RAW use cases
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Use cases in the draft

- Aeronautical Communications
- Amusement Parks
- Wireless for Industrial Applications
- Pro Audio and Video
- Wireless gaming
- UAV platooning and control
- Edge Robotics control

Focus of this presentation
(due to time constraints)
Wireless for Industrial Apps.: Specifics

• Heterogeneous technologies (mostly wireless)

• Multiple simultaneous links

• Variable link conditions (even with low mobility)

• Different needs/traffic types, e.g.:
  • Control loops: reliability is key
  • Monitoring and diagnostics: should not be mixed with previous
Wireless for Industrial Apps.: Requirements for RAW

- Solutions should be backwards compatible
  - Capable of transporting both regular (multiplexed) flows and flows requiring predictable behavior

- Solutions should be able to work over multiple wireless access technologies
  - E.g., segment such as TSCH and a backbone segment such as Ethernet or WI-FI
The gaming industry includes 3 different scenarios:

- **Real-time Mobile Gaming**, very sensitive to network latency and stability
- **Wireless Console Gaming**, requiring low latency and jitter
- **Cloud Gaming**, requiring low latency
Wireless gaming: Specifics

- Intra BSS latency: less than 5 ms
- Jitter variance: less than 2 ms
- Packet loss: less than 0.1%
Wireless gaming: Requirements for RAW

• Time sensitive networking extensions, such as time-aware shaping and redundancy to address congestion and reliability problems
• Priority tagging (stream identification) to support differentiation of time-sensitive packets from other BE traffic
• Time-aware shaping, as defined in IEEE 802.1Qbv
• Dual/multiple link, to improve latency stability
• Admission control
Summary and next steps

• Different **use cases** do need wireless connectivity for various purposes **demanding reliable and available wireless** behavior
  • 7 use cases already included in the draft
  • Others: smart grid...

• Next steps:
  • Document additional use cases?
  • Continue with the characterization of use cases in terms of requirements
  • Adopt as WG document?