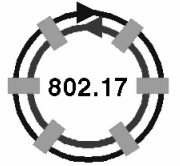# Spatially Aware Bridging Requirement

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Planning for Success

- For 802.17b to be successful the following requirements must be met:
  - No changes to existing base standard
    - Minimal SW changes might be acceptable
  - Support for split interface across 2 line-cards or a single interface
  - Support wrap or steer systems
  - Easily implemented as a sub-layer of the MAC or as part of the bridge FDB processes
  - Quick TTM – RevCom approval March 2006

No Changes to P802.17/2004
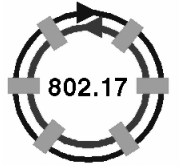
- 802.17 silicon is already available
- Churn in the standard will harm 802.17 deployment / rollout
- As long as none of the base document is altered, comments are only allowed on the new material
  - Maintenance process is the correct method for fixing any 802.17 *features*

Support for Split Interfaces

- Many 802.17 interfaces are split across line-cards in order to provide higher availability
  - Base standard supports split line-cards
  - Implementation is responsible to get ringlet selection right
- Two copies of the database will exist
  - No requirement to synchronize the databases
    - Keep cost and complexity low
  - Some additional flooding might occur, but not if ringlet selection is handled "correctly"
    - Technically this might require the appearance that the SAB/client performs ringlet selection
    - "Correctly" could be defined as transmission on the same ringlet as frame was received or
    - Force no requirement and persistent flooding could occur.
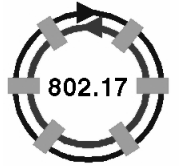
Support Wrap or Steer

- There should be no special issues with regard to supporting steering
- With regard to wrapping, the only corner cases involve the center wrapped station on split linecards
  - Iff the FDB is flushed on protection events (into or out of) then no issues occur
  - Else additional flooding occurs as the database learns since the information is in the wrong database
  - Implication is that ringlet selection occurs before the SAB shim
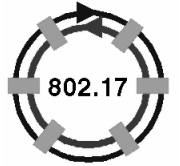
Implement as MAC Sublayer

- Existing bridges will not be able to support SAB
  - Forcing SAB into dot1/bridges greatly limits market
  - A shim layer within the MAC allows any bridge to add this functionality to the .17 interface
  - A shim layer within the MAC allows MAC silicon to be upgraded to support SAB as required
    - Or for SAB to be implemented above MAC silicon but below bridge

Implement within Bridge

- Eventually Bridges may implement this functionality

    – Driven largely by uptake of .17 and the need to cost reduce platforms

- Insuring SAB is compatible with existing .1D/Q operation allows

    – Easier integration of SAB into bridge firmware / hardware

Quick TTM

- Customer's with L2 networks are demanding this functionality
  - 802.17 rollout should not be unduly delayed waiting for this functionality

- Keeping the functionality focused and avoiding feature creep will insure rapid closure of standard

Questions?

802.17