WEB-BASED MAP MASHUP APPLICATION   FOR PARTICIPATORY WIRELESS NETWORK SIGNAL STRENGTH MAPPING AND CUSTOMER SUPPORT SERVICES

Constance Kalu
Department of Electrical/Electronic and Computer Engineering University of Uyo, AkwaIbom **NIGERIA**

Simeon Ozuomba
Department of Electrical/Electronic and Computer Engineering, University of Uyo, AkwaIbom, **NIGERIA**

Kufre Udofia
Department of Electrical/Electronic and Computer Engineering, University of Uyo, AkwaIbom, **NIGERIA**

ABSTRACT

In this paper, a web-based Google map mashup application   that will enhance customer support services and addresses the challenges of post-deployment site survey for wireless networks service providers is presented. Incremental Software Development Methodology (ISDM) is used in the development of the software system. The system allows the wireless network clients to use GPS tool and network discovery tool such as NetSurveyor to capture and upload their current location coordinates along with the signal strength of the wireless networks at their current location. Furthermore, the system enables network service providers to use Google map to visualize the location of their network access points, the location of their clients and the signal strength at their clients' locations. The system has provision for clients to interact with the service providers to facilitate prompt response to the clients' challenges. The wireless network service providers can use this information in troubleshooting and in providing or planning for maintenance and support services to their clients. The system was developed using PHP and Java scripting languages, HTML, MYSQL database management system and then hosted locally using apache WAMP server. Sample data are collected from wireless networks and their clients in Owerri municipal in Imo state.

Keywords: Site Survey, Web Application, Map Mashup Application, Incremental Software Development Methodology, Wireless Network, geolocation.