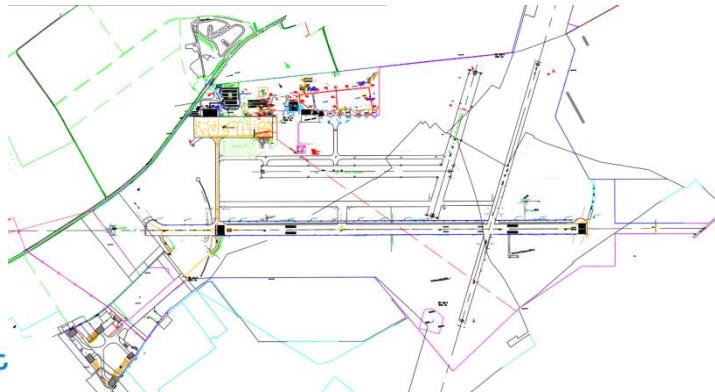


Inspections of 3 types of critical infrastructures by drone

- Airport fences
- Medium-voltage power lines
- Penstocks



a é r o p o r t

CAEN
CARPIQUET

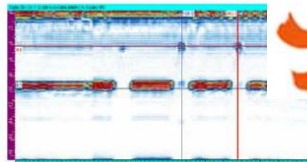
exemple de conduite forcée de conception rivetée (1907)



exemple de perte d'épaisseur localisée affectant les conduites forcées.



image ultrason OL0° de type C (en haut) et B (en bas) de cratères de corrosion Ø 20 mm et de profondeur 5 mm



Site web

3 Field experimentations

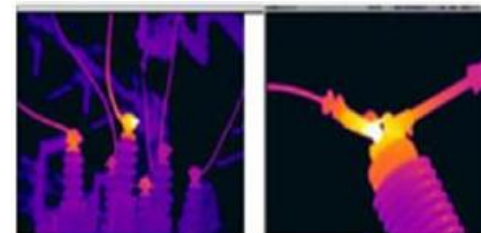
- With many other opportunities



Contrôle des lignes par mission héliportée 2 opérateurs



Drone au service des isolateurs verre (photo drone Alérion)



Exemple de cas critiques : connexions en tête d'isolateur défectueuses.

ENEDIS
L'ELECTRICITE EN RESEAU

➤ Automated infrastructures anomalies detection



THALES

RTaW
RealTime at Work



UNIVERSITÉ DE LORRAINE

Inria

ALERION

SYSGO
EMBEDDING INNOVATIONS

- Automatic flights beyond visual line of sight (BVLOS)
- Extended operational availability (> 200 days per year)
- EASA JARUS SORA based air and ground safety analysis and AMDEC based failures management
- French and European regulations
- Cyber-security (protection of wireless communications)



Performance and features

Take-off weight	25 kgs
Dimension	Distance between motors : 1150 mm Height : 800 mm
Power	LiPo 12S 44 Ah
Maximum thrust	70 kgs
Take-off maximum weight	30 kgs
Maximum thrust versus weight ratio	2.8 at 0 meter altitude / 2.1 at 2500 meters altitude
Range at 25km/h	5.6kms (in 12 minutes)
Maximum speed	75 kms/h
Hovering power	4.2 kW
Maximum power	18.9 kW
Emergency systems	Parachute + engines cut
Drone impact energy with emergency systems	250 J
Transportation	1150 x 250 x 400 mm



Main sensors

Canon EOS
IDS camera
Lightware LIDAR
IR Lock
RTK GPS

