

DRONE & UAV ENTREPRENEURSHIP



Dr. Jerry LeMieux

30 Businesses You Can Start

Today the data processing is done off board at the ground control station or non-real time with recorded data. Low bandwidth availability causes problems displaying real-time full motion video. We will need high performance computers that have low power requirements and low weight. These new processors will need to be scalable with the sensor or suite of sensors. In the future, the operator will select the feature extraction needed, the processing will be done onboard the drone and the result will be streamed down for final decision making.

Menci provides photogrammetry software that uses small digital images acquired by drones to create a large map. This software runs on your PC and allows the user to create both 2D and 3D maps. You can import both .TIF and .JPG files. There are even three add on products. Stereo Tools will allow for 3D feature collection. Google Earth Tiler will allow you to share your image map through Google Earth. It builds KML files that overlay your image on Google Earth. Cloudview is a point cloud stream viewer. There is another software suite they are working on called KT-3D which does not require GPS or IMU data. You can visit the website at www.menci.com and download the software for a free trial.

FLIR offers a free App for Apple and Android that allows you to control your IR drone camera remotely through a WiFi connection. You can remotely adjust the temperature span and contrast levels, change color palettes, add temperature measurement tools, playback voice comments, focus manually or automatically. There is even support for multispectral images. You can take pictures or record live video on your mobile device.

FLIR also offers FLIR Tools for PC and Mac. This software will allow you to import, edit and analyze images and then turn them into professional inspection reports for your customer. You can directly import the images to your PC through a USB cable. Edit radiometric images to thermal tune level and span, change the palette, or adjust parameters such as emissivity, reflective temperature, and more. Add measurement tools like spots, area boxes, circles and lines. Create professional PDF image sheets and reports. Display stored compass and GPS information. Playback stored MP4 video imported from the camera. Switch between IR, DC, Thermal Fusion, PiP, and MSX modes. You can re-open saved PDFs for further editing and revisions.