

# **TECHNOLOGY BRIEFING**

## **ULTRA-FAST IMAGE REGISTRATION**



### **SUMMARY**

Using a revolutionary new patented algorithm, originally devised for astrophysics research, Blackford Analysis has developed an *ultra-fast* image registration technology.

The technology has the potential to greatly increase the efficiency and ease-of-use of any application involving multiple volumetric image sets, single- or multi-modality.

Offering order-of-magnitude speed-ups over existing techniques, it provides an opportunity to eliminate existing but costly pre-processed registration, or to introduce automated volume registration where previously it was not practical.

### **KEY FEATURES**

- *Sub-second* registration of entire volumes
- *Full-affine* or *rigid-body* registration
- Potential to scale resolution without slow-down (eg, for 1024x1024 image matrices)
- Single- or multi-modality use, eg, CT-CT, CT-MR, MR-MR
- Requires only standard PC hardware
- Suitable for use in server or client environments
- Potential to apply same patented technique to other registration challenges

### **ABOUT BLACKFORD ANALYSIS**

Blackford Analysis is a University of Edinburgh group dedicated to developing commercial applications of the *MOPED algorithm*. This algorithm, originally developed by the highly regarded Institute for Astronomy to analyse galaxy spectra, can be used to dramatically accelerate many algorithms involving large data sets. The Blackford Analysis team consists of highly skilled imaging scientists coupled with experts in the relevant application domains. More details can be found at [www.blackfordanalysis.com](http://www.blackfordanalysis.com).

### **CONTACT**

To discuss licensing opportunities or arrange a meeting contact Dr Ben Panter at [info@blackfordanalysis.com](mailto:info@blackfordanalysis.com).