

TEM Leitungen, Telegraphengleichung

$$\underbrace{(\nabla^2 + k_c^2)}_{:= 0} A = 0$$

→ 2D Potential Problem: $\nabla^2 \Phi = 0$
+RB

$$k_z = k = \frac{\omega}{c}$$

$$\vec{E} = -\text{grad}(\Phi) e^{\mp jk_z z}$$

$$\vec{H} = \frac{\pm 1}{Z_F} \vec{e}_z \times \vec{E}$$

$$Z_F = \sqrt{\mu/\varepsilon}$$

Ränder: $\vec{E} \times \vec{n} = \vec{0}$

$$\rightarrow \Phi(\text{Rand}) = \text{const}$$

Dirichlet Randbedingung







