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Re:	Contribution on comments to IEEE P802.16g baseline task group document
Abstract	Add informative description of network architecture in P802.16g baseline document
Purpose	Adoption
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Informative description of network architecture

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1. Introduction

In the current IEEE P802.16g baseline document, the logical network architecture is given, and the logical function entity NCMS (Network Control and Management System) has been introduced. The NCMS includes a lot of functions, such as AAA Services, Paging Services, Gateway and Router Services etc. And these might not be enough for operators and vendors whom usually like the specification as detailed as possible. One important issue is network topology. Operators will like to know how many network elements exist in an 802.16 network. They concern not only MSS/SS and BS, but also other elements for an operable network.

Based on 802.16, a lot of topologies can be developed. It can be centralized or distributed. It's a good idea to let the operators to select the appropriate network topology for themselves. However, we should assure that the typical topologies are possible to be implemented based on 16e and 16g.

Classical mobile operators are familiar with centralized network like cellular systems. It's very mature now and should be concerned. More important, is it possible to connect an 802.16 access network to a 3G core network? And the positive answer will be amused.

A simpler way to deploy the network is to use distributed one, which is also cheaper. In a distributed network, a plug-and-play BS is possible. But, as far as the mobility is concerned, such as handover, the distributed network is immature now and is difficult to assure the QoS.

Here we just introduce two classical types of topology. And it is possible to use other typical topologies to deploy an 802.16 network.

It is difficult to define a set of procedures and messages fitting to all kinds of topologies. That is to say, some procedures and messages depend on the network topologies. Without topology descriptions, there exists a risk that the defined messages or procedures may not be suitable for a particular topology. So we think that some informative description of typical network topologies will be needed. When we are going on with procedures and messages, we can check if they are suitable for typical topologies.

In this contribution, we propose to add an informative annex to describe the typical network topology.

2. Proposed Text Changes

Add following text in the end of document as Annex F.

Annex F (Informative)
Network Topologies
This annex provides two types of network topologies without precluding other typical topologies.

F.1 Full distributed network
Figure 1 is a diagram of the typical full distributed network.

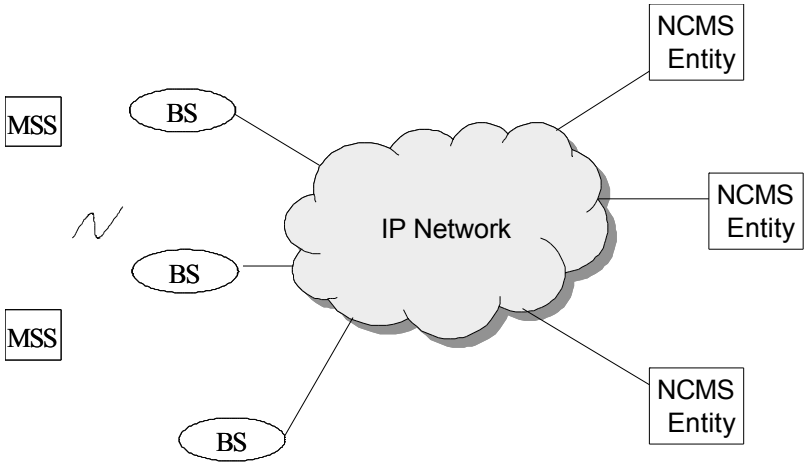

Figure 1 Distributed network

In a full distributed network, BS connects to IP network directly. NCMS is implemented as several network elements, each of the elements is also connects to IP network directly. Some NCMS functions, such as gateway and router service, are embedded in BS.

F.2 Centralized network

802.16's network can also be deployed as cellular system does now. Figure 2 is a diagram of the typical centralized network, which is similar to 3G core network.

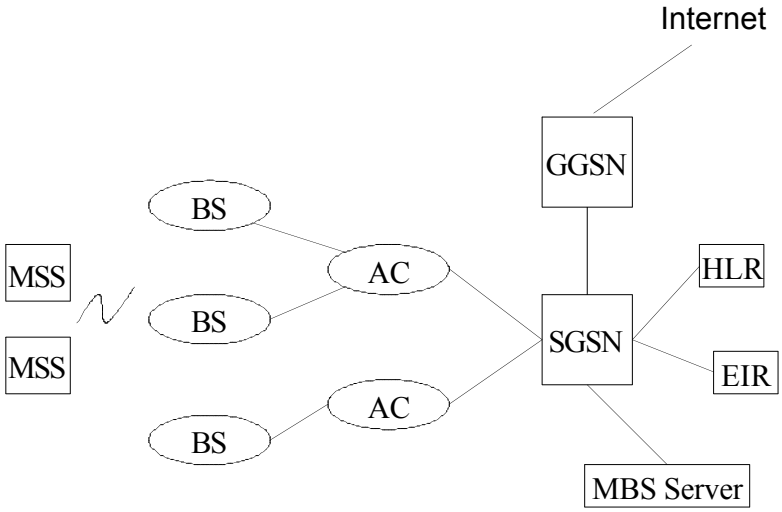

Figure 2 Centralized network

In a centralized network, BS connects to IP network through AC, SGSN and GGSN.