|  |  |
| --- | --- |
| Project | **IEEE 802.21.1 Media Independent Services**  **<**[**http://www.ieee802.org/21/**](http://www.ieee802.org/21/)**>** |
| Title | **Suggested remedy for Cmt #130 and #131 of LB8** |
| DCN | **21-16-00-0012-02-REVP** |
| Date Submitted | **January 20, 2016** |
| Source(s) | Yoshikazu Hanatani (Toshiba) |
| Re: | Session #72, Atlanta |
| Abstract | This contribution suggest a remedy on the MIS\_Push\_Certificate primitives. |
| Purpose | Suggested remedy for Cmt #130, 131 in LB8. |
| Notice | This document has been prepared to assist the IEEE 802.21 Working Group. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein. |
| Release | The contributor grants a free, irrevocable license to the IEEE to incorporate material contained in this contribution, and any modifications thereof, in the creation of an IEEE Standards publication; to copyright in the IEEE’s name any IEEE Standards publication even though it may include portions of this contribution; and at the IEEE’s sole discretion to permit others to reproduce in whole or in part the resulting IEEE Standards publication. The contributor also acknowledges and accepts that IEEE 802.21 may make this contribution public. |
| Patent Policy | The contributor is familiar with IEEE patent policy, as stated in [Section 6 of the IEEE-SA Standards Board bylaws](http://standards.ieee.org/guides/opman/sect6.html#6.3) <[http://standards.ieee.org/guides/bylaws/sect6-7.html#6](http://127.0.0.1:4664/cache?event_id=757737&schema_id=1&s=5X0vID10lu_E6yrIkWkNd4Wz2H8&q=hancock)> and in *Understanding Patent Issues During IEEE Standards Development* <http://standards.ieee.org/board/pat/faq.pdf> |

Problem:

A method for setting CertificateStatus is not completely described.

A role of CertificateStatus is not completely described.

Suggested remedy:

Change as follows.

1. * 1. **MIS\_Push\_Certificate**
        1. **MIS\_Push\_Certificate.request**
           1. **Function**

This primitive is generated by an MIS User at the PoS to send a Certificate to a destination PoS(es) or MN(s).

* + - * 1. **Semantics of service primitive**

MIS\_Push\_Certificate.request (

DestinationIdentifier,

Certificate

)

Parameters:

|  |  |  |
| --- | --- | --- |
| **Name** | **Data Type** | **Description** |
| DestinationIdentifier | MISF\_ID | Specifies the recipient(s) of the credential. |
| Certificate | CERTIFICATE | A PoS’s X.509 certificate |

* + - * 1. **When generated**

A PoS generates this primitive for initial provisioning of credentials or for credential updates.

* + - * 1. **Effect on receipt**

Upon receipt of this primitive, the MISF on the PoS sends the corresponding MIS\_Push\_Certificate request message to the destination MN(s) or PoS(es).

* + - 1. **MIS\_Push\_Certificate.indication**
         1. **Function**

This primitive is generated by an MISF to notify a local MIS User that an MIS\_Push\_Certificate request message has been received.

* + - * 1. **Semantics of service primitive**

MIS\_Push\_Certificate.indication (

SourceIdentifier,

Certificate

)

Parameters:

|  |  |  |
| --- | --- | --- |
| **Name** | **Data Type** | **Description** |
| SourceIdentifier | MISF\_ID | Identifies the sender of the credential. |
| Certificate | CERTIFICATE | A PoS’s X.509 certificate |

* + - * 1. **When generated**

This primitive is generated by an MISF when an MIS\_Push\_Certificate request message is received.

* + - * 1. **Effect on receipt**

Upon receipt of this primitive, an MIS user on an MN or a PoS verifies a X.509 certificate in the Certificate. The result of verification is provided back to push requester via CertificateStatus parameter in MIS\_Push\_Certificate.response. The CertificateStatus parameter value is set as follows. If the X.509 certificate is revoked by a certificate revocation list then CertificateStatus is set to “Certificate Revoked,” else if the X.509 is expired then CertificateStatus is “Certificate Expired,” else if a signature in X.509 is not valid then CertificateStatus is set to “Verification Failed”, else CertificateStatus is set to “Certificate Valid.”

* + - 1. **MIS\_Push\_Certificate.response**
         1. **Function**

This primitive is generated by an MIS User to acknowledge receipt of a credential from a PoS.

* + - * 1. **Semantics of service primitive**

MIS\_Push\_Certificate.response (

DestinationIdentifier,

CertificateStatus

)

Parameters:

|  |  |  |
| --- | --- | --- |
| **Name** | **Data Type** | **Description** |
| DestinationIdentifier | MISF\_ID | Specifies the sender of the credential. |
| CertificateStatus | CERT\_STATUS | Indicates whether a credential has been verified and is now in use by the recipient.  One of the following values is used:  1: Certificate Valid  2: Certificate Revoked  3: Certificate Expired  4: Verification Failed |

* + - * 1. **When generated**

An MIS User generates this primitive after receipt and processing of credential.

* + - * 1. **Effect on receipt**

An MIS\_Push\_Certificate response message is sent back to the sender of the credential to indicate a status of a credential by providing the CertificateStatus. When CertificateStatus is “Certificate Valid,” the validated credential public keys can be utilized for multicast message exchange within their expiration period.

* + - 1. **MIS\_Push\_Certificate.confirm**
         1. **Function**

This primitive is generated by an MISF that receives an MIS\_Push\_Certificate response message to indicate the status of the credential inspection.

* + - * 1. **Semantics of service primitive**

MIS\_Push\_Certificate.confirm (

SourceIdentifier,

CertificateStatus

)

Parameters:

|  |  |  |
| --- | --- | --- |
| **Name** | **Data Type** | **Description** |
| SourceIdentifier | MISF\_ID | Identifies the remote MISF that invoked MIS\_Revoke\_Certificate.response. |
| CertificateStatus | CERT\_STATUS | Indicates whether a credential has been verified and is now in use by the recipient. |

* + - * 1. **When generated**

The MISF that receives an MIS\_Push\_Certificate response message generates this primitive to indicate the status of the credential inspection.

* + - * 1. **Effect on receipt**

If CertificateStatus is “Certificate Valid”, then it indicates to the MIS User that a receiver of the MIS\_Push\_Certificate request message is capable of receiving signed multicast messages.