

Autonomous Intelligent Sensor Systems

Power optimizations beside power sourcing innovations and global coverage by satellite networks supports designing autonomous – intelligent sensor systems. These systems can be deployed in hitherto unreachable geographic locations and can operate without much needed human interface. Such proposed systems have many other related advantages. The architecture of such systems, in brief, may comprise of on sensor low powered microprocessors with flash memory based storage. They have SHF– VHF, wide band antennas or antenna arrays for communication with both available network nodes in the vicinity or the satellites on as available or as required basis towards power optimizations and the signal strength. A separate ad-hoc networking capability like MANETs can also be incorporated using the capabilities of these sensor systems. Implementation of different decision and optimization algorithms at such systems makes related processing and transmission optimized by reducing the data to minimum essential. Terminal benefits of reduced or essential data storage at Data Centers and its expeditious handling will reduce the associated costs against the cost additionally incurring on these sensor systems. These proposed sensors can enjoy at least limited mobility with geographical tagging of data and geo-location awareness of the system itself.

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