Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Proposal for updating 802.16 standard architecture reference model**
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Re:	Contribution on IEEE 802.16-2004/IEEE802.16g
Abstract	This contribution proposed to update the system architecture reference model of 802.16-2004. And remove the corresponding description in 16g.
Purpose	Adoption
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Proposal for updating 802.16 standard architecture reference model

Huawei Technologies.

Introduction

This contribution proposes updating the 802.16 standard architecture reference model to give more explicit network architecture description.

Proposed Text

1. [Change the text in section 1.4 as following]

1.4 Reference Model

1.4.1 Network Reference Model

The Figure A describes a network reference model along with the interfaces that are within the scope of this specification. Multiple SS or MS maybe attached to a BS. ~~The SS communicate to the BS over the U interface using a Primary Management Connection or a Secondary Management Connection. MS typically only utilize the Primary Management Connection over the U interface for management and related control functions.~~ SS or MS communicate to the BS over the U interface using a Primary Management Connection, a Basic Management Connection or a Secondary Management Connection.

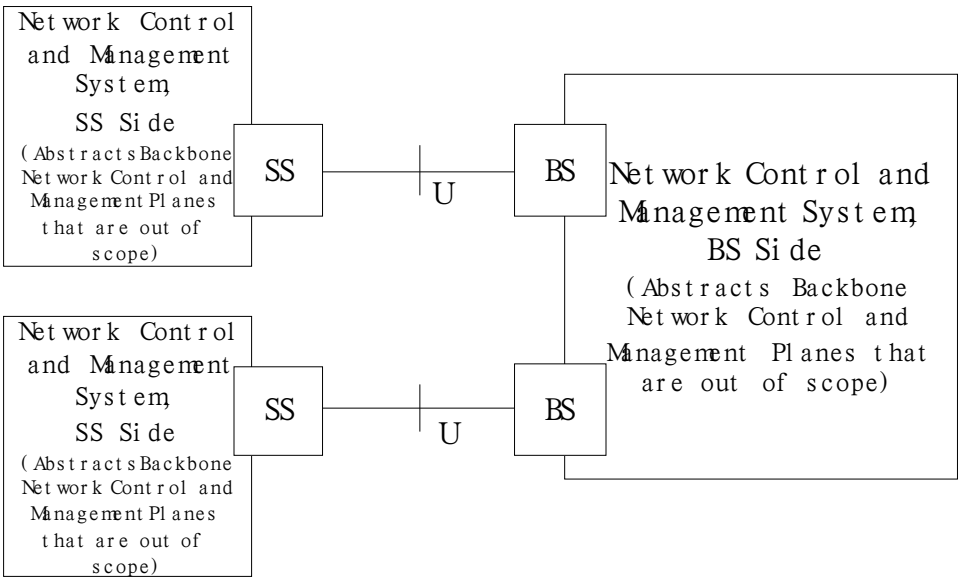

Figure A – Network Reference Model

1.4.1.1 Network Control and Management System(NCMS)

~~This abstraction is detailed in Figure y to show the different functional entities that make up such a Network Control and Management System. These entities may be centrally located or distributed across the network. The exact functionality of these entities and their services is outside the scope of this specification but shown here for illustration purposes and to better enable the description of the management and control procedures.~~

This abstraction is detailed shown the different functional entities that make up a Network Control and

Management System. For different network elements, the corresponding NCMS functions are also different. The exact functionality of these entities and their services is outside the scope of this specification but shown here for illustration purposes and to better enable the description of the management and control procedures.

The illustrated BS side NCMS functions are shown in Figure B.

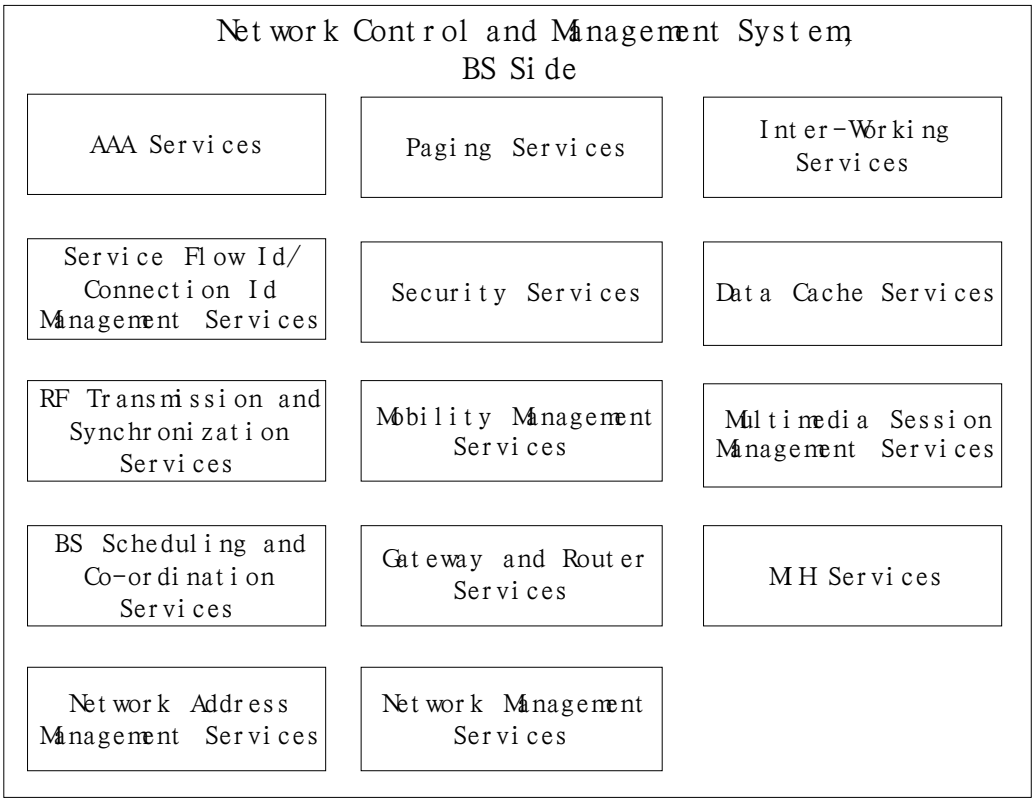

Figure B Illustration of BS side Network Control and Management System

The illustrated SS side NCMS functions are shown in Figure C.

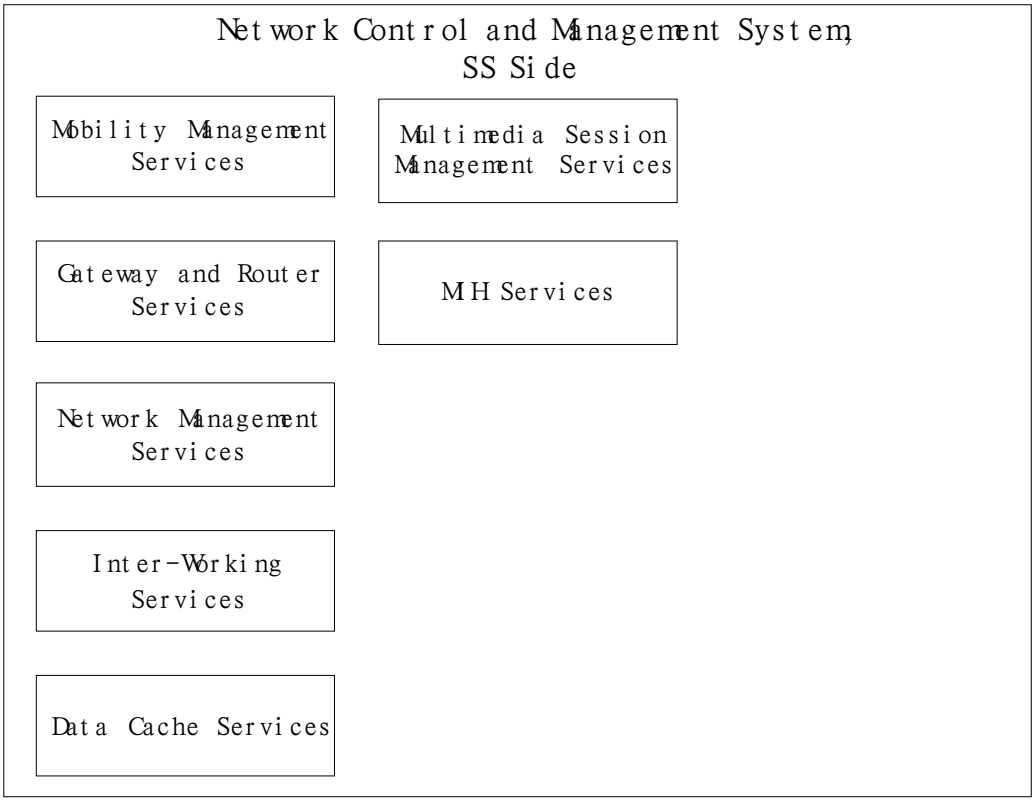

Figure C Illustration of SS side Network Control and Management System

~~NCMS protocols are not defined in this specification, however information elements (IEs) and protocol primitives for these IEs are exposed using Service Access Points (SAP). This includes CS, MAC and PHY layer context information used by NCMS protocols to manage and control the air interface. Every BS is assumed to be part of an NCMS and therefore as shown in Figure 3.~~

The system architecture is shown in Figure D.

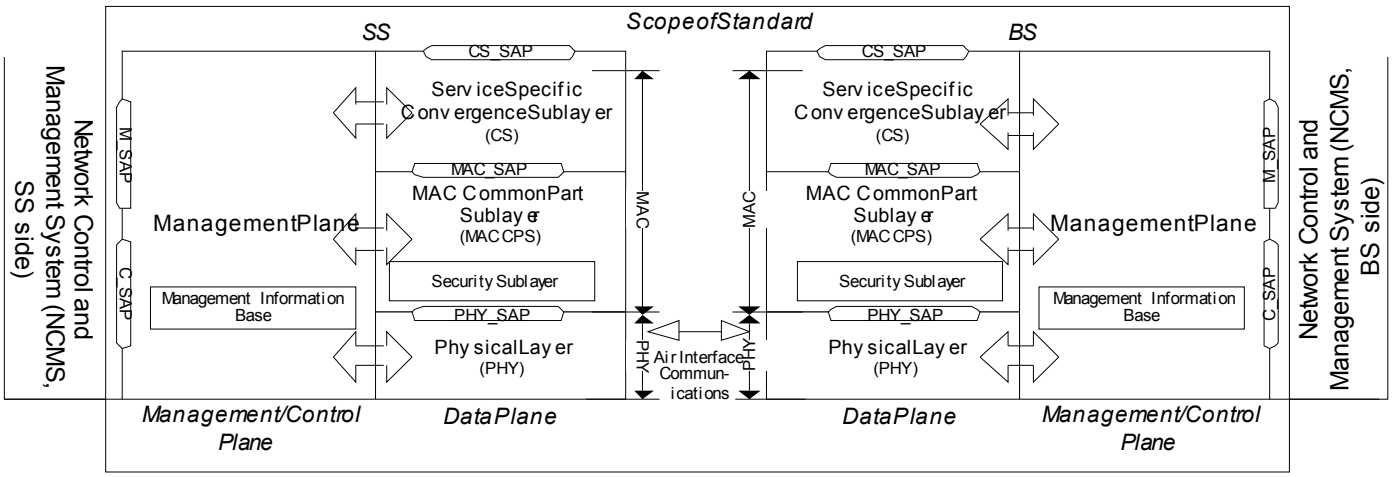

Figure D System Architecture Model

1.4.1.1.1 SS/MS and BS Interface

SS or MS communicate to the BS over the U interface using a Primary Management Connection, a Basic Management Connection or a Secondary Management Connection.

For all SS or MS, the related control plane messages utilize the Primary Management or Basic Management Connection.

For managed SS or MS, the related management plane messages go through the Primary Management Connection or the secondary Management Connection.

1.4.1.1.2 SS/MS and NCMS Interface

This interface is a set of Service Access Points (SAP) between SS/MS and NCMS and is represented in the Figure D. It is decomposed into two parts: the Management SAP is used for Management plane primitives alone and the Control SAP is used for Control plane primitives that to support handovers, security context management, radio resource management, and low power operations (such as Idle mode and paging functions). The primary goal of such an interface is to ensure protocol separation.

1.4.1.1.2.1 Management SAP(M_SAP)

The Management SAP may include, but is not limited to primitives related to:

- System configuration

- Notifications/Triggers

1.4.1.1.2.2 Control SAP(C_SAP)

The Control SAP may include, but is not limited to primitives related to:

- Handovers (e.g. notification of HO request from MS, etc.)

- Idle mode mobility management (e.g. Mobile entering idle mode)

- Subscriber and session management (e.g. Mobile requesting session setup)

- Radio resource management, etc.

- AAA server signaling (Eg. EAP payloads).

1.4.1.1.3 BS and NCMS Interface

This interface is a set of Service Access Points (SAP) between BS and NCMS and is represented in the Figure D. It is decomposed into two parts: the Management SAP is used for Management plane primitives alone and the Control SAP is used for Control plane primitives that to support handovers, security context management, radio resource management, and low power operations (such as Idle mode and paging functions). The primary goal of such an interface is to ensure protocol separation.

1.4.1.1.3.1 Management SAP(M_SAP)

The Management SAP may include, but is not limited to primitives related to:

- System configuration

- Monitoring Statistics

- Notifications/Triggers

1.4.1.1.3.2 Control SAP(C_SAP)

The Control SAP may include, but is not limited to primitives related to:

- Handovers (e.g. notification of HO request from MS, etc.)
- Idle mode mobility management (e.g. Mobile entering idle mode)
- Subscriber and session management (e.g. Mobile requesting session setup)
- Radio resource management, etc.
- AAA server signaling (Eg. EAP payloads).