IEEE 802.19 Working Group Tutorial
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Wireless Coexistence

- **There are several working groups that develop wireless standards (e.g., 802.11, 802.15)**

- **Most of these standards operate in unlicensed (license-exempt) frequency bands**

- **It is important to understand the coexistence between devices using these standards**

- **This led to the 802 policies related to wireless coexistence**

Coexistence Policy

- **New Wireless Project**
  - **Indicate in the Criteria for Standards Development (CSD) if the Working Group plans to develop a Coexistence Assessment (CA) document**
  - **Typically applies for PHY or lower MAC projects**
  - **Other cases (like Security) a CA document is not needed**
- **Letter Ballot Phase**
  - **The WG develops a CA document and includes it in the first Letter Ballot**
  - **The 802.19 WG votes on the approval of this document**
  - **Members of 802.19 are typically members of one of the wireless working groups**

Scope of the Coexistence Assessment Document
(In 802 Chairs Guidelines)

The CA document:

1) shall include a list of the active IEEE 802 wireless standards operating in the same frequency bands as the new standard under development,

2) should include a list of the active IEEE 802 projects expected to operate in the same frequency bands as the new standard under development,

3) should include a list of market-relevant implementations and standards outside of IEEE 802 operating in the same frequency bands as the new standard under development.

The CA document should assess the potential impact of systems based on the proposed standard on other identified standards using the same bands, and impacts other systems may have on the proposed standard:

- **Consider aspects such as: transmit power, bandwidth, duty cycle, channel access methods and proximity**

- **Describe the methods used to undertake the assessment**

- **Include a description of factors that mitigate the coexistence impacts**

802.19 Ballot on CA document

- **802.19 Votes on the Approval of the CA document**

- **If the CA document is approved, then the process is complete**

- **If the CA document fails then it is updated and 802.19 votes on the updated CA document during the second Letter Ballot, or the Recirculation ballot**

- **Any comment on the CA document are provided to the original WG for updating of the CA document**

IEEE 802 Wireless Standards Table of Frequency Ranges

- **802.18 and 802.19 recently developed spreadsheet mapping Wireless Standards to Frequency Ranges**
- **This is intended to assist people in preparing CA documents**
- **The document is on the 802.18 web site at,**
  - https://mentor.ieee.org/802.18/dcn/22/18-22-0009-01-0000-ieee-802-wireless-standards-table-of-frequency-ranges.xlsx
- **The intention is to place this on the Executive Committee section on Mentor**