

# **Intelligent Networks Data Fusion Web-based Services for Ad-hoc Integrated WSNs-RFID**

Falah Alshahrany<sup>1,\*</sup>, Maysam Abbod<sup>2</sup>, J. Alshahrani<sup>3</sup>, Abdullah Alshahrani<sup>4</sup>

<sup>1,2</sup>Department of Electronic and Computer Engineering, Brunel University, London, UB8 3PH, United Kingdom

<sup>3</sup> School of Engineering and Sustainable Development, De Montfort University, Leicester, LE1 9BH, United Kingdom.

<sup>4</sup> School of Electronic, Electrical and Systems Engineering, Loughborough University, Loughborough, LE11 3TU, United Kingdom.

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## **Abstract**

The use of variety of data fusion tools and techniques for big data processing poses the problem of the data and information integration called data fusion having objectives which can differ from one application to another. The design of network data fusion systems aimed at meeting these objectives, need to take into account of the necessary synergy that can result from distributed data processing within the data networks and data centres, involving increased computation and communication. This papers reports on how this processing distribution is functionally structured as configurable integrated web-based support services, in the context of an ad-hoc wireless sensor network used for sensing and tracking, in the context of distributed detection based on complete observations to support real rime decision making. The interrelated functional and hardware RFID-WSN integration is an essential aspect of the data fusion framework that focuses on multi-sensor collaboration as an innovative approach to extend the heterogeneity of the devices and sensor nodes of ad-hoc networks generating a huge amount of heterogeneous soft and hard raw data. The deployment and configuration of these networks require data fusion processing that includes network and service management and enhances the performance and reliability of networks data fusion support systems providing intelligent capabilities for real-time control access and fire detection.

**Keywords:** data fusion, RFID-WSN integration, intelligent agents, dynamic multi-agent systems.

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\*Corresponding author. E-mail address: falah88@hotmail.com

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