
**Proposed Revision to PHY_SAP
Service Primitives**

IEEE P802.11-94/241a
November 1994
PHY_SAP Revision

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Reason for Change

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The PHY editors jointly propose to modify the PHY_SAP service primitives.

The current set of classes defined in section 8 are insufficient to support all PHYs or are not clearly defined.

- No means of indicating CCA channel busy or idle
- Transmit and receive interactions not clearly defined
- Data parameters for start and end classes not defined
- No means of indicating the end of a NAV timer

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PHY_DATA.requestIEEE P802.11-94/241a
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PHY_SAP Revision**PHY_DATA.request(class, data)**

- class=Start_of_Data, data=TXVECTOR
 - Starts the transmit state machine. TXVECTOR contains the packet length and other packet control information which are PHY dependent.
- class=Data, data=DATA
 - One octet of MPDU data
- class=End_of_Data, data=NULL
 - Indicates end of data to transmit.
- class=End_of_Activity, data=NULL
 - Resets the PLCP CS/CCA assessment timers to the state appropriate for the end of a received packet. This is generated by the MAC at the end of a NAV timer. This request is used by some PHY implementations which may synchronize antenna diversity switching with the contention backoff timing. The use of this request in the PHY is optional.

PHY_DATA.indicateIEEE P802.11-94/241a
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PHY_SAP Revision**PHY_DATA.indicate(class, data)**

- class=Start_of_Activity, data=NULL
 - CS/CCA channel busy
- class=Start_of_Data, data=RXVECTOR
 - Start of the MPDU portion of a packet following a valid SFD and PLCP Header. RXVECTOR contains the packet length and other packet information including RSSI. RXVECTOR is PHY dependent.
- class=Data, data=DATA
- class=End_of_Data, data=RXERROR
 - End of a received packet. RXERROR contains the condition of the received packet with states including no_error, header_violation, format_violation, carrier_lost.
- class=End_of_Activity, data=NULL
 - CS/CCA channel idle

PHY_DATA.confirm

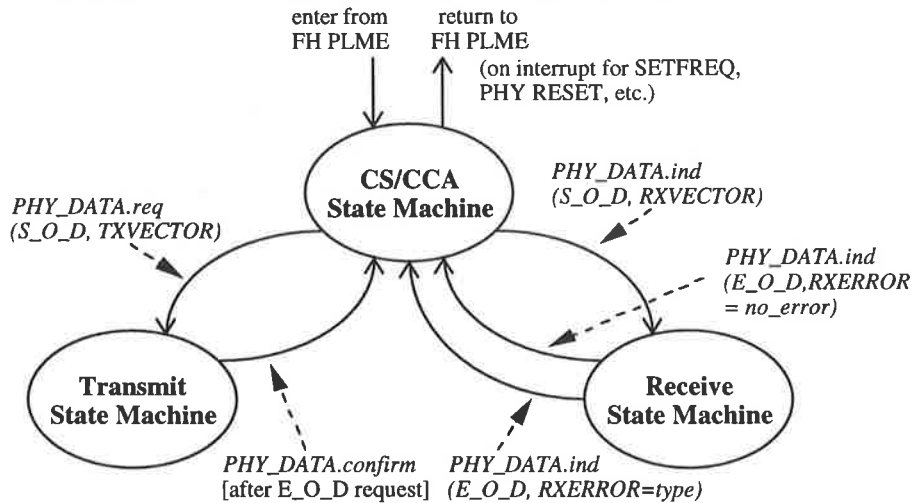
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PHY_DATA.confirm

- After all PHY_DATA.request(Data, DATA), it indicates the PLCP is ready to receive another byte. After the PHY_DATA.request(End_of_Data, NULL), it indicates that transmission is complete.

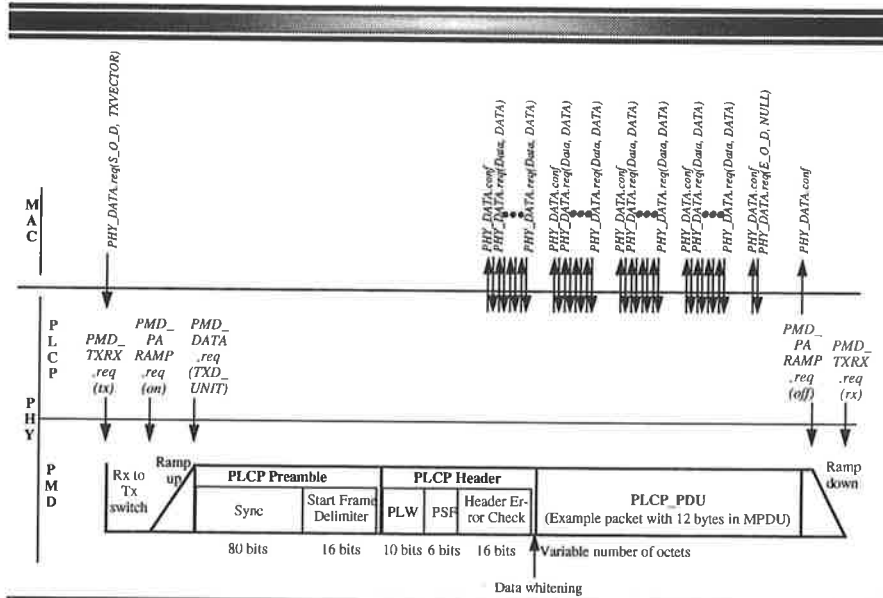
FH PLCP State Machines

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FH Transmit Timing

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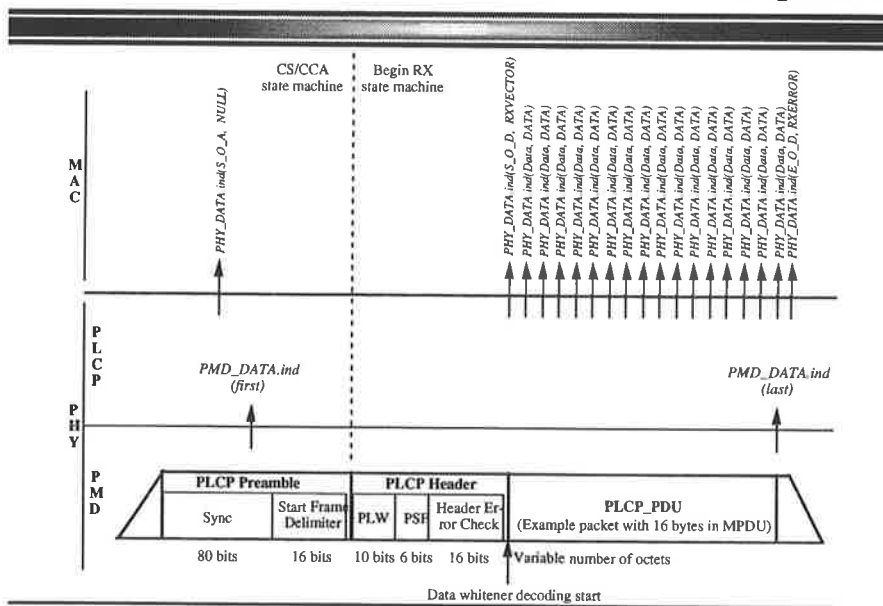
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FH Receive Timing

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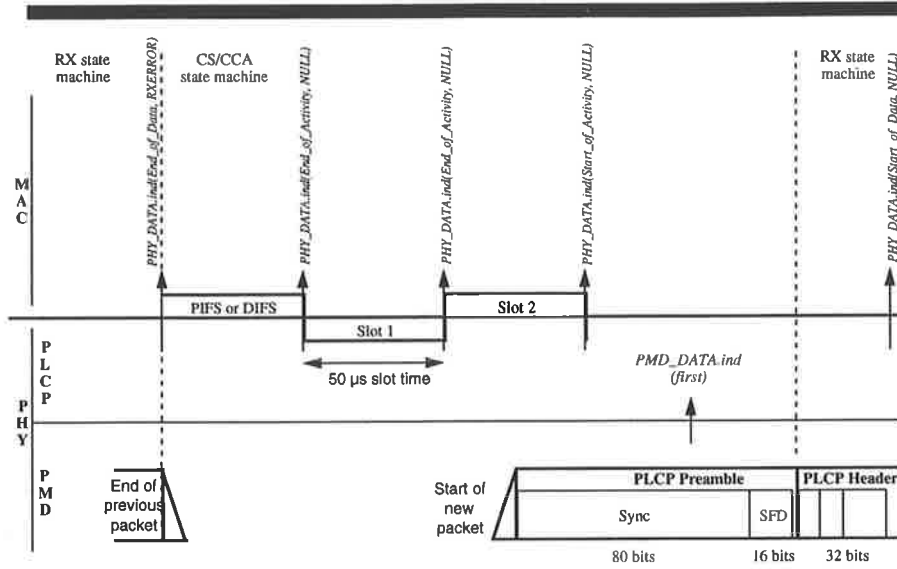
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FH CS/CCA Timing

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