

# **WEB-BASED GIS APPLICATION FOR LOCATING SCHOOLS FOR ADMISSION OF CHILDREN TO GRADE**

**I.A. Wijekoon**

Postgraduate Institute of Science, University of Peradeniya, Peradeniya, Sri Lanka

Generally, students are admitted to popular schools based on the distance to the school from students' home in Sri Lanka. Location is geographical information, that could be displayed using Geographical Information System (GIS) techniques. Web GIS is an advance technology to manage and display all geographical locations on the earth's surface.

This report presents a web-based application for determining the distance to the residence of an applicant to nearby schools. The application is developed by incorporating GIS for the location detection and analysis.

Web mapping application was developed by using different free and Open Source Software tools which are low cost, high stable and secure. Web-GIS architecture was implemented using open source Web-GIS tools like GeoServer, PostgreSQL, PostGIS OpenLayers, GeoExt and Ext JS.

Kandy educational zone, Kandy District, Central Province was chosen as the area for testing purposes. The system created is user friendly and the user can click their home location on the map to see a radius of 3 kilometers buffer/circle (this default distance can be changed) and identify the schools to which they are eligible for grade one admission.

This application could be extended to all the zones in Sri Lanka as this would be much beneficial to all parents who are aspiring to seek admission of their children to popular schools. Further, this will be a valuable application for the officials served in Grade one selection panels for popular schools.