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EION TrustLink
Advanced Wireless Interference Mitigation Technique

What is TrustLink?

EION TrustLink is a technology developed by EION Wireless for the delivery of high-throughput, outdoor, multimedia-rich applications in the unlicensed band. TrustLink Technology provides interference mitigation, increased system performance, low latency and Quality of Experience.

Dynamic Polling

With TrustLink, the core approach is to employ a dynamic polling system in place of a traditional CSMA-CA system for channel control. Here, transmissions for the CPEs are synchronized to the base station and do not attempt to transmit until instructed to by the access point. Using a dynamic approach, only those CPEs that have traffic to send or receive data are polled. Traffic dormant CPEs are polled much less frequently, which substantially reduces the number of extraneous messages. Dynamic polling gives more time for live traffic handling and reduces system overhead.

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Interference Mitigation Algorithm

TrustLink incorporates strong algorithms that significantly reduce the harmful effects of interference in the unlicensed band. The system takes a commanding role in the face of interference from outside systems. Unlike other wireless systems, TrustLink will constantly scan for gaps in transmission and take advantage of every free opportunity in the unlicensed band. This behaviour is where TrustLink can win out in congested channels. By capitalizing on any gap in transmission and polling CPEs with traffic, TrustLink has a higher probability of successful communication. The added advantage of the aggressive polling approach is that it will back off CSMA-CA systems by keeping the channel active. Collectively, the opportunistic gap-grabbing, streamlined messaging and backing off of CSMA-CA messages results in significantly better throughput than conventional 802.11 systems in the same crowded channel environment.

Scalability Platform

For highly scalable networks, TrustLink Technology allows operators to connect many CPEs to each access point. Traditional WiFi-based CSMA-CA systems require that all subscribers hear each other, and multiple collisions can occur and suffer from hidden node and capture effect, limiting the number of subscribers. TrustLink solves the hidden node problems and enables a truly scalable platform for cost-effective point-to-multipoint networks.

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