3x benefit by local competence –

direct use of Taxi-FCD to generate road traffic messages

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Abstract

Established radio service providers get more and more competitive pressure by web based providers. Local radio stations focus on high topical and precise regional traffic information as one of their unique features to stabilise competitive basis. Therefore traffic information will be augmented by self determined contents facilitated by addicted communities detecting traffic jam manually. More efficient is to utilise Floating Car Data recorded by fleets. In Dresden/Germany a cooperation between the locally focused radio station Radio Dresden, the Dresden taxi-co-operative and Technische Universität Dresden has been established. The cooperation has benefits for all involved parties. Radio station is able to provide more topical information than the competitors. Benefit for the academic institute is the broad impact emerging of innovation potential. Taxi-co-operative is getting more public attention for their services by referring as data provider in the traffic news.

Keywords:

radio station, traffic news, floating car data, local competence, benefit

Section Title

TS116

Section sub-title

Traffic & network management – Interurban (5)

Preparation of road traffic information in Germany was realised almost exclusively by government and sent out to drivers by radio stations till last decade. Private content providers and lots of service providers entering this information market today. This progression is based on technological innovations, mainly more powerful telecommunication (high transfer rates, mobile devices, etc.) and positioning (particularly by GNSS).
Intention can be identified to provide area wide information, from national up to European range. Considering interoperability and user friendliness are advantageous changes. Established service providers, like radio stations, get more and more competitive pressure.
Whereas basic safety services have to be performed by wide range radio stations furthermore, local radio stations focus on high topical and precise regional traffic information as their unique feature against new as well as against well-known competitors. Therefore TMC-based traffic information will be augmented by self determined contents. Founding and care about station-related communities monitoring congestion is playing a significant role here. The bigger the community the more traffic jams are discoverable. So there is the interest additionally to get information also about road traffic occurrences by fleet drivers.

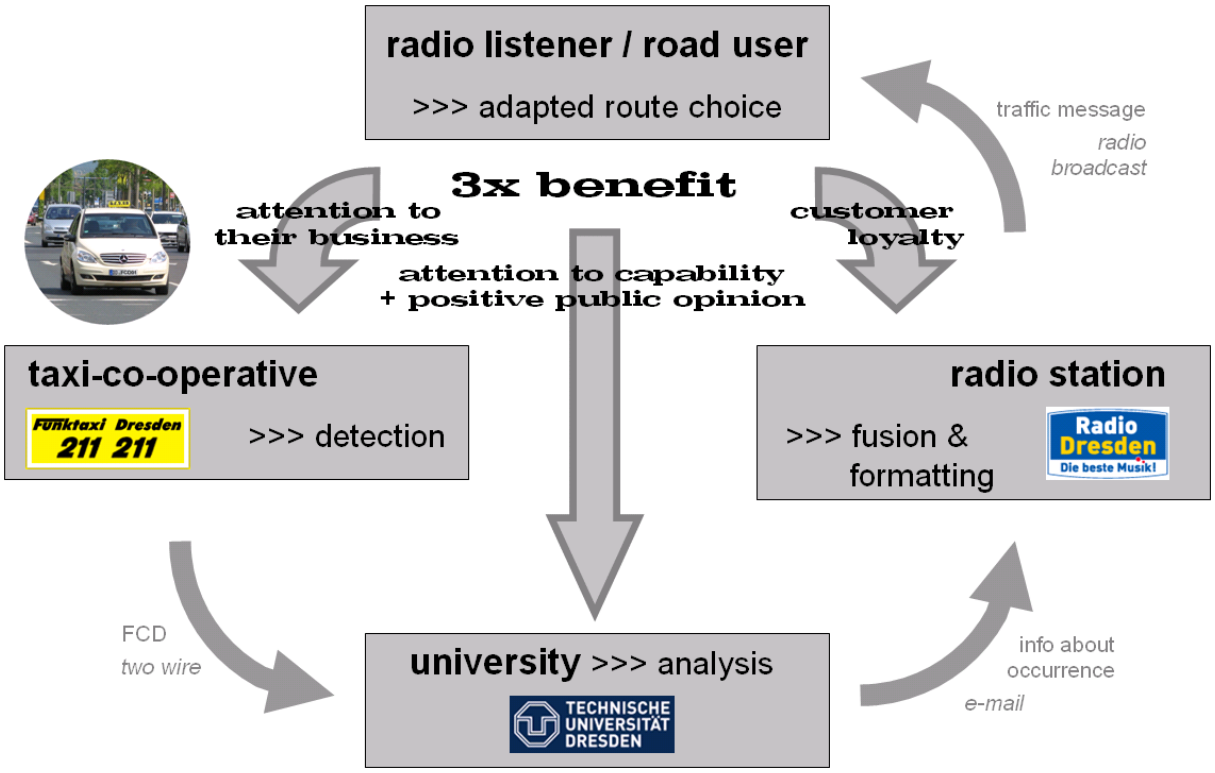

Figure 1 – Information flow and benefits

In Dresden, a mid-size German city, cooperation between the locally focused radio station Radio Dresden, the Dresden taxi-co-operative and Technische Universität Dresden has been established (see Figure 1) for that reason.

Taxi-co-operative is providing FCD. These will be analysed regarding to traffic occurrence by algorithms, developed by researchers of Institute of Traffic Telematics at Technische Universität Dresden. Further traffic information is sent to traffic news editorial staff of radio station. Here fusion with other information as well as the preparation of messages, ready to be broadcasted, takes place.

Benefit for Radio Dresden is the augmented traffic conditions image of region. So there is an informational advantage against competitors. Benefit for the academic institute is the broad impact emerging of innovation potential and service capability by publication about the developed service. Taxi-co-operative is getting more public attention for their services by referring as data provider in the traffic news.

Speed profiles are analysed to get a 6-stage level of service. Thresholds are used to interpret speed level, time and range of queuing and the number of stops. To focus traffic messages on essential occurrences only information about traffic jams with duration of more than 4 minutes (see Figure 2) are reported to radio station. Of course this calibration is customisable. The chosen approach is transferable to other regions obviously.

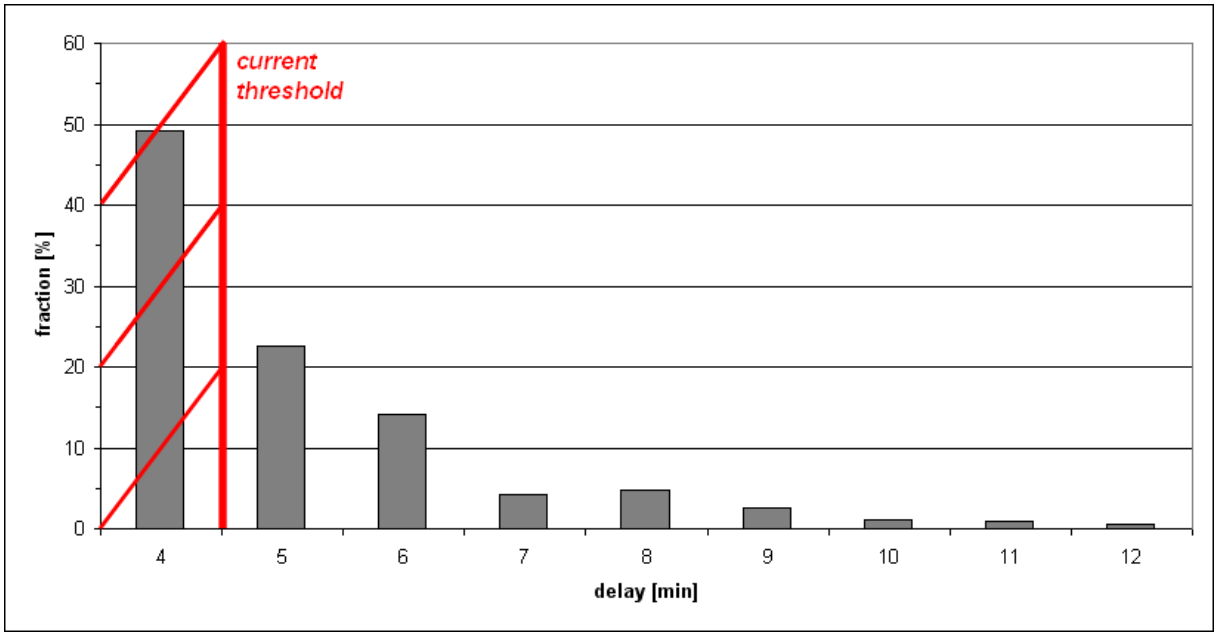

Figure 2 – Fraction of determined delays

Its productive efficiency is demonstrated by identification of about three occurrences in traffic flow, worth to drive around, day by day.