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| 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 | IEEE 1900.7 White Space Radio Reference Models and Management Model |
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| Source(s) | [Hoang Vinh Dien](http://www.nict.com.sg/hoang.htm), Hiroshi HaradaNational Institute of Information and Communications Technology (NICT) | E-mail: hvdien@nict.com.sg; harada@nict.go.jp  |
| Re: | In response to open call for contributions IEEE 1900.7-12/0063r00 |
| Abstract | This provides a reference model, management model, Network reference model for 1900.7 network |
| Purpose | To be discussed and adapted by WG for draft 1900.7 standard |
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# Reference Models and Management Model

[Hoang Vinh Dien](http://www.nict.com.sg/hoang.htm), Hiroshi Harada

NICT

# Introduction

# This contribution provides reference model, management model, Network reference model for 1900.7 network draft

# Text Proposal in IEEE 1900.7 Draft

**[*Remedy 1: Insert the following text to 1900.7 Draft*]**

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

**5.3 Reference Model**



**Figure 1: Reference Model of the IEEE 1900.7 station**

Figure 1 illustrates the reference model and scope of IEEE 1900.7 standard.

The MAC comprises three sublayers. The service-specific convergence sublayer (CS) provides any

transformation or mapping of external network data, received through the CS service access point (SAP),

into MAC service data units (SDUs) received by the MAC common part sublayer (CPS) through the MAC

SAP.

SAP is provided with a well-defined interface or set of primitives to exchange the information, by virtue

of which these different components can talk to each other.

Multiple CS specifications are provided for interfacing with various protocols. The internal format of the CS payload is unique to the CS, and the MAC CPS is not required to understand the

format of or parse any information from the CS payload.

**5.3.1 PHY, MAC and Convergence sublayer**

TBD

**5.3.2 Security sublayer**

TBD

**5.3.4 Interface with TV WS database**

TBD

**5.3.5 Interface with geolocation device**

TBD

**5.3.6 Optional Interface**

- Interface with spectrum sensing device: TBD

- Interface with external WS management: TBD

- Interface with WS coexistence system: TBD

**5.4 Management Model**

Management Model is shown in Figure 2. It consists of a network management system (NMS), managed nodes, TV White Space Database and a Network Control System.

Managed nodes, such as BS, RS, MS collect and store the managed objects in the format MIB that are made available to NMSs via management protocols (e.g SNMP).

TV White Space Database stores available TV WS channels (with time and location) which is made available to BS

A Network Control System contains the service flow and the associated information when MS enters into a BS network.

**Figure 2: Management Model of the IEEE 1900.7 station**

**5.5 Network reference model**

**Figure 3: Network Reference Model of the IEEE 1900.7 station**

Figure 1-3 describes a simplified network reference model. Multiple RS or MS may be attached to a BS. MS communicate to the BS over the WS interface

.

**5.5.1 MS and BS Interface**

TBD

**5.5.2 Management SAP (M-SAP)**

TBD

**5.5.3 Control SAP (C-SAP)**

TBD

*[-------------------------------------------------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”