



Open NFC SDK v4.3 - Release Notes

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History

Version	Date	Comments
0.1	May 25, 2011	Delivery for Open NFC 4.3.0 Beta
0.2	July 19, 2011	Release for Open NFC 4.3.0 r0
0.3	Sept. 19, 2011	Release for Open NFC 4.3.1
0.4	Oct. 15, 2011	Release for Open NFC 4.3.2
0.5	Nov. 14, 2011	Release for Open NFC 4.3.3 Beta
0.6	Dec. 5, 2011	Release for Open NFC 4.3.3

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1 Introduction

This document is the release notes of the NFC software stack “Open NFC - PC Edition v4.3.3”.

The C API version 4.3 is backward compatible with the previous version 4.x of the stack. The C APIs of the next versions 4.x of the product will remain backward compatible with this version of the API.

The changes in this version compared to the previous version are listed in the last section of the document.

The following tools are validated to recompile the examples of applications:

- “Visual C++ 2010 Express Edition” The Express edition is a free version of Visual C++ 2010. This tool may be downloaded from Microsoft MSDN web site.

These tools are optional. Other Win32 compilation tool chains may be used to recompile the Windows projects but they are not validated for this delivery.

2 Contents

This delivery contains the following elements:

- the implementation of Open NFC on windows XP/7,
- the NFC Simulator tool for PC
- the product documentation for the client API.
- some examples of applications and

The delivery contains the following files and folders:

./

- *REN_NFC_1011-224 Open NFC - PC Edition v4.2 - Release Notes vx.x.pdf*
The Release Notes of this product (this file).

./interfaces:

- The C header files containing the C API.

./porting/win32/win32_examples:

- Some examples of applications to test Open NFC - Core Edition under Windows XP/7. The document "MAN_NFC_0901-099 Open NFC - PC Edition - Examples - User's Manual.pdf" describes how to build and how to use the applications.

./porting/jni:

- The Java wrapper for the NFC API on top of Open NFC. This directory includes the Open NFC JAR file, the Java API documentation and some examples of Java applications in source code.
- *SIS_NFC_1003-188 Open NFC - Java Developer's Manual vx.x.pdf*
The Java API documentation

./security

- *FRS_NFC_1104-241 Open NFC - Security Stack vx.x.pdf*
- *STS_NFC_1104-242 Open NFC - Security Stack Specification vx.x.pdf*
The security stack specifications

./security/aclgen

- ACL Generator Tool, a PC tool designed to generate the ACL binary stream to be written into the EF(SE-ACF) file of "PKCS#15 Application"
- *FRS_NFC_1104-244 Open NFC - Security Stack - AC File Generator Tool vx.x.pdf*
The user manual for the ACL Generator tool.

./nfc_simulator:

- *NFC Simulator.exe*
The executable of the simulator of NFC Controller on PC.
- *MAN_NFC_0905-114 Open NFC - NFC Controller Simulator - User's Manual vx.x.pdf*
The manual describing the usage of the NFC Simulator.

./nfc_simulator/virtualcards:

- The files used for the simulation of the cards.

./connection_center

- *Connection Center.exe*
The connection center executable and the corresponding DLLs.

- *MAN_NFC_0904-106 Open NFC - Connection Center - User's Manual vx.x.pdf*
The user's manual for the Connection Center tool.

./documents:

- *SIS_NFC_0707-003 Open NFC - API Specification vx.x.chm*
The C API documentation for the applications.
- *STS_NFC_0707-001 NFC Tag Type 5 Specification vx.x.pdf*
Specification for the Type 5 Tags
- *STS_NFC_0707-002 NFC Tag Type 6 Specification vx.x.pdf*
Specification for the Type 6 Tags
- *DIV_NFC_0804-250 NFC Standards vx.x.pdf*
An overview of the NFC standards and products

3 Change Log

This section describes differences between the current release and the previous versions of the product.

3.1 Changes between version 4.3.3 and version 4.3.3 Beta

No change in the API.

3.2 Changes between version 4.3.3 Beta and version 4.3.2

This release includes new functionalities and some issue fixing.

Id.	Type	Description
WME-1125	Change backward compatible	Update the management of the P2P timeout (RWT) to match the LTO value. If Open NFC is in front of a bugged P2P Target device setting a RWT value higher than the LTO value (incompliant with NFC Forum specification), the P2P stacks was using the RWT value for the P2P timeout. The implementation is changed to force the timeout to be compliant with the LTO value.
WME-1323	Change	Removing support of compression in Type Limitations: - Type 5 tags on Picopass 32K are no longer supporting compression. These tags were not used.
WME-1322	Change backward compatible	Protection of stack reentrancy for the synchronous functions. Returning the new error W_ERROR_PROGRAMMING if a synchronous function is called from the event pump thread. The implementation is simply based on the stack level.
WME-1394	Change backward compatible	Controlling of the maximum timeout used with the card removal feature. The card removal feature sends inactive frames to the cards to check their presence. The timeout used for the detection was set by the card and was up to 5 seconds.
WME-1312	Change	Replacing proprietary type "tchar" defined in the source code with standard type: "char16_t". The proprietary type tchar was used for Unicode characters of the first Unicode pane encoded in Utf-16 (without escape sequence). The proprietary type "tchar" is no defined in ISO C++ 11 as "char16_t". This type is non-ambiguous.
WME-1309	Change	Use specific types for the boolean type. Required to improve portability in C++. The code of Open NFC was using the C++ keywords "bool", "true" and "false". These types were defined as "unsigned int" for C compiler. This was creating issues with C++ compilers using different definitions. Use a definition compliant with all C/C++ compilers such as GCC or Visual C++. typedef unsigned char bool_t; #define W_FALSE ((bool_t)0) #define W_TRUE (!W_FALSE)

3.3 Changes between version 4.3.2 and version 4.3.1 r0

No change in the API.

3.4 Changes between version 4.3.1 r0 and version 4.3.0 r0

This release includes new functionalities and some issue fixing.

Id.	Type	Description
WME-1062	Change	Detecting B Prime cards is only possible with WBPrimeListenToCardDetection() because the specification of an APGEN is mandatory. Removing the priority in the signature of the function WBPrimeListenToCardDetection(). The priority shall always be exclusive. WReaderListenToCardDetection() does not detect B Prime card any longer.
WME-1060	New Feature/Change	The new function WReaderGetIdentifier() returns the identifier associated with a connection. The function WKovioGetConnectionInfo() is obsolete and is no longer supported.

Id.	Type	Description
WME-1059	New Feature/Change	The new function WReaderExchangeData() added to exchange raw data with the reader protocols. This function allow de raw communication with Topaz tags, to the ISO 15693 tags, B Prime cards, FeliCa cards and ISO 15693 cards. The following function are replaced by WReaderExchangeData(): WBPrimeExchangeData(), and WBPrimeExchangeDataSync(). The following function are deprecated: WFeliCaExchangeData(), WFeliCaExchangeDataSync(), W14Part3ExchangeData(),W14Part3ExchangeDataSync(),W14Part4ExchangeData(), and W14Part4ExchangeDataSync().
WME-1058	Change	In most asynchronous function, the output buffers was documented as "unchanged after an error returned by the function". This is no longer the case, the content of the buffer is unspecified.
WME-1057	New Feature	The type 6 tag format used to read/write NDEF message on I Code tags is updated to support the new specification of NXP for the ICode tags.
WME-1056	New Feature/Change	The communication with UICC and removable Secure Element is now supported. The Secure Element API and the UICC API are unified. The previous UICC API is deprecated: <ul style="list-style-type: none"> The NFC Controller property W_NFCC_PROP_SE_NUMBER gives the total number of Secure Element. The porting variables P_SE_DEFAULT_PRINCIPAL_PROPRIETARY_<N> are no longer required. See the porting manual.
WME-1055	New Feature/Change	The stack now support the Wi-Fi pairing and the Bluetooth pairing defined by the NFC Forum. The Bluetooth pairing API and the Wi-Fi pairing API are updated to reflect the new functionalities.
WME-1054	New Feature	A new HAL is added to access to the external secure elements such as the UICC. This new API is used by the new functionalities of the SE API to communicate with the external SE. The implementation of the HAL is optional and only required if the new functionalities of the SE API are required.
WME-1053	New Feature	Adding the new function WNFCControllerActivateSwpLine(). This function may be used to activate a SWP line during the boot procedure.
WME-1052	New Feature	Adding the new function CSecurityGetConfiguration() in the Security HAL. This function checks if the security stack should be used for each SE slot and return the value the value of the default principal.
WME-1051	New Feature	Adding the new function CSecurityCheckImpersonatedIdentity() to check the access rights for an application.

3.5 Changes between version 4.3.0 r0 and version 4.3.0 Beta

This release includes new functionalities and some issue fixing.

Id.	Type	Description
WME-953	New Feature	Adding the support for the Kovio tags. Adding the API to read Kovio tags.
WME-954	New Feature	Including the automatic handling of the Jupiter Secure Element. The functions WJupiterSEApplyPolicy(), WJupiterSEApplyPolicySync(), WJupiterSEGetAID() and WJupiterSEGetAIDSync() are no longer present in the API, the implementation of the jupiter functions is automatic. See "APN_NFC_1011-231 Open NFC - Usage of the SE API with SecuRead 1.1.pdf" for the details. The configuration variable P_INCLUDE_JUPITER_SE is no longer required; the presence of the Jupiter applet is automatically detected.
WME-955	New Feature	Implementing the detection of the card removal during a reader session. The new function WReaderListenToCardRemovalDetection() is used to register a function called for the card removal events.
WME-963	New Feature	Updating the implementation of the Bluetooth pairing following the NFC Forum Handover specification and the Bluetooth 2.1 specification. The Bluetooth pairing API is updated to reflect the new functionality.
WME-964	New Feature/Change	Adding a new function W14Part3ExchangeDataEx() with detailed control on the frame handling. W14Part3ExchangeDataEx() allows the caller to specify how to process "proprietary" answers (ACK/NACK). The function W14Part3ExchangeData() no longer parses the command sent by the user (to manage ACK/NACK answers of Type 2 cards, eg Mifare UL, UL-C, My-d move; my-d NFC...). The CRC of the data is always checked with this function.
WME-966	New Feature/Change	The P2P implementation is now supporting the Active mode and the possibility to limit the protocol to F only for the target side. The structure tWP2PConfiguration is update to reflect the new functionalities.
WME-910	New Feature/Change	Added support of the detection of multiple Felica cards

3.6 Changes between version 4.3.0 Beta and version 4.2.3

This release includes new functionalities, the issue fixing is listed in version 4.3 (see above).

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Id.	Type	Description
WME-895	New Feature	<p>Integration of the Security Stack for the Secure Element(s). This stack implements the access control to the Secure Element(s)</p> <ul style="list-style-type: none"> • The security stack is always included. It is activated if the PKCS#15 applet is found in the Secure Element(s) • The functions W7816ExchangeAPDU(), W7816ExchangeAPDUSync(), W7816OpenLogicalChannel() and W7816OpenLogicalChannelSync() may return the new error W_ERROR_SECURITY • The new compilation variables P_SE_DEFAULT_PRINCIPAL_<X> are defined to set the default principal of each Secure Element. • A new tool is provided to generate the policy files used by the PKCS#15 applet • The PKCS#15 applet is provided as a Java card application compliant with the Secure Element and the UICC. • Adding in the porting layer the security functions CSecurityCreateAuthenticationData(), CSecurityDestroyAuthenticationData and CSecurityCheckIdentity(). • Adding the security function WSecurityAuthenticate() in the API. • Modification of the signature of the porting functions: PDriverOpen(), CServerRead(), CServerWrite() and CServerCopyToClientBuffer().
WME-894	New Feature	<p>Adding the new error code W_ERROR_SECURITY This new error is generated by the new security features of the stack.</p>
WME-893	Change	<p>The tools for Windows 7 compilation are updated from MS Visual Studio 2008 to MS Visual Studio 2010</p>
WME-904	New Feature	<p>W7816GetResponseAPDUData() returns the FCI data received in response to the SELECT AID APDU sent by W7816OpenLogicalChannel()</p>
WME-908	New Feature	<p>Adding a direct access to the exchange function of the ISO 18092 layer. The new function WFeliCaExchangeData() is added in the API.</p>
WME-909	New Feature	<p>Adding the function WFeliCaSelectSystem() to select the sub-system of a FeliCa card.</p>
WME-910	New Feature	<p>Adding the support for the detection of multiple FeliCa cards. Adding the function WFeliCaGetCardNumber() and WFeliCaGetCardList() The function WFeliCaGetConnectionInfo() is deprecated.</p>
WME-911	New Feature	<p>Adding the support for Infineon my-d cards. Adding a complete set of API for my-d Move cards and my-d NFC cards.</p>
WME-912	New Feature	<p>Adding support for B Prime card reader/writer functions. Adding a complete set of API to read B Prime cards.</p>
WME-952	Change	<p>Changing the behavior of the closing of an ISO 7816 Connection. The previous behavior was forcing the closing of the logical channels when the main connection was closed. The new behavior is to wait for the explicit closing of the logical channel before closing the main connection.</p>