

“The Sun Fire server and Sun Blade Grid Engine are the best solutions available for achieving high-performance computing in this kind of environment.”

RICHARD CLAYTON, BRITISH HEART FOUNDATION LECTURER, LEEDS UNIVERSITY



SAVING TIME SAVING MONEY SAVING LIVES

KEY FEATURES

Customer

- Leeds University, Computational Biology Research Laboratory

Industry

- Education — scientific/medical research

Application

- Visualization and modeling programs

ISV Solution Set

- Custom

Area of Focus

- Collaborative engineering—HPC

Sun Products

- Sun Blade 1000 workstations
- Sun Fire 6800 server

Geography

- EMEA (United Kingdom)



Sun Blade 1000
www.sun.com/desktop

www.cbiol.leeds.ac.uk

EDUCATION



ISV

CUSTOM

EMEA



AREA OF FOCUS

COLLABORATIVE
ENGINEERING

The Computational Biology Research Laboratory at Leeds University is one of Europe's leading centers for cardiology research. Its work focuses on electrical activity in the heart and the effectiveness of cardiac drugs.

Day and night, lines of code are being processed at the Leeds University laboratory, as its scientists continue their extensive and time-consuming research into what causes the human heart to stop beating. The longer their computers take to process the code, the longer it will take to find the drugs that could save countless lives around the world.

Ultra Power

To achieve the high-performance computing environment this work requires, the laboratory has upgraded to a solution from Sun Microsystems, Inc., that includes 26 clustered Sun Blade™ 1000 workstations and a Sun Fire™ 6800 server. Each Sun Blade system boasts a dual UltraSPARC™ III processor which, along with the Sun Fire server, provides the research team with a combined processing power of more than 70 UltraSPARC III processors.

Dr. Michael Rudgyard, managing director of Streamline Computing, the company that implemented the Sun Blade environment, explains why Sun's hardware is so suited to clustering: “The great thing about the UltraSPARC architecture is that it is 64-bit architecture and can therefore

address large memory images on each node, unlike 32-bit environments, such as Linux. Plus, the eight-MB cache on a Sun Blade workstation is larger than that available on Intel or AMD processors—a cache of this size is more able to maintain performance over a wide range of applications.”

The Sun Blade workstations have been clustered together using an Ethernet connection, and can either be used as a single processing resource or divided, giving the laboratory added flexibility for conducting its computational experiments.

Heart of the Matter

High performance and flexibility were not the only reasons for choosing a Sun solution; the university also wanted value. “Sun provides more computing power per pound than any of its competitors,” says Arun Holden, professor of computational biology at Leeds. “Since installing Sun's infrastructure, there has been a 140-fold increase in speed and performance compared to our previous system. We can now process experiments overnight that, before, would have taken weeks.”