Multi Bit Rate Support

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Principles of Operation

All stations support the ESS DEFAULT_RATE Control and Multicast in DEFAULT_RATE Unidata Message in DEFAULT_RATE
Principles of Operation (ctd...)

New Field in RTS: Requested_Rate

New Field in CTS: Granted_Rate

If RTS' Requested_Rate is acceptable for the receiving station's PHY, then

Granted_Rate = Requested_Rate

else

Granted_Rate = DEFAULT_RATE

Data Messages at Granted_Rate
Principles of Operation (ctd...)

RTS/CTS "duration" field is MPDU "Data Length" field

The same value on the CTS regardless of the chosen speed.
The NAV calculation uses the Requested_Speed/Granted_Speed to calculate the duration
Draft Standard Changes Description

Change Duration Element to Data_Length
Add a Rate Element (RTS/CTS frames)
Change RTS/CTS frames picture
Change MAC Data Service Pseudo-Code
Change MAC Management Service Pseudo-Code
Change NAV Setting Procedure
Describe how a CTS frame is built
   No formal description in the draft
Rx State Machine Changes

R20a: Change NAV Calculation Description
R30a: Change NAV Calculation Description
R12: Add Requested_Rate reading
R13: Add Granted_Rate reading
Ctrl State Machine Changes

**State C1, Tx RTS:**
Add that Requested_Rate shall be set to MAX_BITRATE

**State C5, Tx CTS:**
Add Granted_Rate Calculation Description

**State C3, Tx Data:**
Add: Set TX_BIT_RATE in PHY_DATA.request to Granted_Rate

These parameters will be part of the PLME_PARLIST passed on the PHY_DATA.request and PHY_DATA.indicate Service Primitives.