**IEEE P802.15.16t**

**Wireless Personal Area Networks**

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| Project | **IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)** |
| Title | **TG16t Mobility Requirements for Railroad Applications** |
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| Re: |  |
| Abstract | [IEEE 802.15 TG16t] |
| Purpose | [Requirement clarification for WG] |
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TG16t Mobility Requirements for Railroad Applications

The Federal Railroad Administration (FRA) has a classification system for railroad tracks in the United States. The railroad tracks are classified based on various factors such as track geometry, structure, and inspection failure limits. The track classification includes a maximum allowable operating speed depicted in the following table (summarized from 49 CFR Part 213).

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| **Track classification** | **Maximum allowable operating speed for trains** |
| Class 1 track | 15 mph |
| Class 2 track | 30 mph |
| Class 3 track | 60 mph |
| Class 4 track | 80 mph |
| Class 5 track | 90 mph |
| Class 6 track | 110 mph |
| Class 7 track | 125 mph |
| Class 8 track | 160 mph |
| Class 9 track | 220 mph |

In order to support communication use cases where either end point is part of a train consist, the IEEE802.16t standard shall support velocities and mobility up to 220 mph.