

ABSTRACT

Abstract – To overcome traffic congestion, the Bandung City government is trying to expand public transportation options, one of which is the Trans Metro Bandung (TMB) bus system. In general, fewer people use TMB buses than private vehicles. This is because consumers continue to rely on system schedules, which are often incorrect due to traffic congestion and other technical issues. The Trans Metro Bandung (TMB) application system still has limitations when compared to the Trans Jakarta bus system application facilities. One of these limitations is the absence of information about the expected arrival of the bus, which is affected by the state of traffic. Therefore, this study proposes the application of the Internet of Things (IoT) concept to develop a tool that periodically conveys information about the current position of public transportation. This data will be collected using a Global Positioning System (GPS) device and reported to a server that offers comprehensive real-time information through the Global System for Mobile Communications (GSM) device. In addition to real-time position data, an integrated information service in the form of a website will display additional data, such as the projected time of arrival of vehicles at the destination stop. Therefore, the goal of this study is to provide consumers with comprehensive information services that will allow them to have a more organized and enjoyable travel experience. In an effort to reduce traffic congestion throughout Indonesia, especially in the city of Bandung, the results of this study will encourage more prospective passengers to choose public transportation rather than private vehicles.

Keywords—Public Transportation, IoT, Monitoring, Web-application