

## **Semantic interoperability test method for data schema comparison with constrained application protocol**

### **ABSTRACT**

The main objective of this paper is to verify and propose schema compatibility as one of the main interoperability step for devices in the communication level of IoT system. The communication level requires two or more devices that are going to send or received data with each other to have the same data schema. We introduced a test scenario between the devices based on Constrained Application Protocol (CoAP). Then, we considered some scenarios like smart car, smart industry, smart home and smart city of data schema with different versions(core,V1.0,V2.0 and V3.0) of json structure and its comparison method whether they have the same data schema or not. We also proposed an algorithm for schema comparison and tested the processing time for the comparison of data schema.