

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >		
Title	Protocol Architecture to support Self Organization Network		
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Re:	IEEE 802.16m-07/047, "Call for Contributions on Project 802.16m System Description Document (SDD)". Target topic: "Proposed 802.16m Protocol Architecture and main functionalities per protocol layer".		
Abstract	The contribution proposes a protocol to support SON to be included in the 802.16m System Description Document (SDD).		
Purpose	Discuss and adopt		
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Protocol Architecture to support Self Organization Network

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1. Introduction

In this contribution, we propose a protocol stack to support self organization network in 802.16m [1][2].

2. Self Organization

2.1 Self organization network architecture

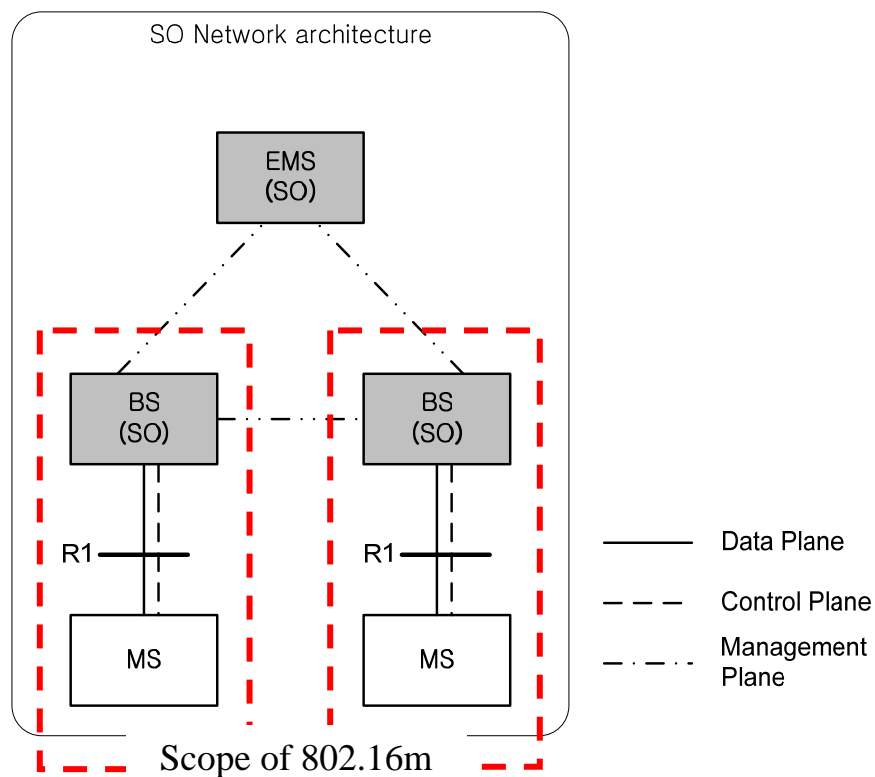


Figure 1. Self organization network architecture

Figure 1 shows the architecture of Self organization (SO) network. The SO functions mainly comprise of self configuration and self optimization mechanisms. EMS (Entity Management System) performs SO functions over base stations (BS) like managing system configuration parameters, radio resource managements to coordinate interference among BSs and etc. BS may perform SO functions in relation with neighboring BSs and mobile stations (MS) served by the BS. They may include transmission power control of BS, update of hand over parameters and etc. MS may measure SO related metrics in response to BS's request and report the measurement to the BS. The measurements may include received signal strength of the other BSs, the location information of MS and etc. The SO scope of IEEE 802.16m is inside of the red dotted boxed.

2.2 Proposal

Insert the following text into Air-Interface Protocol Structure subclause (i.e. Chapter 8 in [1]):

----- Text Start -----

8.x Protocol stack for SON (Self Organizing Network) Support

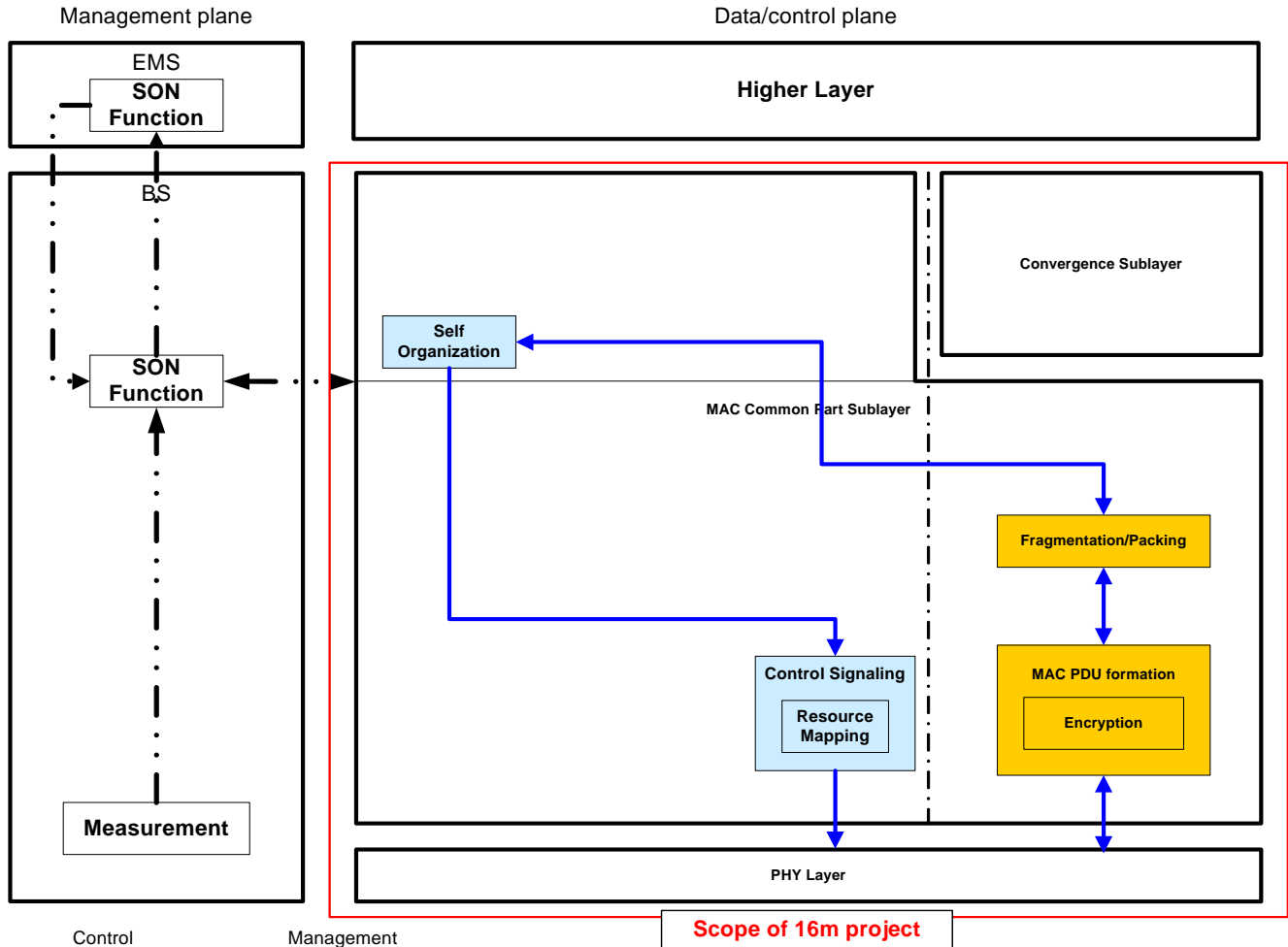


Figure xxx. Protocol stack for SO support

Self Organization (SO) block performs functions to support self configuration and self optimization mechanisms. The functions include procedures to request MSs to report measurements for self configuration and self optimization and receive the measurements from the MSs. The specific request/response mechanisms are for further study (FFS). The types and definitions of the measurements are FFS. SO reference signals can be defined to enhance the self configuration and self optimization mechanisms. The SO block determines to send the reference signal and manages the control signal block to transmit the signal. The types and definitions of the SO reference signals are FFS

----- Text End -----

3. References

- [1] IEEE 80216m-07_002r4, "IEEE 802.16m System Requirements."
- [2] IEEE C802.16m-07/320r1, "Draft Table of Content for the IEEE 802.16m System Description Document."