

3GPP2 C.S0093-0

Version 1.0

Date: October 2008



3RD GENERATION
PARTNERSHIP
PROJECT 2
"3GPP2"

Highly Detectable Pilot Specification for the CDMA2000 High Rate Packet Data Air Interface

COPYRIGHT

3GPP2 and its Organizational Partners claim copyright in this document and individual Organizational Partners may copyright and issue documents or standards publications in individual Organizational Partner's name based on this document. Requests for reproduction of this document should be directed to the 3GPP2 Secretariat at <mailto:secretariat@3gpp2.org>. Requests to reproduce individual Organizational Partner's documents should be directed to that Organizational Partner. See <http://www.3gpp2.org/> for more information.

This page is intentionally left blank.

CONTENTS

1 REFERENCES ix

2 1 Overview 1-1

3 1.1 Scope of this Document..... 1-1

4 1.2 Requirements Language 1-1

5 1.3 Architecture Reference Model 1-1

6 1.4 Protocols 1-2

7 1.4.1 Interfaces 1-2

8 1.4.2 InUse and InConfiguration Protocol Instances 1-2

9 1.4.2.1 Procedures and Messages 1-2

10 1.4.2.1.1 Commit Procedures 1-2

11 1.4.2.2 InConfiguration Protocol Instance Instantiation 1-2

12 1.4.2.3 InUse Protocol Instance Instantiation 1-3

13 1.4.2.4 Protocol Initialization 1-3

14 1.4.3 Protocol Negotiation..... 1-3

15 1.5 HDP Channel 1-3

16 1.6 Terms 1-3

17 1.7 Notation 1-4

18 2 HDP Protocol Suite 2-1

19 2.1 Overview..... 2-1

20 2.2 Basic Protocol Numbers..... 2-1

21 2.3 Default HDP Protocol Suite..... 2-1

22 2.3.1 Overview..... 2-1

23 2.3.2 Primitives and Public Data..... 2-1

24 2.3.2.1 Return Indications 2-1

25 2.3.2.2 Public Data 2-1

26 2.3.3 Protocol Data Unit 2-1

27 2.3.4 Protocol Initialization 2-1

28 2.3.4.1 Protocol Initialization for the InConfiguration Instance of the Protocol

29 Suite 2-1

30 2.3.4.2 Protocol Initialization for the InUse Instance of the Protocol Suite..... 2-2

31 2.3.5 Procedures and Messages for the InConfiguration Instance of the Protocol

32 Suite 2-2

CONTENTS

1	2.3.5.1 Procedures	2-2
2	2.3.5.2 Commit Procedures	2-2
3	2.3.5.3 Message Formats.....	2-3
4	2.3.5.3.1 ConfigurationRequest	2-3
5	2.3.5.3.2 ConfigurationResponse	2-3
6	2.3.6 Procedures and Messages for the InUse Instance of the Protocol Suite	2-4
7	2.3.6.1 Procedures	2-4
8	2.3.6.2 Message Formats.....	2-4
9	2.3.6.3 Interface to Other Protocols	2-4
10	2.3.6.3.1 Indications.....	2-4
11	2.3.7 Configuration Attributes.....	2-4
12	2.3.8 Protocol Numeric Constants	2-4
13	2.3.9 Session State Information	2-4
14	2.4 Generic HDP Protocol Suite.....	2-5
15	2.4.1 Introduction	2-5
16	2.4.1.1 Basic Protocol Numbers.....	2-5
17	2.4.1.2 Public Data.....	2-5
18	2.4.1.3 Messages	2-5
19	2.4.2 Generic HDP Protocol Suite Initialization.....	2-5
20	2.4.2.1 Protocol Initialization for the InConfiguration Instance of the Generic	
21	HDP Protocol Suite	2-5
22	2.4.3 Procedures and Messages for the InConfiguration Instance of the Generic	
23	HDP Protocol Suite	2-6
24	2.4.3.1 Procedures	2-6
25	2.4.3.2 Commit Procedures	2-6
26	2.4.3.3 Message Formats.....	2-7
27	2.4.3.3.1 ConfigurationRequest	2-7
28	2.4.3.3.2 ConfigurationResponse	2-7
29	2.4.4 Procedures and Messages for the InUse Instance of the Generic HDP	
30	Protocol Suite	2-8
31	2.4.4.1 HDP MAC Protocol.....	2-8
32	2.4.4.1.1 Overview	2-8

CONTENTS

1	2.4.4.1.2 Public Data	2-8
2	2.4.4.1.3 Protocol Data Unit.....	2-8
3	2.4.4.1.4 Procedures	2-9
4	2.4.4.1.4.1 Access Network Requirements.....	2-9
5	2.4.4.1.4.1.1 HDPOverhead Message Transmission.....	2-9
6	2.4.4.1.4.1.2 Timing	2-9
7	2.4.4.1.4.1.2.1 Planned Coloring	2-10
8	2.4.4.1.4.1.2.2 Random Coloring.....	2-11
9	2.4.4.1.4.2 Access Terminal Requirements.....	2-13
10	2.4.4.1.4.2.1 HDPOverhead Message Processing	2-13
11	2.4.4.1.5 Message Format	2-13
12	2.4.4.1.5.1 HDPOverhead Message	2-13
13	2.4.4.2 HDP Physical Layer Protocol	2-17
14	2.4.4.2.1 Overview	2-17
15	2.4.4.2.2 Procedures	2-17
16	2.4.4.2.2.1 Access Terminal Requirements.....	2-17
17	2.4.4.2.2.2 Access Network Requirements.....	2-17
18	2.4.4.2.2.2.1 Frequency Parameters	2-17
19	2.4.4.2.2.2.2 Power Output Characteristics.....	2-17
20	2.4.4.2.2.2.3 Modulation Characteristics.....	2-17
21	2.4.4.2.2.2.3.1 Forward Channel Structure	2-17
22	2.4.4.2.2.2.3.2 HDP Channel.....	2-20
23	2.4.4.2.2.2.3.2.1 Modulation	2-20
24	2.4.4.2.2.2.3.2.2 Orthogonal Spreading	2-20
25	2.4.4.2.2.2.3.2.3 Scaling.....	2-20
26	2.4.4.2.2.2.3.3 Time Division Multiplexing.....	2-20
27	2.4.4.2.2.2.3.4 Quadrature Spreading	2-20
28	2.4.4.2.2.2.3.5 Filtering.....	2-20
29	2.4.4.2.2.2.3.6 Synchronization and Timing	2-21
30	2.4.5 Interface to Other Protocols	2-21
31	2.4.5.1 Commands Sent	2-21
32	2.4.5.2 Indications.....	2-21

CONTENTS

1	2.4.6 Configurable Attributes	2-21
2	2.4.7 Protocol Numerical Constants	2-21
3	2.4.8 Session State Information	2-21
4		

FIGURES

1	Figure 2.4.4.1.4.1.2.1-1 Architecture Reference Model	1-1
2	Figure 2.4.4.1.4.1.2.1-1 Generic HDP Protocol Suite	2-5
3	Figure 2.4.4.1.4.1.2.1-1 An Example of Planned Coloring.....	2-10
4	Figure 2.4.4.1.4.1.2.1-2 HDP Slot Transmit Timing for Planned Coloring (a) for	
5	$\lfloor T/768 \rfloor \bmod 3 = 0$ (b) $\lfloor T/768 \rfloor \bmod 3 = 1$ (c) $\lfloor T/768 \rfloor \bmod 3 = 2$	2-11
6	Figure 2.4.4.1.4.1.2.2-1 HDP Slot Transmit Timing for Random Coloring.....	2-13
7	Figure 2.4.4.2.2.2.3.1-1 Forward Channel Structure.....	2-18
8	Figure 2.4.4.2.2.2.3.1-2. Forward Link Slot Structure	2-19
9	Figure 2.4.4.2.2.2.3.1-4. HDP Channel Structure.....	2-20
10		

FIGURES

- 1 This page is intentionally left blank.

TABLES

1 Table 2.4.4.1.4.1.2.1-1 HDPOffset2(C,T) for Planned Coloring, if NumHDPSlot = 02-10
2 Table 2.4.4.1.4.1.2.2-1 HDP Color Code2-12
3 Table 2.4.4.1.4.1.2.2-2 HDPOffset2 for Random Coloring, if NumHDPSlot = 02-12
4 Table 2.4.7-1 Numeric Constants2-21
5

TABLES

- 1 This page is intentionally left blank.

REFERENCES

1 The following standards contain provisions that, through reference in this text, constitute
2 provisions of this standard. At the time of publication, the editions indicated were valid. All
3 standards are subject to revision, and parties to agreements based on this standard are
4 encouraged to investigate the possibility of applying the most recent editions of the
5 standards indicated below.

6

7

8

[1] 3GPP2 C.S0024-B Version 2.0, cdma2000 High Rate Packet Data Air Interface
Specification, March 2007.

9

10

[2] 3GPP2 C.S0057-C Version 1.0, Band Class Specification for cdma2000 Spread
Spectrum Systems, July 2008.

REFERENCES

- 1 This page is intentionally left blank.

1 OVERVIEW

1.1 Scope of this Document

These technical requirements form the compatibility standard for cdma2000^{®1} highly detectable pilot systems. These requirements ensure that a compliant access terminal can obtain service through any access network conforming to this standard. These requirements do not address the quality or reliability of that service, nor do they cover equipment performance or measurement procedures.

1.2 Requirements Language

Compatibility, as used in connection with this standard, is understood to mean: Any access terminal can obtain service through any access network conforming to this standard. Conversely, all access networks conforming to this standard can service access terminals.

“Shall” and “shall not” identify requirements to be followed strictly to conform to the standard and from which no deviation is permitted. “Should” and “should not” indicate that one of several possibilities is recommended as particularly suitable, without mentioning or excluding others, that a certain course of action is preferred but not necessarily required, or that (in the negative form) a certain possibility or course of action is discouraged but not prohibited. “May” and “need not” indicate a course of action permissible within the limits of the standard. “Can” and “cannot” are used for statements of possibility and capability, whether material, physical, or causal.

Footnotes appear at various points in this standard to elaborate and further clarify items discussed in the body of the standard.

1.3 Architecture Reference Model

The architecture reference model is presented in Figure 2.4.4.1.4.1.2.1-1.

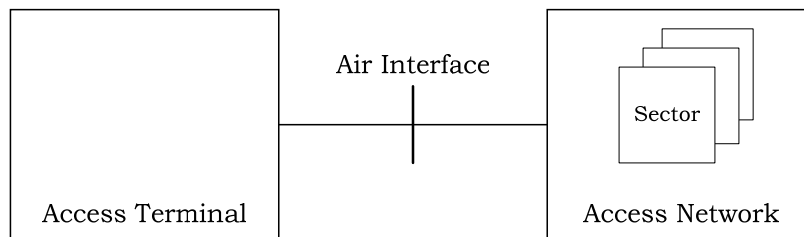


Figure 2.4.4.1.4.1.2.1-1 Architecture Reference Model

The access terminal, the access network, and the sector are formally defined in 1.6.

¹ cdma2000[®] is the trademark for the technical nomenclature for certain specifications and standards of the Organizational Partners (OPs) of 3GPP2. Geographically (and as of the date of publication), cdma2000[®] is a registered trademark of the Telecommunications Industry Association (TIA-USA) in the United States.

1 The reference model includes the air interface between the access terminal and the access
2 network. The protocols used over the air interface are defined in this standard.

3 **1.4 Protocols**

4 1.4.1 Interfaces

5 This standard defines a set of interfaces for communications between a protocol executing in
6 one entity and the same protocol executing in the other entity. The generic term “entity”
7 is used to refer to the access terminal and the access network.

8 Protocols in this standard have three types of interfaces:

- 9 • Headers and messages are used for communications between a protocol executing in
10 one entity and the same protocol executing in the other entity.
- 11 • Indications are used by a protocol to convey information regarding the occurrence of
12 an event. Any protocol can register to receive these indications.
- 13 • Public Data is used to share information in a controlled way between protocols.
14 Public data is shared between protocols in the same layer, as well as between
15 protocols in different layers. The public data of the InUse protocol is created when an
16 InUse instance of a protocol is created.

17 Indications are written in the form of *Protocol.Indication*. Indications are always written in
18 the past tense since they notify of events that happened.

19 Headers and messages are binding on all implementations. Indications and public data are
20 used as a device for a clear and precise specification. Access terminals and access
21 networks can be compliant with this specification while choosing a different
22 implementation that exhibits identical behavior.

23 1.4.2 InUse and InConfiguration Protocol Instances

24 A protocol instance can be either an InUse instance or an InConfiguration instance.

25 1.4.2.1 Procedures and Messages

26 Each protocol specifies procedures and messages corresponding to the InUse and
27 InConfiguration protocol instances. In general, the InConfiguration protocol instances
28 process messages that are related to parameter configuration for each protocol, while non-
29 configuration procedures and messages are processed by the InUse protocol instances.

30 1.4.2.1.1 Commit Procedures

31 Each InConfiguration protocol defines a set of Commit procedures. The Commit procedures
32 for a protocol are invoked by the InUse instance of the Session Configuration Protocol
33 defined in [1].

34 1.4.2.2 InConfiguration Protocol Instance Instantiation

35 An InConfiguration instance of each protocol is created by the Session Configuration
36 Protocol defined in [1] once the session configuration is initiated. InConfiguration protocol

instances can be changed by the Session Configuration Protocol defined in [1]. Once the access terminal and access network agree upon using a new protocol subtype for a certain protocol Type, an InConfiguration protocol instance associated with the newly negotiated protocol (specified by its protocol subtype) is created and the existing InConfiguration protocol instance for that protocol Type is replaced by the newly negotiated one.

1.4.2.3 InUse Protocol Instance Instantiation

An InUse instance of a protocol can be instantiated in one of two ways:

- Upon establishing a session, an InUse instance of the protocol with default subtype and default values of attributes is created.
- The Commit procedures of an InConfiguration instance of a protocol may cause the creation of a new InUse instance of the protocol.

1.4.2.4 Protocol Initialization

The initialization procedures for an InUse protocol instance are invoked upon creation of the InUse protocol instance.

The initialization procedures for an InConfiguration protocol instance are invoked upon creation of the InConfiguration protocol instance.

1.4.3 Protocol Negotiation

Protocols can be negotiated and can be configured when the session is set-up (see [1] for a discussion of sessions). Protocols are associated with a Type that denotes the type of the protocol and with a Subtype that denotes a specific instance of a protocol (e.g., the Default HDP Protocol Suite and the Generic HDP Protocol Suite).

The negotiation and configuration processes are part of the Session Layer defined in [1].

1.5 HDP Channel

The HDP Channel carries highly detectable pilot from the access network to multiple access terminals.

1.6 Terms

Access Network (AN). The network equipment providing data connectivity between a packet switched data network (typically the Internet) and the access terminals.

Access Terminal (AT). A device providing data connectivity to a user. An access terminal may be connected to a computing device such as a laptop personal computer or it may be a self-contained data device such as a personal digital assistant.

CDMA System Time in Slots. An integer value T such that: $T = \lfloor t \times 600 \rfloor$, where t represents CDMA System Time in seconds. Whenever the document refers to the CDMA System Time in slots, it is referring to the value T .

CDMA System Time. The time reference used by the system. CDMA System Time is synchronous to UTC time except for leap seconds and uses the same time origin as GPS

1 time. Access terminals use the same CDMA System Time, offset by the propagation delay
 2 from the access network to the access terminal. CDMA System Time is defined in [1]. Also
 3 referred to as system time in this document.

4 **Cell.** A physical grouping of one or more sectors that transmit the same power control
 5 command to an access terminal as defined in [1].

6 **Forward Channel.** The portion of the Channel consisting of those Physical Layer Channels
 7 transmitted from the access network to the access terminal.

8 **Forward Control Channel.** The channel that carries data to be received by all access
 9 terminals monitoring the Forward Channel.

10 **Forward Traffic Channel.** The portion of the Forward Channel that carries information for
 11 a specific access terminal.

12 **HDP** see Highly Detectable Pilot.

13 **HDP Channel.** A Forward Link only channel to carry HDP from the access network to
 14 access terminals.

15 **HDP Block.** An HDP slot contains four HDP blocks, each 400 chips long, placed at the data
 16 portion of the slot, surrounding the pilot and MAC bursts.

17 **HDP Slot.** A slot that carries HDP in the data portion.

18 **Highly Detectable Pilot.** A pilot signal that provides better coverage than the Pilot
 19 Channel.

20 **Physical Layer.** The Physical Layer provides the channel structure, frequency, power
 21 output, modulation, and encoding specifications.

22 **Sector.** A part of the access network that is identified by (SectorID, CDMA Channel).
 23 SectorID as described in [1].

24 **Slot.** A duration of time specified by 1.66... ms that starts when the system time in ms is
 25 equal to an integer multiple of 1.66... ms.

26 1.7 Notation

27 **A[i]** The element of a one-dimensional array A with index i. Also referred
 28 to as the “ith element” of A. Unless otherwise specified, the elements
 29 of an array are indexed starting with i = 0.

30 **<e₁, e₂, ..., e_n>** A *structure* with elements ‘e₁’, ‘e₂’, ..., ‘e_n’.
 31 Two structures E = <e₁, e₂, ..., e_n> and F = <f₁, f₂, ..., f_m> are equal if
 32 and only if ‘m’ is equal to ‘n’ and e_i is equal to f_i for i = 1, ...n.
 33 Given E = <e₁, e₂, ..., e_n> and F = <f₁, f₂, ..., f_m>, the assignment “E =
 34 F” denotes the following set of assignments: e_i = f_i, for i = 1, ...n.

35 **S.e** The member of the structure ‘S’ that is identified by ‘e’.

1	M[i:j]	Bits i^{th} through j^{th} inclusive ($i \geq j$) of the binary representation of variable M. M[0:0] denotes the least significant bit of M.
2		
3		Concatenation operator. (A B) denotes variable A concatenated with variable B.
4		
5	$\lfloor x \rfloor$	Indicates the largest integer less than or equal to x: $\lfloor 1.1 \rfloor = 1$, $\lfloor 1.0 \rfloor = 1$.
6		
7	$\lceil x \rceil$	Indicates the smallest integer greater than or equal to x: $\lceil 1.1 \rceil = 2$, $\lceil 2.0 \rceil = 2$.
8		
9	$ x $	Indicates the absolute value of x: $ -17 = 17$, $ 17 = 17$.
10	\oplus	Indicates exclusive OR (modulo-2 addition).
11	\times_c	Indicates the Cartesian product.
12	min (x, y)	Indicates the minimum of x and y.
13	max (x, y)	Indicates the maximum of x and y.
14	x mod y	Indicates the remainder after dividing x by y: $x \text{ mod } y = x - (y \times \lfloor x/y \rfloor)$.
15		
16	N/A	Not applicable.

17 Unless otherwise specified, the format of field values is unsigned binary.

18 Unless indicated otherwise, this standard presents numbers in decimal form. Binary
 19 numbers are distinguished in the text by the use of single quotation marks. Binary number
 20 representations may contain “don’t care” bits whose value is considered irrelevant within
 21 the context where they are used. A “don’t care” bit is indicated by an ‘X’ within a binary
 22 number representation. As an example, the binary number representation ‘1X’ can be used
 23 to represent the two binary numbers ‘10’ and ‘11’. Hexadecimal numbers are distinguished
 24 by the prefix ‘0x’.

25 Unless specified otherwise, each field of a packet shall be transmitted in sequence such
 26 that the most significant bit (MSB) is transmitted first and the least significant bit (LSB) is
 27 transmitted last. The MSB is the left-most bit in the figures in this document. If there are
 28 multiple rows in a table, the top-most row is transmitted first. If a table is used to show the
 29 sub-fields of a particular field or variable, the top-most row consists of the MSBs of the
 30 field. Within a row in a table, the left-most bit is transmitted first. Notations of the form
 31 “repetition factor of N” or “repeated N times” mean that a total of N versions of the item are
 32 used.

1 This page is intentionally left blank.

2

1 **2 HDP PROTOCOL SUITE**

2 **2.1 Overview**

3 The air interface of the highly detectable pilot system is comprised of a group of protocols
4 identified collectively as the HDP Protocol Suite. Protocols use signaling messages or
5 headers to convey information to their peer entity at the other side of the air-link. When
6 protocols send messages they use the Signaling Application (such as the Default Signaling
7 Application defined in [1]) negotiated during the session negotiation process to transmit
8 these messages.

9 **2.2 Basic Protocol Numbers**

10 The HDP Protocol Suite is negotiated by the Session Layer defined in [1].

11 The Type field for the HDP Protocol Suite is 7 bits, set to N_{HDPTYPE} .

12 All protocols in a given instance of the HDP Protocol Suite share the same Type and
13 Subtype. The access terminal and the access network shall negotiate the use of the entire
14 HDP Protocol Suite. Protocols in the suite cannot be individually negotiated.

15 **2.3 Default HDP Protocol Suite**

16 2.3.1 Overview

17 This protocol suite does not provide any services.

18 2.3.2 Primitives and Public Data

19 2.3.2.1 Return Indications

20 This protocol suite does not return any indications.

21 2.3.2.2 Public Data

22 This protocol suite shall make the following data public:

- 23 • Subtype for this protocol suite

24 2.3.3 Protocol Data Unit

25 This protocol suite does not define a protocol data unit.

26 2.3.4 Protocol Initialization

27 2.3.4.1 Protocol Initialization for the InConfiguration Instance of the Protocol Suite

28 Upon creation, the InConfiguration instance of this protocol suite in the access terminal
29 and the access network shall perform the following in the order specified:

- 1 • The fall-back values of the attributes for this instance of the protocol suite shall be
2 set to the default values specified for each attribute (See [1] for a description of fall-
3 back values).
- 4 • If the InUse instance of this protocol suite has the same protocol subtype as that of
5 the InConfiguration instance of the protocol suite, then the fall-back values of the
6 attributes defined by the InConfiguration instance of the protocol suite shall be set to
7 the values of the corresponding attributes associated with the InUse instance of the
8 protocol suite.
- 9 • The value for each attribute for this instance of the protocol suite shall be set to the
10 fall-back value for that attribute.

11 2.3.4.2 Protocol Initialization for the InUse Instance of the Protocol Suite

12 Upon creation of the InUse instance of this protocol suite, the access terminal and the
13 access network shall perform the following:

- 14 • The value of the attributes for this instance of the protocol suite shall be set to the
15 default values specified for each attribute.

16 2.3.5 Procedures and Messages for the InConfiguration Instance of the Protocol Suite

17 2.3.5.1 Procedures

18 This protocol suite uses the Generic Configuration Protocol (see [1]) to define the processing
19 of the configuration messages.

20 2.3.5.2 Commit Procedures

21 The access terminal and the access network shall perform the procedures specified in this
22 section, in the order specified, when directed by the InUse instance of the Session
23 Configuration Protocol to execute the Commit procedures:

- 24 • All the public data that are defined by this protocol suite, but are not defined by the
25 InUse instance of the protocol suite shall be added to the public data of the InUse
26 instance of the protocol suite.
- 27 • If the InUse instance of this protocol suite has the same subtype as this instance of
28 the protocol suite, then
 - 29 – The access terminal and the access network shall set the attribute values
30 associated with the InUse instance of this protocol suite to the attribute values
31 associated with the InConfiguration instance of this protocol suite, and
 - 32 – The access terminal and the access network shall purge the InConfiguration
33 instance of the protocol suite.
- 34 • If the InUse instance of this protocol suite does not have the same subtype as this
35 instance of the protocol suite, then the access terminal and the access network shall
36 perform the following:

- 1 – The InConfiguration instance of the protocol suite shall become the InUse
- 2 instance of the protocol suite for the HDP Protocol Suite.
- 3 • All the public data not defined by this protocol suite shall be removed from the
- 4 public data of the InUse protocol suite.

5 2.3.5.3 Message Formats

6 2.3.5.3.1 ConfigurationRequest

7 The ConfigurationRequest message format is as follows:

8

Field	Length (bits)
MessageID	8
TransactionID	8
Zero or more instances of the following record	
AttributeRecord	Attribute dependent

9 MessageID The sender shall set this field to 0x50.

10 TransactionID The sender shall increment this value for each new

11 ConfigurationRequest message sent.

12 AttributeRecord The format of this record is specified in [1].

13

Channels	FTC RTC	SLP	Reliable
Addressing	unicast	Priority	40

14 2.3.5.3.2 ConfigurationResponse

15 The ConfigurationResponse message format is as follows:

16

Field	Length (bits)
MessageID	8
TransactionID	8
Zero or more instances of the following record	
AttributeRecord	Attribute dependent

17 MessageID The sender shall set this field to 0x51.

1 TransactionID The sender shall set this value to the TransactionID field of the
 2 corresponding ConfigurationRequest message.

3 AttributeRecord An attribute record containing a single attribute value. If this
 4 message selects a complex attribute, only the ValueID field of the
 5 complex attribute shall be included in the message. The format of the
 6 AttributeRecord is given in [1]. The sender shall not include more
 7 than one attribute record with the same attribute identifier.
 8

Channels	FTC RTC	SLP	Reliable
Addressing	unicast	Priority	40

9 2.3.6 Procedures and Messages for the InUse Instance of the Protocol Suite

10 2.3.6.1 Procedures

11 This protocol suite does not define any procedures.

12 2.3.6.2 Message Formats

13 No messages are defined for the InUse instance of this protocol suite.

14 2.3.6.3 Interface to Other Protocols

15 2.3.6.3.1 Indications

16 This protocol suite does not register to receive any indications.

17 2.3.7 Configuration Attributes

18 No configuration attributes are defined for this protocol suite.

19 2.3.8 Protocol Numeric Constants

Constant	Meaning	Value
N _{HDPType}	Type field for this protocol suite	0x1c
N _{HDPDefaultSubtype}	Subtype field for this protocol suite	0x0000

20 2.3.9 Session State Information

21 This protocol suite does not define any parameter record to be included in a Session State
 22 Information record (described in [1]).

2.4 Generic HDP Protocol Suite

2.4.1 Introduction

The Generic HDP Protocol Suite contains the following protocols:

HDP MAC Protocol: The HDP MAC Protocol defines procedures used to transmit via the HDP Channel. The HDP MAC Protocol is defined in 2.4.4.1.

HDP Physical Layer Protocol: The HDP Physical Layer Protocol provides the channel structure for the HDP Channel. The HDP Physical Layer Protocol is defined in 2.4.4.2.

The relationship between the protocols in the Generic HDP Protocol Suite and the air interface layers in [1] is shown in Figure 2.4.4.1.4.1.2.1-1.

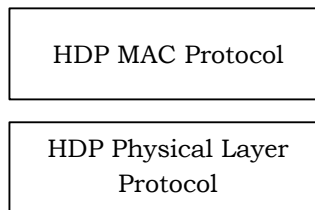


Figure 2.4.4.1.4.1.2.1-1 Generic HDP Protocol Suite

2.4.1.1 Basic Protocol Numbers

The Subtype field for the Generic HDP Protocol Suite is two octets, set to $N_{\text{HDPGenericSubtype}}$.

2.4.1.2 Public Data

- Subtype for the Generic HDP Protocol Suite.

2.4.1.3 Messages

Messages generated by all the protocols in the Generic HDP Protocol Suite are always an integer number of octets in length. The sender shall include reserved bits at the end of the message, if necessary, to make the message an integer number of octets in length. The sender shall set the reserved bits to '0'. The receiver shall ignore the value of the reserved bits.

2.4.2 Generic HDP Protocol Suite Initialization

2.4.2.1 Protocol Initialization for the InConfiguration Instance of the Generic HDP Protocol Suite

Upon creation, the InConfiguration instance of this protocol suite in the access terminal and the access network shall perform the following in the order specified:

- The fall-back values of the attributes for this instance of the protocol suite shall be set to the default values specified for each attribute.

- 1 • If the InUse instance of this protocol suite has the same subtype as that of the
2 InConfiguration instance of the protocol suite, then the fall-back values of the
3 attributes defined by the InConfiguration instance of the protocol suite shall be set to
4 the corresponding attribute values of the InUse instance of the protocol suite.
- 5 • The value for each attribute for this instance of the protocol suite shall be set to the
6 fall-back value for that attribute.
- 7 • The value of the public data of the InConfiguration instance of the protocol suite
8 shall be set to the value of the corresponding public data of the InUse instance of the
9 protocol suite.
- 10 • The value of the subtype associated with the InConfiguration instance of the protocol
11 suite shall be set to the subtype that identifies this protocol suite.

12 2.4.3 Procedures and Messages for the InConfiguration Instance of the Generic HDP 13 Protocol Suite

14 2.4.3.1 Procedures

15 The Generic HDP Protocol Suite uses the Generic Configuration Protocol (described in [1])
16 to define the processing of the configuration messages.

17 The access network and access terminal shall not negotiate the Generic HDP Protocol Suite
18 unless Subtype 3 or higher of the Physical Layer Protocol in [1] is negotiated (i.e., unless
19 the ProtocolSubtype value associated with the ProtocolType value of 0x0 in the
20 SessionStateInformation record of the access terminal is 3 or higher).

21 2.4.3.2 Commit Procedures

22 The access terminal and the access network shall perform the procedures specified in this
23 section, in the order specified, when directed by the InUse instance of the Session
24 Configuration Protocol defined in [1] to execute the Commit procedures:

- 25 • All the public data that are defined by this protocol suite, but are not defined by the
26 InUse instance of the protocol suite shall be added to the public data of the InUse
27 protocol suite.
- 28 • If the InUse instance of this protocol suite has the same subtype as this instance of
29 the protocol suite, then
 - 30 – The access terminal and the access network shall set the attribute values
31 associated with the InUse instance of this protocol suite to the attribute values
32 associated with the InConfiguration instance of this protocol suite, and
 - 33 – The access terminal and the access network shall purge the InConfiguration
34 instance of the protocol suite.
- 35 • If the InUse instance of this protocol suite does not have the same subtype as this
36 instance of the protocol suite, then the access terminal and the access network shall
37 perform the following in the order specified:

- 1 – The InConfiguration instance of the Generic HDP Protocol Suite at the access
- 2 terminal and access network shall become the InUse instance for the HDP
- 3 Protocol Suite.
- 4 • All the public data not defined by this protocol suite shall be removed from the
- 5 public data of the InUse instance of the protocol suite.

6 2.4.3.3 Message Formats

7 2.4.3.3.1 ConfigurationRequest

8 The ConfigurationRequest message format is as follows:

Field	Length (bits)
MessageID	8
TransactionID	8

9 Zero or more instances of the following record

AttributeRecord	Attribute dependent
-----------------	---------------------

- 10 MessageID The sender shall set this field to 0x50.
- 11 TransactionID The sender shall increment this value for each new
- 12 ConfigurationRequest message sent.
- 13 AttributeRecord The format of this record is specified in [1].

14 The access network and the access terminal shall use the following values for the message
 15 information fields when transmitting the ConfigurationRequest message:

Channels	FTC	RTC	SLP	Reliable
Addressing	Unicast		Priority	40

17 Message information fields are defined in [1].

19 2.4.3.3.2 ConfigurationResponse

20 The ConfigurationResponse message format is as follows:

21

Field	Length (bits)
MessageID	8
TransactionID	8

Zero or more instances of the following record

AttributeRecord	Attribute dependent
-----------------	---------------------

- 1 MessageID The sender shall set this field to 0x51.
- 2 TransactionID The sender shall set this value to the TransactionID field of the
3 corresponding ConfigurationRequest message.
- 4 AttributeRecord An attribute record containing a single attribute value. If this
5 message selects a complex attribute, only the ValueID field of the
6 complex attribute shall be included in the message. The format of the
7 AttributeRecord is given in [1]. The sender shall not include more
8 than one attribute record with the same attribute identifier.

9 The access network and the access terminal shall use the following values for the message
10 information fields when transmitting the ConfigurationResponse message:

Channels	FTC	RTC	SLP	Reliable
Addressing	Unicast		Priority	40

12 Message information fields are defined in [1].

14 2.4.4 Procedures and Messages for the InUse Instance of the Generic HDP Protocol Suite

15 2.4.4.1 HDP MAC Protocol

16 2.4.4.1.1 Overview

17 The HDP MAC Protocol contains the rules governing the operation and the timing of the
18 HDP Channel.

19 2.4.4.1.2 Public Data

20 This protocol does not have any public data.

21 2.4.4.1.3 Protocol Data Unit

22 The transmission unit of this protocol is a message. This is a control protocol; and
23 therefore, it does not carry payload on behalf of other layers or protocols.

24 This protocol uses the Signaling Application to transmit and receive messages.

1 2.4.4.1.4 Procedures

2 2.4.4.1.4.1 Access Network Requirements

3 The access network shall transmit the HDPOverhead message according to the
4 requirements in 2.4.4.1.4.1.1.

5 The HDP Channel shall be transmitted according to the timing requirements specified in
6 2.4.4.1.4.1.2.

7 The primary HDP channel is transmitted by some ANs that may be used for position
8 determination. A secondary HDP channel may be transmitted by some ANs in other slots,
9 e.g., for the purpose of inter-AN coordination. The primary HDP channel shall set the value
10 of HDPWalshCover to 0, while the secondary HDP channel shall set the value of
11 HDPWalshCover to 1. Furthermore, the HDPOffset1 value of secondary HDP channel shall
12 be less than the HDPOffset1 value of the primary HDP channel minus 7, or greater than
13 the HDPOffset1 value of the primary HDP channel plus 11.

14 2.4.4.1.4.1.1 HDPOverhead Message Transmission

15 In order for the access terminal to discover and monitor the HDP Channel successfully,
16 various HDP-related parameters need to be signaled over the air interface. The access
17 network broadcasts these parameters over the Control Channel defined in [1] in the form of
18 HDPOverhead message.

19 The HDPOverhead message transmitted by a sector contains the HDP Channel transmit
20 timing information for the sectors. The access network shall transmit an HDPOverhead
21 message periodically in the Synchronous Capsule of the Control Channel defined in [1].
22 The HDPOverhead message shall be transmitted at least once every $N_{\text{HDPOverheadPeriod}}$ Control
23 Channel cycles. The HDPOverhead message shall be effective when the message is
24 transmitted.

25 2.4.4.1.4.1.2 Timing

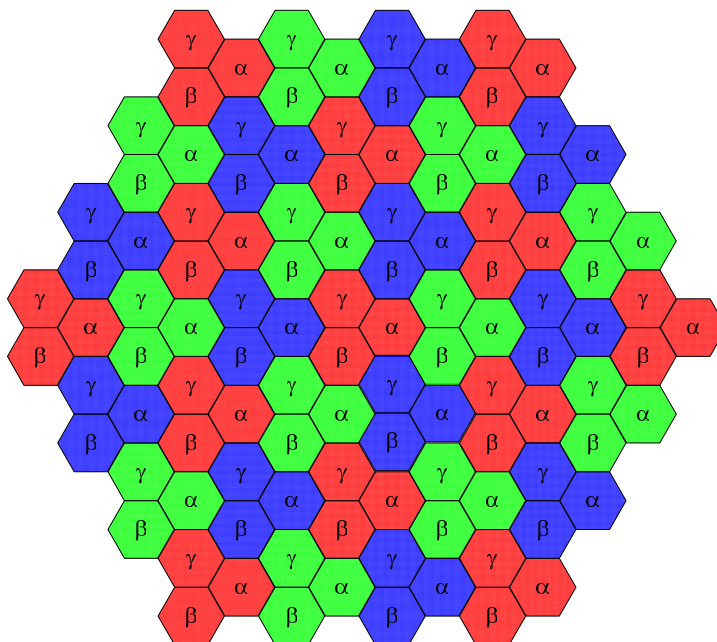
26 Each cell and sector is associated with a parameter called HDP color. The HDP color of a
27 cell takes on a value from the set { Red, Green, Blue } abbreviated as { R, G, B }, the HDP
28 color of a sector takes on a value from the set { R, G, B } \times_c { α , β , γ }. The HDP color of a
29 sector is a 2-tuple, for example (R, α) abbreviated as $R\alpha$, the first element coming from the
30 HDP color of the cell to which the sector belongs. The HDP color of a sector uniquely
31 determines a HDP slot transmit timing for the sector. There are two schemes for coloring:
32 planned coloring and random coloring.¹ All sectors of a cell shall use the same coloring
33 scheme, either planned or random.

¹ The HDP color defined in this document is not related to the color codes that are defined in [1] for detecting subnet changes.

1 2.4.4.1.4.1.2.1 Planned Coloring

2 In planned coloring, a cell is assigned one of three elements { R, G, B } for its HDP color,
 3 and a sector within the cell is assigned one of three elements { α , β , γ } as the second
 4 element of its HDP color. Coloring should be done in such a manner as to minimize
 5 interference among sectors of the same HDP color in a balanced way. An example of
 6 planned coloring is given in Figure 2.4.4.1.4.1.2.1-1, with the actual colors of red, green
 7 and blue representing the HDP colors of the cells.

8



9

10 **Figure 2.4.4.1.4.1.2.1-1 An Example of Planned Coloring**

11

12 If NumHDPSlot is set to 0, a sector with HDP color $C \in \{ R, G, B \} \times_c \{ \alpha, \beta, \gamma \}$ shall transmit
 13 HDP Channel in every slot T with

14
$$(T - \text{HDPOffset1} - \text{HDPOffset2}(C, T)) \bmod 768 = 0$$

15 Table 2.4.4.1.4.1.2.1-1 specifies the parameter of HDPOffset2

16 **Table 2.4.4.1.4.1.2.1-1 HDPOffset2(C,T) for Planned Coloring, if NumHDPSlot = 0**

HDPOffset2	R α	R β	R γ	G α	G β	G γ	B α	B β	B γ
$\lfloor T/768 \rfloor$ mod 3 = 0	0	256	512	516	4	260	264	520	8
$\lfloor T/768 \rfloor$ mod 3 = 1	4	260	516	520	8	264	256	512	0

$\lfloor T/768 \rfloor$ $\text{mod } 3 = 2$	8	264	520	512	0	256	260	516	4
--	---	-----	-----	-----	---	-----	-----	-----	---

1 If NumHDPSlot is set to 1, a sector with HDP color $C \in \{R, G, B\} \times_c \{\alpha, \beta, \gamma\}$ shall transmit
 2 HDP channel in every slot T with

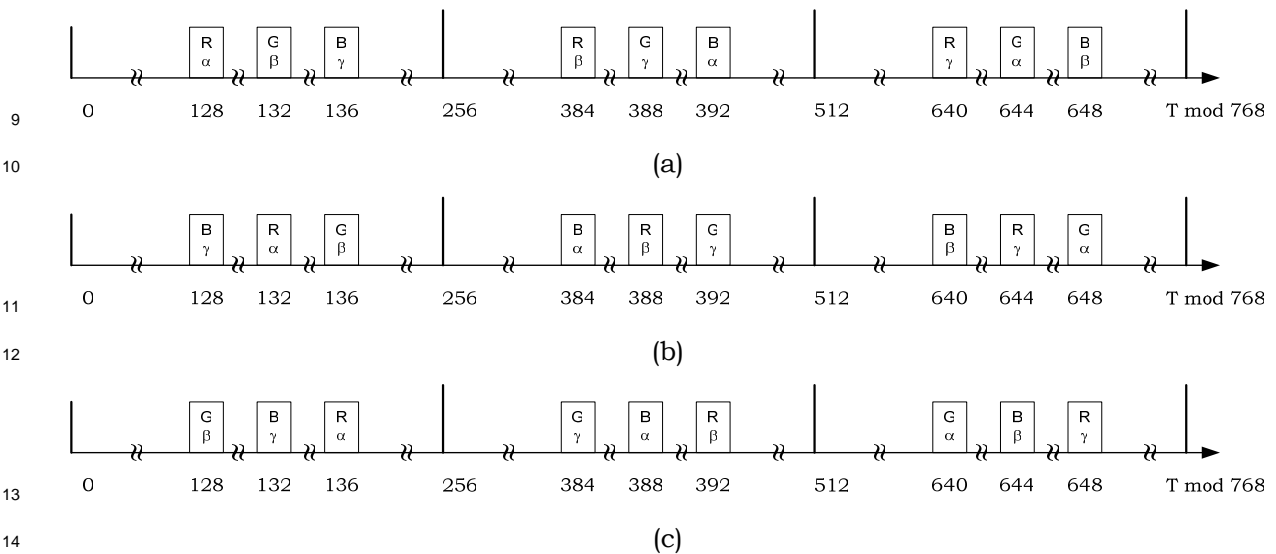
3
$$(T - \text{HDPOffset1} - \text{HDPOffset2}(C)) \text{ mod } 2304 = 0$$

4 Table 2.4.4.1.4.1.2.1-2 specifies the parameter of HDPOffset2.

5 **Table 2.4.4.1.4.1.2.1-2 HDPOffset2(C) for Planned Coloring, if NumHDPSlot = 1**

C	R α	R β	R γ	G α	G β	G γ	B α	B β	B γ
HDPOffset 2	0	768	1536	1792	256	1024	1280	2048	512

6
 7 Figure 2.4.4.1.4.1.2.1-2 illustrates an example of the HDP slot transmit timing when
 8 NumHDPSlot is set to 0 and HDPOffset1 is set to 128.



15 **Figure 2.4.4.1.4.1.2.1-2 HDP Slot Transmit Timing for Planned Coloring (a) for**
 16 **$\lfloor T/768 \rfloor \text{ mod } 3 = 0$ (b) $\lfloor T/768 \rfloor \text{ mod } 3 = 1$ (c) $\lfloor T/768 \rfloor \text{ mod } 3 = 2$**

18 2.4.4.1.4.1.2.2 Random Coloring

19 In random coloring, the HDP color of a sector varies with time once every N slots in a
 20 random manner, where $N = 768$ if NumHDPSlot is set to 0, and $N = 2304$ if NumHDPSlot is
 21 set to 1. For each time duration $s \times N \leq T < (s+1) \times N$, $s = 0, 1, \dots$, a cell generates a random
 22 integer $0 \leq x(s) \leq 8$, referred to as HDP color code. The random integer is mapped to a HDP
 23 color according to Table 2.4.4.1.4.1.2.2-1. Sectors within a cell are numbered 0, 1, 2, ...,

with the parameter HDPSectorIndex, and the HDP color determined above is assigned to sector 0. The s -sectors within the cell are colored in such a manner that the second elements of HDP colors for sector 0, 1, 2, ... shall follow the sequential order of α , β , γ with wrap around while the first element remains the same for all sectors in the cell. For example, if sector 0 has $R\beta$ as its HDP color, then sector 1 and 2 shall have $R\gamma$ and $R\alpha$ as their HDP colors. As a result, $x(s)$ determines the HDP colors of all sectors in the cell for time duration $s \times N \leq T < (s+1) \times N$.

Table 2.4.4.1.4.1.2.2-1 HDP Color Code

HDP Color Code	0	1	2	3	4	5	6	7	8
HDP Color	$R\alpha$	$R\beta$	$R\gamma$	$G\alpha$	$G\beta$	$G\gamma$	$B\alpha$	$B\beta$	$B\gamma$

A cell generates random integer $x(s)$ for time duration $s \times N \leq T < (s+1) \times N$ as follows: compute the 32-bit $m = [9\text{-bit seedPN}, 8\text{-bit sectorSeed}, 15\text{-bit LSB of } s]$, map the 32-bit m to the 32-bit $n = 2654435716 \times m^2 \bmod 2^{32}$, then obtain $x(s) = \lfloor n/536870000 \rfloor$. [9-bit seedPN, 8-bit sectorSeed] is called random coloring seed for the cell. seedPN is set to the pilot PN offset of a sector within the cell, and sectorSeed is set as follows:

If $s \bmod 6 = 0, 2$, or 4 , then sectorSeed should be set to the 8 LSBs of HDPSectorSeed field advertised in the HDPOverhead message.

If $s \bmod 6 = 1$, then sectorSeed should be set to the 16th ...9th LSBs of the HDPSectorSeed field advertised in the HDPOverhead message.

If $s \bmod 6 = 3$, then sectorSeed should be set to the 24th ... 17th LSBs of the HDPSectorSeed field advertised in the HDPOverhead message.

If $s \bmod 6 = 5$, then sectorSeed should be set to the 8 MSBs of HDPSectorSeed field advertised in the HDPOverhead message.

The value of the HDPSectorSeed should identify a HRPD sector. It may be used for the purpose of inter-AN coordination.

If NumHDPSlot is set to 0, a sector with HDP color $C(T) \in \{R, G, B\} \times_c \{\alpha, \beta, \gamma\}$ shall transmit HDP Channel in every slot T with

$$(T - \text{HDPOffset1} - \text{HDPOffset2}(C(T))) \bmod 768 = 0$$

Table 2.4.4.1.4.1.2.2-2 specifies the parameter of HDPOffset2

Table 2.4.4.1.4.1.2.2-2 HDPOffset2 for Random Coloring, if NumHDPSlot = 0

$C(T)$	$R\alpha$	$R\beta$	$R\gamma$	$G\alpha$	$G\beta$	$G\gamma$	$B\alpha$	$B\beta$	$B\gamma$
HDPOffset	0	256	512	516	4	260	264	520	8

2									
----------	--	--	--	--	--	--	--	--	--

1 If NumHDPSlot is set to 1, a sector with HDP color $C(T) \in \{ R, G, B \} \times_c \{ \alpha, \beta, \gamma \}$ shall
 2 transmit HDP channel in every slot T with

3
$$(T - \text{HDPOffset1} - \text{HDPOffset2}(C(T)) \bmod 2304 = 0$$

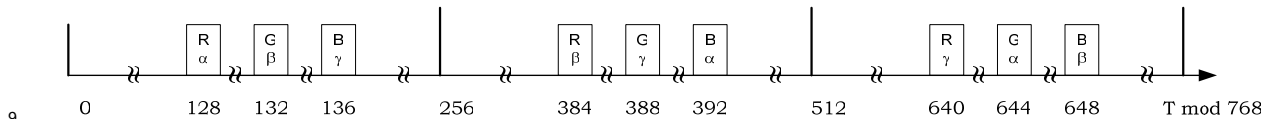
4 Table 2.4.4.1.4.1.2.2-3 specifies the parameter of HDPOffset2.

5 **Table 2.4.4.1.4.1.2.2-3 HDPOffset2(C(T)) for Random Coloring, if NumHDPSlot = 1**

C(T)	R α	R β	R γ	G α	G β	G γ	B α	B β	B γ
HDPOffset2	0	768	1536	1792	256	1024	1280	2048	512

6

7 Figure 2.4.4.1.4.1.2.2-1 illustrates an example of the HDP slot transmit timing when
 8 NumHDPSlot is set to 0 and HDPOffset1 is set to 128.



9

10 **Figure 2.4.4.1.4.1.2.2-1 HDP Slot Transmit Timing for Random Coloring**

11 2.4.4.1.4.2 Access Terminal Requirements

12 2.4.4.1.4.2.1 HDPOverhead Message Processing

13 If the PlannedOrRandomColoring field of a record in the HDPOverhead message is '1', then
 14 the access terminal shall compute the random coloring seed for this sector as follows: If the
 15 SeedSameAsPrevious field and SeedPNSameAsThisPN field are '0' and '0' respectively, then
 16 the random coloring seed as defined in 2.4.4.1.4.1.2.2 for this sector shall be generated
 17 with seedPN set to the HDPCellSeedPN field in this record. If the SeedSameAsPrevious field
 18 and SeedPNSameAsThisPN field are '0' and '1' respectively, then the random coloring seed
 19 as defined in 2.4.4.1.4.1.2.2 for this sector shall be generated with seedPN set to the
 20 HDPSectorPilotPN field in this record. If the SeedSameAsPrevious field is '1', then the
 21 random coloring seed for the sector shall be the same as that for the previous sector.

22 2.4.4.1.5 Message Format

23 2.4.4.1.5.1 HDPOverhead Message

24 The access network sends the HDPOverhead message to provide the access terminal with
 25 the HDP Channel transmit information for the sectors.

26

1 HDPOffset1	The access network shall set this field to the offset of HDP channel, in the range from 0 to 247, inclusive. ¹
2	
3 HDPSectorCount	The access network shall set this field to the number of records specifying sectors information included in this message.
4	
5	
6 HDPSectorPilotPN	The access network shall set this field to the PN offset of a sector.
7	
8 PlannedOrRandomColoring	The access network shall set this field to '0' if the HDP color of this sector is assigned by planned coloring, and to '1' if the HDP color of this sector is assigned by random coloring.
9	
10	
11	
12 PlannedHDPColorCode	The access network shall omit this field if the corresponding PlannedOrRandomColoring is set to '1'. Otherwise, the access network shall set this field to the value shown in Table 2.4.4.1.4.1.2.2-1 corresponding to the planned HDP color of this sector.
13	
14	
15	
16	
17 SeedSameAsPrevious	The access network shall omit this field if the corresponding PlannedOrRandomColoring is set to '0'. Otherwise, the access network shall set this field as follows:
18	
19	
20	
21	The access network shall set this field to '1' if the previous sector uses random coloring and the random coloring seed for this sector is the same as that for the previous sector. Otherwise, the access network shall set this field to '0'. If this is the first sector using random coloring listed in this message, then the access network shall set this field to '0'.
22	
23	
24	
25	
26	
27	
28 SeedPNSameAsThisPN	The access network shall omit this field if the corresponding PlannedOrRandomColoring is set to '0' or SeedSameAsPrevious is set to '1'. Otherwise, the access network shall set this field as follows:
29	
30	
31	
32	The access network shall set this field to '1' if the PN portion (MSBs) of the random coloring seed for this sector is the same as the HDPSectorPilotPN field in
33	
34	

¹ For detection of HDPSectorSeed without reception of HDPOverhead message, it is recommended that HDPOffset1 parameter is set to the same value with in the network.

1 this record. Otherwise, the access network shall set
 2 this field to '0'.

3 HDPCellSeedPN The access network shall omit this field if the
 4 corresponding PlannedOrRandomColoring is set to '0'
 5 or SeedSameAsPrevious is set to '1' or
 6 SeedPNSameAsThisPN is set to '1'. Otherwise, the
 7 access network shall set this field to the PN portion
 8 (MSBs) of the random coloring seed for this sector.

9 HDPSectorSeed The access network shall omit this field if the
 10 corresponding PlannedOrRandomColoring is set to '0'
 11 or SeedSameAsPrevious is set to '1'. Otherwise, the
 12 access network shall set this field to a 32-bit number
 13 that identifies a HRPD sector.

14 HDPSectorIndex The access network shall omit this field if the
 15 corresponding PlannedOrRandomColoring field is set
 16 to '0' or SeedPNSameAsThisPN is set to '1'. Otherwise,
 17 the access network shall set this field to an index for
 18 this sector in the cell which also contains the sector
 19 identified by HDPCellSeedPN. If this field is omitted,
 20 the sector index is assumed to be zero.

21 AdditionalCDMAChannelCount The access network shall set this field to the number
 22 of CDMA channels on which HDP is transmitted.

23 AdditionalCDMAChannel The access network shall set this field to the channel
 24 record specification for the additional CDMA channel
 25 on which HDP is transmitted. The channel record
 26 format is specified in [1].

27 Reserved The number of bits in this field is equal to the number needed to make the
 28 message length an integer number of octets. The access network shall set this field to zero.
 29 The access terminal shall ignore this field. The access network shall use the following
 30 values for the message information fields when transmitting the HDPOverhead message:

31

Channels	CC	SLP	Best Effort
Addressing	Broadcast	Priority	30

32 Message information fields are defined in [1].

1 2.4.4.2 HDP Physical Layer Protocol

2 2.4.4.2.1 Overview

3 The HDP Physical Layer Protocol provides the channel structure for the HDP Channel.

4 2.4.4.2.2 Procedures

5 2.4.4.2.2.1 Access Terminal Requirements

6 The access terminal shall receive messages generated by the HDP Protocol Suite as
7 described in [1].

8 2.4.4.2.2.2 Access Network Requirements

9 This section defines requirements specific to the access network transmitter for the
10 operation of the HDP Channel.

11 2.4.4.2.2.2.1 Frequency Parameters

12 The access network shall meet the requirements in the current version of [2].

13 2.4.4.2.2.2.2 Power Output Characteristics

14 Power output characteristics shall be as specified for the Subtype 3 Physical Layer Protocol
15 in [1].

16 2.4.4.2.2.2.3 Modulation Characteristics

17 2.4.4.2.2.2.3.1 Forward Channel Structure

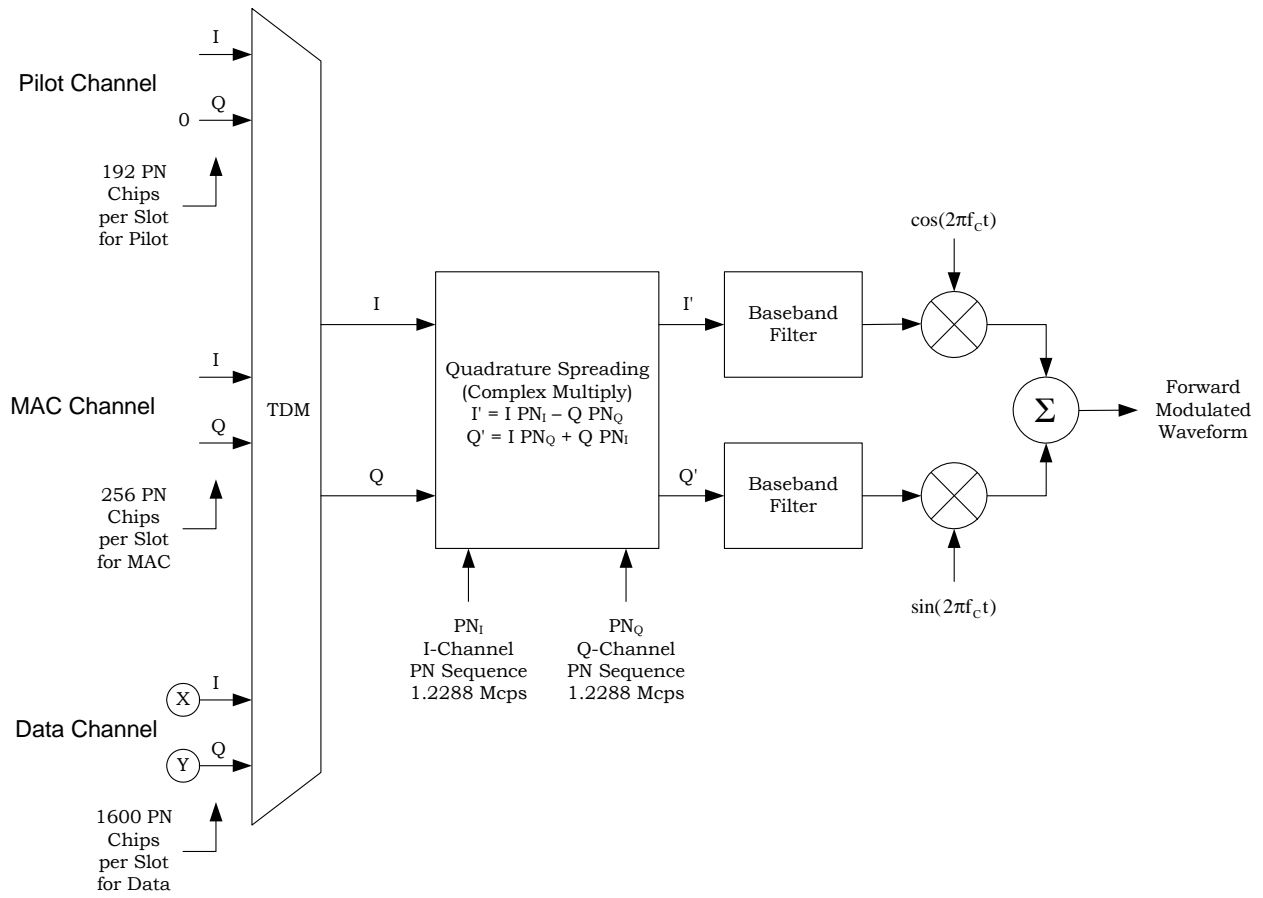
18 The Forward Channel has the overall structure as shown in Figure 2.4.4.2.2.3.1-1.

19

20 The Forward Data Channel is time division multiplexed with the Pilot and MAC channels.
21 The structure of Pilot and MAC channels is specified in [1]. For each 2048 chip slot, there
22 are 192 chips for the Pilot Channel, 256 Chips for the MAC channel, and 1600 chips for
23 the Forward Data Channel. The time division multiplexed channels are quadrature spread
24 and baseband filtered as specified in [1], and then converted in frequency to the
25 appropriate frequency band. The function of the time-division multiplexing block is shown
26 in Figure 2.4.4.2.2.3.1-2 for active and idle slots.

27 In an idle slot, the Forward Data Channel is empty. In any active slot, the Forward Data
28 Channel carries the Forward Traffic Channel, the Control Channel, the Broadcast Channel,
29 or the HDP Channel. HDP Channel is the part of Forward Data Channel that carries
30 unmodulated pilot.

1



2

3

4

Figure 2.4.4.2.2.3.1-1 Forward Channel Structure

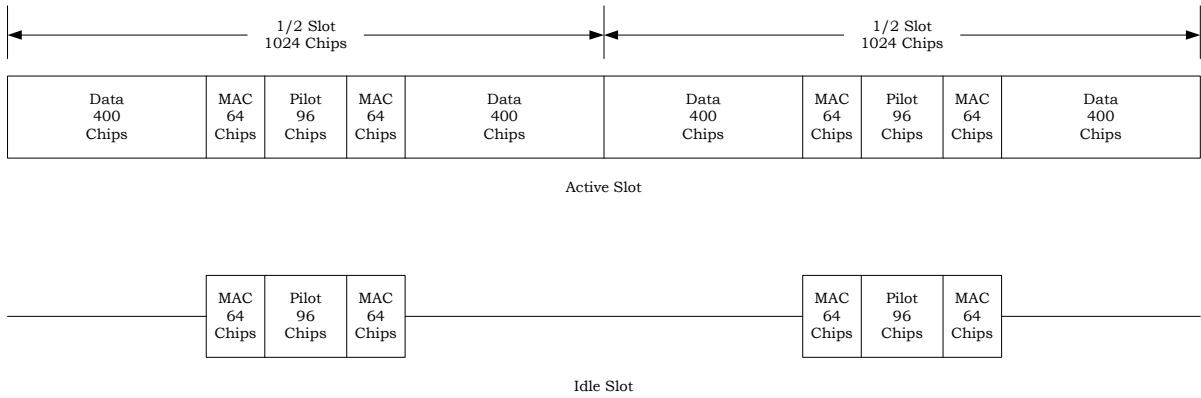
5

6

7

8

1



2

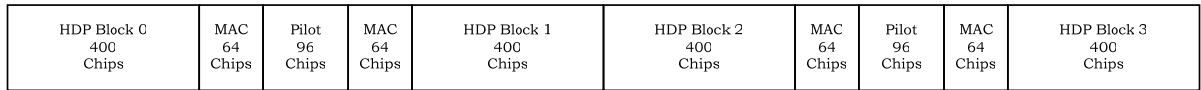
Figure 2.4.4.2.2.2.3.1-2. Forward Link Slot Structure

3

4 Each slot transmitted on the HDP Channel consists of four time division multiplexed
 5 blocks of 400 chips per block, as shown in Figure 2.4.4.2.2.2.3.1-3. The HDP blocks of the
 6 HDP Channel are constructed from unmodulated symbol as shown in Figure
 7 2.4.4.2.2.2.3.1-4.

8

9



10

**Figure 2.4.4.2.2.2.3.1-3. Forward Link Slot Structure during an HDP Channel
Transmission**

11

12

13

1 2.4.4.2.2.2.3.6 Synchronization and Timing

2 Synchronization and timing shall be as specified for the Subtype 3 Physical Layer Protocol
3 in [1].

4 2.4.5 Interface to Other Protocols

5 2.4.5.1 Commands Sent

6 This protocol does not issue any commands.

7 2.4.5.2 Indications

8 This protocol suite does not register to receive any indications.

9 2.4.6 Configurable Attributes

10 No configuration attributes are defined for this protocol.

11 2.4.7 Protocol Numerical Constants

12 The numeric constants for the Generic HDP Protocol Suite are shown in Table 2.4.7-1.

13 **Table 2.4.7-1 Numeric Constants**

Constant	Meaning	Value
N_{HDPTType}	Type field for this protocol suite	0x1c
$N_{\text{HDPGenericSubtype}}$	Subtype field for this protocol suite	0x0001
$N_{\text{HDPOverheadPeriod}}$	The maximum number of Control Channel cycles between two consecutive HDPOverhead message transmissions	35

14 2.4.8 Session State Information

15 This protocol suite does not define any parameter record to be included in a Session State
16 Information record (described in [1]).

- 1 This page is intentionally left blank.