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Re:	Contribution on comments to IEEE 802.16g-05/008
Abstract	In this contribution, we propose to define some primitives for performance monitoring management.
Purpose	Adoption
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Performance management primitives for Performance Monitoring Procedures

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1. Introduction

Network performance management plays a very important role in the overall network management system. It provides ways for the end user to collect performance related information on different levels of network components. These collected performance data can be used to fine tune the system performance.

This contribution, proposes the definition of some generic performance management primitives which can be used to define 802.16 system specific performance monitoring and other performance related procedures.

2. Summary of the Proposed Remedy

In this contribution, we have defined three primitives to support performance management between BS and NCMS which are described briefly in the following table.

Primitive	Direction	Primitive Contents
M_PM.command	BS <- NCMS	Object ID, Action Type, PM_Configuration Attribute_List_ID, PM CONFIGURATION ATTRIBUTE LIST
M_PM.confirmation	BS -> NCMS	Object ID, Action Type, PM_Configuration Attribute_List_ID, PM CONFIGURATION ATTRIBUTE LIST
M_PM.notification	BS -> NCMS	Object ID, PM report information

As shown in Figure 1, the procedure is as the following:

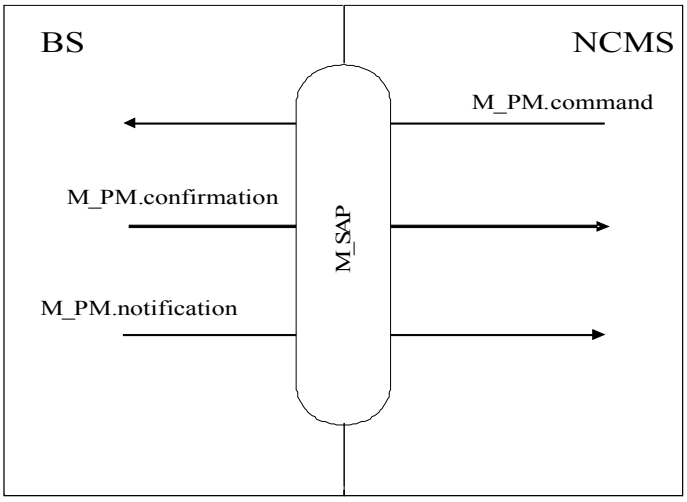

Figure 1 Example of primitive flow of Performance monitoring

3. Proposed Text Changes

[*Insert section 14.5.4 as follow*]

14.5.4 Performance Management

14.5.4.1 Performance Monitoring Procedure

The performance monitoring primitives are a set of primitives for supporting the performance monitoring procedure between BS and NCMS.

Figure 306a shows the example of performance monitoring procedure

Figure 306a Example of primitive flow of Performance monitoring

14.5.4.1.1 M_PM.command

14.5.4.1.1.1 Function

This primitive is used by NCMS to inform the BS of the performance monitoring configuration information, which includes the Object identifier, Action type, PM Configuration Attribute List.

14.5.4.1.1.2 Semantics of the service primitives

The parameters of the primitive are as follows:

```
M_PM.command
{
    Object ID
    Action Type
      PM_Configuration Attribute_List_ID
      PM Configuration Attribute List
    {
        Performance Item Name
        Performance Monitor Parameters
        Performance Report Parameters
    }
```

}

Object ID

This is the object identifier. It may be, for example, the BS_ID, MS_ID or SF_ID etc. according to the performance monitor requirement;

Action Type

The Action Type defines the specific action performed by the BS. The possible Action Types are CREATE, REMOVE, SUSPENT, RESUME, GET and SET.

PM_Configuration Attribute_List_ID

This uniquely identifies the PM_Attribute List

PM Configuration Attribute List

{

Performance Item Name

The performance monitoring item name

Performance Monitor Parameters

It defines the information of monitor action type (periodic or event triggered), monitoring granularity (e.g. 5ms, 10ms, etc), etc. When Action Type is set to GET, REMOVE, SUSPEND or RESUME, this field is ignored.

Performance Report Parameters

It defines the information of report type (periodic or event triggered) , reporting granularity (e.g. 1 hour, 1 day, etc.). When Action Type is set to GET, REMOVE, SUSPEND or RESUME, this field is ignored.

}

14.5.4.1.1.3 When generated

This primitive is used by the NCMS when it needs to start or stop monitoring the performance of the system on per BS, SS/MS or specific call based performance data. This primitive also can be used by NCMS to retrieve performance measurement from the BS immediately.

14.5.4.1.1.3 Effect of receipt

The BS will configure the performance monitoring items according to the received primitive. The BS action is defined based on Action Type in the primitive according to the following table:

Table 454 Action and Action Type

Action Type	**BS Action**
GET	The BS reports all performance measurements to NCMS according to PM Configuration Attribute List immediately.
SET	The BS configures the performance monitoring items according to PM Configuration Attribute List
CREATE	The BS creates a new PM Configuration Attribute List
REMOVE	The BS removes a PM Configuration Attribute List
SUSPEND	The BS suspends a provisioned PM_Configuration Attribute List
RESUME	The BS resumes the provisioned PM_Configuration Attribute List

14.5.4.1.2 M_PM.confirmation

14.5.4.1.2.1 Function

This primitive is used by BS to response to the NCMS of M_PM.command primitive, which confirms the proposed performance monitoring information by NCMS.

14.5.4.1.2.2 Semantics of the service primitives

The parameters of the primitive are as follows:

M_PM.confirmation
{
Object ID
Action Type
PM_Configuration Attribute_List_ID
PM Configuration Attribute List
{
Performance Item Name
Status
Performance Item Report Information
}
}

Object ID
This is the object identifier. It may be, for example, the BS ID, MS ID or SF ID etc. according to the performance monitor requirement;

PM_Configuration Attribute_List_ID
This uniquely identifies the PM_Attribute List

PM Configuration Attribute List
{
Performance Item Name
It is the name of performance monitoring item.
Status
This indicates the result of configuration performance item, it can be SUCCESS or FAILURE
Performance Item Report Information
The performance item report information. It could be the monitoring item value or other correspondent information. This information is only valid if the Action Type is set to GET.
}

14.5.4.1.2.3 When generated

This primitive is generated by the BS to confirm start or stop performance monitor when it receives the M_PM.iCommand.

14.5.4.1.2.4 Effect of receipt

The NCMS checks the status in the primitive and continues next step accordingly.

14.5.4.1.3 M_PM.notification

14.5.4.1.3.1 Function
This primitive is used by BS to report the performance monitoring items information.

14.5.4.1.3.2 Semantics of the service primitives
The parameters of the primitive are as follows:

M_PM.notification
{
Object ID
PM_Configuration Attribute_List_ID
PM Reporting Item List
{
Performance Item Name
Performance Item Report Information
}
}

Object ID
It is the object identifier and can be, for example, the MS ID, SF ID etc. according to the performance monitor requirement;

PM_Configuration Attribute_List_ID
This uniquely identifies the PM_Attribute List

PM Reporting Item List

{
Performance Item Name
It is the name of the performance reporting item.
Performance Item Report Information
The performance item report information. It could be the monitoring item value or other correspondent information
}

14.5.4.1.3.3 When generated

This primitive is generated by the BS to report the required performance metrics based on the report mode in the former performance monitoring.

14.5.4.1.3.3 Effect of receipt

The NCMS will take corresponding actions after receiving this report.