## **THNS 2017**

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Marc GUIGON

guigon@uic.org

Tel: + 33607080520

Proposal of lecture: Big data: impact of timetable data on railway business In Europe

In Europe, each railway undertaking builds its own timetable data, based on the needs of customers, company policies and local authorities for regional or commuter trains. The Forum Train Europe harmonises the production plan and the path requests in Europe, mainly for international passenger trains.

European passenger railway undertakings can be incumbent railways, or private companies. There are several hundred private passenger companies in Europe.

Timetables are the first part of the value chain of ticket distribution, before pricing, booking, ticketing, control and post-trip.

These timetable data comprise a lot of elements, such as station codes and coordinates, minimum connecting time, number of trains, running periods, classes and different services such as restaurant, sleeping cars, wheelchair, power supply sockets...

For international trains, timetable data of all railway undertakings (in large Europe comprising Russia, Turkey, Belarus, Ukraine) are weekly collected in a centralised tool in UIC, named MERITS, verified and integrated. Then the integrated data are delivered by UIC to all European railway undertakings which can use them as they want: customer information, journey planners, booking, Apps...

Recently, in April 2017, European railway undertakings gave the mandate to UIC to deliver these integrated data to third parties, and make contracts between UIC and third parties. Third parties are Global Distribution Services, Online Travel Agencies, public authorities, other transport modes, Startups, universities... So, from end 2017, Third Parties will give information to customers, and, for the Ticket Vendors, can sell railway tickets in the name of railway undertakings. UIC will also provide a hotline for third parties for all questions, problems and discussions with railway undertakings.

This evolution is a real revolution in the world of data which are directly linked to railway business.

In the next years, UIC will carry out some studies to develop new tools to make at disposal open data through APIs, and real-time data, combining planned data and real-time data.