

**Application of Automated Vehicle Location System in a Public Transit System in Ilorin, Nigeria:
Issues and Challenges**

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Abstract: Intracity public transit services in urban centres of developing economies including Nigeria remain largely inefficient as evidenced in the noticeable large number of commuters waiting at bus stops for vehicles which arrival times or even operations are not predictable. This exactly describes the situation of public transit services along the University of Ilorin students' movement corridor in Ilorin metropolis, Nigeria. This study was therefore carried out to enhance the performance of the public transportation system along the studied corridor through the application of Automatic Vehicle Location System (AVLS). The objectives were to: improve on the monitoring of vehicles and drivers; create an avenue for tracking of vehicles by riders and stimulate the development and deployment of AVLS technology. Automatic Vehicle Location Equipment was installed in two vehicles in the fleet of the University used for public transit and their movements monitored through SMS messages and the internet. The study showed that the vehicles varied their route from the scheduled designated route which is the studied student movement corridor a number of times during operational hours and on some days did not operate on the corridor. Issues and challenges that came to the fore during the study, which are responsible for the dearth in the application of AVLS in public vehicles operating on the movement corridor and by extension other urban centres in Nigeria include: lack of administrative will by heads and managers of public transport services to apply the technology; lack of funds; lack of requisite expertise and poor internet and GSM communication services. These issues should be addressed through enlightenment and investment in AVLS technology.

Keywords: Automatic Vehicle Location System, Willingness, Enlightenment, Investment, Expertise