Sharc, specialist in volume meshing has chosen Datakit as a partner for its CAD data exchange

The company Sharc ([http://www.sharc.co.uk/](http://www.sharc.co.uk/)) is based in Manchester (UK) where, since 1997, it has been developing Harpoon, a solution for the generation of volume meshes. It works for developers of finite element and fluid dynamics software and large industrial groups who need the high-performance meshing (quality, speed, compliance with initial structures) generated by this pre-processor. Harpoon integrates a powerful technology based on the use of hexahedral and pentahedral mesh elements and automatic feature extraction. It has an intuitive and ergonomic GUI and runs on a wide range of platforms and operating systems.

Computational codes are developed worldwide and operate in many different environments. The whole issue of platform support was central to our negotiations on the integration of Datakit technology, second only, among Sharc’s priorities, to the technical capability of the data exchange. Datakit satisfied Sharc’s demands for portability, notably for Linux.

Richard Bardwell, Sharc’s CEO says “Windows is still the number one platform for 50% of Harpoon applications, but 35% of users work on Linux and our aim is to ensure that they get the same quality of data transfer. Our priorities are Windows and Linux 32, followed by Windows 64 and Linux 64. The latter generate real interest among Harpoon users in both the USA and Asia. Addressing memory capacity issues they facilitate the processing of large assemblies. Datakit has planned to provide versions dedicated to these operating systems in the near future.”

In addition to addressing portability issues Sharc has undertaken an in-depth analysis of the interface functionalities to assess their interoperability with its mesher. Extensive tests have been performed on the identification of the names and different entities - parts, lines or segments, triangles or cells, faces, surfaces or boundaries, and also on the compliance with the initial construction tree, the management of coordinate systems and the visible or invisible entities, essential points and key factors enabling assemblies to be read completely and reliably.

These functions have fulfilled Sharc’s requirements and Datakit’s technology has now been adopted by the British firm for rapid integration. Version 3.0 of Harpoon will be available in the summer.