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7 mai 2014

# Hypothèses

- Directions du grillage approximativement perpendiculaires ( $90^\circ \pm 30^\circ$ )
- Lignes dans la transformée de Hough

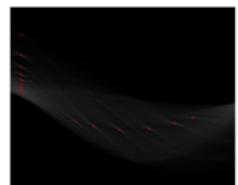
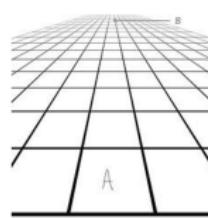
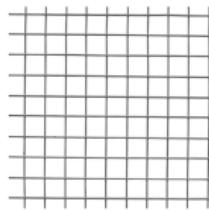


Figure: Illustration de l'impact de la perspective sur les piques troués dans la transformée de Hough

# Prétraitements

- Centrage de la transformée de Hough
- Élimination des artéfacts

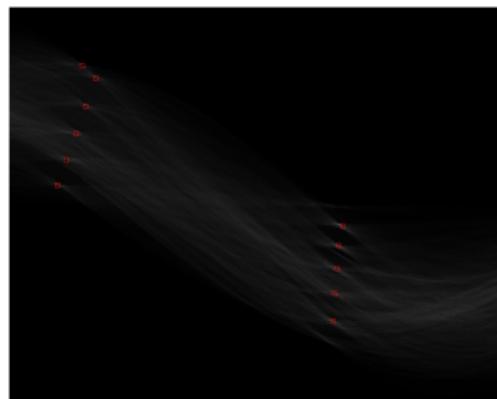
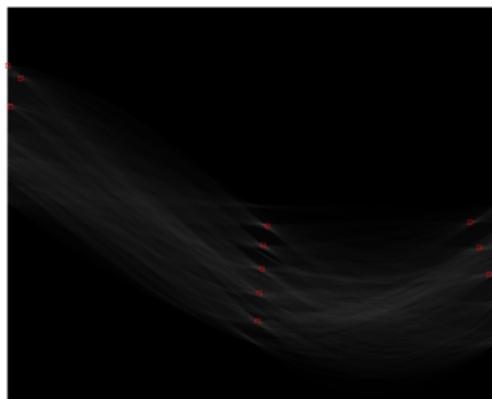


Figure: Centrage de la transformée de Hough

# Détection de lignes dans Hough par Ransac

- Essai avec Hough
- RANSAC sur de larges fenêtres coulissantes

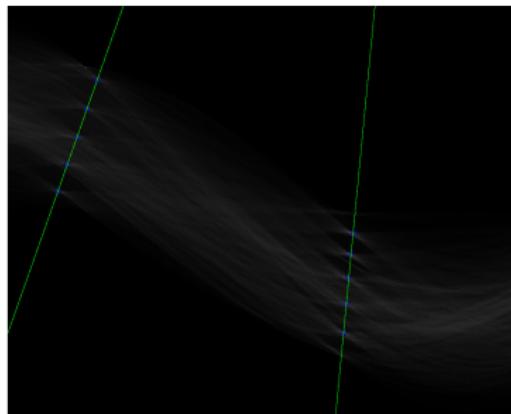
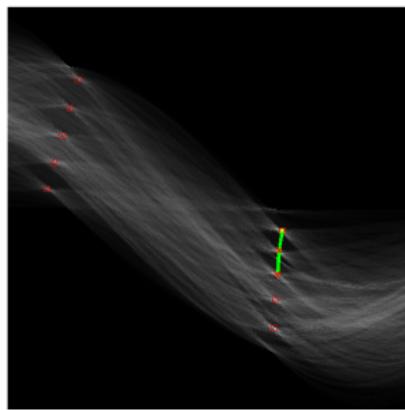
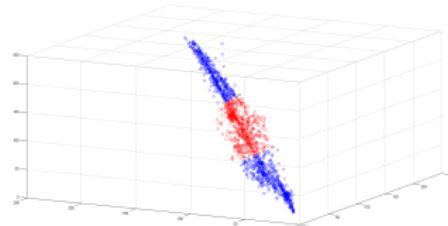


Figure: Détections de droites dans la transformée de Hough

# Raffinement du grillage

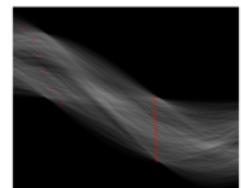
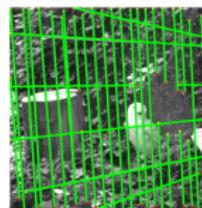
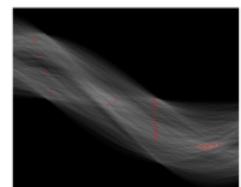
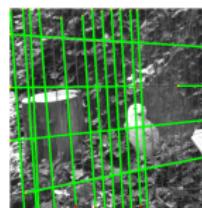
- Par colorimétrie

- Kmeans couleur sur le grillage



- Par périodicité dans Hough

- Période majoritaire dans la ligne trouvée



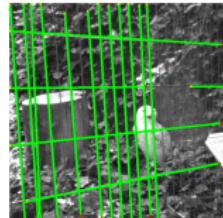
# Application sur une image de zoo



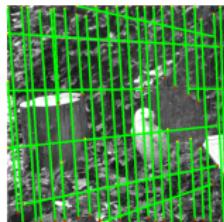
(a) Image réduite



(b) Détection de  
contours par Canny



(c) Première  
déttection de lignes



(d) Raffinement



(e) Masque



(f) Inpainting

Figure: Processus de suppression des lignes d'un grillage sur une image

# Exemples de bonnes detections du grillage

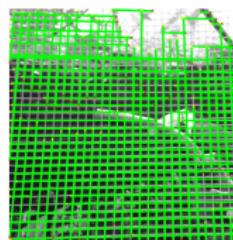
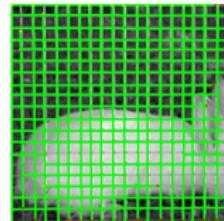


Figure: Exemples de bonnes detections

# Limites de l'algorithme

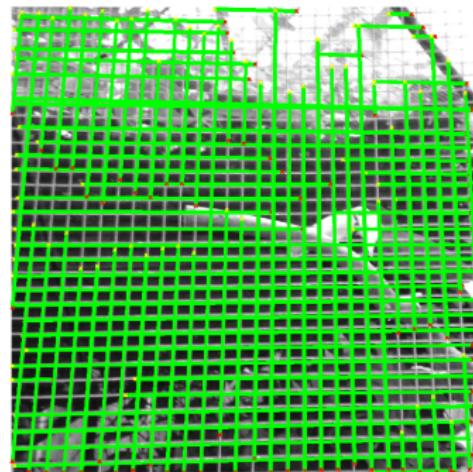
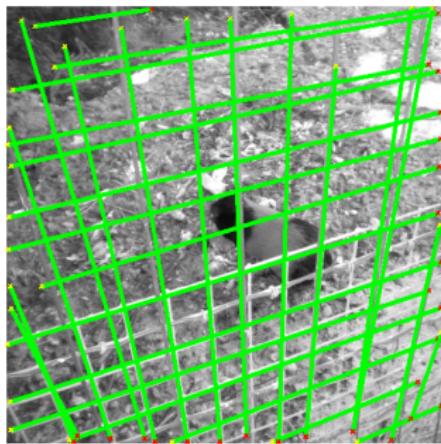


Figure: Exemples de difficultés pour notre algorithme

# Limites de notre algorithme

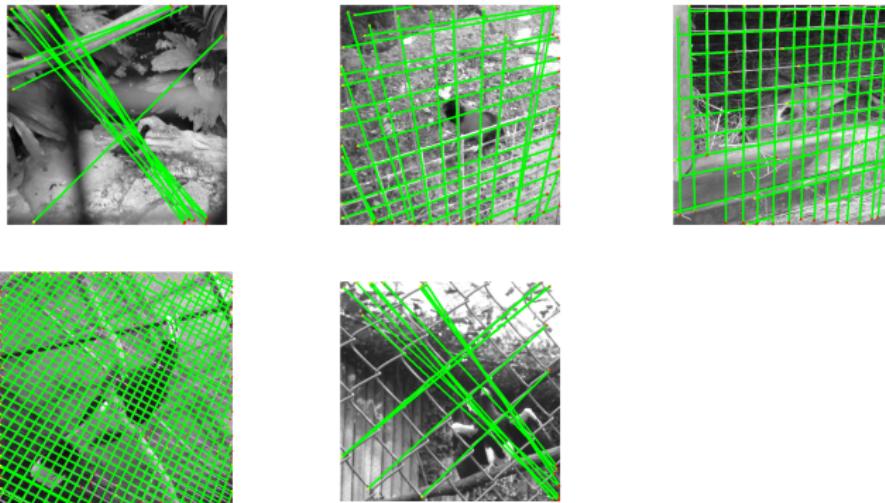


Figure: Exemples de limites de notre algorithme