



ADVANCING NEAR  
FIELD COMMUNICATION  
TECHNOLOGY

# NFC on Android Roundtable

Moderator: Peter Coster

Toppan Forms Co., Ltd

NFC Forum Ecosystem Development

Working Group Chair



# What is an API

Application Layer

API (Application Programming Interface)

Middleware Layer

Hardware Layer

- Short History:
  - Over 15 years in contactless expertise, leader in contactless payment, and holding over 130 family patents
  - Strategic partners and investors - Visa, Nokia, Motorola, Samsung, Qualcomm
- Area of Expertise in NFC:
  - INSIDE offers a “One-stop Shop” fully integrated NFC solution
  - Unique integration team (former Sagem Mobile)
  - Recent Atmel SMS acquisition providing extensive expertise and portfolio
  - Over 25 years experience in security market.
- NFC Forum Involvement:
  - Sponsor Member of the NFC Forum
  - Platinum sponsor of the Spotlight for Developers
  - Active participation in all Working Groups and Committees

- Short History
  - Established in 2006 (formerly a division of Philips), 50+ years of experience in semiconductors, 28000 employees working in more than 25 countries
  - High Performance Mixed Signal and Standard Product solutions
    - Automotive, Wireless infrastructure, Industrial, Consumer, Identification, Lighting, Mobile, Computing
  - Identification: Leader in Secure Transactions & Identity, Authentication, & Tagging
    - ABI ranks NXP #1 Contactless IC Vendor for 3rd year in a row
    - Over 6 billion contactless ICs shipped to date
- Area of expertise in NFC:
  - Co-inventor of NFC
  - NXP provides full turnkey NFC S/W & H/W solutions
  - PN544: 2<sup>nd</sup> generation NFC IC, 6th commercial NFC IC of NXP
  - NFC solutions matured in over 170 field trials
- NFC Forum Involvement:
  - Founding member of the NFC Forum

- Short History
  - Broad range semiconductor provider
  - 2009 sales: USD \$8.51 billion
  - Approx. 51000 employees
  - 25 years expertise in smartcards & secure ICs
- Area of expertise in NFC:
  - NFC controller chips & related NFC software stacks
  - Secure chips for SWP-(U)SIM's & Secure Elements
  - Contactless smartcard and memory chips
- NFC Forum Involvement:
  - Sponsor member of the NFC Forum

- Short History:
  - Founded in 1994, headquarter based in Hamburg, Germany
  - Based on a modular software architecture
  - Experts of communications technologies, such as NFC, Bluetooth, ISDN, and Cable
- Area of expertise in NFC:
  - Leading company for an independent and solidly-maintained NFC protocol stack with legacy support
  - Adaptation layer for different operating systems and hardware
- NFC Forum Involvement:
  - Associate Member since 2006

- Short History:
  - Trusted Logic is composed of 110 security experts
  - Mobile phone security, smart cards, and NFC software development
  - Security evaluations
- Area of expertise in NFC:
  - NFC protocol stack development
  - End-to-end NFC solutions through partnership with market leaders
- NFC Forum Involvement:
  - NFC Forum contributor to NFC interoperability and testing

# Roundtable Attendees

- Agnes Revel, INSIDE Contactless
- Charles Dachs, NXP
- Laurent Sourgen, STMicroelectronics
- Christian Andresen, Stollmann
- Nicolas Ponsini, Trusted Logic

## 1. What is being done to create a common API?

Several initiatives have been taken in the past months to bring a standard Android NFC API to the market. Various stakeholders in the NFC value chain are involved in these discussions. The companies around this table are representing the leading technology providers (NFC ICs and NFC Host Software) for NFC integration in Android handsets. These companies are determined to work on a standard Android NFC API that will be available soon to developers.

2. Where do you see the landscape in 6-9 months, 3 years?

A common royalty-free API will allow a fast adoption of this API. Avoidance of proprietary features will also be a way to accelerate market and avoid fragmentation.

Commitment from Mobile Vendors on smartphone supports the common API approach in allowing fast endorsement by market of the NFC on Android.

Applications will be necessary to interest end users in this technology and enhance their experience using NFC.

## 3. When will developers get kits to work with?

SDKs have been available since the first protocol stacks were released. They will be updated to keep supporting all future API enhancements and market requirements. When a standard API is agreed upon, most companies will update their SDKs to be in line with this.

4. When will we see devices in the market that will provide real business opportunities?

The first NFC-enabled devices in quantity are expected in 2011.

## 5. What is the importance of smartphones?

Because smartphones represent the high-end market of mobile phones, new technologies are typically first introduced with them and are implemented later in feature phones.

As smartphones usually provide an advanced flexible operating system, they allow the implementation of all kinds of applications that can be developed and users can test different ideas using this new technology.

- Smartphones are an enabler for new technologies into the market. These devices bring new technology to the end user and allow them to get familiar with it.

6. What is the importance of Android in smartphones? And NFC?

Android is one of the most important platforms for NFC. We expect NFC apps to quickly appear on the market once NFC is available in smartphones. These will cover various applications for payment, ticketing, social networking, etc., so NFC implementations need to be complete and stable.

## 7. How big is the opportunity?

NFC will be one of the key features of smartphones. It will drive the usage of phones to a new level and quickly become a standard. Therefore, volumes and expectations will be high.

## 8. What challenges do you see?

During the previous months, the NFC technology deeply matured and therefore, most important challenges are now behind us.

The biggest remaining challenge we foresee is to avoid fragmentation, particularly to allow application interoperability. The use of common platforms, starting with APIs, is necessary to make durable actual developments and the NFC technology itself.

All actors from the industry are to be included in developing a common de facto standard API, avoiding potential fragmentation.

Proprietary niches seem today to be the highest risk and a potential factor to slow down the market, and this should be avoided.