MAC State Machine

Proposed Changes

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What can be done better?

Current Situation
The transaction for CTS and ACK timeout, are triggered by strict timeouts, during these "waiting states" all information is discarded.

Potential Problems
1. A "slow" station CTS may be discarded if CTS timeout too short.
2. A new RTS (from other station) may be discarded if timeout too long.
Proposed Solution

Use a longer timeout (more flexible to slow implementations), and let any new frame trigger a "timeout" transition (based on the fact that if we have received other frame we can assume that we are not receiving the CTS or the ACK)

Changes Description

New Flag: Rx_flag (indicates we've received a frame, even if not addressed to us)

On Rx State Machine:

- Any Transition from R1 sets the Rx_flag

On Control State Machine:

- Transition C12 clears Rx_flag, and Frame Type Flags
- Transition C34 clears Rx_flag, and Frame Type Flags
- Add Transition C27 when Rx_flag is set
- Add Transition C47 when Rx_flag is set
- Enlarge CTS_timeout and ACK_timeout
- C70 does not Reset Frame Type Flags