

Safe Seat

By **Nick Lerner**

Safety, style, and utility rule the child seat, push chair and travel system market. Britax deploys CATIA to excel in all departments while generating business benefits through increased productivity.

Rule based methodology at Britax.

EvoVu Fusion seat developed with CATIA.

amounts of legislation and the changing dictates of fashion."

Iain continued, "In order to keep ahead of the market's changing needs we have to consider not only parents' and carers' requirements but also those of the automotive OEM in whose cars the seats fit. Additionally, we engineer our products to exceed the new NPACS child seat legislation by a significant margin.

"CATIA is the perfect data repository for the rule-based regime under which we work because it allows us the creative freedom that we need to innovate while providing the ideal framework within which to operate at optimum efficiency in all departments."

TESTING MOMENTS

Britax car seats are highly engineered with ADAC testing carried out in-house and finite element analysis (FEA) performed by specialist external contractors. The Andover facility is equipped with a deceleration sled, a hydraulic ram system tuneable to 80g and all the systems required to simulate a pulse corridor up to 35g – well beyond the legislated 24g that equates to a 50kph impact. Further, Britax has full body in white testing facilities, which are also used for the company's work for the aircraft and helicopter seating business.

Iain Stewart commented, "We use CATIA to retain the information and design parameters that allow us to exceed the brand expectations of our customers. This means that we can design exactly what the market desires, and will

buy, while ensuring that throughout the design to manufacture process we are always comply with the required engineering and safety constraints."

Shaun Clark managing director of system supplier, Applied added, "The business benefits that Britax derives from its 5 seats of V5R17 technology lead to accelerated time to market because it is the same software developed for and deployed by the world's leading aerospace, automotive and innovation enterprises. CATIA allows Britax to take full advantage of the benefits of parametric methodology allowing it to iterate and upgrade designs to boost sales, while at the same time, according with and exceeding the stringent safety standard that govern the child seat industry. Applied works with Britax to ensure that its designers and engineers make the best use of Dassault Systèmes technology and are able to take advantage of the most appropriate CATIA modules for their needs through training, upgrade implementation and support."

RULES AND TOOLS

One example of this is found in the way that Applied helped Britax integrate phases of its design to manufacture processes using CATIA to communicate designs and related data to those in the production chain. Iain Explained, "We use 3D to design and validate our products and as this progresses from concept through production to shipping, we communicate the results at each stage, often using rendered

With CATIA, everyone can see what we mean.

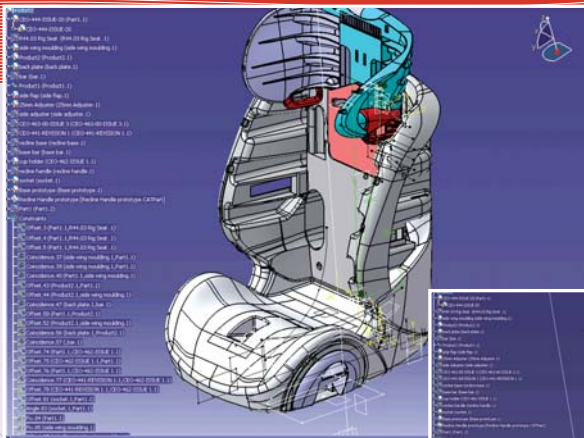
images or other representations of the data in the form most appropriate to the recipient.

"Throughout this process test results, fixing techniques, overall design and consumer feedback are validated with results coming back to CATIA for iteration. Meanwhile, Bills of Materials (BOM) are automatically updated and NC programme or tool design data modified. The parametric features of CATIA allow us to design with maximum efficiency with the application of rule based methodology"

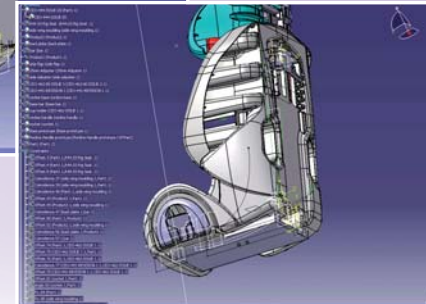
EXTENDED FAMILY

The Britax product range is extensive with push-chairs and travel systems covering virtually any need from all terrain travel systems to chic town models that can convert to prams. Britax subcontracts its mass customised frame manufacture and ensures optimal communication with its expert supply chain using the design and production data generated and maintained

In practice



Isometric assembly view.



Isometric rear view.

within CATIA. In this way Britax is able to add brand value, continue to innovate and achieve greater market share together with enhanced customer satisfaction.

Iain Powell concluded, "CATIA allows our designers to work faster and more efficiently than with other systems that we have tried because the interface is very intuitive and the system allows us to order our production methodology and practices so that there is no gap between what we design and what we manufacture. This is crucial in a business where safety is so important but customer appeal, utility and brand value also sell products.

"By creating our product ranges digitally in 3D using CATIA, sharing the vision with those that need to see it and communicating that data from a single system, we have developed the ability to be innovative, flexible, safe, efficient and to maintain our position as the UK's premier car seat, push chair and travel system brand" •]

For more information:
www.britax.com
www.appliedgroup.com