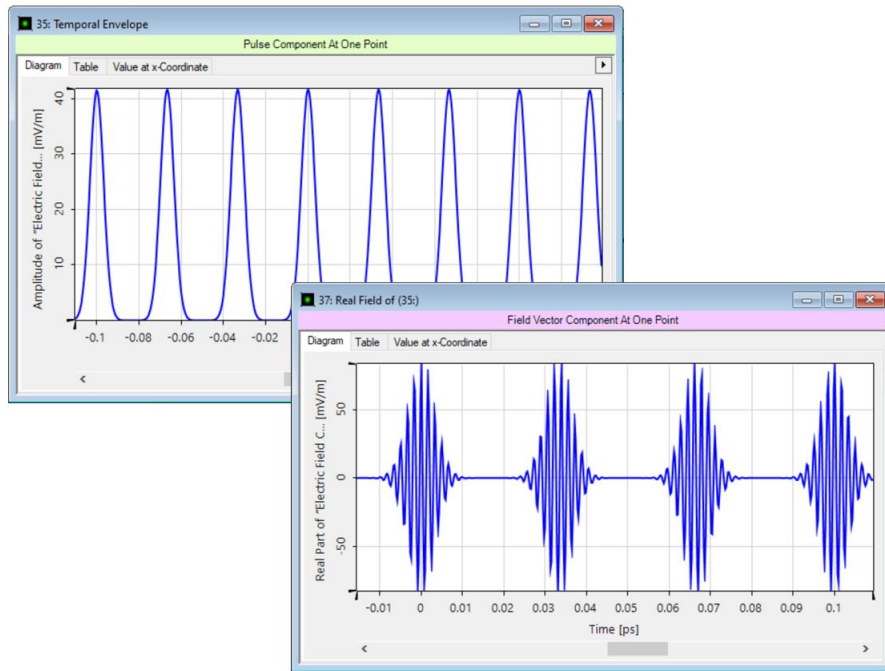


Pulse Train Generator

Abstract

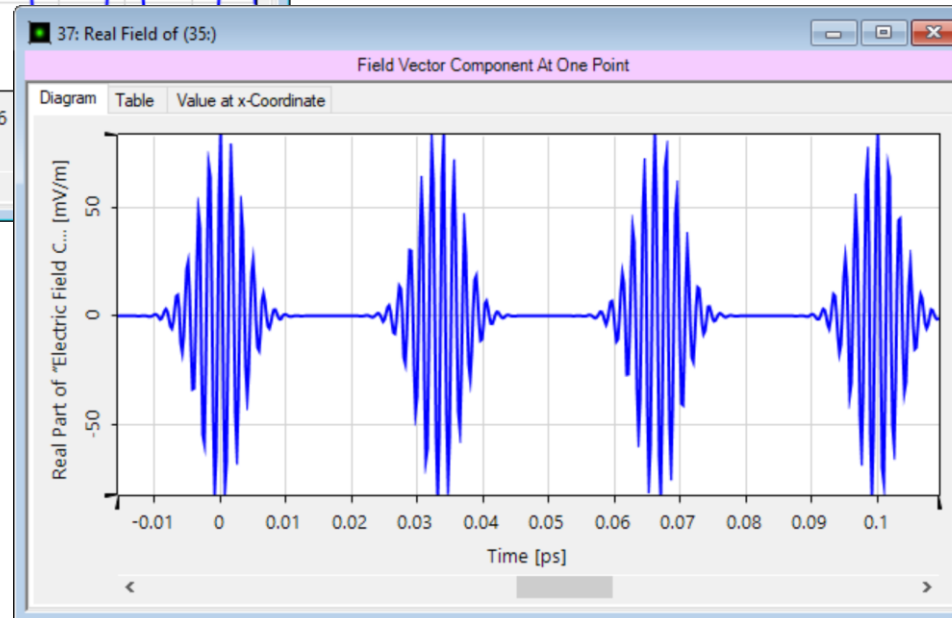
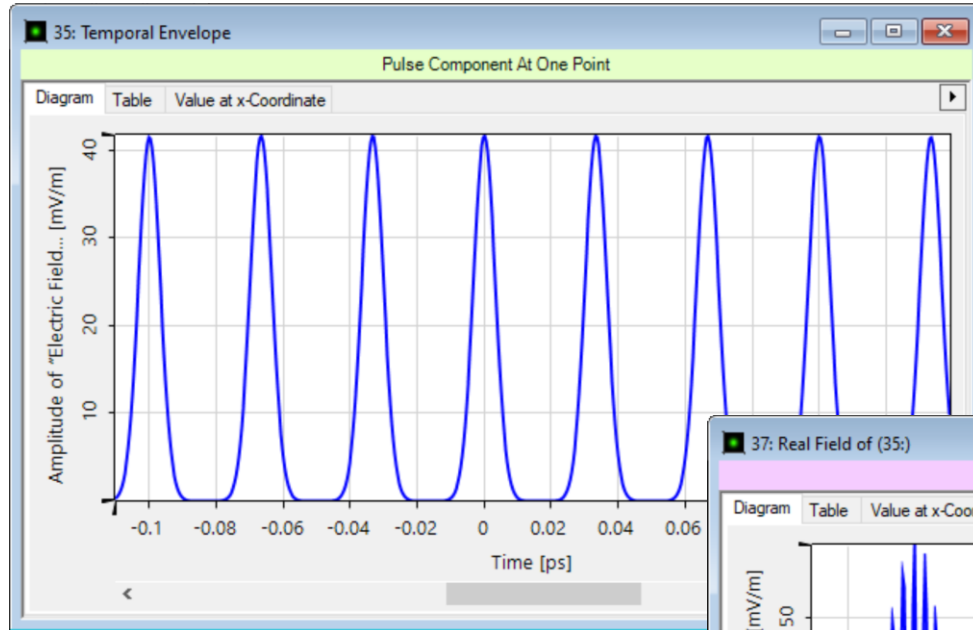


Many laser sources generate trains of seemingly identical pulses. While the time envelop of each individual pulse is indeed completely identical, due to nonlinear processes inside the laser resonator a carrier-envelop-phase will be introduced to each single pulse. In this document we want to demonstrate a component, which allows the user to generate a train of specified gaussian pulses, where the CEP is taken care of.

Task Description

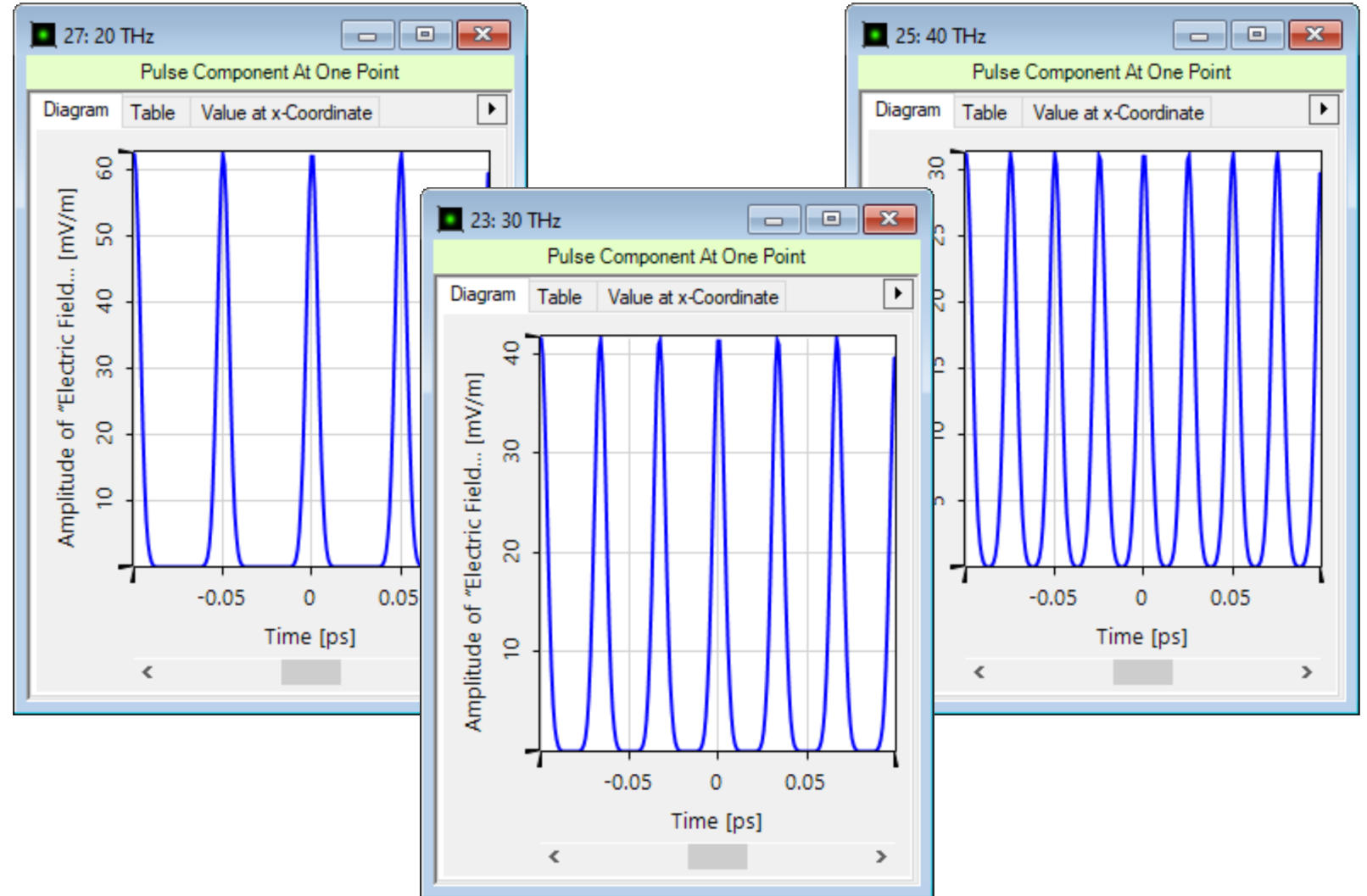
Generate a train of gaussian pulses which are specified by:

- Carrier frequency of a single pulse
- Carrier envelope offset
- Pulse duration of a single pulse
- Pulse repetition rate

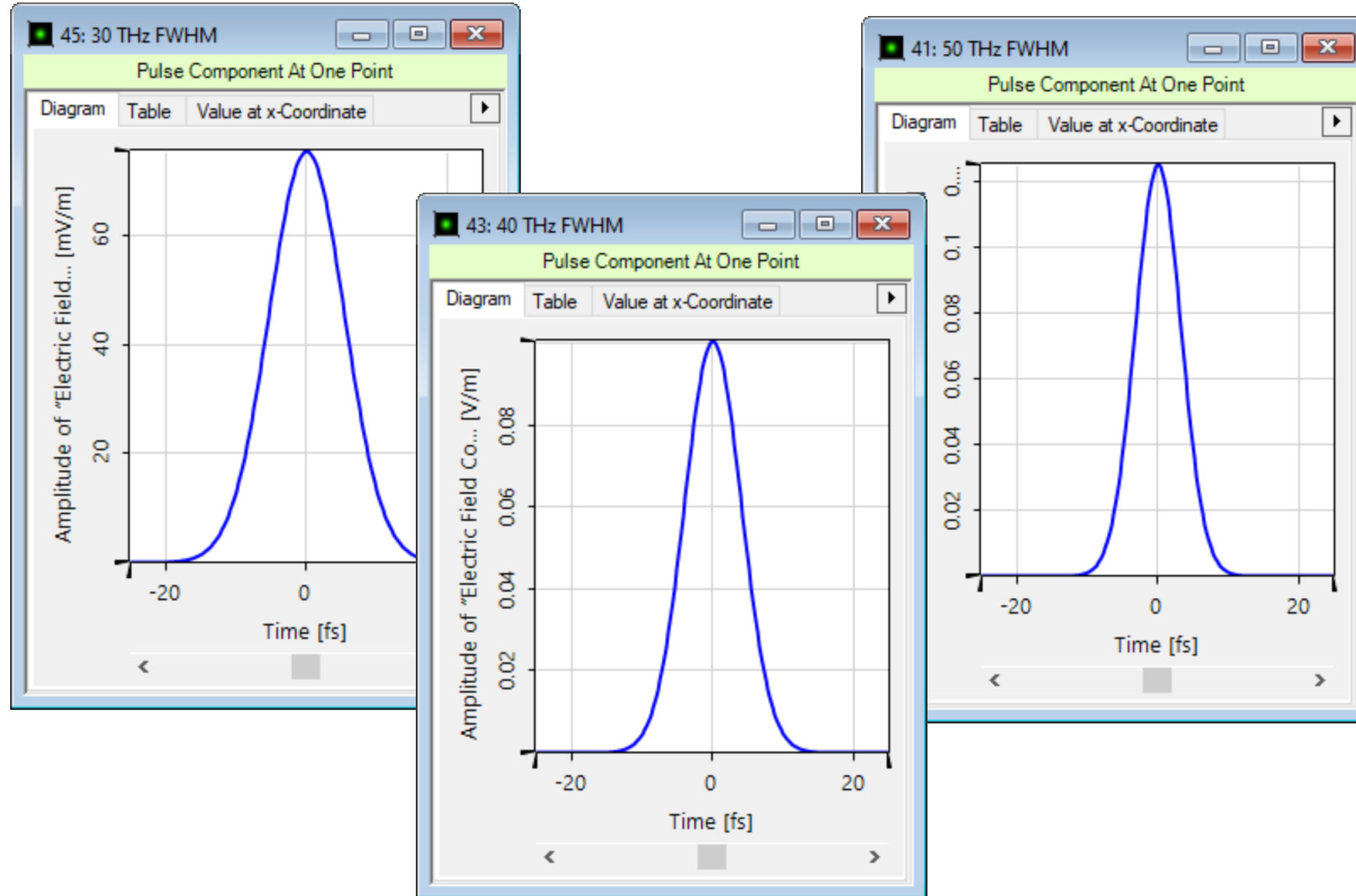


Pulse Repetition Rate

By setting the “Pulse Repetition Rate” the user can define the temporal delay between two pulses

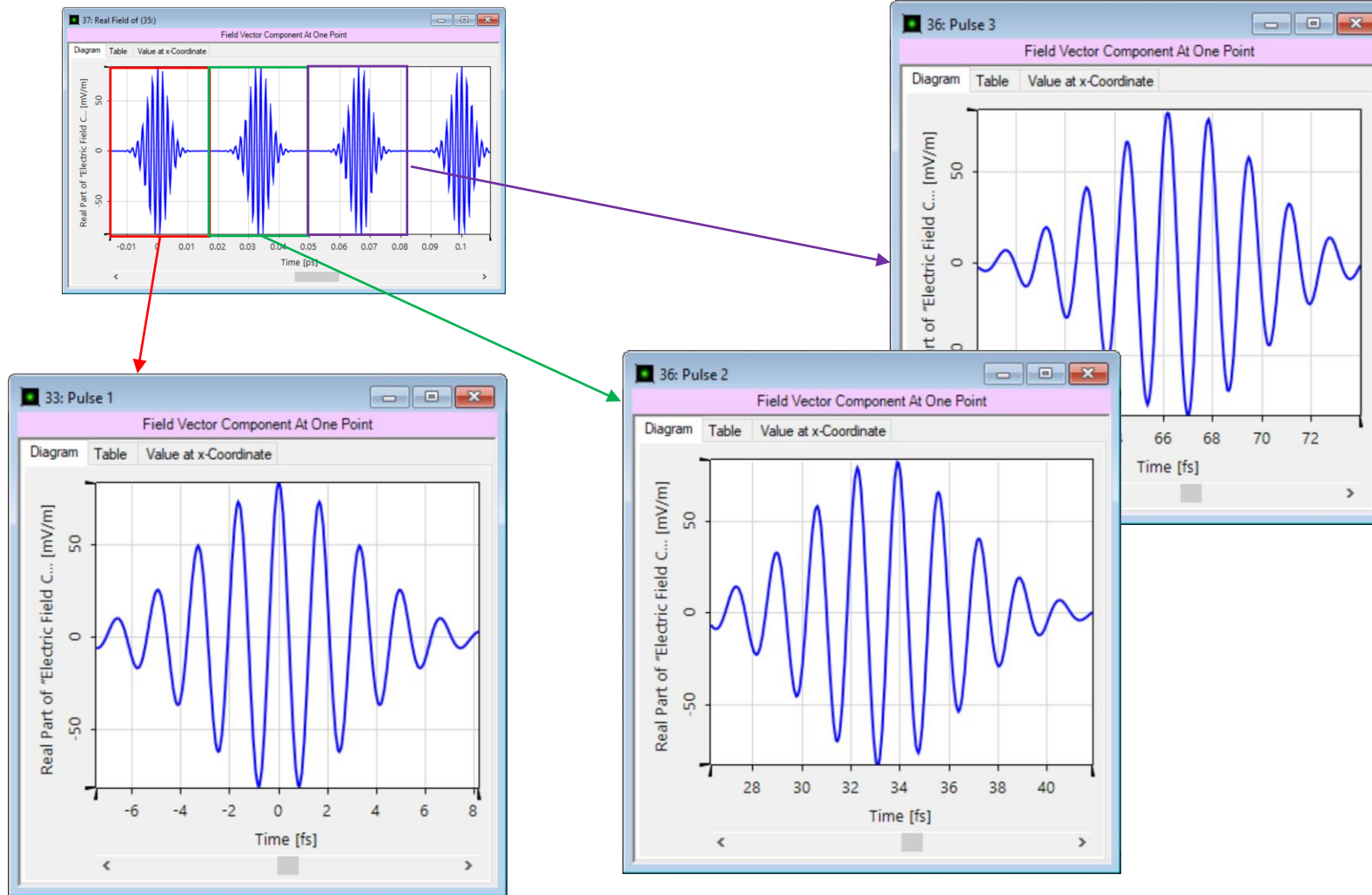


FWHM



Pulse duration can be defined through the parameter "FWHM" of the frequency comb

Carrier-Envelope-Offset



The Carrier-Envelope-Offset is included and can be set by the parameter "CEO"

Document Information

title	Pulse Train Generator
document code	Demo.21
version	1.0
VL version used for simulations	VirtualLab Fusion Spring Release 2020 (2020.1.0.108)
category	Demo
further reading	
