

Efficient Sensor Stream Data Processing System to use Cache Technique for USN(Ubiquitous Sensor Network) Application Service

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Abstract– For the purpose of supporting application services in the USN(Ubiquitous Sensor Network) environment, efficient processing of stream data that occur in the sensor nodes and relevant utilization technologies are being studied. The conversion of various sensor stream data that occur in the sensor nodes into sensor data suitable for use in the upper-level application system is required through sensing data monitoring by applying meta-database from the middleware on the server side. In the earlier developed sensor data processing system, unnecessary search and operation were performed from the middleware on the server side as for sensor stream data that occurred in the same sensor node or in the similar area. In this paper, sensing cache technique is used and efficient sensor data stream processing system is designed and built to reduce the redundant sensor data stream processing.

Keywords: USN(Ubiquitous Sensor Network), Metadata, Data Stream, Middleware