IEEE P802.11  
Wireless LANs

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| CC25 CID174 comment resolution | | | | |
| Date: 2017-11-06 | | | | |
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R0 Proposed resolution to CC25 CID174 that Coverage Classes are not interoperable. Discussed November 7, 2017 in REVmd.

R1 Revise Discussion about logic to change Coverage Class field. Change Proposed Resolution text to cite use in products

**Discussion:**

CID174 “Coverage classes are not interoperable, because there is no mechansim for an AP to know whether a STA supports them (and thence to deny association if it doesn't).”

In general, there are 802.11 bands where higher transmit power limits allow networks operate over greater CSMA diameters than PHY default timing supports, e.g., the US radio regulations for TVWS and the 3650-3700 MHz bands. Coverage Classe field is used to increase CSMA diameters, but STA associate request does not indicate support for Coverage Classes.

10.21.5 Operating with coverage classes specifies operation where dot11OperatingClassesRequired is true and a non-zero Coverage Class field is in use, where the collision radius is greater than the PHY default value. An AP can deny association to any STA that does not have a Supported Operating Classes element with an operating class for a band that the AP uses coverage classes. An AP can change the Coverage Class value to protect CSMA operation of the most distant STAs at the expense of larger slottimes.

An AP can disassociate a STA for any reason, including where the AP manages CSMA diameter and relates problems a specific STA. How the AP manages CSMA diameter is beyond the standard.

The AP uses Coverage Classes in bands where necessary. We propose to not burden the standard with additional information in associate request that is unused outside of bands where Coverage Classes increase CSMA diameters.

CID174 Proposed Change: “Mark coverage classes as obsolete and subject to deletion in a future version of the standard”.

The Carlson Wireless Rural Connect 802.11af radio products use coverage class information to form and operate networks at well over 4 km collision radius. Other Carlson Wireless products support 802.11af including coverage class and will interoperate with products in the field.

Jim Carlson CEO of Carson Wireless wrote an email to the chair of REVmd stating:

“We are producing a product using the 802.11af standard.

We are using the [below] collision detection back off timing and do not want it marked obsolete.”

**Proposed Resolution: REJECTED.** We do not burden the standard with additional information in associate request that is unused outside of bands where Coverage Classes increase CSMA diameters. We are aware of products using Coverage Classes deployed in TV White Space bands, and do not agree to mark Coverage Classes as obsolete.