



**ADVANCING NEAR  
FIELD COMMUNICATION  
TECHNOLOGY**



# NFC Technology Overview

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# Agenda

- Review of Use Cases
- Architecture Overview
- Relationship to Other Standards
- Status of NFC Forum Technical Work

# NFC Has Multiple Uses

Get information by touching smart posters



Use your NFC phone as an event ticket



Print from your camera by holding it close to the printer

Set up your wireless home office with a touch



NFC Consumer Device



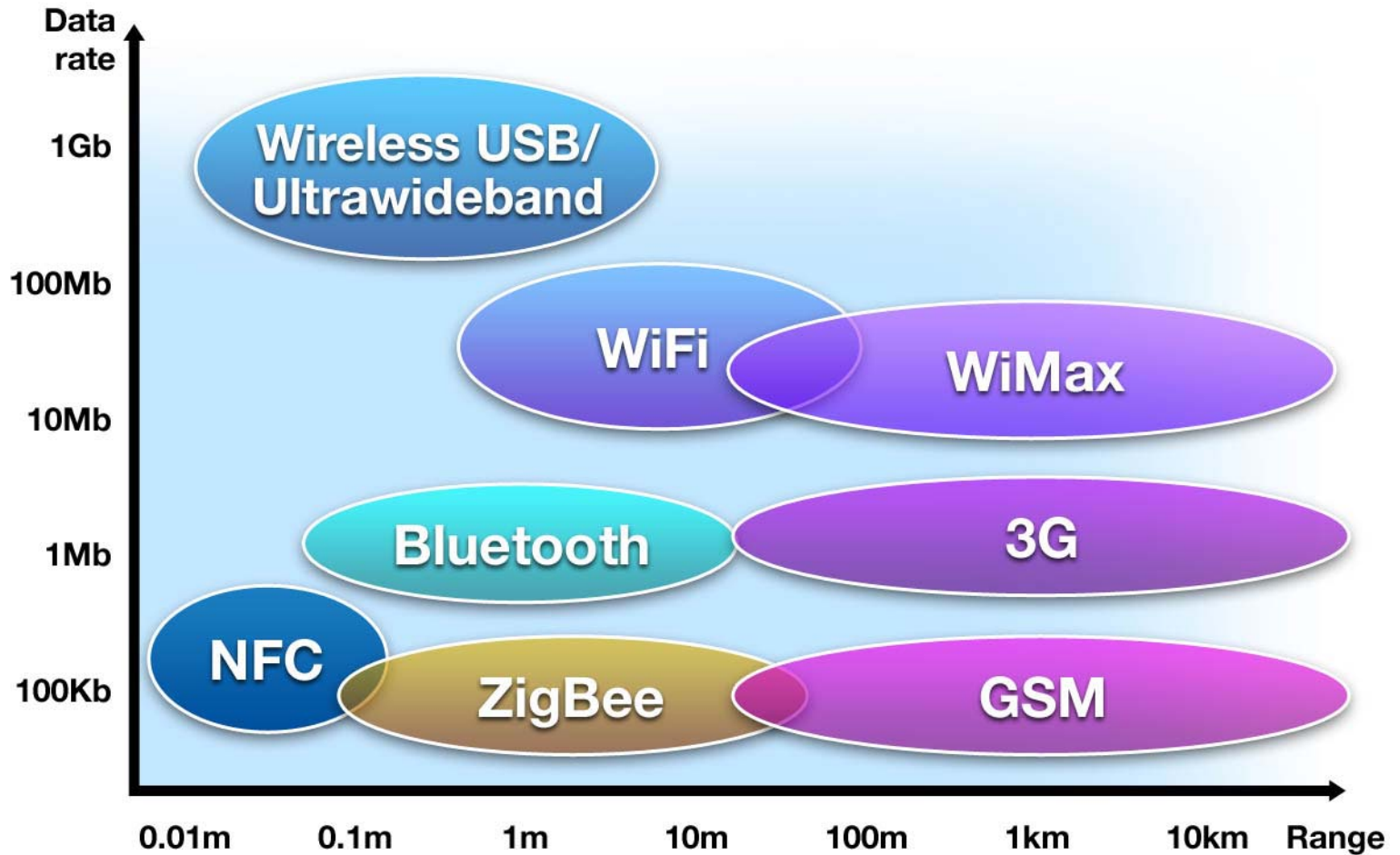
Share business cards with a touch

Get on the bus by waving your NFC phone



Pay for goods with a tap of your NFC phone

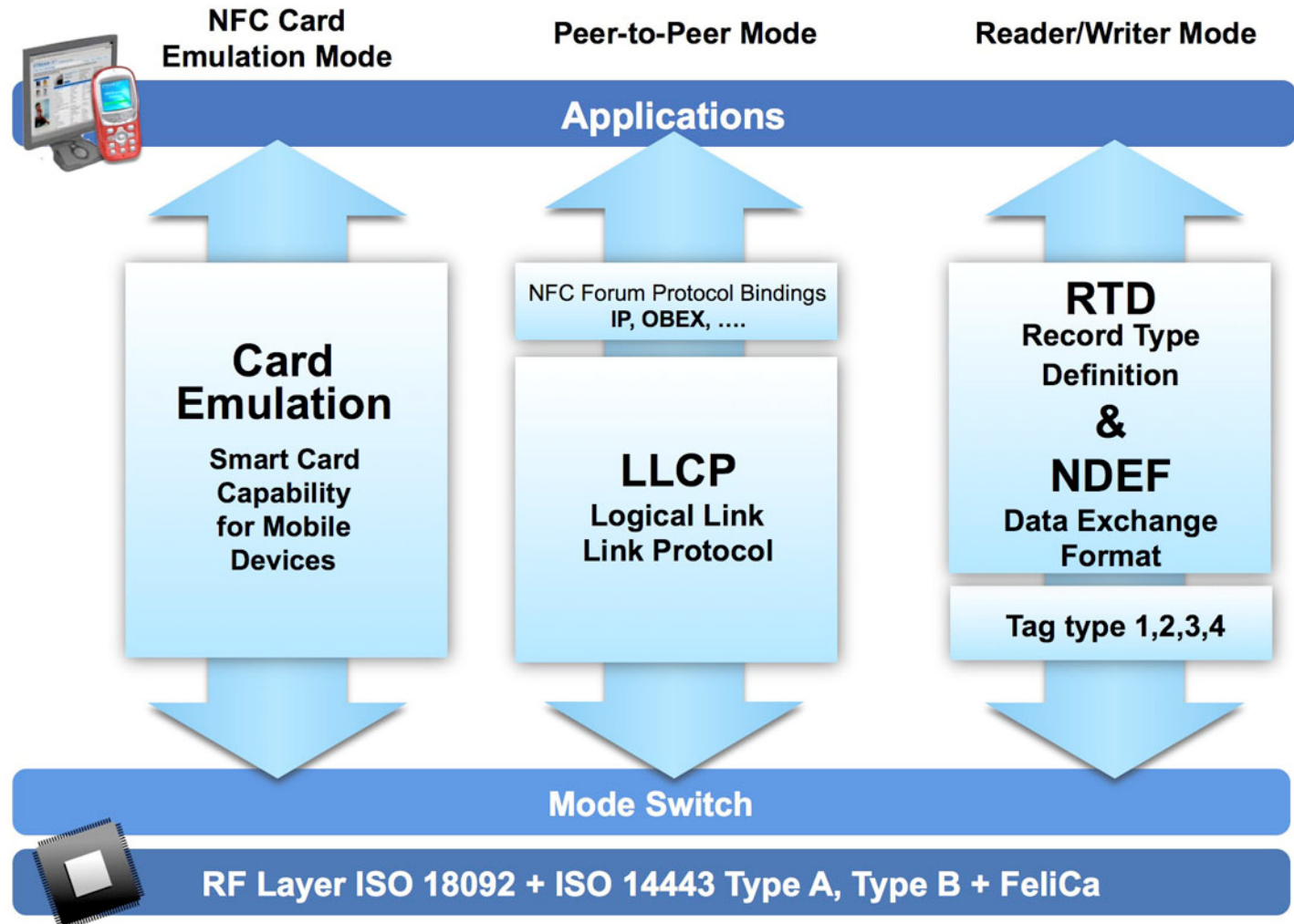
# Wireless Market Space



# Relationship to Other Standards

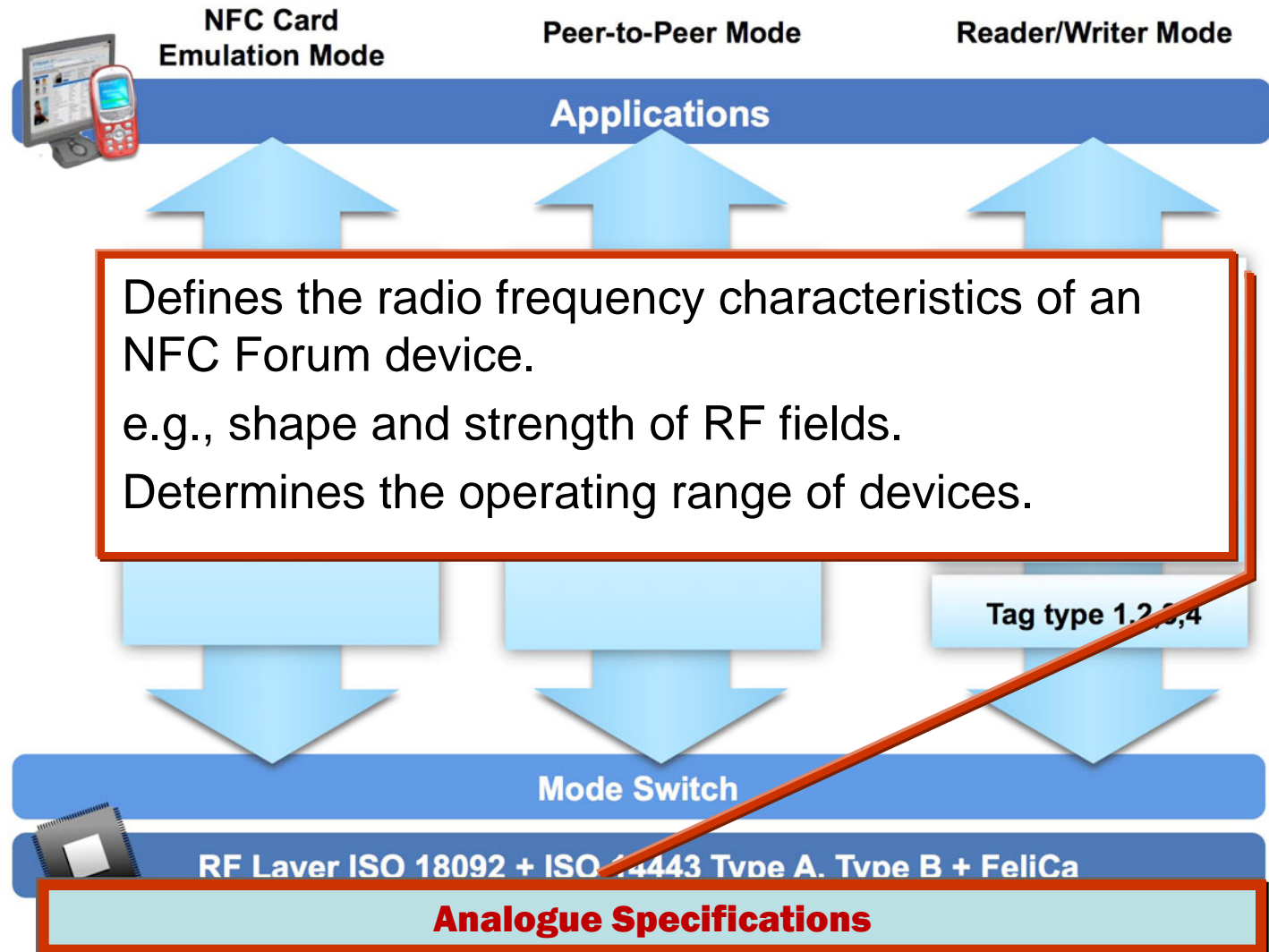
- Proximity and Vicinity Standards
  - ISO/IEC 14443
    - Included as a base standard in Digital Protocol and Analogue specifications.
  - ISO/IEC 18092 – NFCIP-1
    - Included as a base standard in Digital Protocol and Analogue specifications.
  - ISO/IEC 15693 – Vicinity
    - Out of scope of NFC Forum work.

# NFC Forum Technology Architecture

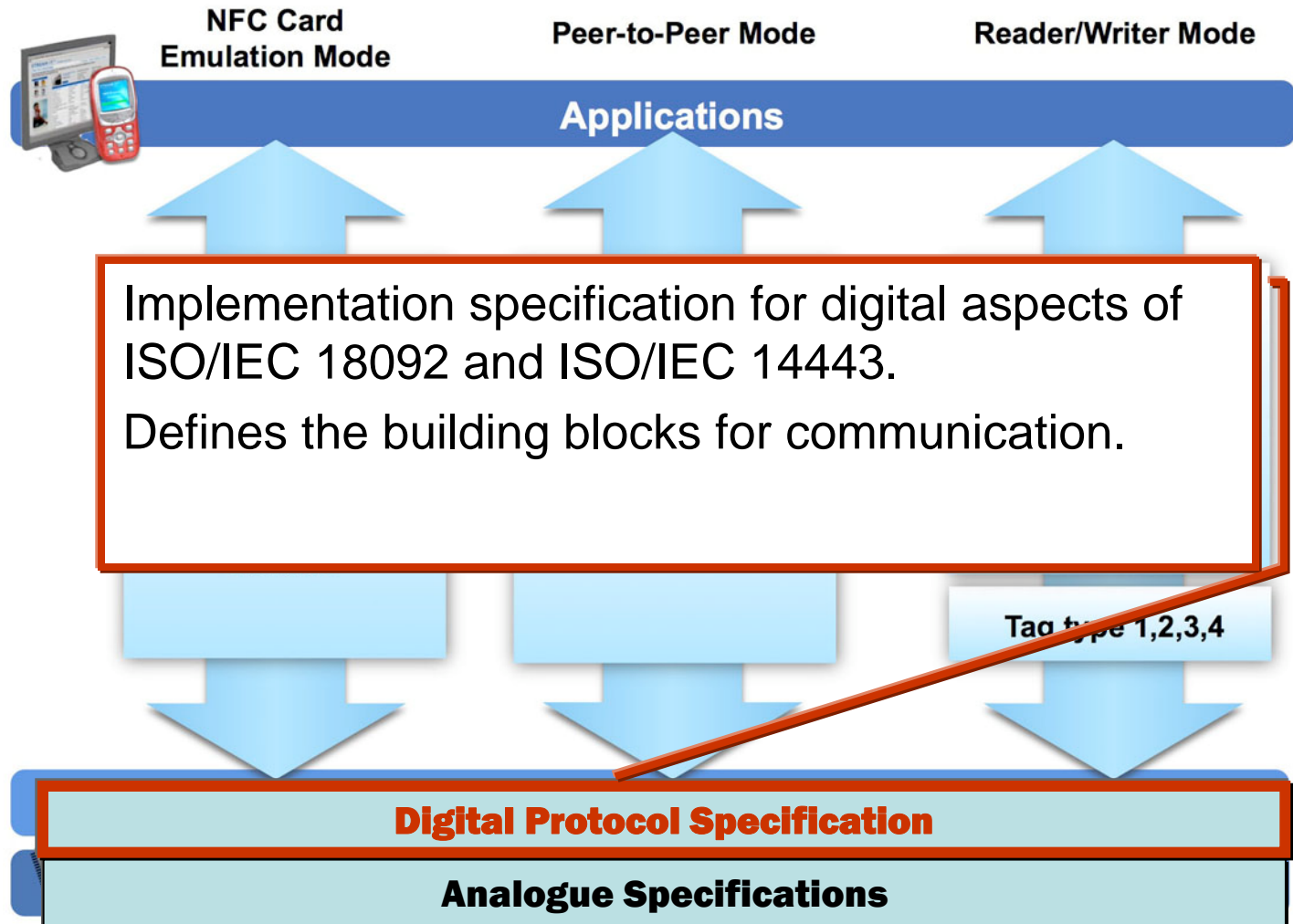


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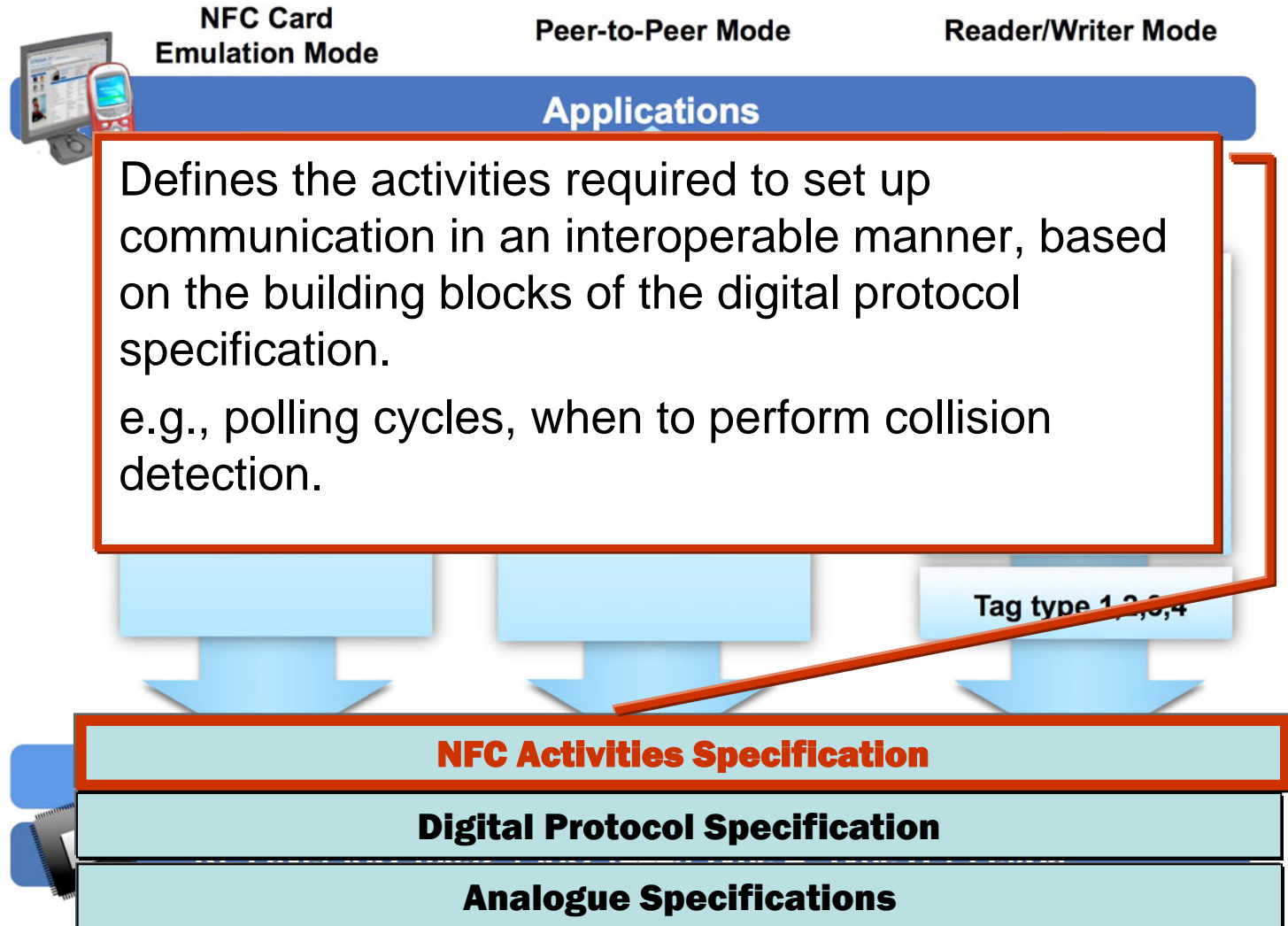
# NFC Forum Technology Architecture



# NFC Forum Technology Architecture

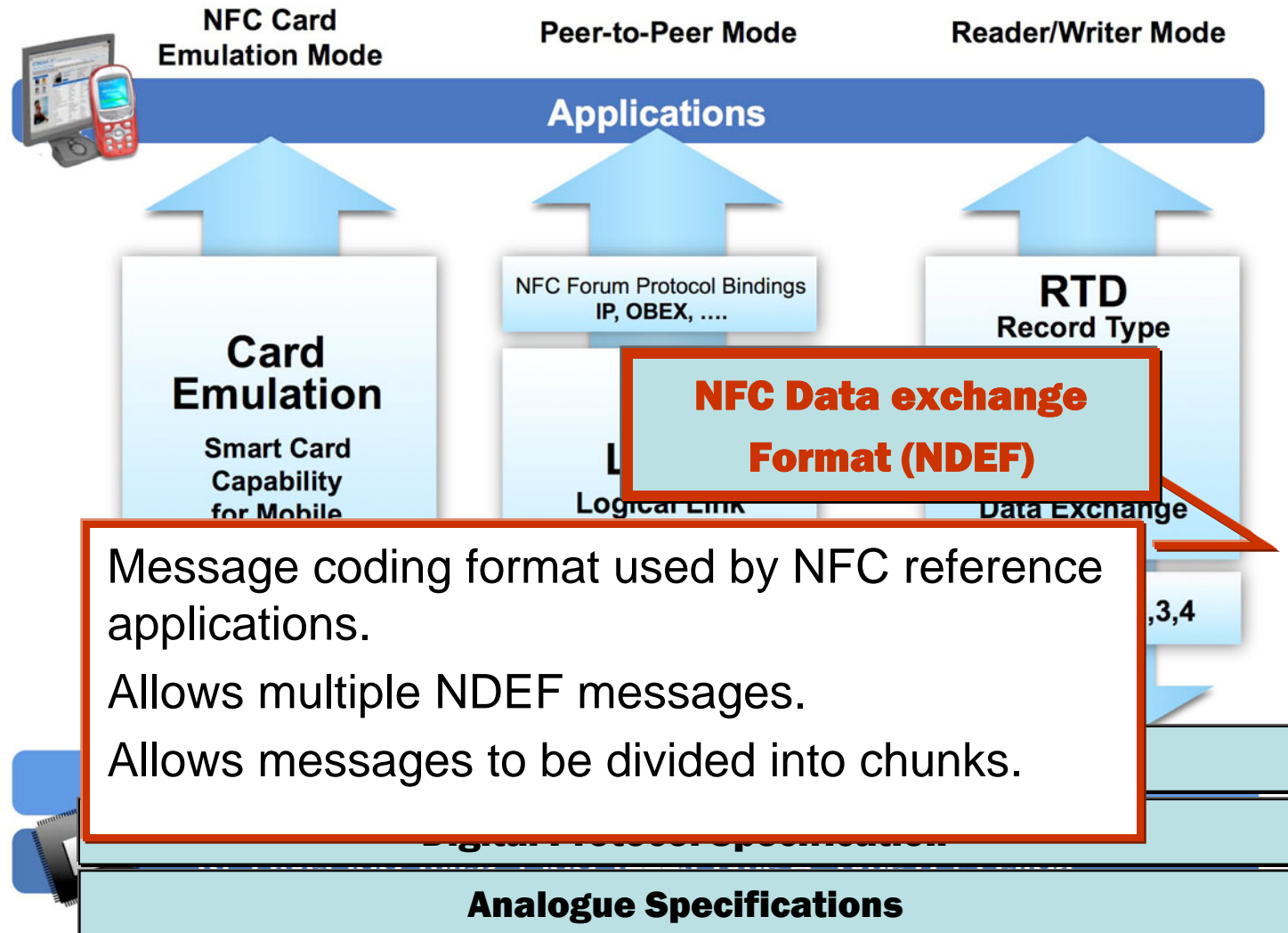


# NFC Forum Technology Architecture

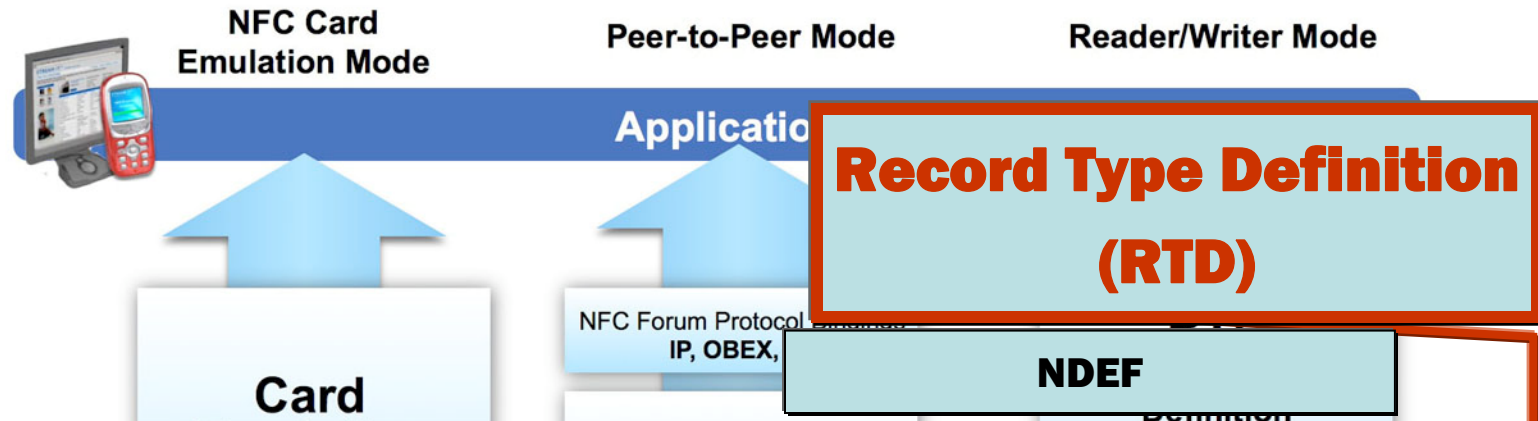


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# NFC Forum Technology Architecture

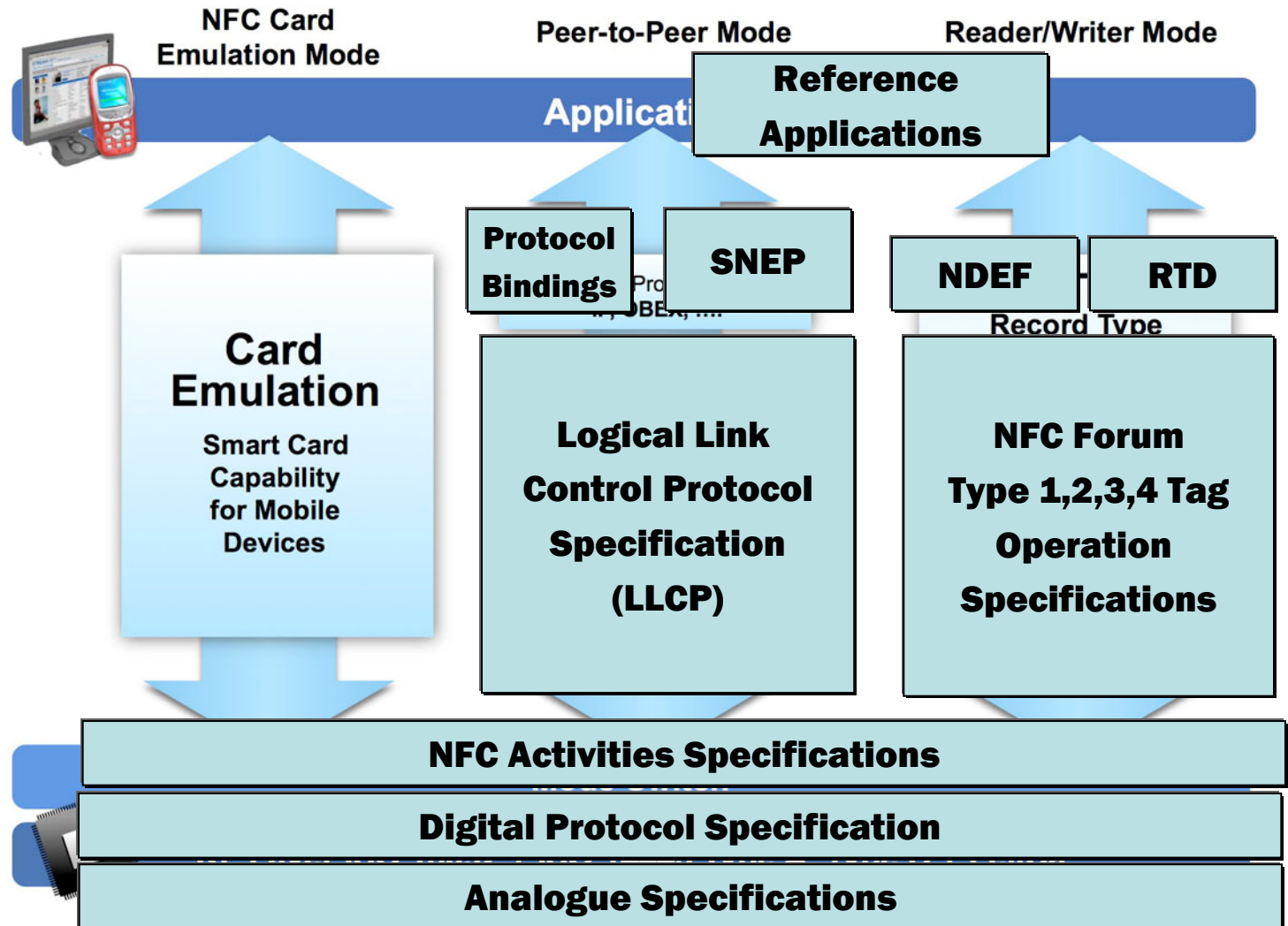


# NFC Forum Technology Architecture



Defines how to construct records in NDEF messages. Records may contain other records. Each record has a type, indicating what it contains. Record types are extensible – they may be defined by NFC Forum specifications (reference applications) or by other bodies (using domain name).

# NFC Forum Technology Architecture



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# Eleven Specifications Released to Date

## Specification

## Purpose

Specification	Purpose
<ul style="list-style-type: none"> <li>• <b>NFC Data Exchange Format (NDEF)</b></li> </ul>	<ul style="list-style-type: none"> <li>• Common data format for devices and tags</li> </ul>
<ul style="list-style-type: none"> <li>• <b>NFC Record Type Definition (RTD)</b> <ul style="list-style-type: none"> <li>• <b>Smart Poster RTD</b></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Standard record types used in messages between devices/tags</li> <li>• For posters with tags with text, audio or other data</li> </ul>
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• <b>Text RTD</b></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• For records containing plain text</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Uniform Resource Identifier (URI) RTD</b></li> </ul>	<ul style="list-style-type: none"> <li>• For records that refer to an Internet resource</li> </ul>
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• <b>Generic Control RTD</b></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Way to request an action</li> </ul>
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>• <b>Connection Handover</b></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• How to establish a connection with other wireless technologies</li> </ul>
<ul style="list-style-type: none"> <li>• <b>NFC Tag Types 1-4 Operation</b></li> </ul>	<ul style="list-style-type: none"> <li>• Defines R/W operation for NFC tags</li> </ul>

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# Work in Progress

- Candidate Specifications
  - Digital Protocol
  - LLCP
- Other Specifications in progress
  - Signed NDEF RTD
  - Simple NDEF Exchange Protocol (SNEP)
  - NFC Controller Interface (NCI)
  - RF Analogue
  - NFC Activities Specification
- Check for updates at:  
<http://www.nfc-forum.org/specs/>

# We're Close!

- GOAL: Basic level of interoperability
- Achievable for summer 2009!