

WiFi Training Program 2025

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Question-6:

What is the role of Guard Intervals in WLAN transmission? How does a short Guard Interval improve efficiency?

A Guard Interval (GI) is a short time gap added between transmitted symbols in a wireless signal. This is mainly added to prevent the symbols overlapping and ISI (Inter Symbol Interference)

It works in OFDM symbol transmission by adding a short gap between the transmission symbols and it helps in reliable transmission and prevents ISI.

There are two types of GI:

- 1. Long GI- duration – 800ns**
- 2. Short GI- duration – 400ns**

Since short GI has Less dead time, So more bits are transmitted more symbols per second which increases the throughput and efficiency.