Design of Algorithms for Body-SLAM

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?
??

$$A = H_{\lambda} R_1(\Psi) T_t R_2(\Phi)$$

$$= \lambda cos\Psi - sin\Psi sin\Psi cos\Psi t 0 t 1 cos\Phi - sin\Phi sin\Phi cos\Phi \tag{1}$$

R
T
Ψ
Φ
λ
?
??
??

?
?
??
P
d
P

$$\theta = tan^{-1}\left(\frac{R}{d}\right) \tag{2}$$

R
??
(x, y)
(x', y')

$$x' = \frac{L\phi}{2\pi} y' = r \tag{3}$$

ϕ
P
??

$$\phi = tan^{-1}\left(\frac{y - y_0}{x - x_0}\right) \tag{4}$$

r
P

$$r = \sqrt{(x - x_0)^2 + (y - y_0)^2}. \tag{5}$$

L
H
??
x'
ϕ
0
$x' =$
0
2π
$x' =$
L
y'
$y' =$
0
0
$y' =$
H
η
??
P
y'

$$\theta \cong \left(\frac{y'}{H}\right)\eta \tag{6}$$

??
x'
??
??
P
D
C
θ_1
d
C'
P
θ_2