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HOW TO TRANSFORM REAL TIME TRAFFIC INFORMATION INTO A HISTORICAL DATABASE USED FOR DYNAMIC ROUTING

***Digest of paper*[1]**

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Abstract: Most routing devices use real time traffic information. It proved that the first hours of a new day can be used to find a good matching day in the past. The traffic data from the matching day can be used to predict traffic streams on the current day. We designed a historic database storing traffic information from real time available public domain databases. A dynamic version of the well-known Dijkstra shortest path algorithm was used to design a dynamic routing algorithm.
Key words: dynamic Dijkstra algorithm; dynamic routing; experiments; historic database; shortest path algorithm

1. INTRODUCTION

Most currently available routing devices use real traffic information. Routing algorithms implemented on smartphones can use network facilities to trace and track other drivers on the road. In case of traffic congestion tracked data can be used to reroute other drivers via less congested alternative routes if possible.

Many traffic accidents and incidents are difficult to predict. But once a traffic jam has been detected it can be used for possible rerouting car drivers before they join the traffic jam. Many congestions as morning and afternoon traffic jams are rather predictable. Car drivers can be rerouted long before. At start of his trip a car driver

[1] The full paper is proposed for including in the IEEE Xplore Digital Library

provides his destination and the dynamic routing system computes possible alternative routes with a minimum of delay. Traffic events and accidents can happen and these are difficult to predict. Experts in regional traffic centre distribute all over The Netherlands are involved in generating additional traffic information.

The outline of this paper is as follows. In section 2 related works will be discussed. Next in section 3 the conversion of data from real time data from a website to a historic database will be presented. In section 4 a dynamic version of Dijkstra algorithm will be discussed using a historic database. In the last section 5 conclusions will be drawn. The paper ends with references.

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