

Abstract

Dynamic Feedback Balancing Algorithm for Data Management of an Integrated Sensing Network [†]

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With the development of an integrated sensing network (ISN) which supports generalized mobility and will allow consistent and ubiquitous provision of sensed data services to any object, anywhere and at any time, it is necessary to implement data management with high efficiency for data accessing and processing so that it can improve the quality of data service. In this paper, the dynamic feedback balancing algorithm for static initialization and dynamic data allocation is proposed, which realizes real-time data monitoring, query and real-time or stationary synchronization in an ISN. In order to implement data balance, we make sure of the data service levels and distinguish between heavy nodes and light nodes with the dynamic information reported by each node in an ISN, then transfer the data from heavy nodes to light nodes. Comparing with the consistent hash algorithm, the quality of data service provided by the proposed algorithm is improved significantly.



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