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Re:	Contribution on comments to IEEE 802.16g-05/008
Abstract	In this contribution, we describe the system version information collection procedure and service primitives that could be exchanged between the BS and the NCMS entities.
Purpose	adoption
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Version Information Collection Primitives for Configuration Management

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Introduction

Currently, the update of software and hardware becomes more frequent, which consequently lead to more complexity and frequent changing of software and hardware's version information. In order to implement efficient management, each of network elements' version information should be acquired conveniently and efficiently, as well as accurately and timely. This proposal makes it possible to solve these problems effectively.

Summary of the Proposed Remedy

Information collection includes two basic functions, initiative inquiry and initiative report. Initiative inquiry is for initiatively getting BS's version information, and initiative report is for processing the changing of BS system version. Four primitives are defined to describe these two basic functions as follow. Brief explanation is included in the table below.

Primitive	Direction	Primitive Contents
CONFIGURATION_INFOR_REPORT_INDICATION	BS -> NCMS	Software version information, Hardware version information, List of extensive parameters (for labeling the changing status of version), error information, etc
CONFIGURATION_INFOR_REPORT_CONFIRMATION	NCMS -> BS	Result of processing
CONFIGURATION_INFOR_QUERY_REQUEST	NCMS -> BS	Extensive parameter, for defining inquiry conditions
CONFIGURATION_INFORMATION_QUERY_RESPONSE	BS -> NCMS	Software version information, Hardware version information, error information

CONFIGURATION_INFOR_REPORT_INDICATION/CONFIRMATION primitives are for BS to automatic report the change of related version information to NCMS, whenever it occurs.
CONFIGURATION_INFOR_QUERY_REQUEST/RESPONSE primitives are for initiating inquiry of BS system version information when needed.

Proposed Text

[*Insert section 14.5.2.5 as follow*]

14.5.2.5 Version Configuration

Version configuration management is a basic and important management function. It can be divided into version information collection, version match, version upload/download, version build and so on.

14.5.2.5.1 Version information collection

Version information collection is one of the version configuration management functions that are used to acquire each of network elements' version information conveniently and efficiently, as well as accurately and timely.

14.5.2.5.1.1 Procedure of version information collection

When the version information of one element is changed, the BS shall send the latest information to NCMS. The NCMS shall log the latest information and notify the user that the version information of one element in BS is changed. At the same time the NCMS shall response with success log or not. This is a procedure of initiating inquiry, as figure xxx shows.

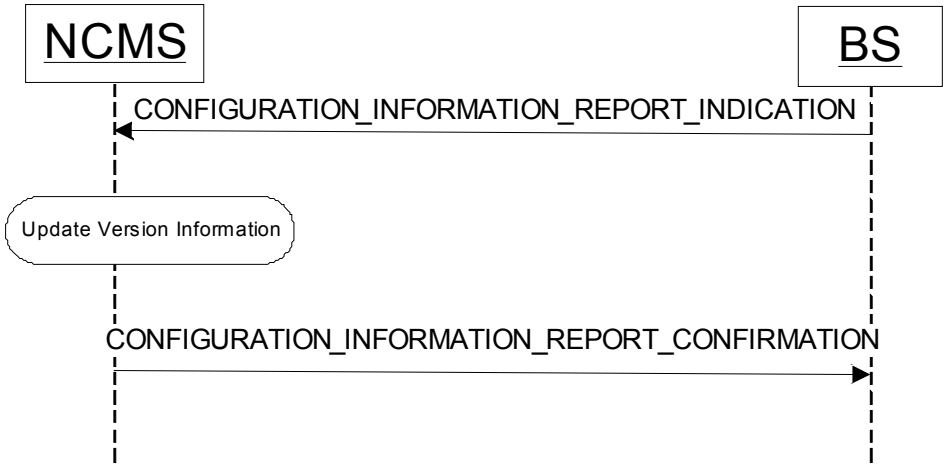

Figure xxx BS initiats version information update

Another procedure is when NCMS initiates the inquiry to detect the version information. First the NCMS sends version information query request to BS. When BS receives the request, it will respond NCMS with the latest version information. NCMS shall update the version information and notify user that the version information of one element in BS is changed. Figure yyy shows this case.

Figure yyy NCMS initiative inquiry version information

14.5.2.5.1.2 Service primitives

14.5.2.5.1.2.1 CONFIGURATION_INFOR_REPORT_INDICATION

14.5.2.5.1.2.1.1 Function

For this primitive, BS takes the initiative to report version-changing information to NCMS when the version information is changed.

14.5.2.5.1.2.1.2 Semantics of this primitive

The parameters of this primitive are defined as follows:

CONFIGURATION_INFO_REPORT_INDICATION

{

SOFTWARE_INFORMATION,

HARDWARE_INFORMATION,

}

SOFTWARE_INFORMATION

Contains the latest software version information

HARDWARE_INFORMATION

Contains the latest hardware version information

14.5.2.5.1.2.1.3 When generated

When the version information is changed in BS, it can initiate with the reporting of the latest version information.

14.5.2.5.1.2.1.4 Effect of receipt

The update version information shall be saved and reported to users after NCMS receives the primitive.

14.5.2.5.1.2.2 CONFIGURATION_INFOR_REPORT_CONFIRMATION

14.5.2.5.1.2.2.1 Functions

This primitive is used by NCMS to response to BS that it has received the primitive and whether it is successful in saving the latest version information.

14.5.2.5.1.2.2.2 Semantics of this primitive

The parameters of this primitive are as follows:

CONFIGURATION_INFO_REPORT_CONFIRMATION

{

Result

}

Result

When the NCMS successfully updates the latest version information, it responses with success tag, else with false tag.

14.5.2.5.1.2.2.3 When generated

When NCMS receives CONFIGURATION_INFO_REPORT_INDICATION, it shall send the response primitive to BS.

14.5.2.5.1.2.2.4 Effect of receipt

When BS receives the response primitive, it shall detect the result in the primitive. If the result is false, BS shall resend CONFIGURATION_INFO_REPORT_INDICATION.

14.5.2.5.1.2.3 CONFIGURATION_INFOR_QUERY_REQUEST

14.5.2.5.1.2.3.1 Functions

This primitive is used when NCMS initiates version information inquiry to BS. The inquiry conditions may also be pre-configured.

14.5.2.5.1.2.3.2 Semantics of this primitive

The parameters of this primitive are defined as follows:

CONFIGURATION_INFOR_QUERY_REQUEST

{

CONDITION

}

CONDITION

Contains the information used to label the inquiry conditions.

14.5.2.5.1.2.3.3 When generated

NCMS issues this primitive, when users need to initiatively acquire version information of BS.

14.5.2.5.1.2.3.4 Effect of receipt

BS shall begin to collect related version information, and send the result to NCMS when it receives the primitive.

14.5.2.5.1.2.4 CONFIGURATION_INFOR_QUERY_RESPONSE

14.5.2.5.1.2.4.1 Functions

This primitive is used to send the inquire result of the version information from BS to NCMS.

14.5.2.5.1.2.4.2 Semantics of this primitive

The parameters of this primitive are defined as follows:

CONFIGURATION_INFOR_QUERY_RESPONSE

{

SOFTWARE_INFORMATION,

HARDWARE_INFORMATION,

STATUS_INFORMATION

}

SOFTWARE_INFORMATION

Contains the updated software information

HARDWARE_INFORMATION

Contains the updated hardware information

STATUS_INFORMATION

Contains the information which version information is correct and which has error.

14.5.2.5.1.2.4.3 When generated

After BS gets the version information, it will send the response primitive to NCMS.

14.5.2.5.1.2.4.4 Effect of receipt

When NCMS receives the primitive, it should update the related version information and display the result to users.