Project	**IEEE 1900.7 Radio Interface for White Space Dynamic Spectrum Access Radio Systems Supporting Fixed and Mobile Operation** <http://grouper.ieee.org/groups/dyspan/7/index.htm>
Title	PHY, MAC, Convergence sublayer within Reference Models
Date Submitted	2013-04-20
Source(s)	Hoang Vinh Dien, Hiroshi Harada E-mail: hvdien@nict.com.sg; harada@nict.go.jp National Institute of Information and Communications Technology (NICT)
Re:	In response to open call for contributions IEEE 1900.7-12/0063r00
Abstract	This provides a detail explanation for PHY, MAC, convergence sublayers within reference model for 1900.7 network
Purpose	To be discussed and adapted by WG for draft 1900.7 standard
Notice	
Release	
Patent Policy and Procedures	

PHY, MAC, Convergence sublayer within Reference Models

Hoang Vinh Dien, Hiroshi Harada
NICT

1. Introduction

This contribution a detail explanation for PHY, MAC, convergence sublayers within reference model for 1900.7 network.

2. Text Proposal in IEEE 1900.7 Draft

[*Remedy 1: Replace the existing text with the following in 1900.7 Draft*]

[----------Start of Text Proposal----------]

5.3.1 PHY, MAC and Convergence sublayer

The MAC CPS provides the core MAC functionality, manages the system access, including bandwidth allocation, connection management. Data from various CSs goes through MAC SAP and is channelled into various MAC connections.

The PHY includes specifications appropriate to a particular frequency range and application. The PHY specifications are discussed in session 9.

5.3.2 Security sublayer

The security sublayer shall providing authentication, secure key exchange, and encryption.

5.3.4 Interface with TV WS database

The white space database SAP provides the interface to TV WS database which is implementation specific. This interface is used to register with the database and request for a set of available channels.

5.3.5 Interface with geolocation device

This interface consists a set of functions for information exchange with the geolocation device to get the geolocation information. This interface shall follow the IEEE 1900.6a standard.

5.3.6 Optional Interfaces

The 1900.7 also specifies three optional interfaces to exchange the information with sensing device, external WS management and WS coexistence system.

- Interface with spectrum sensing device: this interface shall follow the IEEE 1900.6 standard.

- Interface with external WS management: this interface shall follow the 1900.4a standard.

- Interface with WS coexistence system: this interface shall follow the 802.19.1 standard.

[----------End of Text Proposal----------]

References

[1] IEEE 1900.7-12/0063r00, “Open call for contributions”

[2] IEEE 1900.7-12/0041r01, “Reference Models and Management Model”

[3] IEEE 1900.7-13/008r00, "Draft 1900.7 standards"