

Development of General Transit Feed Specification Data for Sri Lanka

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Abstract

General Transit Feed Specification (GTFS) refers to a common format that is used to represent transit data such as schedules and related geographical data (i.e. transit routes, stops). Provision of a specification for presenting transit data has expanded its applicability ranging from trip planning applications to operation analysis and research. At present transit data in Sri Lanka can be publicly accessed through each agency's website or through applications developed based on these data. The interconnectivity of transit data of different transit agencies is absent at present and the development of GTFS data will address the issue. A GTFS feed generally contains agency, routes, trips, calendar, stops, stop times, shapes, frequencies and transfer files. The Paper addresses aspects considered for the development of frequencies, stop times and transfers files in Sri Lankan context.

Frequencies can be represented in two ways based on the availability of a fixed schedule throughout the day by using the "exact_time" field. The paper highlights how the "exact_time" field was used for some bus routes of low frequencies. Development of stop times file is based on each transit mode's timetable. But for buses, the data relating to stop time at each bus stop is not available. The paper highlights how these values were derived for Western Province Transport Authority (WPTA) buses and the National Transport Commission (NTC) buses based on average travel speed while maintaining priority for trips within the Western Province to WPTA buses. The transfer file enables transfers from buses to trains or vice versa. Due to the dispersed locations of railway stations and bus stops in some parts of the country and the number of data to be found being high an efficient way is suggested in the paper using the network analyst tool in ArcGIS software.

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