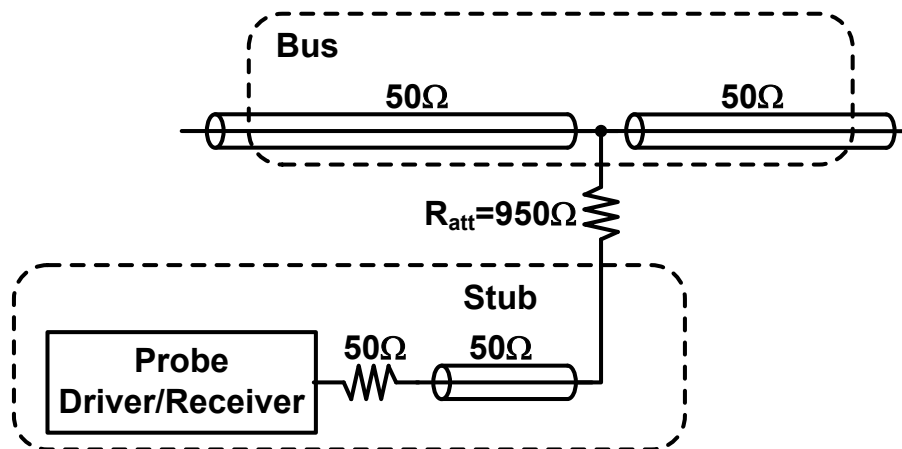


## ECEN 689: High-Speed Links

### Problem 3.8 Clarifications

The following figure clarifies the book Fig. 3.58 and shows which elements are the “bus” and the “stub”. The book problem mentions that there is no reflection from the stubs. This means that the no portion of the signal that travels down the stub will be reflected back to the main bus. There can be reflections at other impedance junctions.



In order to solve Problem 3.8, answer the following questions:

- How much attenuation does the bus waveform,  $V_1$ , experience after it passes the stub, i.e. what is the ratio of  $V_2/V_1$ ? Note, there can be a reflection at the impedance junction that heads back to the source.
- How much signal on the bus gets transferred to the Probe driver/receiver, i.e. what is the ratio of  $V_3/V_1$ ?
- How much signal from the Probe driver appears on the bus, i.e. what is the ratio of  $V_6/V_4$ ?
- If I change  $R_{att}$  how do the  $V_2/V_1$  and  $V_6/V_4$  change?

