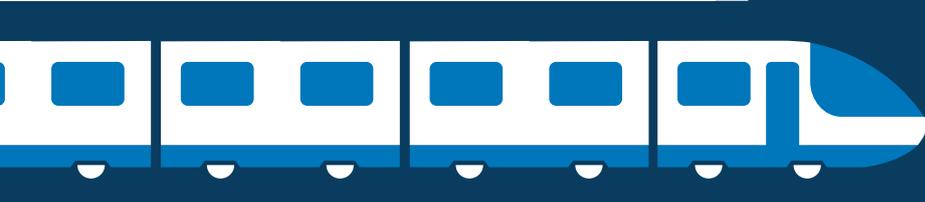


Get Ready for Mobile Public Transport (PT) Services: How NFC delivers RF interoperability with PT infrastructures



Today, an increasing number of consumers rely on their mobile devices to get things done every day—from reading the news to navigation to banking. Those millions of users are eagerly seeking more ways to use their devices, including accessing public transport services.

For public transport operators (PTO), mobile network operators (MNO), and handset manufacturers, this trend offers an opportunity to better serve a growing segment of the population. The best way to take advantage of this opportunity is to ensure that the millions of contactless readers and billions of smartcards already deployed by PTOs work seamlessly with more than a billion NFC-enabled devices in the marketplace.

Why RF interoperability matters

The PT industry requires smooth, reliable, and efficient functioning to ensure a positive experience for millions of daily users—under all circumstances. Until recently, however, that was a challenge with some NFC-enabled devices, because the public transport and mobile device industries used standards from different standards bodies in their RF interfaces.

The result was that PTOs, MNOs, and handset makers who wanted to introduce NFC-enabled services had to make a concerted effort to ensure that particular NFC devices could exchange data reliably with the readers and cards of specific PT systems.

The solution: harmonized specifications

Now there's an answer to the RF interoperability challenge—thanks to the NFC Forum and GSMA. In 2015, the two organizations launched an initiative in concert with global PT representatives, Smart Ticketing Alliance and JRE, and standards bodies, including CEN and ISO. Working together, the initiative was successful in:

- Harmonizing the specifications of mobile device NFC interfaces and PT readers and cards; and
- Establishing standards for testing mobile devices and PT equipment.

The road to the broad introduction of NFC-enabled PT services is now open and clear.

KEY TAKEAWAYS



Analog Specification 2.0 is essential. The NFC Forum's Analog Specification 2.0 provides RF interoperability. NFC-enabled mobile devices that follow the NFC Forum's Analog Specification 2.0 will work with PT readers and cards implementing the ISO/IEC 14443 and ISO/IEC 18092 standards.



Coexistence between NFC Forum Analog 2.0 and other RF interface standards will also be provided in the future. The NFC Forum will continue specification and testing alignment with ISO/IEC 14443, ISO/IEC 18092 and EMVCo.



No PT infrastructure changes are required. If PT readers and cards are conformant to ISO/IEC 14443 or ISO/IEC 18092, PT service providers may use their existing equipment and seamlessly introduce NFC-enabled PT services.



Regional testing or adaptation of handsets is no longer necessary.



All NFC-enabled mobile devices certified by the NFC Forum will work with existing PT systems. The NFC Forum certification mark on the device packaging is your assurance of a positive user experience.



NFC interoperability is future-proofed. Because key PT market stakeholders participated in the initiative, all relevant mobile use cases have been identified and can be supported.

Take the next steps

The alignment of technical specifications among leading standards bodies and PT industry organizations has paved the way for RF interoperability and mobile PT services.

Government bodies are also playing a vital role. As part of its NFC initiative, the German federal government launched OPTIMOS, a research project that seeks to create an open NFC ecosystem for the mobile use of secure identities for mobile services. The project uses examples of national e-ticketing in public transport to define and test applications. The OPTIMOS findings will contribute to international NFC standardization with the goal of ensuring the global interoperable use of NFC devices in the medium term.



Your organization can begin preparing now for NFC public transport implementation in 2017 by taking the following steps:



PUBLIC TRANSPORT ASSOCIATIONS:

Start developing a plan for NFC field deployment.



HANDSET MANUFACTURERS:

Implement the latest NFC Forum specifications and conduct certification of your handsets.



MOBILE NETWORK OPERATORS:

Start discussions with PT service providers on joint service offers and field implementation.

In order to drive the ongoing harmonization activities of the NFC Forum, the active participation and support of the involved organizations and bodies is highly appreciated.

Please visit the NFC Forum Transport page at <http://nfc-forum.org/nfc-and-transport/>

In case of questions, please contact Transport SIG Chairs at sctwg-chair@nfc-forum.org.

The Public Transport RF Interoperability Initiative

AREA OF FOCUS	NFC FORUM GROUP DRIVING THE COLLABORATION	PARTICIPATING ORGANIZATIONS
Market feedback		
Technical specification alignment		