

Circuit Environment

*Lab Report*

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| NAME: | NEPTUN: |
| DATE: 05.11.2021 | LAB: 3 |

# **Task 1: A generator circuit with Vg=200 V and Rg=25 Ω was used to excite a 75-Ω lossless line with a rectangular pulse of duration τ =0.4 µs. The line is 200 m long, its velocity =2 \*108 m/s, and it is terminated in a load ZL =125 Ω.**

# **Generate a bounce diagram for the voltage on the line.**

# **Use the bounce diagrams to plot the total voltage at the sending end of the line and at the load.**

# **Using LTspice to validate your work.(screen shots are required)**

# **Task 2: Answer the following questions (Short Answer).**

1. **What is different between ground and return path?**
2. **What is the speed of the signal?**
3. **Why does the dielectric material affect the signal’s speed?**
4. **When is the signal reflected?**