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 choosen 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.