

As of my last update in January 2022, 802.11be, also known as Wi-Fi 7, had not yet been finalized or ratified by the IEEE. However, it's likely that it represents the next iteration of the Wi-Fi standard following 802.11ax (Wi-Fi 6).

802.11be is expected to build upon the advancements of its predecessors and introduce further improvements in speed, capacity, efficiency, and reliability. While specific details about 802.11be may not be available until the standard is officially ratified and published, some anticipated features and enhancements could include:

- **Even Higher Data Rates:** 802.11be is expected to support even higher data rates than its predecessors, possibly exceeding 10 Gbps.
- **Enhanced Spectrum Efficiency:** The standard may introduce further enhancements to spectrum efficiency through technologies like advanced modulation schemes, wider channel bandwidths, and more efficient spectrum utilization techniques.
- **Improved MU-MIMO and OFDMA:** Multi-User MIMO (MU-MIMO) and Orthogonal Frequency Division Multiple Access (OFDMA) are likely to be further refined and optimized to support a larger number of simultaneous connections and improve network efficiency in high-density environments.
- **Reduced Latency:** 802.11be may include features aimed at reducing latency, such as improved scheduling algorithms, enhanced Quality of Service (QoS) mechanisms, and support for low-latency applications like virtual reality and real-time gaming.
- **Enhanced Security:** The standard is expected to include improvements in wireless security protocols to address emerging security threats and vulnerabilities.
- **IoT and 5G Integration:** With the growing importance of Internet of Things (IoT) devices and the deployment of 5G networks, 802.11be may include features to better integrate with these technologies and provide seamless connectivity across heterogeneous networks.
- **Power Efficiency:** Like previous standards, 802.11be may include features aimed at improving power efficiency for battery-powered devices, such as Target Wake Time (TWT) and power-saving mechanisms.

It's important to note that while some features and enhancements of 802.11be can be anticipated based on trends and previous standards, the final specifications will depend on the work of the IEEE 802.11 Working Group and industry stakeholders involved in the standardization process.