

Self-Configuration and Smart Binding Control on IoT Applications

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Abstract—The rapid development of wireless communication technology facilitates the realization of the Internet-of-Things (IoT). Automatic configuration and smart connection system have become relative important issue in accordance with extensive applications of IoT, and the energy saving concepts. Therefore, this work presents the integration of ‘Automatic Configuration and Wisdom Connection System’ with Wireless Sensor Networks (WSN), IoT and ZigBee technology, to actualize automatic configuration based on a received signal strength indicator (Received Signal Strength Indicator, RSSI), lighting auto-configuration area, regional allocation, and sub-areas. The proposed ‘Automatic Configuration and Wisdom Connection System’ automatically configures different lightings to the same position within in the range -3dBm when the RSSI value varies only slightly. The system is configured to the same lighting site within the experimental environment when the sub-area range set -3dBm. This study presents a significant contribution to new configuration of objects in Things (Web of Objects), context awareness control, and optimization of network control platform.

Keywords: *ZigBee, IoT, Auto-configuration, Smart binding, WSN, RSSI.*



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