

Helping BAS Monitor Global Warming

Software systems for
airborne radar

SAGENTIA



For almost 60 years the British Antarctic Survey (BAS) has undertaken the majority of Britain's scientific research on and around the Antarctic continent. BAS supports three stations in the Antarctic and two on South Georgia, as well as aircraft and ice-strengthened ships, all managed by a team of over 400 professional staff.

The challenge

As part of its scientific remit, BAS monitors the geophysical state of the Antarctic ice sheet in response to concerns over rising sea levels, global warming and climate change. BAS aims to determine the timing and causal links between changes in the ice sheet and other features of the global system, such as atmosphere, oceans and landmasses – but the links are not simple or direct, and thorough investigation requires complex instrumentation.

Airborne radar is a key research tool. BAS developed its own radar system (PASIN) to enable airborne research, and asked us to design and develop software capable of gathering and processing a wide range of information. Exceptional reliability was particularly important as airborne research is limited to only 120 hours per year.

Our solution

Working closely with BAS, we developed software which enabled PASIN to capture

airborne readings, store the data and provide on-board scientists with real-time data and a graphical representation of the surveyed ice.

The software package we delivered was capable of meeting the needs of this high-performance, multi-threaded, intensive application. Following a two-month development phase, the system underwent extensive testing to ensure the quality, reliability and performance of the finished software – and is now in use in the Antarctic.

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