



PCF Time Bounded Services

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Current Specification Status

- **Distributed Coordination Function (DCF)**
 - Yes
- **Point Coordination Function (PCF)**
 - Yes
- **Distributed Time Bounded Services (DTBS)**
 - Agreed in principle
- **PCF Time-Bounded Services (PCF TBS)**
 - No, Why not?...

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Alternatives

- **DTBS using Active Signalling**
 - Rejected because it would require an energy based CCA
- **DTBS using different Inter-Frame Spacings**
 - Long delays for asynchronous traffic to access medium
 - Very inefficient with more than two priority levels
- **PCF TBS**
 - Similar to PCF asynchronous traffic

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Arguments For PCF TBS

- In any situation in which a PCF is viable, PCF TBS will be viable also
- Low average delay between packets on the air

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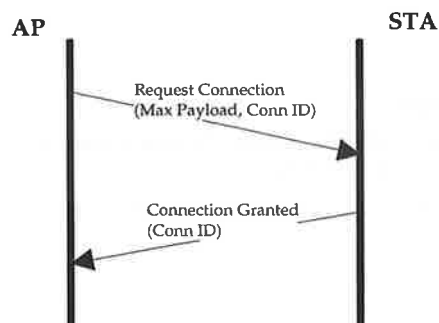
What is needed?

- Connection ID in CF Up and CF Down packets
- Request to be included on the polling list
 - Similar to the mechanism used with asynchronous traffic

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AP Initiates Connection

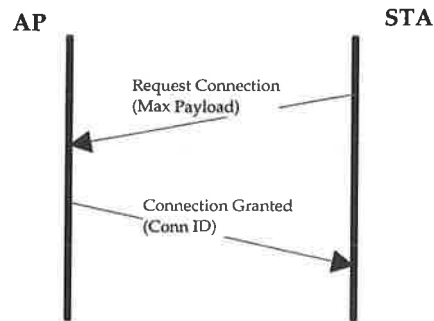


- AP requests a connection
 - With a maximum payload and an assigned connection ID
- STA grants connection
 - With connection ID
 - Can refuse by not responding

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STA Initiates Connection



- STA requests a connection
 - With a maximum payload
- AP grants connection
 - With assigned connection ID
 - Can refuse by not responding

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Changes to Frame Formats

- Data Frames
 - For CF-Up and CF-Down the Duration field can be reused as a connection ID field.
 - Duration field has no meaning in Contention Free Period
- Management Frame Sub-Types
 - Connection Request
 - Connection Grant
 - End Connection

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