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**Fare Collection System Using Contactless Smart Cards  
Honored with the “Denki no Ishizue” Award  
by the Institute of Electrical Engineers of Japan**

Railway Technical Research Institute  
East Japan Railway Company  
Sony Corporation

The Railway Technical Research Institute (RTRI), East Japan Railway Company (JR East), and Sony Corporation, who jointly developed the Fare Collection System Using Contactless Smart Cards (see Fig. 1), are pleased to announce that the system has been honored with the 18<sup>th</sup> “Denki no Ishizue (Foundations of Electricity)” Award, an electrical technology commendation, by the Institute of Electrical Engineers of Japan (IEEJ). The award ceremony was held on March 19, 2025, at the Meiji University’s Academy Hall, Surugadai Campus (see Fig. 2 and Fig. 3).

Although this system is now widely used in society as a contactless ticketing system for public transport, at the time its development began in 1987, magnetic tickets were in use for railway automatic ticket gates, and contactless cards were only used for extremely limited purposes in Japan. The development and introduction of this system, with the optimal communication range and transaction time that allow passengers to pass through ticket gates without stopping during rush hour in the Tokyo metropolitan area, and which is equipped with wireless power transmission, wireless communication, as well as immediate retry function and security measures, has enabled smooth passage through ticket gates. Moreover, the expansion of operators adopting this system has significantly reduced the burden on users when navigating complex railway networks, thereby greatly enhancing the convenience of public transport. Furthermore, the system’s electronic money function has become widespread in commercial facilities nationwide, making a substantial contribution to the development of electronic payments in society. These various achievements have been highly valued, leading to this commendation.

The 18<sup>th</sup> Electrical Technology Commendation “Denki no Ishizue” Award

[Name of the Honored Item] Fare Collection System Using Contactless Smart Cards

[Category] Product

[Recipients] Railway Technical Research Institute, East Japan Railway Company, and Sony Corporation

[Reason for Commendation] <https://www.iee.jp/file/foundation/data07/press/press18-all.pdf>



**Fig. 1 Prototype Automatic Fare Collection Gate and Prototype Contactless Smart Cards**



**Fig. 2 The 18th “Denki no Ishizue” Award Ceremony**



**Fig.3 Representatives of the Honored Organizations at the Award Ceremony**  
(Kunihiro Kawasaki, RTRI (center); Shu Ishimoto, JR East (right); and Tomohiko Iino, Sony (left))

## **[About the “Denki no Ishizue” Award by the Institute of Electrical Engineers of Japan – Looking Back to See the Future–]**

The “Denki no Ishizue” Award, a commendation system for achievements in electrical technologies, was established to recognize and honor electrical technologies that made significant progress in the 20<sup>th</sup> century, greatly contributed to social life, and provided opportunities to reflect on what should be done to make society sustainable in the 21<sup>st</sup> century. This award aims to promote valuable electrical

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technologies to the public, to let many people know about the excellence and fascination of electrical technologies, and, through this, to contribute to the future development of the field.

(Source: IEEJ website: <https://www.iee.jp/foundation/select/>)