The case for removing the HR/DSSS/FH option.

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What is it?

- HR/DSSS/FH is first and foremost an FH system.
  - A HR/DSSS/FH station joins an FH BSS and “hops” with the rest of the BSS.
  - CCA and “medium reservation” is done in a 1 MHz wide channel.
  - High Rate transmission of the PDU consumes a 22 MHz channel.
- It is an FH system that speeds up to HR DS when possible.
- It is NOT a system that operates at high speed and falls back to 2 Mbps FH.
Why remove it?

- No Coexistence.
- The HR/DSSS/FH mode interferes with all other 802.11 PHYs.
- If approved, it will be the worst possible interferer that we have defined.
  - Bad interferer for existing FH and DS systems
- It doesn’t even coexist with itself.
  - Co located HR/DSSS/FH systems will not work well

Why remove it?

- It is a single cell system.
  - Applications are limited
- There is no migration path from existing FH to high speed DS.
- It does not provide backwards compatibility from the high rate PHY to FH systems.
Why remove it?

• It is a new PHY.
• It does not interoperate with the HR/DSSS PHY.
• The charter for TGb states that we are to develop a single PHY.
  – This clearly violates that charter.
• Options in the standard are bad.

Why remove it?

• Adding this option causes confusion in the market.
  – Creating two new incompatible PHYs
  – 802.11 should present a unified position
• High Rate capability is expanding the market for WLANs.
• Why repeat the same mistake we made with FH and DS in the 2.4GH band?
• This option is yet another thing to explain.
  – It becomes an obstacle to adoption
Please vote to remove HR/DSSS/FH

- it is technically ugly
  - not well defined in current draft
- it is not benign
  - “electronic warfare”
- it has limited application
- it will be expensive
- it slows the market adoption of WLANs
- 802.11b schedule issues