

and for defining in conjunction with each of said telemetry types a prioritized set of a plurality of performance goals which vary depending upon telemetry transmission type;

means associated with at least one of said transmitter and said receiver for controllably altering a plurality of operational parameters of at least one of said transmitter and said receiver;

means associated with at least one of said transmitter and said receiver for determining whether a transmission between said transmitter and said receivers meets said performance goals; and

means associated with at least one of said transmitter and said receiver for selecting among said operational parameters and adjusting said selected operational parameters based upon said prioritized set of performance goals to achieve said performance goals in order of their priority.

8. A system in accordance with claim 7, wherein said adjustable operational parameters include a plurality of transmission speed, number of repetitions of data transmitted, transmission power, transmission frequency and receiver bandwidth.

9. A system in accordance with claim 7, wherein said set of performance goals include a plurality of transmission speed, transmission power, error rate, noise level and transmission range.

5 10. A communication system in accordance with claim 7, wherein said transmitter comprises an impulse radio transmitter and wherein said receiver comprises an impulse radio receiver.

10 11. A communication system in accordance with claim 10, wherein said impulse radio transmitter comprises means for modulating a pseudo-random baseband pulse stream with data to be transmitted, such that for one data state, at least one pulse's position in said pseudo-random baseband pulse stream is perturbed, and for another data state, at least one pulse's position in said pseudo-random baseband pulse stream is not perturbed.

15 20 12. A communication system in accordance with claim 10, wherein said impulse radio transmitter comprises means for modulating a pseudo-random baseband pulse stream with data to be transmitted, such that for one data state, at least one pulse in said pseudo-random baseband pulse stream is not transmitted.

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