



Computer Simulation of fluid flow, heat flow,  
chemical reaction and stresses in solids



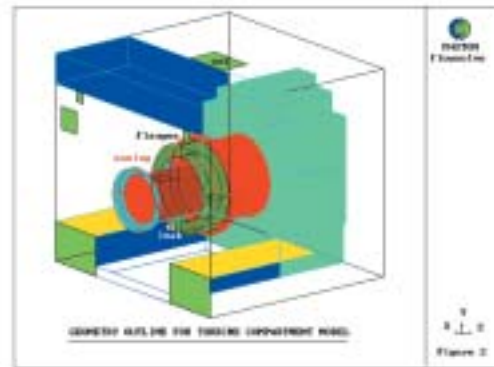
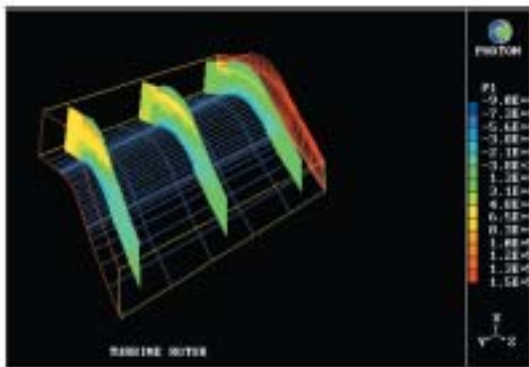
Gold Partner Scheme

## CHAM uses *in2itive* solution to improve its business model

***Web-enablement of PHOENICS computational fluid dynamics software allows consultancy to reach new customers***

Concentration, Heat and Momentum Limited (CHAM) is a leading consultancy and software company specialising in computer simulation of fluid flow and heat transfer.

PHOENICS, CHAM's computational fluid dynamics (CFD) software, was the first general purpose package of its type and has been used by organisations across the world since its launch in 1981. Its powerful modelling tool can be used in a vast range of technological design roles, such as predicting airflow around the bodywork of a prototype car or a new building, or heat transfer within a nuclear reactor. It is targeted at scientists, design engineers, architects, environmental workers, as well as powerplant designers and chemical engineers, all of whom use the software as a key part of the design process.



***Screen shots of Phoenix in action***

The PHOENICS software had previously been sold on a traditional 'one licence per terminal' basis, but CHAM was keen to widen customer appeal by offering the service over the web to provide existing, new and potential customers with a more flexible way of working and increased benefits which could be backed up by a more flexible pricing structure. This is especially important in the global economic downturn, as potential customers are more willing to entertain lower up front charges.

PHOENICS has a number of key processes embodied within a graphical user interface (GUI). The first is a pre-processor in which the problem is established and conditions (e.g. water flow) are defined. This links to a mathematical 'solver' process that carries out the calculations, which can take a number of hours, and finally to a post-processor where the results can be visualised. The complexities of the software renders it particularly CPU-intensive, meaning that for optimum speed and performance it has traditionally been more suitable for use on high-power computers. Mobile workers, or those businesses requiring collaboration amongst employees, would have previously had to purchase a number of licences and use the software over several terminals across a network, which could often prove prohibitively expensive.

In order to compete more aggressively, CHAM decided to make PHOENICS accessible over the Internet to win new customers through this new commercial model as well as extending its global footprint.

### **Making the model work**

To realise its objectives, CHAM selected the Gold Partner and Bespoke Portal solutions from in2itive, which delivered a wide range of benefits without expensive and time-intensive re-engineering or reprogramming of the software.

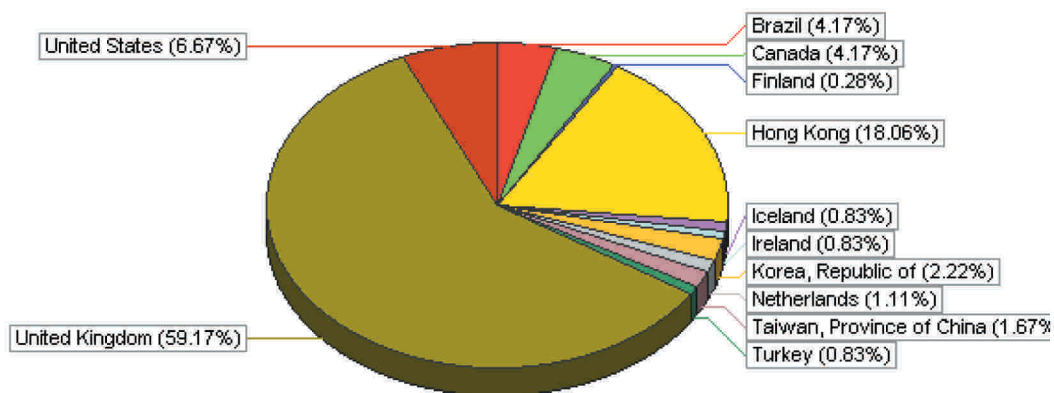
The in2itive portal service allows the proven Windows-based CFD product to be run across the Internet and accessed from any standard desktop or laptop at home, at work or even from a hotel room – a facility that customers have found invaluable as it allows them to fully utilise a CPU heavy software package from less powerful terminals.

in2itive's service and high specification hardware infrastructure ensures that all users consistently achieve the same high-level of performance, whilst driving down the cost of ownership and support.

**Barry Redman**, an engineer for **Silcock Dawson & Partners** designs building service systems such as air conditioning and has been using the web-enabled PHOENICS product to log on and check the progress of simulations. It ensures he is able to use the PHOENICS complex computations wherever he is in the world:

“Typically, a complex CFD simulation can take up to 12-15 hours to process. Because I spend a great deal of my work time travelling around Europe, it’s important for me to be able to access PHOENICS at regular intervals to see how simulations are proceeding – so I can make any necessary adjustments.

in2itive’s web-enablement and portal access to the product means that I can now start the simulation process before travelling and then check its progress when I arrive in the Netherlands, making project development time shorter. Web-enabled PHOENICS has become an incredibly valuable tool as I can log on and make changes to the model from anywhere.”



Users from countries accessing CHAM Portal during March 2003

### Increase in CHAM’s sales

The licence model redevelopment was instantly popular. CHAM signed six new customers in the USA, Ireland and Hong Kong.

Many of CHAM’s customers work on short-term projects – for example when designing a new product – which means it is not always cost effective to purchase the full licence. Through accessing PHOENICS over the Internet, customers are able to buy a licence to use the product for a specific period – usually the duration of the project. This is recognised as a service and adds value for the customer.

in2itive’s technology and services have also enabled CHAM to improve the efficiency of its sales process by providing real-time web-based demonstrations for potential customers around the world. This approach has effectively enabled CHAM unrestricted access to prospective customers globally. Rather than crossing the

world to demonstrate the product, or wholly relying on local agents, presentations and live sessions with a potential customer can now be given remotely over the web, ensuring consistency when selling the key features and benefits.

**Peter Spalding**, sales manager at **CHAM** was impressed by the smoothness of the web-enablement process and the short conversion period of 48 hours:

“Because of the complex structure of PHOENICS, I didn’t think it could be easily web-enabled, so when in2itive approached us, I was sceptical. But following a remarkably swift and painless implementation, I am impressed that in2itive has delivered on its promises and given us a great deal more.

The in2itive portal service has enabled CHAM to make PHOENICS available to customers globally in a particularly effective way. This saves our salespeople making expensive and time-consuming trips.”

The in2itive service also provides the secure application service provider (ASP) facilities on behalf of CHAM. Jeff Lenton, in2itive managing director, said: “CHAM is a perfect example of our portal technology in action. Software companies are increasingly looking to offer their products over the web, but are often held back because of the high costs and time involved in re-engineering products or data security concerns – all of which are resolved in our products and services.

Support facilities to CHAM’s global user base have also been enhanced as our portal functionality enables their technical support and helpdesk staff to join a user session on a live project and assist in getting the most out of this complex software.

When CHAM wanted to develop its new service, it needed a solution that would provide first-rate accessibility, but that wouldn’t require product redevelopment. in2itive’s Gold Partner web-enabling service and Bespoke Portal platform has enabled CHAM to significantly improve return on investment, provide a new revenue stream and enhance their customer support function – meeting all of CHAM’s original objectives, whilst realising major cost and time to market savings over traditional methods.”