IEEE P802.11  
Wireless LANs

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| 802.11  [Resolutions to CID #4224  (relative to IEEE 802.11 REVmd D3.2) | | | | |
| Date: 2018-05-13 | | | | |
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**Abstract**

This submission proposes a resolution to CID #4224.

History:

R0: Initial Version

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| 4224 | Mark RISON |  |  |  | The units of MULTICHANNEL\_SAMPLING\_RATE are unclear.  Sometimes it's sample/s, sometimes unitless.  Since Annex P says the sampling rate is MULTICHANNEL\_SAMPLING\_RATE sample/s, MULTICHANNEL\_SAMPLING\_RATE itself should be unitless | Delete " sample/s" in 15.4.5.11 Time of Departure accuracy, 16.3.7.10 Time of Departure accuracy, 17.3.9.9 Time of Departure accuracy, 19.3.18.8 Time of Departure accuracy, 20.5.4.1.2 Time of Departure accuracy, 21.3.17.5 Time of Departure accuracy, 23.3.16.5 Time of Departure accuracy, 24.5.4.1.2 Time of departure accuracy, 25.5.7.1.3 Time of Departure accuracy, 25.6.9.2.3 Time of Departure accuracy | Accept |

**Discussion:**

1. Accept and incorporate changes proposed by the commenter – requires the reader to read Annex-P in order to understand the unit in which MULTICHANNEL\_SAMPLING\_RATE is represented (samples/s); and renders comprehending the corresponding statement in Clauses 15, 16, 17, 19, 20, 21, 23, 24 and 25 may be incomplete (without reading Annex-P).
2. Revise. Do not make the proposed changes to Clauses 15, 16, 17, 19, 20, 21, 23, 24 and 25 but make one change to Annex-P as shown below

**Resolution: with (b) above Revise or with (a) above Accept**

***Editor: Change the following paragraph in P4590L12-21 as shown below:***

The Time Difference of Departure accuracy test is performed by instrumentation capable of converting signals transmitted on one or more channels into a stream of complex samples at *f*s sample/s or more, with sufficient accuracy in terms of I/Q arm amplitude and phase balance, dc offsets, phase noise, etc, and at a fixed delay from the transmitter. The minimum sampling rate is MULTICHANNEL\_SAMPLING\_RATE (expressed in samples/s). A possible embodiment of such a setup is converting the signal to a low IF frequency with a cabled microwave synthesizer, sampling the signal with a digital oscilloscope and decomposing it digitally into quadrature components. The sampled signal is processed in a manner similar to an actual time of arrival processor, according to the following steps: