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| 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** |
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| 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. |
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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 Valid2: Certificate Revoked3: Certificate Expired4: 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.

* + 1.