Foreword and Editorial

International Journal of Web Science and Engineering for Smart Devices

We are very happy to publish this issue of an International Journal of Web Science and Engineering for Smart Devices by Global Vision School Publication.

This issue contains 2 articles. Achieving such a high quality of papers would have been impossible without the huge work that was undertaken by the Editorial Board members and External Reviewers. We take this opportunity to thank them for their great support and cooperation.

In the research paper "Design of the Efficient Replication Management for IoT Service Environments", this paper proposes a new replication management strategy for IoT sensor network environments. Replication generally leads to high data availability. In order to handle excessive node failures in fault-prone IoT sensor networks, we present a voting strategy called sensor delegation consensus(SDC).
SDC reduces the communication overheads related to replication process such as quorum coordination and quorum operation via viable proxy voting scheme using robust sensor nodes except unreliable nodes in voting process.

In the paper "The Development of an IoT-Based Educational Simulator for Dental X-Ray Taking", this study aimed to develop an IoT-based X-ray educational simulator. We created a simulator that has a shape and operating motion range similar to that of an intraoral x-ray machine, which is widely used in clinical settings. We installed angle sensors inside the cone and detector to enable the user to monitor rotation angles in the cone and detector. Information on measured angles was sent to servers through wired telecommunications or a network, and these measured numbers were analyzed and used as evidence to determine whether the user placed the patient in a suitable posture and position to take X-ray images. We believe that this dental X-ray simulator can provide safe X-ray practical training with no risk of radiation exposure and that it can be used in many dental education settings in the future.

November 2018

Neal Xiong, Colorado Technical University, USA

Editor-in-chief of the November Issue on
International Journal of Web Science and Engineering for Smart Devices