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Piloting map service for navigating in punctuality analysis for trains

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1 Background

A train network is a complex system. Almost every running train have the possibility to affect almost every other train running in the system. When you look at a busy area, such as a major city and it's closest area, a great deal of material can be on the move at any given time on a rail network with limited capacity. This leads to limited time slots for each train and every problem can lead to major problems, not just for the train experiencing the problem, but can spread to other trains.

To minimize delays it may be necessary to improve both infrastructure and/or time table on railway routes or parts of routes. However, to understand what needs to be improved and optionally where, you need a good tool to analyze the rail network capacity, and if necessary, visualize each individual train figure 1.1 on the following page in the rail network to follow delays to the source.

Here they have plotted each train on it's course between each station on it's route, with a colored circle around the train which varies depending on if the train is on schedule or delayed. It is also possible to play through the selected day or drag through time manually.

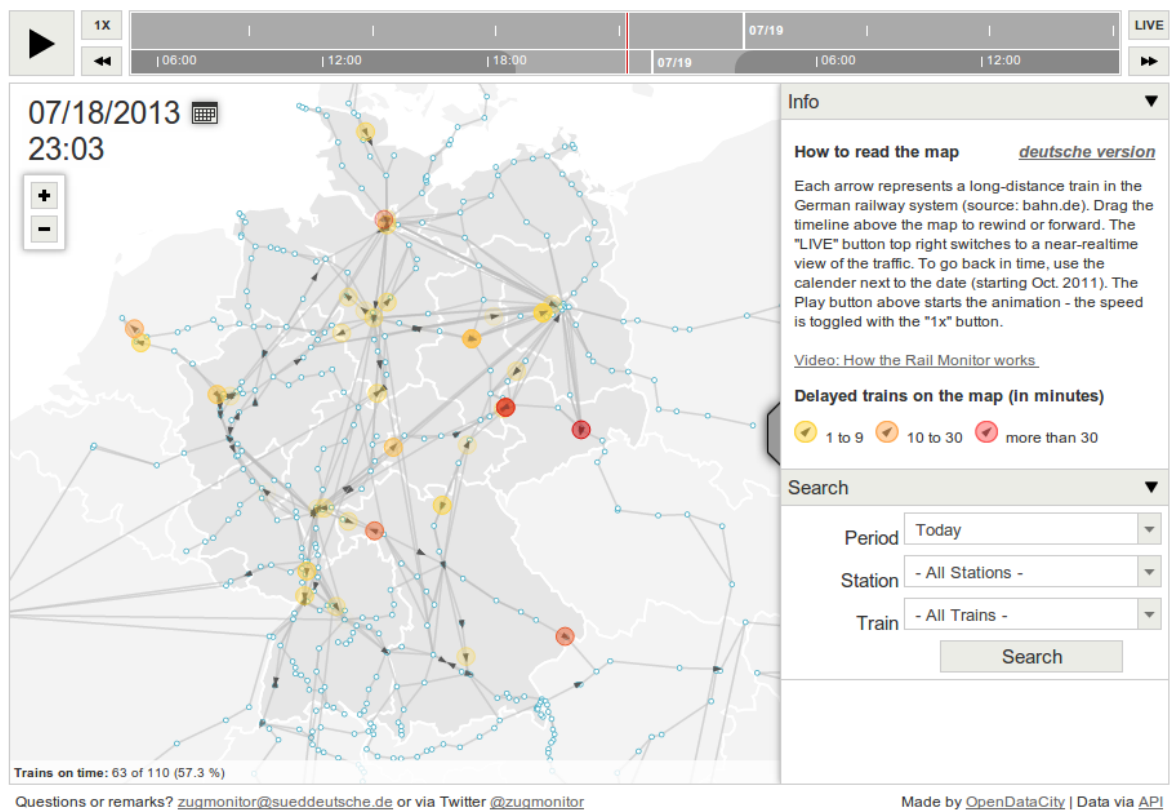


Figure 1.1: Zugmonitor [1]

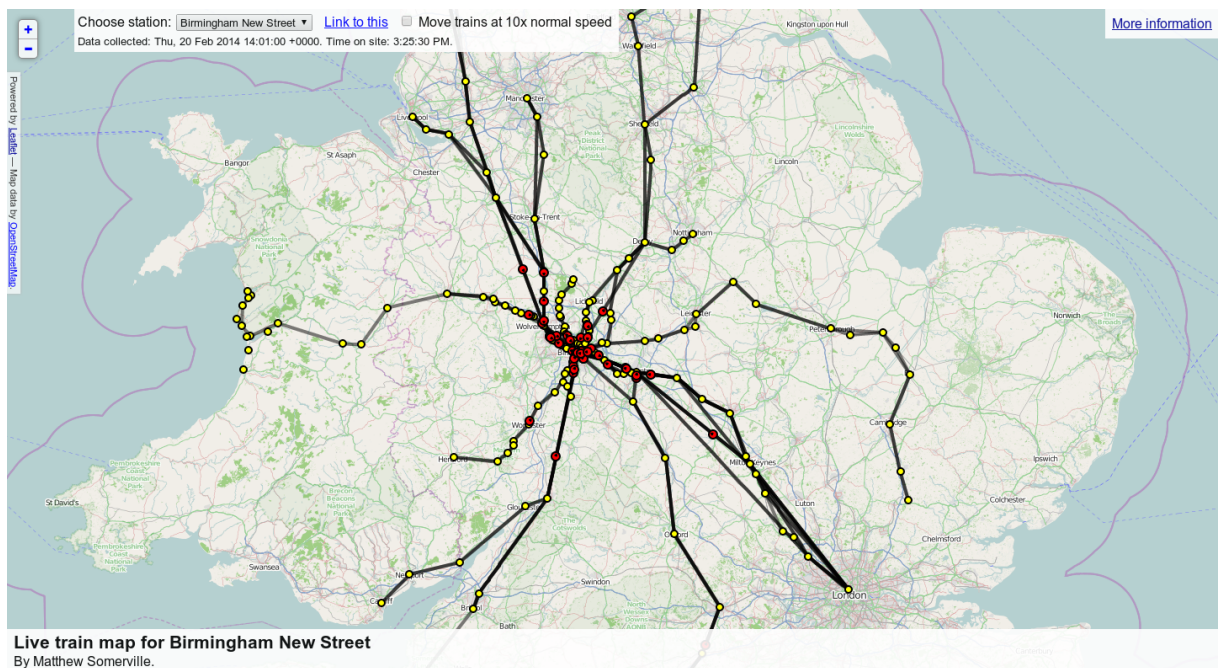
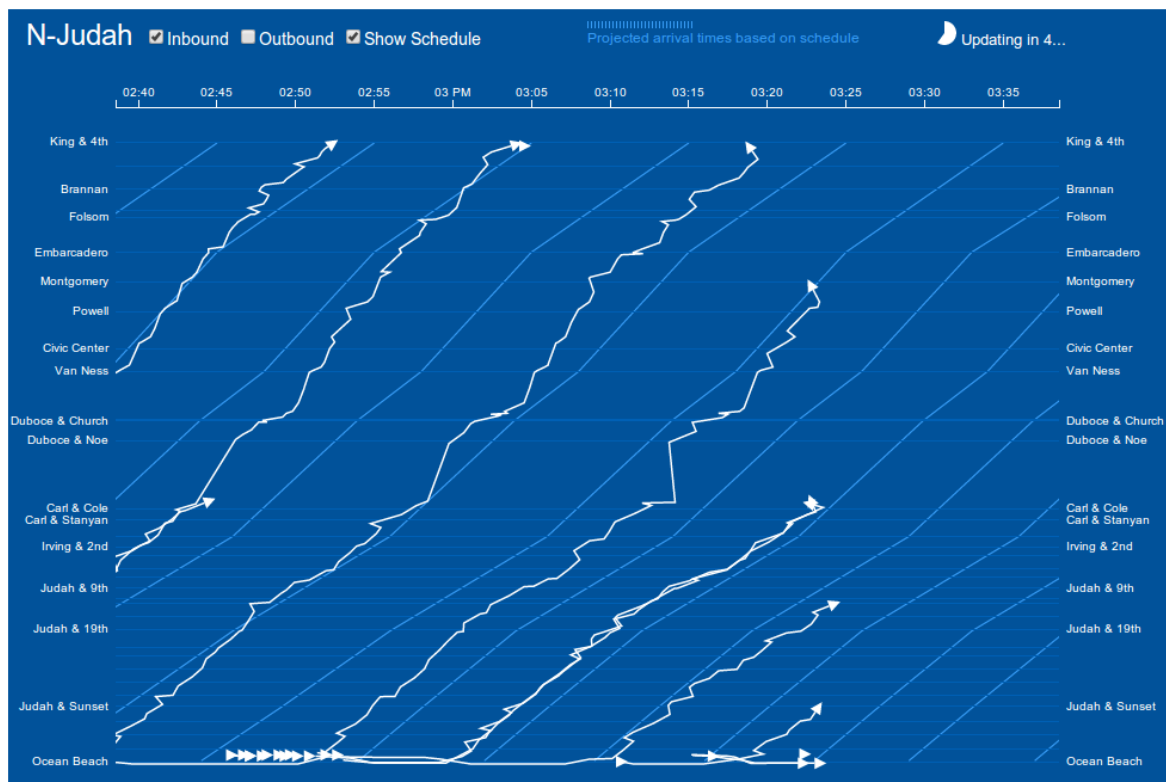


Figure 1.2: Live train map for Birmingham new street [2]



A live chart of vehicle locations on the N-Judah light rail line in the past 12 hours.

Hang

Figure 1.3: Visualizing transit delays [3]

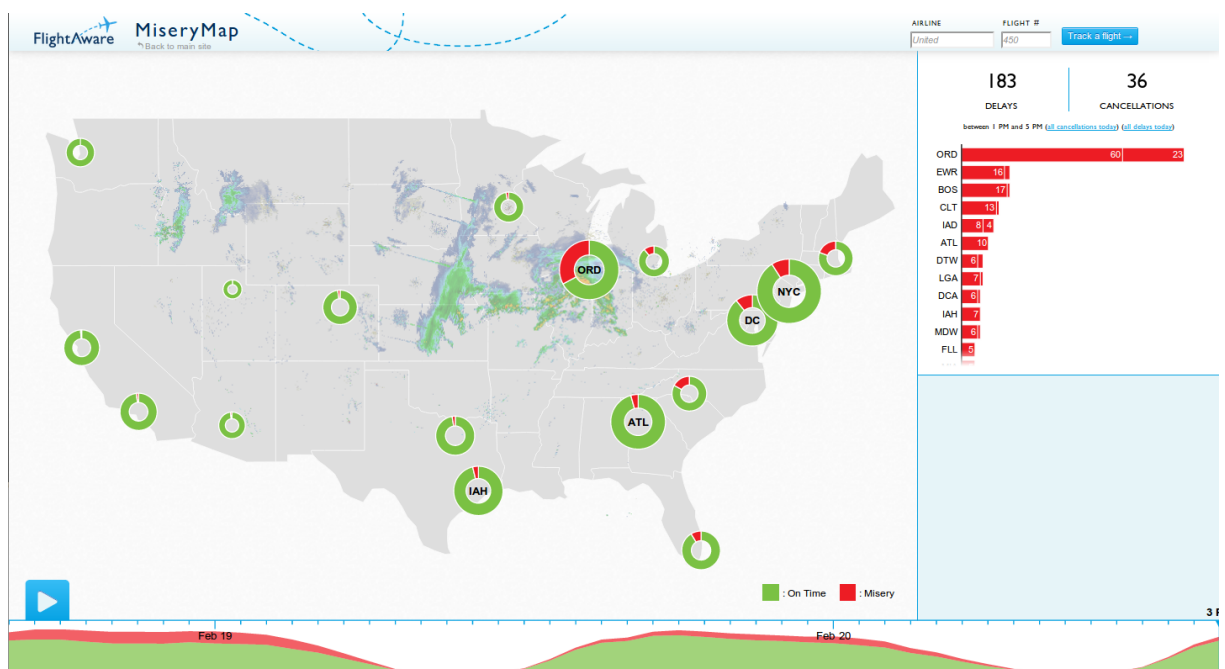


Figure 1.4: MiseryMap [4]

Bibliography

- [1] OpenDataCity, “Zugmonitor – leider außer betrieb.” <http://zugmonitor.sueddeutsche.de/>. [Online; accessed 15. February 2013].
- [2] M. Somerville, “Live train map for birmingham new street.” <http://traintimes.org.uk/map/#bhm>. [Online; accessed 15. February 2013].
- [3] bdon.org, “Visualizing transit delays in real time: Muni light rail.” <http://bdon.org/2013/08/28/visualizing-transit-delays/>. [Online; accessed 15. February 2013].
- [4] FlightAware, “Miserymap.” <http://uk.flightaware.com/miserymap/>. [Online; accessed 15. February 2013].