

★ FIRE FLIGHT ★

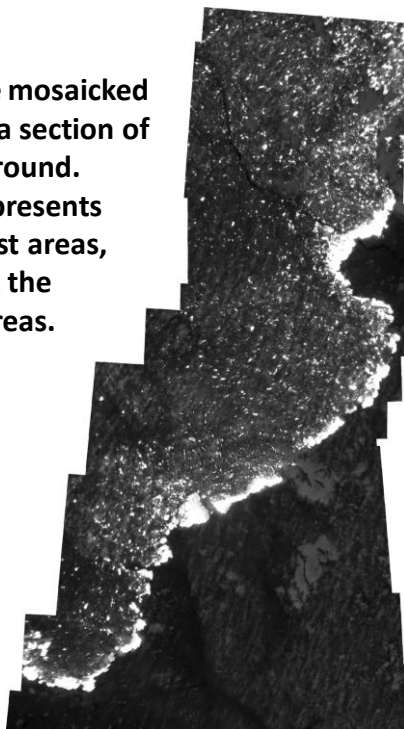
★ AERIAL FIRE MAPPING SYSTEMS ★

FireFlight Test Project: Near real time fire mapping

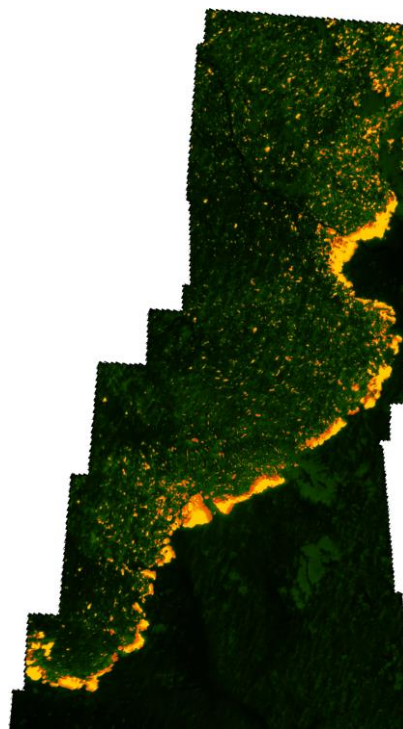
On the 30th October 2014, Spatial Scientific undertook thermal mapping of a moderate sized wildfire near Ballandean, Queensland. The fire burnt in rough and inaccessible terrain, making it difficult for ground crews to contain and control.

As this fire occurred early in the development of the FireFlight fire mapping system, it provided an opportunity to test and evaluate the then new system. Image data was acquired in two flight runs over the fire, which were flown through thick smoke and turbulent conditions.

Greyscale mosaicked image of a section of the fire ground. White represents the hottest areas, and black the coolest areas.



Colourised image mosaic showing how an orange/green colour ramp can be applied to a greyscale thermal image to create a more intuitive fire map.



The fire front, burnt areas, and unburnt areas can be clearly distinguished.

The Ballandean fire was used to test many aspects of the new fire mapping system, including:

- Flight planning and other mission related factors (including safety of air crew)
- Acquisition, storage and transmission of raw image data and meta data
- Geometric processing, colourisation of image mosaics, and data delivery

The data acquired over the Ballandean fire was invaluable for the development of the FireFlight system. Due to the experimental nature of this mission, the resulting image mosaics were not made available online.

