

NASA has the Spirit to 'Xplore', with Vibtech's help!

Rugged tablet PCs are an ideal, portable solution for many applications that take place in harsh or demanding environments. When Scottish engineering company Vibtech was called upon to help NASA (National Aeronautics and Space Administration) recently, it needed an effective tool for use with its land seismic data acquisition systems. Vibtech chose an Xplore Tablet PC, supplied by Spirit Data Capture Limited.

Vibtech (Vibration Technology Limited) is based near Edinburgh, and specializes in the development of wireless solutions for the oil, gas and mineral exploration sectors. These include a totally new seismic acquisition system and the Infinite Telemetry System. The company has recently been working on programs with NASA in the US. These have included a project that could eventually lead to the development of a seismic data acquisition system that could be sent to the moon – and possibly even to Mars.



As part of this program, Vibtech needed a powerful and rugged tablet PC that had a screen input. This would act as the Central Control Unit (CCU) in the new system, and would be used in a range of different scenarios. Steve Wilcox, Vibtech's Technical Manager, explains: *"We needed a tablet that was PC-compatible and had the performance of a PC, but was light, rugged and had a good battery life. We started trawling the web and ultimately found what we were looking for on Spirit's website."* Spirit is the authorized channel partner for Xplore Technologies, a leading supplier of rugged tablet PCs. Steve continues: *"The Xplore iX104C2 appeared to offer the best combination of features, and met our key requirements."*



The Xplore tablet has already been used by Vibtech in simple two dimensional subsurface imaging in support of NASA's developing planetary exploration program. However, Steve Wilcox envisages several other scenarios in which the tablet could be used in the future. He says: "*We are thinking of using it as a CCU in different ways, including being mounted in a quad bike or all terrain vehicle. We are also exploring the possibility of using it as a data collection device in applications where data are stored in remote acquisition units, rather than being transmitted back to the CCU.*"

The first scenario is as the CCU and data storage unit for a small, one-man demonstration system that could be used for astronaut training. The second involves a similar use, but for civil engineering applications of seismic imaging. These would allow civil engineers to conduct surveys of the ground structure in a specific area prior to the start of building work. In the third scenario, the Xplore tablet could be used as the CCU for a passive monitoring system used on oilfield production sites. This would enable engineers to try and determine the changes occurring to sub-surface structures as a result of production procedures.

Steve Wilcox continues: "*The Xplore tablet allows us to offer NASA and other organizations a simple, one-man operable system at a relatively low cost. We particularly like its portability and its long battery life. The unit has performed exceptionally well, and has enabled us to look at areas of business that we hadn't previously considered.*"