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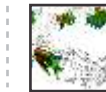
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FLAUNT IT!!

Technology's latest at CADD Centre!

10 FEATURES AT A GLANCE

1. Easy to learn
2. Fast modifications by direct update in 3D / 2D
3. Rollover mechanism
4. International shapes with preference series
5. Modification in 3D
6. Extensive block management
7. Output of part lists in many file formats such as PDF, RTF, HTML
8. Drawings parts lists in 2D drawings
9. Automatic generation of all 2D drawings for costing and production
10. Intelligent dimensioning

ProSteel

Bentley's ProSteel is a 3D modeling environment, for structural steel and metal work, supporting construction and planning tasks. ProSteel, works alongside AutoCAD and MicroStation platform to provide a multi-material modeler. Thereby, ProSteel is ideal to layout complex structures, produce shop drawings, assemble connections and manage bill of materials. ProSteel offers integration not only with Bentley products but also with third-party products.

detailing includes miscellaneous steel such as stairs, handrails, ladders, and circular stairs. The documentation provides 2D drawings from a 3D model, including bills of materials, NC data and PPS data.

ProSteel is for:

The professionals using ProSteel, to bring about more effective results in their professions, are Structural/civil engineers, Plant engineers, Fabricators, Detailers, Architects, and Educators etc. Various firms in similar sectors have also benefited from this software. Patrons of this software include Maurer + Söhne, Sinclair Knight Merz, Connel Wagner, KBR Kellog Brown & Root, Roche Mining Pty Ltd, PermaSteelisa Europe/Josef Gartner GmbH, Larsen & Toubro Limited, Hatch etc.

ProSteel at CADD Centre:

At CADD Centre, the Masters Diploma in Building Design offers students an opportunity to master ProSteel. This course combines

ProSteel with other tools such as Revit Architecture, Design Visualization Pro, STAAD Pro and ANSYS Civil etc. CADD Centre also provides students with the opportunity to acquire ProSteel skills with Project Management tools such as PMP and MSP. This comprehensive combination ensures that students are provided with the skill set required to be experts in the field of building design.

Reference: www.bentley.com

Book Post



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Our latest venture

This republic day witnessed CADD Centre's continued growth and expansion beyond Indian borders. CADD Centre's latest venture is its collaboration with the government of Ivory Coast. CADD Centre will work alongside the government to carry out a specialized training and development program.

CADD Centre signed the agreement with the Government of Ivory Coast on 26th January, 2013 at the World Trade Centre, Bangalore. The agreement was signed by His Excellency Mr. Sainy Tiemele, The Ambassador, Cote d'Ivoire and Mr. S. Karaidiselvan, Managing Director CADD Centre Training Services Limited.

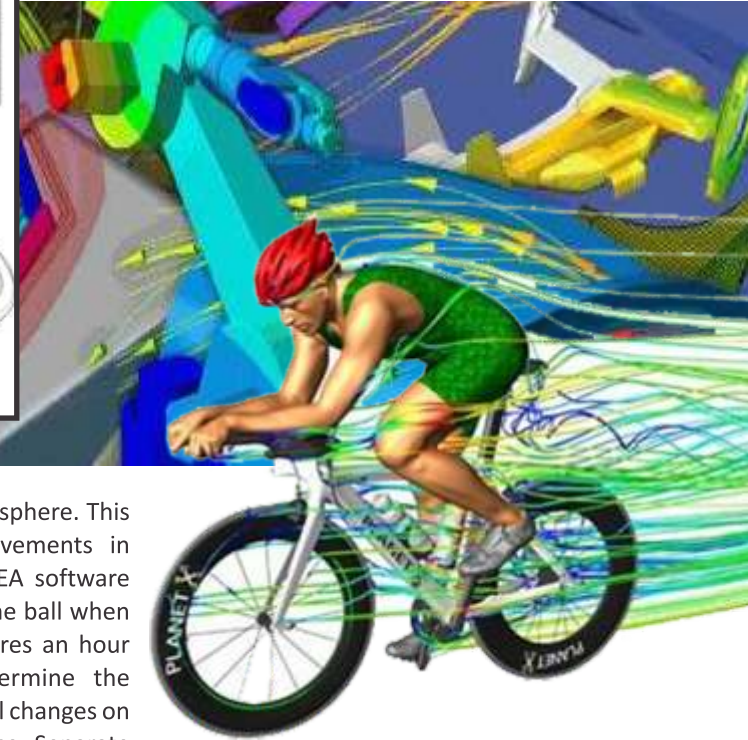
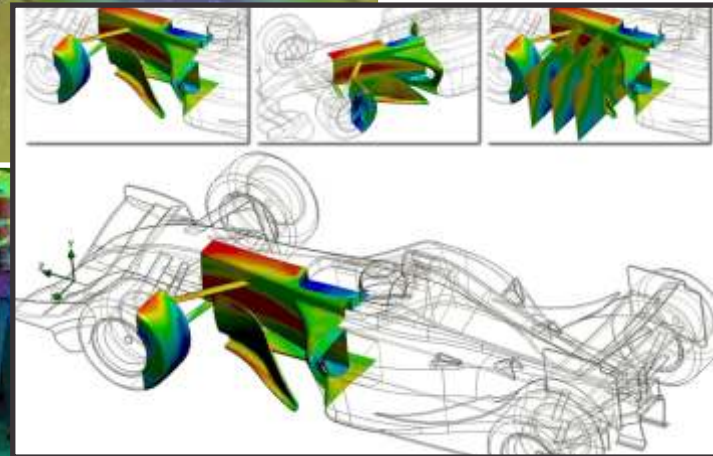
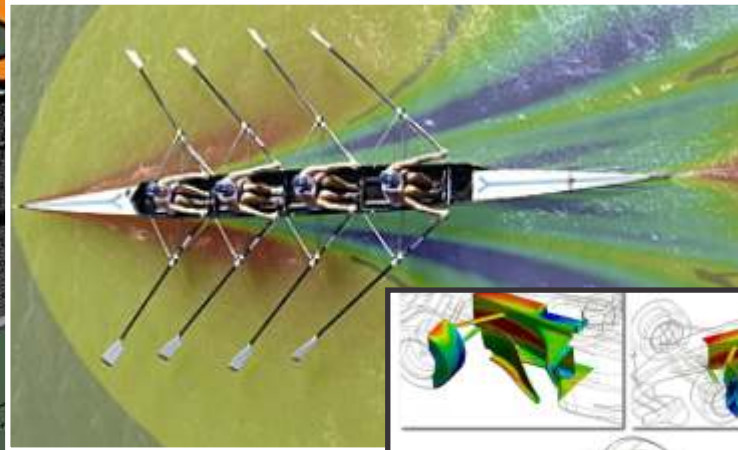
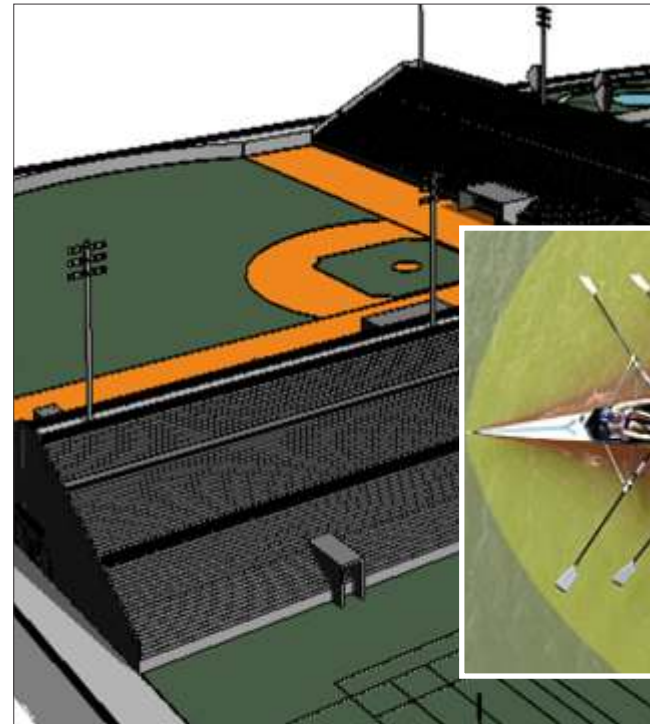


The ethics of sports

The sacred field of sports has been scarred by scores of unethical practices. Ben Johnson, exactly 25 years back become infamous with just one word "Busted". When he tested positive for banned drugs, Johnson not only lost his gold medal and world records, he also lost numerous fans. Lance Armstrong by admitting to systematic doping has shattered the faith of billions of fans. This is worsened by the fact that Armstrong and Johnson are just the tip of the iceberg.

The urgent need for improved performances has corresponded to the rise of dishonourable practices. In no other field is the value of milliseconds more visible, races are won and lost by mere immeasurable seconds. This feeble distinction between the first and second place brings about the drive to excel. While this drive can bring about a passion for excellence, a journey of self discipline and inspiration to succeed it can also become a destructive force by sportspersons turning to unethical means to win.

This aggressive competition can remain healthy however if ethical means of improving performance is practiced. Sportspersons must take to heart the advice of Gandhi – "Means are after all everything." While sportsman must train harder, engineers too have a role to play.



Motor sports have seen design skills being employed over the past few decades, the first inviscid panel method was used in the 1980s – An inviscid flow is the flow of an ideal fluid that is assumed to have no viscosity. It can be argued that Formula 1 has been a major

system of products, when worn together, reduces full-body passive drag by up to 16.6 percent, improves oxygen economy by up to 11 percent, and reduces active body drag by up to 5.2 percent. Technology thus has given an edge to talented swimmers such as Michael Phelps.

Football has also witnessed the contributions of engineering techniques. FEA software from Simulia was used to design the Teamgeist ball for the 2006 FIFA World Cup. It was engineered to behave consistently wherever it was struck with the interior of the ball being a carcass structure made from 12 pentagonal panels of

computational fluid dynamics (CFD) software to optimize the aerodynamics of individual components, such as the head tube, fork, bottom bracket and seat stay attachment. Next, engineers performed a systems simulation as they combined components into a full structure and tested the aerodynamic performance of the assembly at crosswind angles from -20 degrees to +20 degrees. Engineers manually iterated through a series of designs to an optimized solution that provided about a 20 percent reduction in drag. This drag reduction could decrease a rider's time by approximately one minute over one hour of race time.

Engineering Influences in SPORTS

Engineering the ethics of sports:

Innovating to improve performance, using intelligence instead of deception, is the way engineers must look at sports. Engineers, have in their hands, the very tools to dictate the ethics of sports. Sports equipment, are the most fundamental area where the influence of engineers can be seen. A vast range of sports balls, golf clubs & balls, running shoes, baseball bats & helmets, surf boards, skis and snowboards, ice axes, bicycles, mouth-guards, training equipment, and tennis racquets are designed using CFD and CAE with products from ANSYS, LS Dyna, SIMULIA, MSC & Mentor Graphics' FloEFD tool. Below are sports where the design skills have come into play in obvious manners.

Motor Sport was one of the first professional sports to adopt commercial CFD tools for competitive advantage. Adrian Newey, is an example of what engineers can do in the field of sports. He has worked in both Formula One and IndyCar racing as a race engineer, aerodynamicist, designer and technical director, considered one of the best engineers in Formula One. He designed championship-winning Formula One cars for Williams F1 and McLaren.

driver for technology innovation in CFD with high performance computing and preprocessing enhancements to CFD technologies being developed for ANSYS FLUENT, CD-Adapco's CCM+ and latterly the OpenFOAM product.

Swimming too has seen various innovations, Speedo International has a long track record of technological innovations in elite swimsuit design over several Olympiads and its 2008 offering, the LZR Racer Swimsuit, was developed with the help of ANSYS FLUENT CFD software for the Beijing Games. With the use of CFD, Speedo were able to make their suit 5% better in passive drag and swimmers were going on average 2% faster overall after its launch. Late in 2011, Speedo debuted its latest swimwear innovation, Fastskin3 — a cap, goggle and swimsuit engineered to work together as one revolutionary racing system. Research indicates that this innovative

fabric that fold up to form a sphere. This design led to large improvements in stiffness distribution. The FEA software modeled the behaviour of the ball when kicked at up to 160 kilometres an hour (100mph), helping to determine the effect of even small structural changes on the ball's overall performance. Separate CFD simulation using the ANSYS FLUENT determined and improved the aerodynamic features of the novel panel structure used on the ball's surface

Cycling is a sport that has seen rapid technological advances. Cycles are continuously being developed to ensure speed, in a sport where every fraction of a second counts. Examples of such specially designed cycles are presented by the company Avanti Bikes. To help design the bikes, Dynamics Sports Engineering (DSE) engineers first used ANSYS CFD- Flo

Virtual Athlete

The examples cited above are just a mere reflection of the revolution occurring in the field of sports. While some might suggest that such innovations are "technological doping" – the fact remains that such research and development is carried out in a transparent manner with the prime investment being intelligence.

Reference:
www.nafems.org/downloads/nwc11/keynotes/hanna.pdf
www.ansys.com/About+ANSYS/ANSYS+Advantage+Magazine

