

lee neesham case studies

'A' Class Surfacing, Concept Modelling & Visualisation



A' Class Surfacing: Bentley Motors EXP10 Speed 6e Concept

During the past few years Bentley and Volkswagen had been discussing the possibilities for an all-electric Bentley, and whether this was the correct fit for the brand. As time went on, it became increasingly apparent that it was probably something customers would both accept and desire.

Bentley decided to produce a show car to garner customer opinion of an electric model. So in mid 2016 work began in earnest on creating such a car. With the Speed 6 gaining such accolades and positive customer and media response at the Geneva Motors Show of 2015 it seemed like an obvious choice such a model. Within the Design Studio there had always been a desire to show the Speed 6 as a cabriolet model, and indeed considerable work had already been undertaken to realise this, so this sealed the decision.

I had been heavily involved in exploring a cabriolet version of the Speed 6 after its Geneva preview. So with the work of creating a roadster already largely undertaken, most of the work from an exterior design perspective focused on creating a new design language for Bentleys future electric range. It needed to be clearly distinguishable from the current range of petrol engined models, but obviously a true Bentley at the same time. Exuding all the key values of the brand, as well as delivering a statement of unparalleled luxury motoring within the electric segment.

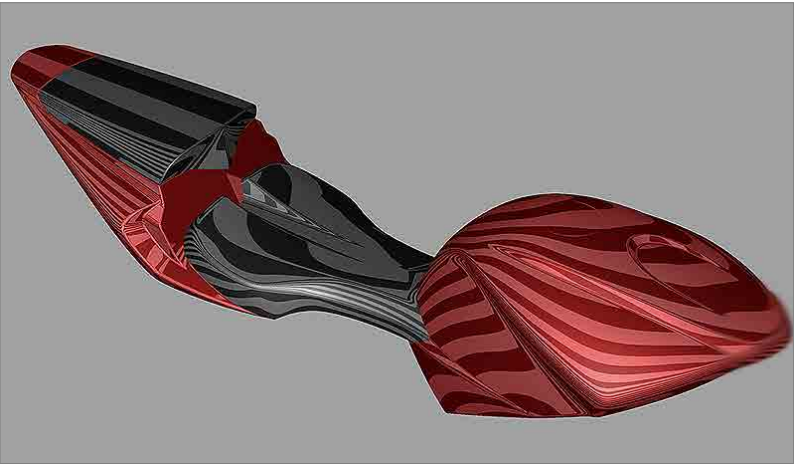
I undertook the work of modelling the roadster myself, as well as overseeing the team that created the exterior details for the car.

'A' Class Surfacing
Concept Modelling
VRed Visualisation



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'A' Class Surfacing, Concept Modelling & Visualisation



'A' Class Surfacing: Triumph Daytona 675 Triple

The Daytona 675 Triple was a jointly designed and developed by Triumph and Renfrew Group. Triumph's inhouse design team were responsible for the bikes styling and Renfrew were involved in the hard modelling, surface modelling and engineering development of the bikes exterior components.

I managed the team responsible for creating the exterior 'A' class surfaces which were built from scan data and engineering schemes, supplied by Triumph, following completion and approval of the hard foam model. Along with a team of studio engineers we supplied Triumph with a set of fully engineered components created in Pro-E.

The new Daytona 675 Triple is set to follow in the footsteps of the Daytona 600 and Daytona 650 released a few years earlier and further increases Triumphs' success of recent times in this all important middleweight capacity segment.

'A' Class Surfacing
Production Data
Integration with Pro-E



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'A' Class Surfacing, Concept Modelling & Visualisation



'A' Class Surfacing: Volvo XC60 Concept Car

The XC60 Concept Car was designed, developed and built at Volvo Cars Studio's in Gothenburg. It was the first concept car that Volvo had produced since the arrival of Steve Mattin, the company's new design director.

The car's lines marked a significant departure from the relatively conservative styling of previous Volvo's and showcased the new DNA expected to be seen on the production version of this compact premium crossover that would follow shortly.

I became involved with this project in its later stages, as timescales became increasingly tight. I joined the team responsible for developing the interior and modelled a number of components and features within the car for milling and one off production.

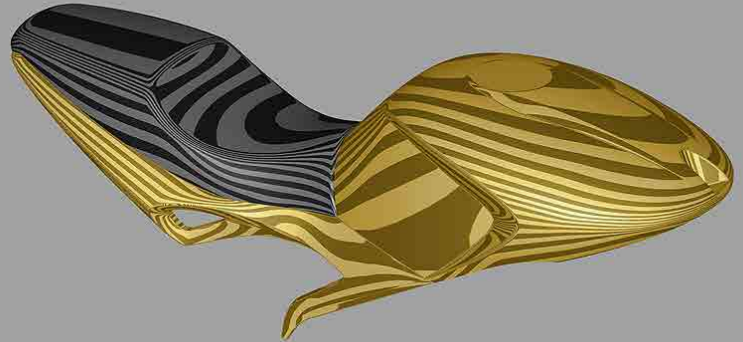
The car debuted at the 2007 Detroit Motor Show to considerable media interest to Volvo's departure from its 'boxy' iconic status.

'A' Class Surfacing
Prototype Data
Integration with Catia



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'A' Class Surfacing, Concept Modelling & Visualisation



'A' Class Surfacing: Triumph Speed Triple

The Speed Triple made its first public appearance at the 2004 Motorbike Show held at the NEC, Birmingham, and was designed by the Renfrew Group, during my time with the consultancy.

I was solely responsible for creating the exterior 'A' class surfaces which were built from scan data and engineering schemes, supplied by Triumph, following completion and approval of the hard foam model. Along with a team of studio engineers we supplied Triumph with a set of fully engineered components created in Pro-E.

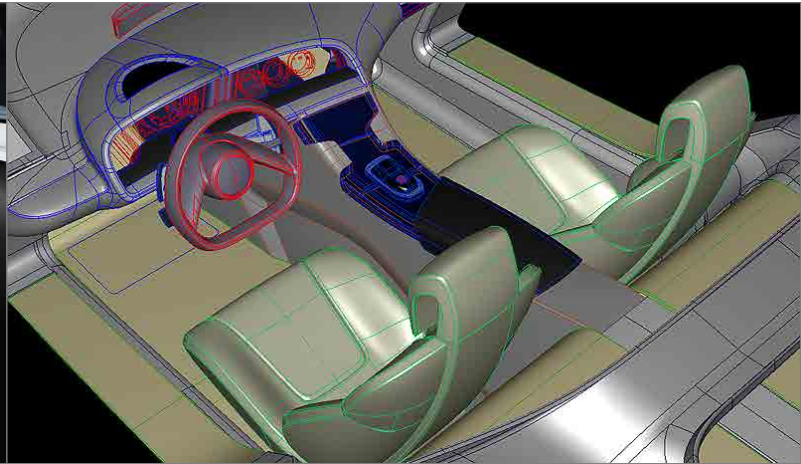
This represents the second generation of the current Speed Triple and is essentially a styling exercise as the bike retains both its original engine and chassis. A completely new replacement for the bike is scheduled for the near future.

'A' Class Surfacing
Production Data
Integration with Pro-E



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'A' Class Surfacing, Concept Modelling & Visualisation



A' Class Surfacing: Saab Aero X Concept Car

The Aero X concept car was designed and engineered at GM's Advanced Design Studio in Pixbo, Sweden. G-Studio, an Italian coachbuilders, were contracted to build the car at its studios in Turin. The car itself bared little relevance to any forthcoming Saab production car but none-the-less drew considerable attention to the brand as well as being a stunning design in its own right.

I formed part of a team of Alias modellers and studio engineers that worked on the Aero X interior. We created the interior from scan data supplied from the initial clay model and modified this with concurrent input from Saab's designers and studio engineers along with further input from G-Studio's coachbuilders and engineers as the prototype took shape within their studio.

Timescales were very tight and consequently pressure was high, none-the-less we had the car ready for its debut at the 2006 Geneva Motor show. The Aero X went on to 'Steel the Show' in the words of most Automotive Journalists.

'A' Class Surfacing
Production Data



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'A' Class Surfacing, Concept Modelling & Visualisation



'A' Class Surfacing: Toro Eurocyclor

Toro, a successful American lawnmower manufacturer approached Renfrew Group to create a range of rotary mowers aimed specifically at the European market.

Toro had yet to break into this market and Renfrew Group had considerable experience of working in this field due to its long term relationship with Flymo. I created a full 3D Alias model from sketches supplied by the designer along with current engineering hard points. This was used to create an actual prototype for marketing assessment.

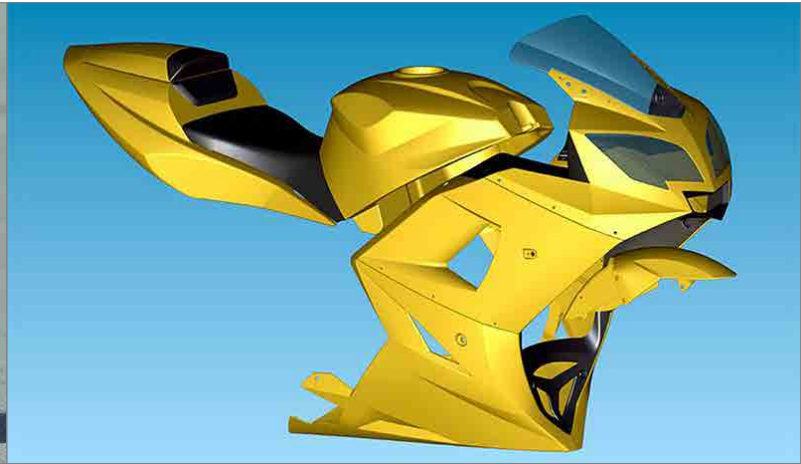
Downstream the form was modified following client feedback and my surfaces were then feed to the engineers for manufacturing development.

'A' Class Surfacing
Production Data
Alias Visualisation



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'A' Class Surfacing, Concept Modelling & Visualisation



'A' Class Surfacing: Triumph Daytona 600

The Daytona 600 was the first of several new bikes Renfrew Group designed for Triumph Motorcycles and was completed in 2002. Its design was the first in a new style that has taken the brand into a new era of sharp focus.

I managed the team responsible for creating the exterior 'A' class surfaces which were built from scan data and engineering schemes, supplied by Triumph, following the completion and approval of the hard foam model. Along with a team of studio engineers we supplied Triumph with a set of fully engineered components created in Pro-E.

The design moved forward into production in record time and was launched at the 2002 Motorcycle exhibition at the NEC in the UK.

'A' Class Surfacing
Production Data
Integration with Pro-E



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'A' Class Surfacing, Concept Modelling & Visualisation



Concept Modelling: Bentley Motors 2017 Continental GT

The 2017 Continental GT is the manifestation of a new design language developed by Luc Donckerwolke and Sang Yup Lee for future Bentley Models. It was first seen by the public on the Speed 6 concept at the Geneva Motor Show in 2015, and later aspects of that design were adopted and developed for the new GT.

John Paul Gregory who at the time was Lead Exterior Designer, later to become Exterior Design Chief, was responsible for the Speed 6. He was key to the development of the new Continental GT, ensuring that the design lineage and new exterior language was maintained and progressed relative to the new Bentley vision. Upon the cars unveiling, shortly before the Geneva Motor Show in 2017, the car received widespread positive reviews and reactions from the press, customers and general public alike. The cars has been a renowning success for Bentley.

As usual I was heavily involved in this project from the outset. The new GT marked a departure from the VW/Audi MLB platforms and instead the Bentley was to be built on the new Porsche MSB platform. This would give the car far better proportions and handling credentials. Along with the design and engineering teams input, I produced several exterior volume models to explore the best proportions for the new GT based around the modular MSB platform. This then became the basis for the styling proposals that followed.

I continued to be involved in the project right up until the car was handed over to the 'A' class surfacing team, managing a team of Alias Modellers developing one of the themes, and later producing VRED renderings for internal events and presentations.

Concept Modelling
Prototype Data
VRed Visualisation



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'A' Class Surfacing, Concept Modelling & Visualisation



Concept Modelling: Volvo XC60

The XC90 had proved a huge success for Volvo becoming their best selling model around the world. Keen to capitalise on this success Volvo wanted to expand the range to include a smaller model the XC60. I worked extensively on the cars interior, in particular the Centre Stack and areas of the IP.

I worked closely with the designers, clay modellers and studio engineers to create the best possible solution of the designers interior concept. The design development stage was very complex, involving many modelling and evaluation loops due to the usual conflicting interests and an ever increasing number of carry-over parts being used.

Concept Modelling
Prototype Data
Integration with Catia



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'A' Class Surfacing, Concept Modelling & Visualisation



Concept Modelling: Bentley Motors Bentayga

Bentley had been considering adding an SUV to its lineup for quite some time, close to 10 years. Then in 2012 it finally did, unveiling the EXP 9F to the world at the Geneva Motor Show.

The show car was unfortunately not well received, and ultimately led to a big shake up within the Bentley Design Department, and to several changes to the Board of Directors. With new management and a new Design Director, Luc Donckerwolke, Bentley looked afresh at the SUV project. The result is the Bentayga – one of the most powerful and luxurious SUV's in the world, and from a design point-of-view the perfect fit with the rest of the Bentley range.

I was heavily involved in this project during the early stages. This took me to Italdesign Giugiaro for 3 months, working with a team of designers and modellers at their offices just outside Turin. At this stage Luc Donckerwolke was managing the project but not yet instilled at Bentleys studio in Crewe. We gave him the experience and expertise needed to take the Bentayga from a concept in Turin to a production ready vehicle in Crewe.

I worked as part of a team of CAD modellers, alongside designers and engineers, seeing this concept through to production. Later on, I created a number of VRed images of the SUV for Dealer and Customer events, introducing them to the Bentayga before the vehicle was available to view.

Concept Modelling
Prototype Data
VRed Visualisation



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'A' Class Surfacing, Concept Modelling & Visualisation



Concept Modelling: Flymo Power Compact

Flymo, a long standing client of Renfrew Group appointed the group to design a new type of grass collection mower that was more compact than predecessors and extended the 'family' look already established by previous mowers that had become synonymous with Flymo.

The power compacts innovation is more than skin deep; its automotive styling is matched by its engineering and performance prowess. With an offset drive the ability to move the grass box directly over the blades enables a short wheelbase whilst utilising as much space as possible for grass collection.

The Power Compact has won numerous design & innovation awards throughout Europe and became a huge success for Flymo.

'A' Class Surfacing
Production Data
Integration with Catia



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'A' Class Surfacing, Concept Modelling & Visualisation



Concept Modelling: Bentley Motors EXP10 Speed 6 Concept

After Dirk Van Braeckel's departure as Design Director of Bentley Motors, Luc Donckerwolke was appointed to replace him. Along with his arrival came Sang Yup Lee as the new Head of Exterior Design. Between them they were tasked with creating a new design language for Bentley's future models.

The most immediate way to express this was through a concept car that could be shown to both the Volkswagen Board and public alike. At this point no decision on the type of vehicle best suited to this had been decided upon. So the designers were tasked with not only exploring and creating a new design language, but also with suggesting the best way to express this through vehicle choice. Early on several vehicles and platforms were considered but ultimately a sports car was favoured due to the flexibility of design it created, and the possibility of it spawning a production model to sit below the Continental GT range. An idea the Bentley Board was considering at the time.

I was heavily involved in this project from the outset. Initially looking into and building generic CAD models of possible vehicle variants, and later on managing a team of modellers developing concepts for the 2 seater sports car. I saw the design and modelling of the chosen theme through to completion, modelling most of the exterior myself and overseeing a team develop the wheels and other exterior details.

Further down-the-line I created a number of exterior renders along side our visualisation department for marketing purposes.

'A' Class Surfacing
Concept Modelling
VRed Visualisation



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'A' Class Surfacing, Concept Modelling & Visualisation



Concept Modelling: Taski Ergodisk

The Taski Ergodisk is a low speed single disc cleaner with high versatility through a wide range of cleaning tasks.

Renfrew Group designed this completely new product for Taski with its many new and unique features including the anatomically formed grip and handle for better working conditions and improved productivity, the hand protection and double lock for increased safety, the foldable handle for easy storage and transport and its easy coupling of accessories for increased efficiency.

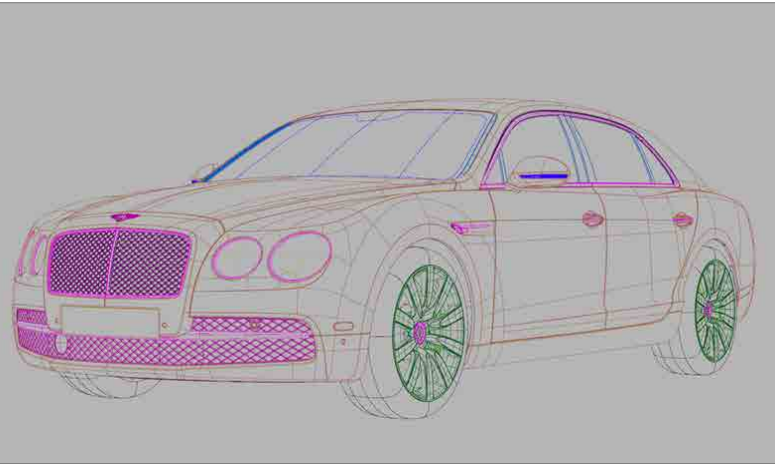
The concepts were first realised as marker visuals before being 'fleshed out' in Alias Studio to determine feasibility and practicality.

'A' Class Surfacing
Production Data
Alias Visualisation



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'A' Class Surfacing, Concept Modelling & Visualisation



Concept Modelling: Bentley Motors Flying Spur

The Bentley Flying Spur was the last Bentley designed under the long standing partnership of Dirk van Braeckel and Raul Pires, and is widely regarded as a huge success both aesthetically and commercially. It established a new sleek character for Bentley sedans with its lower roof line, precise feature lines and wide low stance.

The car hadn't always been this way. Early on in the design process numerous architectural possibilities were explored based around Volkswagens MLB platform architecture. As usual, I was involved in the project from its outset – creating a number of CAD Volume Models that explored both architectural possibilities and vehicle identity such as whether the vehicle should be a sporty sedan or prestigious limousine.

As a chosen design formed, working closely with the designers and engineers, I modelled and developed the chosen exterior using Alias SurfaceStudio. I was also heavily involved in developing and modelling the exterior details on the car, overseeing and directing a team of modellers working on Head Lights, Tail Lights, Wheels, Fender Vents et al.

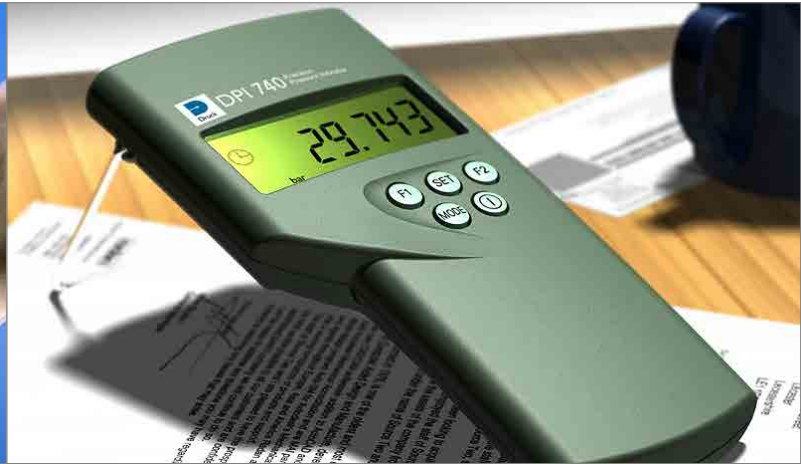
Further down the line I handed the exterior surfaces to the ICEM team for production development.

Concept Modelling
Prototype Data
Showcase Visualisation



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'A' Class Surfacing, Concept Modelling & Visualisation



Concept Modelling: Druck DPI 740

Renfrew Group were commissioned to design, visualise and create 'A' class surfaces for a new hand held pressure indicator for Druck's international market. The CAD data would downstream be imported into their Pro Engineer software for engineering development prior to tooling.

A 3D surface model was generated in Alias Studio interpreted from sketch visuals produced by the product design team. Visuals were generated from the CAD data to generate interest in the product prior to prototype development and its initial production run.

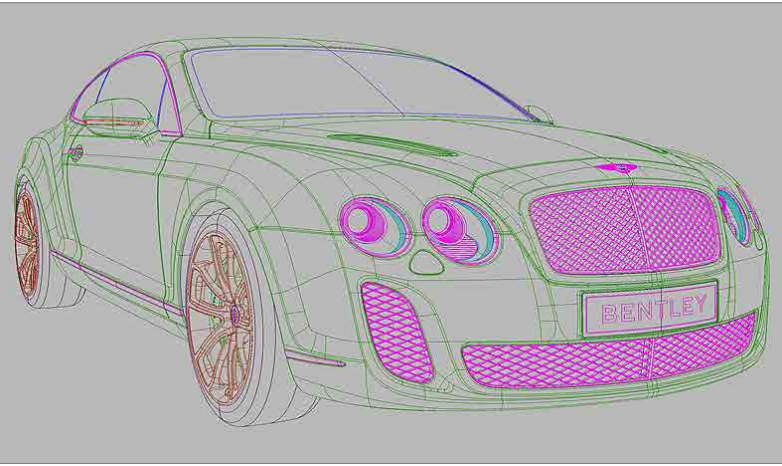
The Alias data, successfully imported into Pro Engineer, was used for production tooling, and the new pressure indicator has further strengthened Druck's position as a world player in this field.

'A' Class Surfacing
Production Data
Integration with Pro-E



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'A' Class Surfacing, Concept Modelling & Visualisation



Concept Modelling: Bentley Motors Continental Supersports

The Continental Supersports is the fastest production car ever built by Bentley, and it is also Bentley's first biofuel powered car capable of running on E85 biofuel, cutting its 'well to wheel' CO2 emissions by up to 70%.

I joined a small team of engineers and designers brought together to work on a special project to reduce weight and increase power of the continental GT, the Supersports is the result of that collaboration. Working alongside the exterior designer, I modelled and developed the exterior using Alias Autostudio.

Regular reviews of the car were carried out in Autodesk Showcase where I presented the latest iterations of the exterior and produced a number of rendered images for several of Bentley's internal departments prior to the initial prototype being finished.

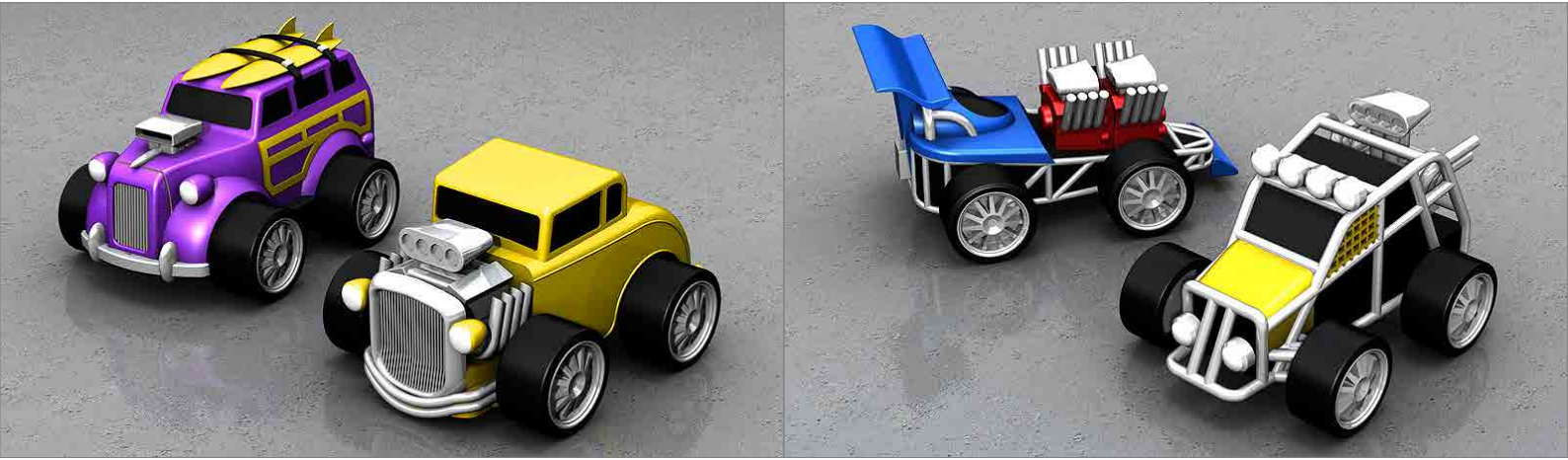
Further down the line I handed the exterior surfaces to the ICEM team for production development.

Concept Modelling
Prototype Data
Showcase Visualisation



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'A' Class Surfacing, Concept Modelling & Visualisation



Concept Modelling: Mattel Hotwheels Rev-Up's

Mattel a long standing client of the Renfrew Group, approached the consultancy with a new project for the Hotwheels brand. Part of the project involved designing and prototypes a range of miniature motorised vehicles for the range topping playset.

The designers involved in the project supplied me with a range of visuals and some engineering hard points. Interpreted these sketches as best I could given the stringent engineering guidelines I had and quickly built up the range of models ay 10 times size. I had roughly 4 hours to produce each model.

These models were then prototyped using an advanced SLA technique to capture the minute details of the model. They were then hand painted and shown for client evaluation.

Concept Modelling
Prototype Data
Alias Visualisation



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'A' Class Surfacing, Concept Modelling & Visualisation



Visualisation: Bentley Motors Continental GT V8

The Continental GT V8 is the latest edition to the Continental line-up. It is powered by an all new 4.0-litre, twin-turbocharged engine producing 500bhp at 6,000rpm. It fulfils the company's commitment to produce a new powertrain delivering a 40% improvement in economy and CO2 emissions over the current W12 engine.

As part of the exterior design team I worked with a number of designers and engineers to develop a new identity for the V8 model. This included designing a new front and rear bumpers, new tailpipes, new wheels, as well as several other small cosmetic changes. Along with other Alias modellers we took sketches and created 3D CAD models for development and review.

These reviews of the car were carried out in Autodesk Showcase where we presented the latest iterations of the exterior changes and produced a number of rendered images for several of Bentley's internal departments prior to the initial prototype being finished.

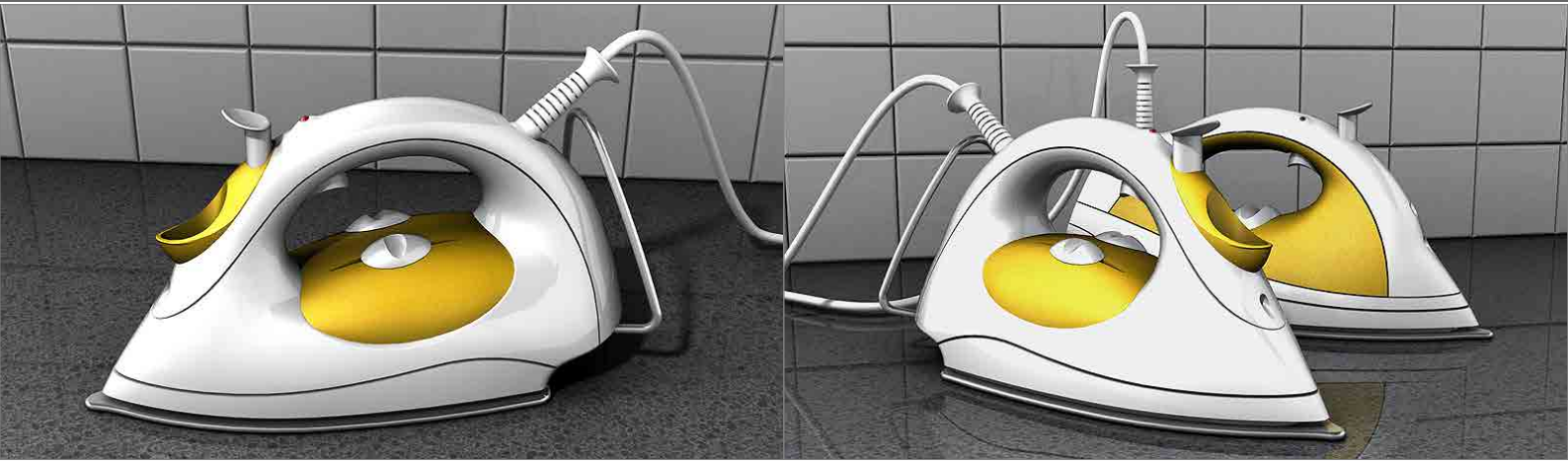
Further down the line we handed the exterior surfaces to the ICEM team for production development.

Concept Modelling
Prototype Parts
Showcase Visualisation



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'A' Class Surfacing, Concept Modelling & Visualisation

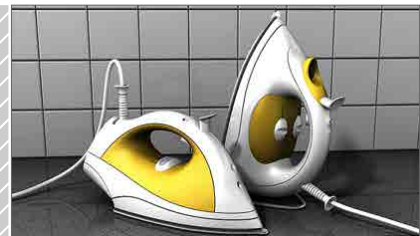


Visualisation: Kenwood Steam Iron

Renfrew Group were approached to update a range of steam irons from both an aesthetical and functional point of view. The irons, once styled, would be created as block models, digitised and modelled in Alias Studio before being handed to Kenwood's own engineering team.

The final concepts were a significant evolution of the 'steam iron' form and reduced part count and assembly times. The new range of steam irons helped maintain Kenwood's market position and keep their range of irons as fresh as their competitor.

'A' Class Surfacing
Concept Modelling
Alias Visualisation



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'A' Class Surfacing, Concept Modelling & Visualisation



Visualisation: Fisco Satellite 30M

Renfrew Group was appointed to design a new stylish tape measure that was not only functional but also simpler to manufacture and assemble. It was hoped the new designs would aid Fisco Products to generate increased sales and recapture ground lost to its competitors in recent years.

Renfrew Group's groundbreaking concept was produced through innovative design that reduced the part count and consequently reduced assembly time considerably. The design also offered a unique ergonomic handgrip that formed an integral part of the products innovative form. Visuals that I created and rendered in Alias Studio helped convey the concept and graphic/label options to their management board.

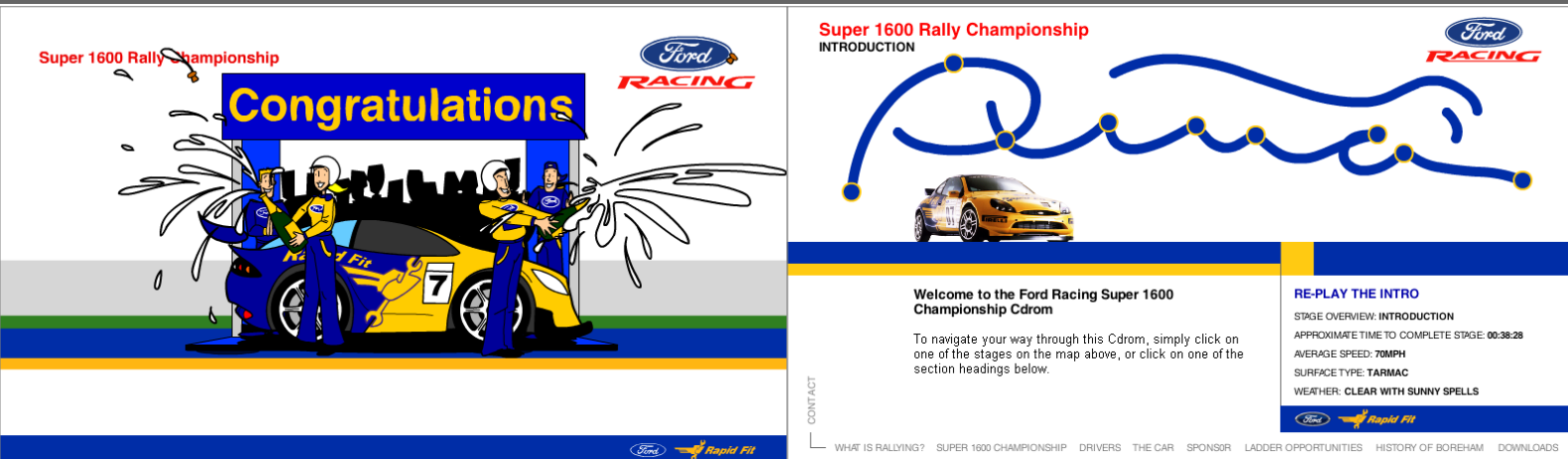
The product went on to become a finalist in the annual design week awards and has since become a best seller in the commercial trade sector restoring Fisco's dominance in this area.

Concept Modelling
Colourways
Showcase Visualisation



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'A' Class Surfacing, Concept Modelling & Visualisation



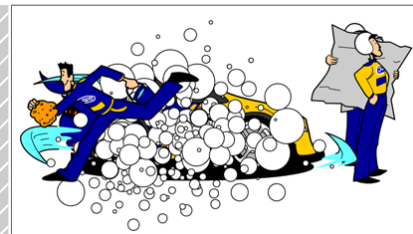
Multimedia: Ford Racing Super 1600 Cdrom

DesignIT was approached by Ford Racing to create a Cdrom to raise the profile of Ford's driver programme and increase uptake among rallying enthusiasts. As well as to increase awareness of the Super 1600 Championship among enthusiasts - a new rallying category set up as a stepping-stone for young talented drivers one stage below the Ford Focus WRC car.

I developed a cdrom that satisfied the appetite for more detailed information on the championship, setting the new category in context and encouraging subscriptions to the DDP. This was distributed to 5,000 rallying enthusiasts.

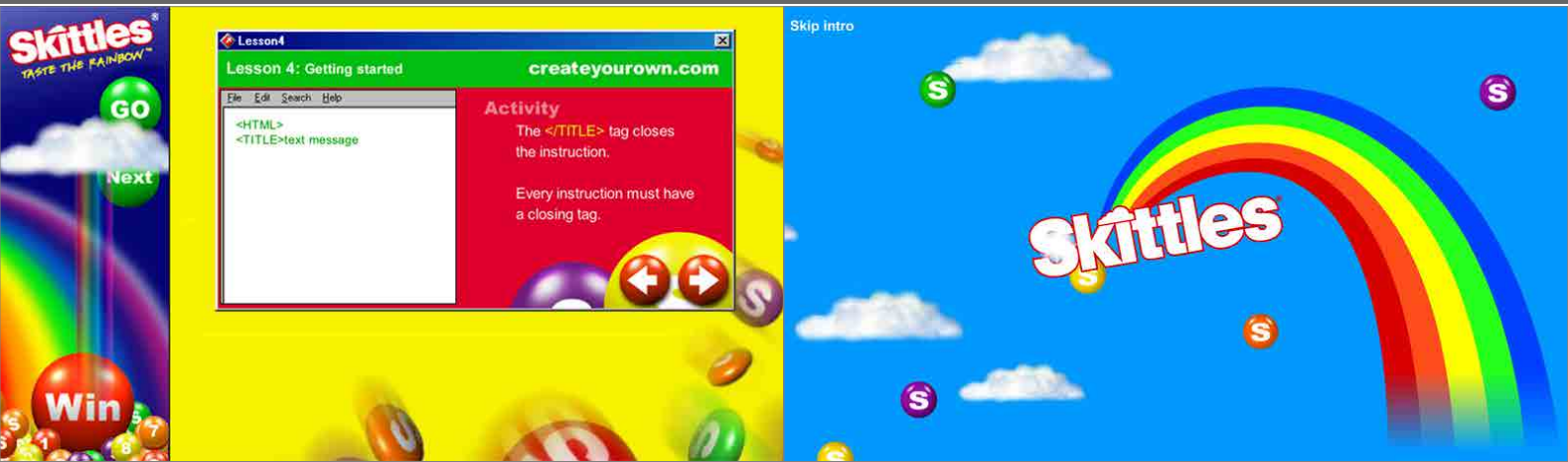
The Colin McRae 'Ladder' is now established as the most subscribed to 'Driver Development Program' and the new rallying category promises to be one of the best attended in 2002 and beyond.

Cdrom Design
Lingo Programming
Video Editing



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'A' Class Surfacing, Concept Modelling & Visualisation



Multimedia: Mars Confectionery Skittles Website

Mar's agency devised a creative concept for both an offline and online promotional campaign aimed at teenagers that would increase saliency and awareness of Skittles amongst 14 - 16 year olds, and encourage schools to purchase more Skittles by allowing Mars to site vending machines in schools.

DesignIT became involved, and creating a highly brand-centric cdrom e-learning concept that was ideal for the target market. It was fun and easy to interact with. Incentives were used to increase uptake and a web site was developed to support the cdrom tutorials and allow site entries to a national competition.

The concept was hugely successful and was even used as part of curriculum for pre GCSE students in participating schools. Perception of brand rose substantially among target market, especially by the 'brand for me' measure.

Website Design
Lingo & HTML Programming
Cdrom Design



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'A' Class Surfacing, Concept Modelling & Visualisation



Multimedia: Renfrew Group Company Brochure

Over the years I worked at Renfrew I created numerous pieces of promotional work ranging from websites to corporate brochures. This brochure was the last piece of promotional work I created for them, and it was designed to compliment their new website that I had recently created.

Renfrew wanted a brochure that was bold and powerful yet clean and simple. It had to leave an impact on two levels, firstly from someone quickly flicking through it and secondly from someone reading it in depth. The brochure has powerful images coupled with short bold statements that can be digested at a glance as well as further images and in depth statements for the more engaged reader.

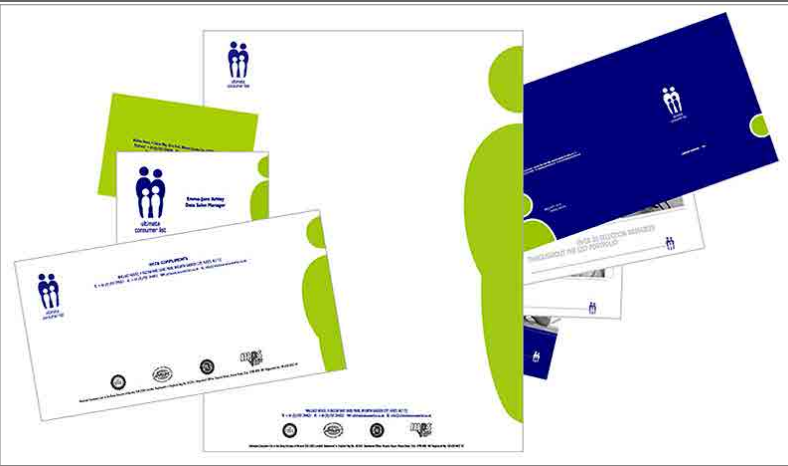
Both this brochure and Renfrew's new website have been a great success, helping to achieve new levels of business for the company.

Graphic Design
Brochure Design
Photography



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'A' Class Surfacing, Concept Modelling & Visualisation



Multimedia: Ultimate Consumer List Corporate ID

Bounty RSCG Euro asked DesignIT to create a brand for 'Ultimate Consumer List' from scratch. It had to be family-centric, speak to the direct marketing community in a clear and authoritative way and have a distinctive look that would work effectively across all media.

We developed a logo and house style that instantly reflected Bounty's unique heritage in this area. A style that was distinctive, authoritative, and worked effectively across all media. The brand was acclaimed at all levels within Bounty and the sector as a whole for its clarity and focus.

It proved to be the catalyst for a new impetus by Bounty that invigorated the sector as a whole. Early indications suggest much higher levels of sales enquire than previously.

Corporate Identity
Brochure Design
Website Design



lee neesham case studies

'A' Class Surfacing, Concept Modelling & Visualisation



Multimedia: Swinton Consumer Website

DesignIT won the pitch to develop Swinton's online brand and web presence in an engaging and interactive way. As well as establish their online quotes facility and increase the levels of enquiries both online and through traditional channels.

The resultant website maintains Swinton's positioning as the brand of 'impartial advice' whilst being dynamic, engaging and building on the values of the brand. The addition of the integrated bespoke quotation system and the bonus of 'sticky' material like the 'Driving Theory Test' to make people 'play and stay' and revisit the site all helped create the right balance.

The site was an instant hit with a huge uptake in online quotation requests and dramatically increased enquiries (45%) via telephone. In addition there was a very favourable reaction to new site and features by both consumers and trade.

Graphic Design
Website Design
HTML & ASP Coding

