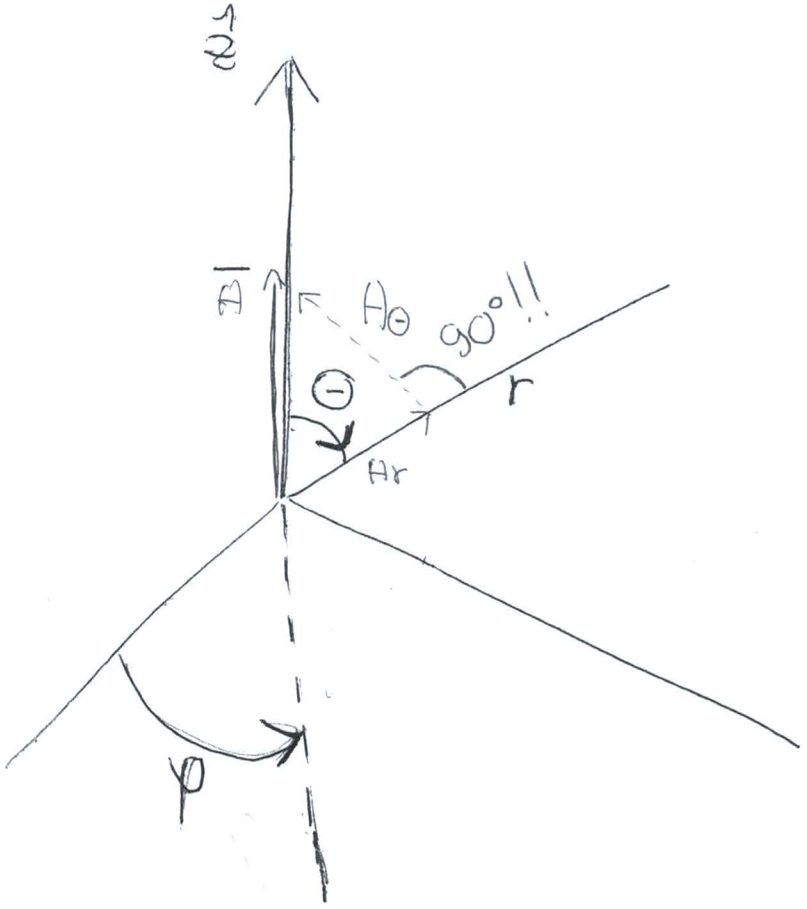
$B(r,\Theta,t)$ at $d \ll \frac{c}{\omega} = \frac{\lambda}{2\pi} \ll r$



$$\vec{A}(r,\Theta,t) = -\frac{\mu_0}{4\pi} \text{Re}\, \frac{\omega}{r} \sin\left(\omega\left(t+\frac{r}{c}\right)\right) \hat{z} \quad /\!/ \quad \hat{z}$$

$\varphi = 0°$ in our 2D model
or any other angle

$$A_r = A(r,\Theta,t)\cos\Theta$$

$$A_\Theta = A(r,\Theta,t)\left(-\sin\Theta\right)$$

Follows right hand rule