



## ***PRESS INFORMATION***

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### **ICEM Surf software helps Land Rover save \$10 million on new Discovery development project.**

ICEM Surf design data drives 'right-first-time' tooling design process.

Southampton, UK. 31 March, 2005. – ICEM Ltd., the leading surface modelling, surface analysis and design visualisation software developer, has announced that, with the aid of the ICEM Surf software suite, Land Rover, the Ford Premier Automotive Group off-road vehicle manufacturer, saved some \$10 million on the new Land Rover Discovery design and development programme.

ICEM Surf was used throughout the design development of the body and interior of the new Discovery, which went on worldwide sale towards the end of last year. Digital surface model data generated by ICEM Surf from 3D scans of the clay styling model was made available to the tooling engineers at Land Rover very early in the development process. This enabled them to begin the tooling development process well before the 'design freeze' stage had been reached.

ICEM Surf's direct data exchange capabilities with the Catia engineering CAD/CAM system used by Land Rover's tooling engineers resulted in an enhanced workflow that meant that as the vehicle design was refined by the designers, modified surface model data was readily available to the engineers and suppliers responsible for developing the production tooling. This data was used directly within Catia to enable tooling design to be updated in parallel with the design development of the vehicle's body skin and interior trim in ICEM Surf.

"By being able to release ICEM Surf surface model data, as it evolved, directly into the tooling development process, we were able to avoid late design changes caused by unforeseen manufacturing problems. This enabled us to ensure that before any tooling was laid down, the designs were technically feasible and accurately represented the final design of the vehicle's various body and interior components", said Wayne Morgan, senior manager, surfacing and cubing for Land Rover and Jaguar Cars. "As well as enabling us to achieve class-leading optical quality, it also significantly reduced the need for changes to tooling for the A-surface components. From a costing exercise that we carried out at the end of the project, we estimate that this capability alone saved Land Rover some \$10 million when compared with previous vehicle programmes."

ICEM Surf was also used by Land Rover for the design development of the body and interior of the all-new Range Rover Sport, which goes on sale in Europe and the USA this Spring.

### **About ICEM Surf.**

ICEM's flagship software product - ICEM Surf – is a suite of 3D surface modelling, surface analysis and design visualisation software that has been developed specifically for use in the design development of the visible surfaces (and their corresponding under-surfaces) of products such as cars, motorcycles, commercial vehicles, agricultural and construction vehicles and a wide range of sporting goods and consumer durable products. ICEM Surf provides a total

surface development solution, from design through to production tooling, meeting the specialist needs both of product designers and of design and manufacturing engineers in the automotive vehicle and product design industries.

In the automotive industry, ICEM Surf plays an essential role for the world's leading OEMs and their suppliers, where it is acknowledged as the premier software for creating and developing the accurate, high quality surfaces – known as Class A surfaces – that reflect the design intent and that are required for the final tool and die design process.

### **About ICEM Ltd.**

With its headquarters in the UK, ICEM Ltd. is the leading worldwide developer of advanced surface modelling, design and visualisation software. ICEM software is a critical component of the product lifecycle management (PLM) software environments of many of the world's leading automotive, aerospace, sporting goods and consumer durable products manufacturers and their suppliers.

With a worldwide network of sales and support offices and specialist distributors covering Europe, the USA, South America, Australia and the Asia Pacific region, ICEM's principal market sector is the worldwide automotive industry. Here it includes most of the leading manufacturers among its customers, including the Ford Motor Company, DaimlerChrysler Group, Volkswagen Audi Group, Porsche, BMW, PSA Peugeot Citroën, Renault, Nissan, Subaru and Harley Davidson among others, as well as leading automotive industry companies such as Volke, EDAG, Pininfarina, Bertone and Bertrandt, among many others. The company also has a significant presence in the industrial design market.

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