

# JRTR

## Japan Railway & Transport Review

### Feature

## Railway and ICT (Information and Communication Technology)

- 'JR East App' for Smartphones
- Tokyo Metro Efforts in Utilization of Open Data
- Innovation in Railway Maintenance utilizing Information and Communication Technology (Smart Maintenance Initiative)

# 67

Mar. 2016

### Special Feature

- Hosting the 9th UIC World Congress on High-speed rail

The collage displays several mobile applications and services used by Japanese railways:

- ダイヤ検索結果 (Timetable Search Results):** Shows a search for a train from Tokyo to Nagoya. It lists departure times (13:43, 14:01), fares (350 yen for adults, 180 for children), and train types (名鉄名古屋, 急行, 須ヶ口, 普通).
- 東京 (Tokyo) Station Map:** A detailed map of the station area, showing platforms, entrances, and surrounding facilities like the Coin Locker.
- 山手線ホーム案内 (Yamanote Line Platform Guide):** Provides information about the platform at Utsunomiya Station, including train numbers (11-10), directions (池袋・新宿方面), and current conditions like temperature (7°C) and car status.
- 駅時刻表 (Station Timetable):** A table showing train schedules for the Nagoya Line. It lists departure times for various services (普通, 急, 特, 準, 普) to destinations like 東岡崎, 豊川稲荷, 豊橋, 豊明, and 東岡崎.
- 渋谷 (Shibuya) Station Map:** A map showing the layout of the station, including the Akihabara Station area and the Yamanote Line.

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Smart phone app of some of the railway companies in Japan. Photos courtesy of Hokuriku Rail Road, Nagoya Railroad, JR East, Tokyo Metro, and Nagasaki Electric Tramway.

## Railway Operational Information

The significance of modes of transportation varies according to differences in society and culture of countries. And even within a country, how modes of transportation are used differs between urban and provincial areas according to the level of propagation. Looking at movement of people, not freight, provincial areas of Japan rely relatively more on automobiles instead of railways, but the situation is the opposite in urban areas. Even amongst urban areas, those with private railways and subways (which are often municipally operated) have an overwhelmingly larger share of transport made up by railways. People rely on railways as a means of transportation closely tied to their lives in areas such as commuting to work or school. For example, doctors and nurses with surgery scheduled, managers with business negotiations and contracts scheduled, and students headed to entrance exams almost always rely on railways in urban areas almost to a critical level. However, railways unfortunately are not always operated smoothly every day. Sometimes, there are chronic delays and cancellations. In recent years, it has become possible for railway operators to predict within a certain range of allowance from years of experience disruptions to operations—rolling stock failures, injury accidents, power outages, and the like—and time until restoration of operations if details can be identified. Alternate means of transport can now be provided quickly. The issue to overcome is how to convey that information to passengers. Informing at stations is the surest method, but the very act of passengers going to the station could likely involve waste of time and money. It would be best to have an environment where passengers could come in contact with the information wherever they are. It is very significant that a clue to a solution for how to provide the information needed most can be seen in utilization of smartphone apps.

K. Aoki

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