Stuff to Grok - Wk 9

Understand the basic idea behind stub matching:
- Find a point back from the load at which the real part of Z_{in} is equal to Z_0.
- At that point, determine the imaginary (reactive) portion of Z_{in}
- Cancel the reactive portion with a lumped or distributed matching element.

There are multiple places where the match can be accomplished, but typically the closer to the load, the better.

The Smith Chart relates:
- Γ_L at any point on a line
- normalized load impedance
- distance from load or generator

The circumference of the Smith chart plots out pure reactance.
The center horizontal line plots out pure resistance.
Impedance chart: inductance top, capacitance bottom
: open circuit right, short circuit left
Admittance chart: reverse all the above.

mho ≡ Siemen ≡ ohm^{-1}

Admittance = Conductance ± Susceptance
$Y = G \pm B$

Stub matching can be accomplished with:
- series or parallel stubs
- shorted or open stub elements

Use admittance chart for parallel stub matching since admittances add in parallel (shunt)