Pervasive Computing: Model to Increase Arable Crop Yield through Detection Intrusion System (IDS)

Authors : Idowu Olugbenga Adewumi, Foluke Iyabo Oluwatoyinbo

Abstract : Presently, there are several discussions on the food security with increase in yield of arable crop throughout the world. This article, briefly present research efforts to create digital interfaces to nature, in particular to area of crop production in agriculture with increase in yield with interest on pervasive computing. The approach goes beyond the use of sensor networks for environmental monitoring but also by emphasizing the development of a system architecture that detect intruder (Intrusion Process) which reduce the yield of the farmer at the end of the planting/harvesting period. The objective of the work is to set a model for setting up the hand held or portable device for increasing the quality and quantity of arable crop. This process incorporates the use of infrared motion image sensor with security alarm system which can send a noise signal to intruder on the farm. This model of the portable image sensing device in monitoring or scaring human, rodent, birds and even pests activities will reduce post harvest loss which will increase the yield on farm. The nano intelligence technology was proposed to combat and minimize intrusion process that usually leads to low quality and quantity of produce from farm. Intranet system will be in place with wireless radio (WLAN), router, server, and client computer system or hand held device e.g PDAs or mobile phone. This approach enables the development of hybrid systems which will be effective as a security measure on farm. Since, precision agriculture has developed with the computerization of agricultural production systems and the networking of computerized control systems. In the intelligent plant production system of controlled greenhouses, information on plant responses, measured by sensors, is used to optimize the system. Further work must be carry out on modeling using pervasive computing environment to solve problems of agriculture, as the use of electronics in agriculture will attracts more youth involvement in the industry.

Keywords : pervasive computing, intrusion detection, precision agriculture, security, arable crop

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