

# JRTR

Japan Railway & Transport Review

Feature

## IC CARDS

- Development of Suica Autonomous Decentralized IC Card Ticket System
- Common IC Card Ticket Project for Greater Tokyo Area
- Marketing EX-IC and TOICA Services
- JR West's ICOCA
- Deploying Transport IC Card in Hiroshima Urban Area
- nimoca IC Fare Card Service of Nishi-Nippon Railroad Co., Ltd
- The Evolution of e-payments in Public Transport—Singapore's Experience
- TSCC Business Profile
- ITSO and European Interoperable Fare Management
- Contactless Ticketing in Paris—The Navigo Pass
- eTicket Germany—An Interoperable Electronic Fare Management Standard for Public Transport

50

Sep. 2008



## JAPAN RAILWAY & TRANSPORT REVIEW

September 2008 NO. 50

Published by **East Japan Railway Culture Foundation** (EJRCF)

2-2, Yoyogi 2-chome, Shibuya-ku,  
Tokyo 151-8578, Japan

Tel (81 3) 5334 0623

Fax (81 3) 5334 0624

Email info@jrtr.net

Chairman: Mutsutake Otsuka

### Chief Editor:

Kunio Aoki

### Editorial Board:

Yoshihiro Akiyama, Director, Japan Railway  
Technical Service

Mami Aoki, Professor, Doshisha University

Makoto Ito, Director, Planning Division, Japan  
Institute for Transport Policy Studies

Tatsuo Odaka, Deputy General Manager,  
Technical Development & Research  
Department, East Japan Railway Co.  
(JR East)

Toshiki Saito, Deputy General Manager,  
Management Administration Department,  
JR East

Kazuhiko Tezuka, General Manager, Planning  
Division, Railway Technical Research  
Institute

### Consulting Editor:

Tatsuhiko Suga

### Editorial Staff:

Robert Hancock

Yoshihiro Abe

Mizuki Naito

Yumu Asano

### Translation, Design & Production:

ALAYA INC.

© All rights reserved. Reproduction of the contents  
in part or whole of this magazine in any manner  
is prohibited without the prior written consent of  
EJRCF.

JRTR is printed in Japan.



Suica (JR East), EX-IC card (JR Central),  
ICOCA (JR West), Navigo (RATP), Ez-link  
Card (Singapore Land Transport Authority),  
KOLIBRI card (VDV), nimoca IC card (Nishi-  
Nippon Railroad), PASMO (Pasma), ITSO  
SAM card (ITSO), PASPY (Hiroshima Electric  
Railway), and EasyCard (Taipei Smart Card  
Corporation) (Clockwise)

## Editorial

### Singing The Praises of The Suica IC Card

According to the report distributed at the JR East annual shareholder's meeting held in June 2008, a total of 24.15 million Suica IC cards had been issued by the end of March 2008. Dividing Japan's population of 128 million by the total cards shows that one in every five or so people in Japan has a Suica card. Since Suica use is limited to the Kanto, Koshinetsu, and Tohoku regions, we can assume that one in two people in JR East's business region has a Suica card. Therefore, it is no exaggeration to say that nearly everyone in the public-transport-using age bracket is a Suica user.

There are many reasons why Suica has become so popular and widespread. From my viewpoint as a Tokyo resident, three major factors impacted my decision to use Suica. First, I am often pressed for time when riding the train. Just travelling a simple route takes time. But when transferring between multiple lines of different operators, finding the right fare from complicated fare tables at every connection is even more time consuming. Moreover, queuing at a ticket machine means more wasted time. Being able to eliminate ticket purchase eliminates this stress. Second, railway fares are in units of ¥10. So, if I purchase a ¥210 ticket with a ¥1000 note, I get ¥790 yen in change. That makes for up to 12 coins—16 if there are no ¥50 coins in the machine—pouring into the change tray like hitting the jackpot at a slot machine. This loose change easily fills a coin wallet or pocket and makes for extra weight to carry around. Suica is extremely helpful because it eliminates the need to handle loose change. Third, I always end up putting my train ticket in one of various places, such as my jacket, shirt, or trouser pockets, or even in my briefcase. Sometimes, I cannot find the ticket when it is time to exit through the ticket gate, because I put it somewhere unusual while thinking about something else. It is embarrassing to be rifling through my pockets in front of the ticket gate, and infuriating when pressed for time. Suica solves the problem of misplacing the small slip of the old magnetic cardboard ticket.

These are the reasons I am so attached to my Suica card and why I am looking forward to trying out Mobile Suica on my mobile phone.

K. Aoki

## CONTENTS

### Feature: IC CARDS

Development of Suica Autonomous Decentralized IC Card Ticket System.....	6
Common IC Card Ticket Project for Greater Tokyo Area.....	16
Marketing EX-IC and TOICA Services.....	18
JR West's ICOCA.....	24
Deploying Transport IC Card in Hiroshima Urban Area.....	28
nimoca IC Fare Card Service of Nishi-Nippon Railroad Co., Ltd. ....	32
The Evolution of e-payments in Public Transport—Singapore's Experience.....	36
TSSC Business Profile.....	40
ITSO and European Interoperable Fare Management.....	44
Contactless Ticketing in Paris—The <i>Navigo</i> Pass.....	50
eTicket Germany—An Interoperable Electronic Fare Management Standard for Public Transport.....	56

### Another Perspective

A Day in Arashiyama: Encounters with 'Strangers'.....	63
---	----

Topics.....	66
-------------	----

### Photostory

Opening of New Lines.....	2, 69
---------------------------	-------