



NFC Forum Backgrounder

Introduction to Near Field Communication (NFC)

Near Field Communication (NFC) is a standards-based, short-range wireless connectivity technology that enables simple and safe two-way interactions among electronic devices. With NFC technology, consumers can perform contactless transactions, access digital content and connect devices with the simplicity of a single touch. NFC also eases the setup of longer-range wireless technologies, such as Bluetooth and Wi-Fi.

One of the newest short-range wireless connectivity technologies, NFC provides intuitive, simple and safe communication between electronic devices. Communication occurs when two NFC-compatible devices are brought within a few centimeters of one another.

The NFC Forum

NFC is being adopted widely because its technology has established the basis for greatly expanded wireless communications. In fact, Strategy Analytics forecasts that mobile phone-based contactless payments will facilitate over \$36 billion of worldwide consumer spending by 2011.

However, for NFC to flourish on a truly wide scale, companies developing NFC-based applications and services must work together. To that end, leading mobile communications, semiconductor, and consumer electronics companies founded the NFC Forum (www.nfc-forum.org) in 2004 as a non-profit industry association. Today the Forum has grown to more than 150+ global member companies.

The Forum's mission is to advance the use of Near Field Communication technology by developing standards-based specifications, ensuring interoperability among devices and services, encouraging development of products using NFC Forum specifications, and educating the market globally about NFC technology. The Forum's members are currently working on specifications for a modular NFC device architecture, and protocols for interoperable data exchange and device-independent service delivery, device discovery and device capability.

The NFC Forum's Sponsor members, which hold seats on the Board of Directors, include global leaders HP, MasterCard Worldwide, Microsoft, NEC, Nokia, NTT DOCOMO, INC., NXP Semiconductors, Panasonic, Renesas Technology, Samsung, Sony, and Visa International.

NFC Benefits and Applications

NFC is distinguished by its intuitive interface and its ability to enable interoperability between fixed and wireless networking platforms as well as seamless wireless-to-wireless communications. Numerous trials and initial deployments of this exciting new technology have successfully illustrated how people carrying mobile phones or smart cards with built-in NFC technology can quickly and easily make purchases, get directions, exchange information and buy transportation. All they need to do is place their phones or cards close to NFC-enabled devices embedded in information kiosks, retail registers, advertising signs, vending machines and thousands of other devices, systems, and signage. This ensures that end users are in control of initiating any NFC-based communication.

End users of this technology benefit from comprehensive specifications developed by the NFC Forum, designed to make NFC devices interoperable. Organizations across the globe are developing products that enable consumers to access digital services anywhere, at any time, using any NFC Forum-compliant device. The NFC Forum envisions a world where people can access content and services freely and intuitively, leading to secure universal commerce and connectivity.

The Forum believes that NFC technology makes business sense for transportation and content providers, device manufacturers, financial services organizations and more. For example, NFC technology can significantly lower the cost of providing mass transport and event ticketing because NFC-based systems reduce the cost of card issuance and management. Commuter transit systems in the U.S., Europe and a number of Asian countries already use NFC-compatible contactless technologies to speed travelers to their destinations.

NFC Technology

Near Field Communication technology evolved from a combination of contactless identification and interconnection technologies. NFC operates in the 13.56 MHz frequency range, over a typical distance of a few centimeters. The underlying layers of NFC technology are based on ISO, ECMA and ETSI standards. NFC technology is supported by the world's leading communication device manufacturers, semiconductor producers, network operators, IT and services companies, and financial services organizations. NFC technology is compatible with hundreds of millions of contactless cards and readers already deployed worldwide.

Join the Forum

We welcome participation from all organizations interested in furthering the mission of the NFC Forum, whether they are for-profit companies or other industry associations with compatible technical interests. Find out more about Near Field Communication and the NFC Forum at www.nfc-forum.org or call +1 781-876-6216.

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