between two or more communication end points. The communication end points may be connected through a number of heterogeneous networks and the end to end throughput characteristics may vary over time. A first aspect of the invention concerns a method for generating packets. In other aspects the invention concerns a computer system for use in packet based communications, a computer protocol for packet based communications and a communications packet. The invention involves determining a "time slice" packet size from the link speed and the interval of time extending between the times at which packets are selected for output from a buffer to the transmission interface. It also involves creating a network packet from frames of time-critical data generated during the interval, where the packet is synchronised to both existing timing requirements of the time-critical frames and the link speed. Then, adding non time-critical data to the network packet if its size had not exceeded the determined "time slice" packet size.

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