

# RPAS: The Era of Increased Data Flows and Bridge Inspection Analysis

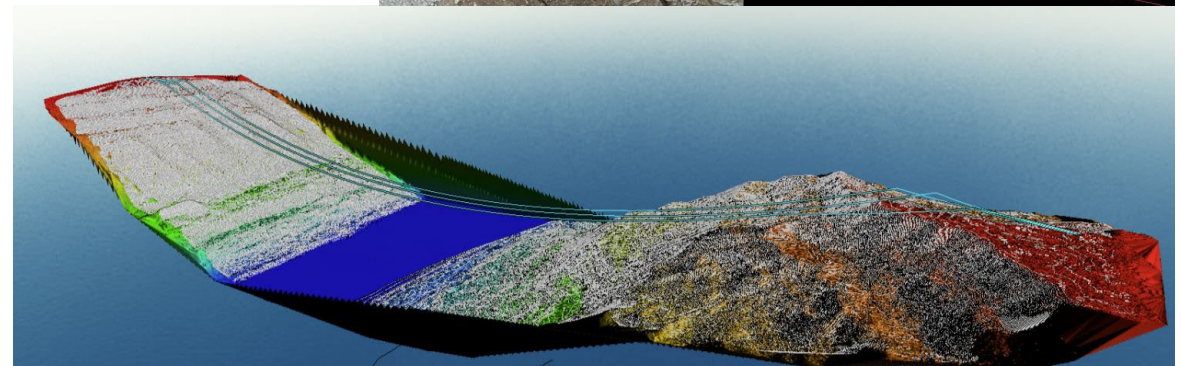
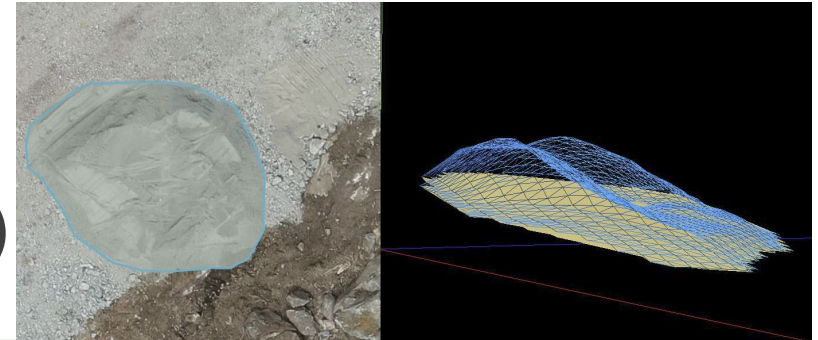


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# RPAS at McElhanney

- One of Canada's largest RPAS programs, over 170 registered pilots
- RGB / LiDAR, erosion monitoring, feature extraction, volume change
- BVLOS – iART Alliance (1/2 TC projects in 🇨🇦)



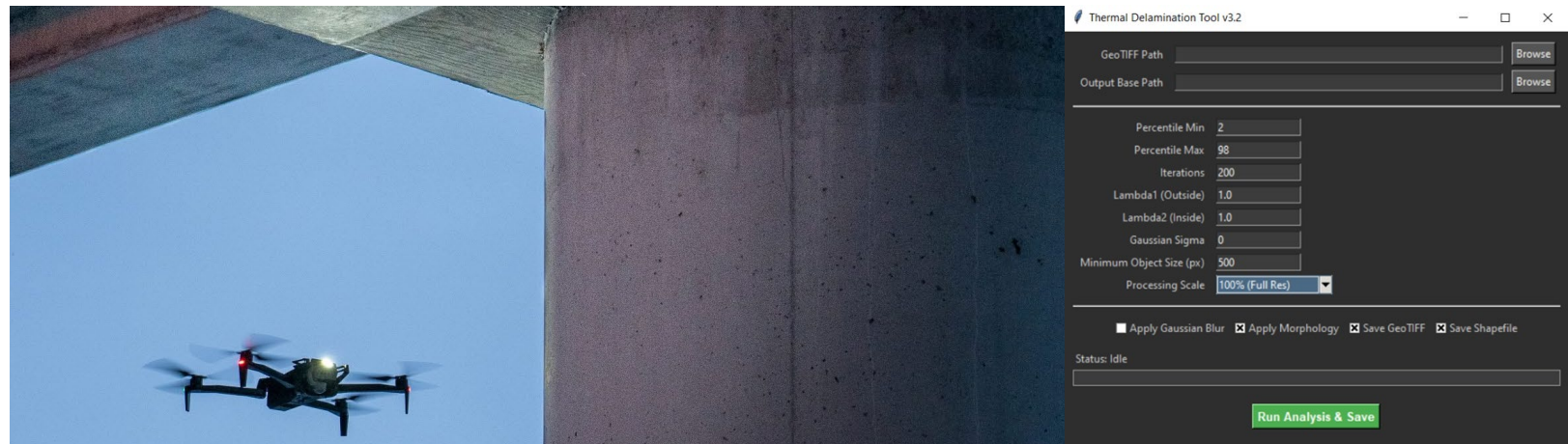
# Large-scale Mapping: Deltaquad Evo

- eVTOL platform, AMC
- Data load: 90min of 60MP RGB + 640kHz LiDAR per flight
- Bridging the gap between drone and crewed aircraft



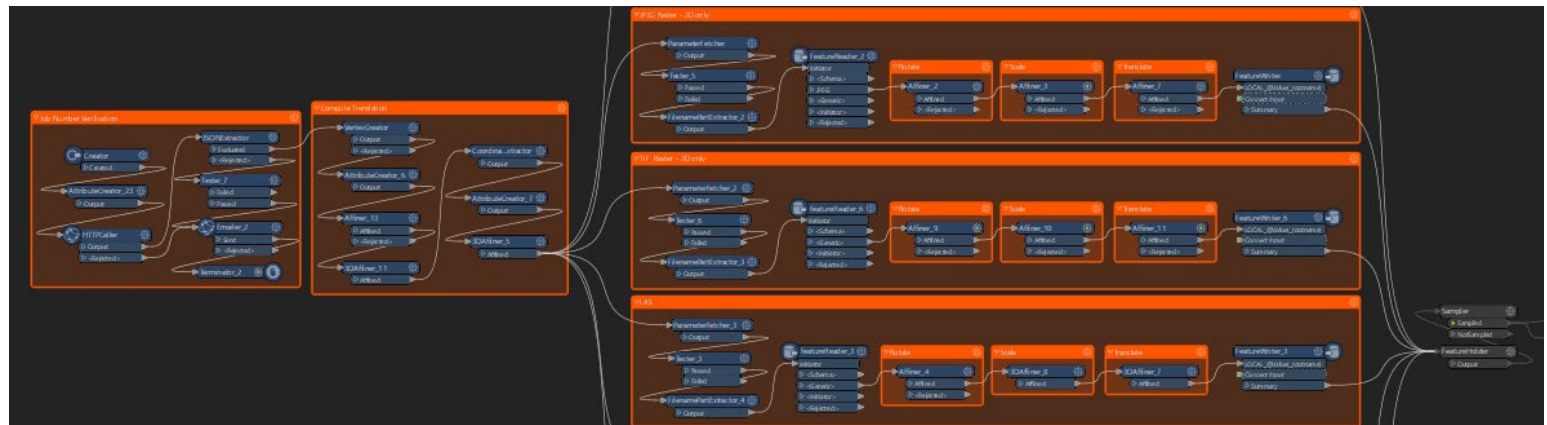
# Bridge Inspections: Skydio X10 & Analysis

- Autonomous flight and mm-level obstacle avoidance
- Textured mesh and thermal deck orthomosaic (+ challenges)
- In-house tool to identify areas of thermal delamination
- Automated crack detection



# The Future: Data Handling and Automations

- How do we manage and process these data volumes?
- Cloud processing
- Tiling, automated scripts
- Hyperspectral (currently testing)



# Thank you

Questions?



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