Energy Efficient Routing Algorithms for Application to Agro-Food Wireless Sensor Networks

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***Abstract*—This paper deals with the application of the AmI concepts to the agro-food production by resorting to a WSN infrastructure, in order to realize a highly interactive virtual environment for the involved actors.**

In particular, our contribution aims at providing the proper routing strategies, once the specific case study has been selected. Focusing on the EU Integrated Project GoodFood scenario, we investigate a class of dynamic flooding algorithm aware of the neighbor nodes status in terms of geographical position and energetic level.

By means of numerical simulations, the proposed approach is compared with the gossiping and the static flooding schemes, highlighting a remarkable gain up to 50% for the network life-time with a particular regard to the most solicited nodes, without complexity increasing.

Keywords—Ambient Intelligent, Wireless Sensor Networks, Routing protocols, power saving

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