

Jitter Measurements



Modern transmission solutions require high levels of capacity and reliability. In order to come as near as possible to the upper limits it is important to understand what causes reduction from the theoretical capacity. By specific measurements it is possible to trace different sources of interference. In this course you learn about the different kinds of interfering sources and how to reduce their effect.

Jitter Measurements

OBJECTIVES

- To understand:
- jitter causes and effects
 - methods of jitter measurements
 - jitter analyze
 - PLL & jitter

TARGET GROUP

- The Jitter Measurement is intended for those working with high speed systems and transmission in:
- measurement
 - construction
 - design

PRECONDITION

- Basic understanding of the Time-Frequency relation is recommended
- Statistical fundamentals

Standard **Advanced**
- 1 day

Content

⌘ What is jitter? - Types, causes and effects

- Errors
 - periodic
 - time interval
 - cycle-cycle
- Noise
 - flicker
 - thermal
 - shot
- Crosstalk
- E- & H-field
- Jitter
 - random
 - deterministic
 - periodic
 - data dependent
- Duty Cycle Distortion
- Inter Symbol Interference

⌘ Different types of Jitter measurements

- Sequential Time Analyze
- Statistical Bin Analyze
- Spectrum Power Density
- TIA

⌘ Jitter Analyze and Jitter separation

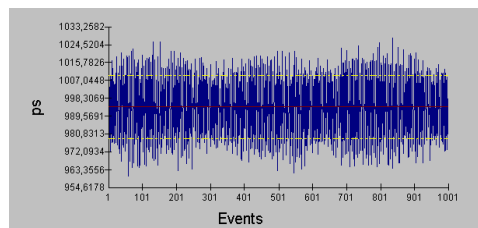
- Histogram
- Best tail fit
- Signal decomposition
- Jitter frequency spectrum

⌘ PLL Output Jitter

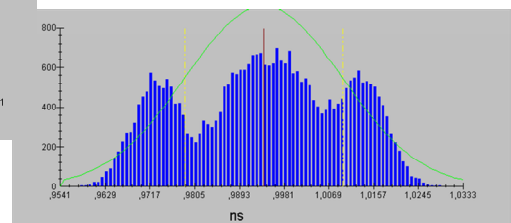
- PLL function
- Jitter sources
- Flicker noise
- White noise

⌘ Analyzes of a signal affected by Jitter

- Practical approach
- Analyze methods
- Jitter separation
- Source determination



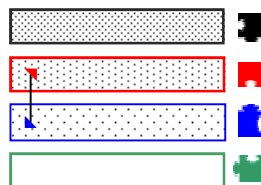
Related Course: EMC



Product

JM-1: Jitter Measurement (1 day)

JM-1



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