

PORTFOLIO ARCHIVE



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TETRA SPEAKERS - 606

CONSUMER PRODUCTS

The Challenge:

To develop a “period piece” refrigerator, based on the existing design vocabulary of Heartland Appliances’ “Classic Collection” line of high-end gourmet kitchen appliances.

Accomplishments:

- designed a uniquely positioned 3 way speaker to discreetly fit into a residential living environment
- designed an elegant aesthetic which communicates high end audio
- eliminated resonance feedback through the design of non-parallel surface enclosure
- developed an enclosure strategy to allow ease of modification for custom finishes
- set up manufacturing detailing and protocols for cost effective Canadian manufacturing
- collaborated with Rob Fraboni and Adrian Butts to attain an audio monitor level of acoustic refinement

Responsibilities:

Research to determine product positioning to fit with target market, industrial design, product prototypes to test and tune acoustics, production detailing and set up for Canadian manufacturing.



Photo by Steve Fenn

DIMPLEX BASEBOARD HEATER

CONSUMER PRODUCTS

The Challenge:

To develop a high volume, low cost electrical baseboard heater for North American production.

Accomplishments:

- optimized venting for heat transfer
- significantly reduced parts count which allows for competitive pricing of this product
- designed for ease of assembly and manufacture, which decreased assembly time
- introduced a clean and simple design aesthetic that allowed it to compliment a wide variety of home decors

Responsibilities:

Industrial design, prototyping and validation, visual models, costing verification, 3D CAD capture, plastics design, and supplier liaison.



HEARTLAND REFRIGERATOR

CONSUMER PRODUCTS

The Challenge:

To develop a “period piece” refrigerator, based on the existing design vocabulary of Heartland Appliances’ “Classic Collection” line of high-end gourmet kitchen appliances.

Accomplishments:

- developed a believable look for a modern product offering that did not exist during the early 20th century era, as exemplified by other products in the line
- designed curved porcelain-covered doors which helped differentiate the product
- increased the product offering by adding colour accent options

Responsibilities:

Research to determine product positioning to fit with target market, industrial design, product prototypes to test and tune acoustics, production detailing and set up for Canadian manufacturing.



ELAN DESKTOP FAN

CONSUMER PRODUCTS



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The Challenge:

Identify options for securing IP and incorporate selected IP direction into a next generation product geared towards the traditional and urban Brookstone consumer.

Accomplishments:

- secured patent for the over-molded finger-safe fan blade
- generated elegant design aesthetic to appeal to Brookstone customers
- introduced integral, pearlescent finishes which contributed to increased perceived value
- developed a compact virtual pivot head adjustment mechanism
- developed a high efficiency, virtually silent, aerodynamic blade

Responsibilities:

Generated IP options, industrial design, visual models, prototypes for UL standards testing, mechanical design, propeller development, 3D capture, and carton graphics.



BLACK & DECKER POWER PAK

CONSUMER PRODUCTS



The Challenge:

To design a easily mountable tool storage bag to compliment the Black & Decker 375 Workmate as well as for it to be a stand alone tool carrier case.

Accomplishments:

- effectively positioned product to compete with other tool bundles in market place
- successfully worked with and managed Black & Decker's offshore vendor
- introduced a non-slip cushion strap design that increased comfort and support
- added value to product by introducing a 120v x 5 outlet detachable power bar
- designed a solution for easy mounting to the 375 Workmate unit

Responsibilities:

Defining functional and performance characteristics, industrial design, design tuning to capitalize on cost reduction opportunities, liaison with offshore manufacturing.



BROOKSTONE THERMOMETERS

CONSUMER PRODUCTS



The Challenge:

To create an easy to use, desirable, consumer level RF temperature sensing system for the home and surrounding environment.

Accomplishments:

- developed a large easy to use and read LCD screen interface
- developed a thermometer and remote sensor that had a high perceived value
- resolved this highly technical product to an intuitive level of use
- designed the sensors to be waterproof and impact resistant
- a cost-effective product life cycle extension was achieved by reusing the original PCB layout and other components in the second generation product

Responsibilities:

Human factors analysis, user interface definition, industrial design development, visual and functional models, product and carton graphics.



BLACK & DECKER KITCHEN PRODUCTS

CONSUMER PRODUCTS



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The Challenge:

Define and design mass market consumer kitchen products for B&D housewares division including: food processors, kettles, coffee makers and mixers

Accomplishments:

- ensured a family look and feel product line infill
- designed products to visually appeal to a mass market
- implemented product safety features

Responsibilities:

Configuration definition, product line positioning, industrial design, visual models, thermal test models, carton design, liaison with B&D and vendor teams



BLACK & DECKER ELECTRIC MOWERS

CONSUMER PRODUCTS



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The Challenge:

To design ergonomic and safe lawn mowers that can easily and cost effectively be positioned to compete in various markets. The products were to be perceived as serious contenders to gas mowers.

Accomplishments:

- a versatile deck and housing design accommodates corded and cordless variants
- a compact shipping volume was achieved resulting in reduced shipping costs and optimized merchandizing
- These electric mowers were positioned successfully along side gasoline mowers
- DW supported the development of the easy one hand height adjust
- innovative safety features were introduced on this line of mowers
- the resulting designs were very profitable with over 1.5 million units sold

Responsibilities:

Industrial design, market feature set review (QFD), human factors and ergonomic review, visual modeling, liaison with B&D engineering team, marketing, and analysis feedback.



BROOKSTONE SOUND SOOTHER LINE

CONSUMER PRODUCTS



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The Challenge:

To innovate and refine the industrial design aspects of an entirely new category of products. Sound Soothers are dedicated audio units that enhance living or sleeping space. Following the introduction of the original products we were asked to design second generation, portable and alternately branded units.

Accomplishments:

- pioneered an overall look and feel that resonated with consumers making it one of Brookstone's highest margin categories over a period of years
- created an easily understood interface for a brand new product
- introduced the upright form factor allowing for access and visibility when located on a cluttered nightstand
- subsequent generations of product offered usability and image upgrades while retaining product line familiarity

Responsibilities:

Conceptual through to final industrial design, focus group evaluations, development of plastic part design, 3D CAD modeling for ID phase, mold fill analysis, prototyping and validation, vendor liaison.



HEADWATERS SOUND RELAXER

CONSUMER PRODUCTS



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The Challenge:

To develop a Sound Relaxer unit with a contemporary look along with a small footprint

Accomplishments:

- developed a soft, clean timeless form
- created an easily understood interface for a brand new product
- introduced the upright form factor allowing
- for easy access and visibility when located on a cluttered nightstand

Responsibilities:

Conceptual through to final industrial design, development of plastic part design, 3D CAD modeling, prototyping and validation, manufacturing liaison.



CANADA POST LETTER SORTER

COMMERCIAL PRODUCTS

The Challenge:

To redesign the letter-carrier mail-sorting work-stations used throughout Canada Post.

Accomplishments:

- composed of center and side modules for coarse adjustment of size and capacity
- quickly adjusts in width and height to accommodate ergonomic needs of replacement letter-carriers
- the work surface height automatically adjusts in correct ratio of arm length to body height
- up to 1000 customer addresses, flexibility in number and size through repositionable partitions
- 2 faced address labels are quickly changeable allowing shift work on the same unit, reducing capital and real estate costs
- FEA structural review and physical verification
- space for packages, mail tubs, route information and task lighting is included

Responsibilities:

Research, industrial design, mechanical design, ergonomic design, full 3D CAD capture, commissioning of aluminum prototype tooling for injection molded components, FEA analysis and verification through prototype testing, fabrication of 10 full prototypes for evaluation, liaison and consultation with CUPW.



NORTEC HUMIDIFIERS

COMMERCIAL PRODUCTS

The Challenge:

To design a family of self contained micro-computer controlled electrode steam humidifiers that are floor and wall mountable.

Accomplishments:

- fault indication mapping and product labeling was developed
- modular keypad and fault indicator displays were created
- expandable from basic to premium units utilizing three cabinet sizes
- front key lock access incorporated for safety
- voltage isolation strategies were developed
- disposable cylinder access positioned for ease of replacement
- product versatility allows for wall or floor mounting

Responsibilities:

Market research, product positioning, industrial design, existing component incorporation and full scale visual modeling.



IN TOUCH SURVEY SYSTEM KIOSK

COMMERCIAL PRODUCTS

The Challenge:

To develop an appealing, robust and easy to ship kiosk which allows the client to collect survey data at customer locations. The unit needed to be easy to set up and knock down by untrained persons – with no fasteners or tools. This kiosk, designed in 1995, is still being used today, exceeding the clients expectations for its lifespan.

Accomplishments:

- materials and processes selected for suitability to low volume manufacturing and servicing including custom aluminum extrusions, laser cut sheet metal and MDF top
- efficient use of structural components to reduce weight
- a quick and evident setup/takedown procedure was designed
- an approachable aesthetic was developed to attract more subjects
- a simple and cost effective graphic panel adds significant visual impact to the unit and is easily updated by the client

Responsibilities:

Industrial design, functional and visual prototypes, mechanical design, final drawings, supplier liaison, and in-house assembly.

Awards/IP:

- Appliance Manufacturer Excellence in Design Award



CANADA POST DUAL SATCHEL MAILBAG

COMMERCIAL PRODUCTS



The Challenge:

Given that letter carriers will load up with up to 60 pounds of mail using multiple single satchels, DW was to design a dual satchel mail carrier bag system, with removable satchels, that reduces both short and long term back injuries and reduces mail handling.

Accomplishments:

- reduced mail handling by eliminating the need for a transfer bag to get the mail from the sorting stations to the road side drop boxes
- increased letter carrier comfort and support, by introducing adjustable form fitting cushioned straps
- maintained affordable carrier bag by designing for low cost manufacturing
- reduced letter carrier fatigue by introducing light weight design
- designed waist support which distributes weight evenly and fits comfortably
- introduced modular construction that accommodates all users
- this is now Canada Post's standard issue mail bag

Responsibilities:

Research, prototypes, limited testing, form-fit-function specifications for manufacturers to optimize fabrication details.



PWGSC PUBLIC SEATING

COMMERCIAL PRODUCTS

The Challenge:

DW was commissioned by Public Works and Government Services Canada to develop an ergonomic exterior park bench intended for installation throughout the grounds of Parliament Hill in Ottawa.

Accomplishments:

- sand-cast iron support gables and durable ash slats delivered a rugged vandal resistant seating support
- ergonomically designed for comfortable seating with full lumbar support and ease of ingress and egress
- the design was tuned based on focus group testing
- the product aesthetic was developed from historic information in order to successfully compliment the existing architecture and landscape environments

Responsibilities:

Historical research, conceptual design, focus groups, CAD capture, ergonomic evaluation, pattern making, production of a functional visual prototype.



HILAN SECTIONAL SLIDE

COMMERCIAL PRODUCTS



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The Challenge:

To develop a cost effective and safety enhanced slide for children's outdoor playground equipment.

Accomplishments:

- system adapts to different sizes through modular roto-molded sections
- improved product safety and attention to resolving high wear issues

Responsibilities:

Concept generation, industrial design, prototyping, tuning for manufacturability, testing and conformity to Canadian and US standards, vendor selection.



TESCAR TRANSPORTER

COMMERCIAL PRODUCTS

The Challenge:

To design a five passenger four wheeled electric vehicle to be used in airports, hospitals and other large facilities to move motion impaired individuals from place to place

Accomplishments:

- collaborated with clients engineering team to develop a solid drive and steering platform which would pass through narrow doorways
- developed ergonomic, safe and efficient vehicle steering and control system with driver in a stand-up perched position to maximize visibility and comfort
- seating system was designed for quick and easy ingress and egress for mobility reduced passengers
- developed a service strategy for quick shroud removal for maintenance and service
- component shrouding developed for low cost vacuum forming tooling and low cost piece part fabrication

Responsibilities:

Joint development with client engineering on drive and seating systems base architecture, industrial design, CAD for shrouding, tooling and part procurement, assembly of test prototypes.



TRANSIT STATION LIGHTING SYSTEM

COMMERCIAL PRODUCTS



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The Challenge:

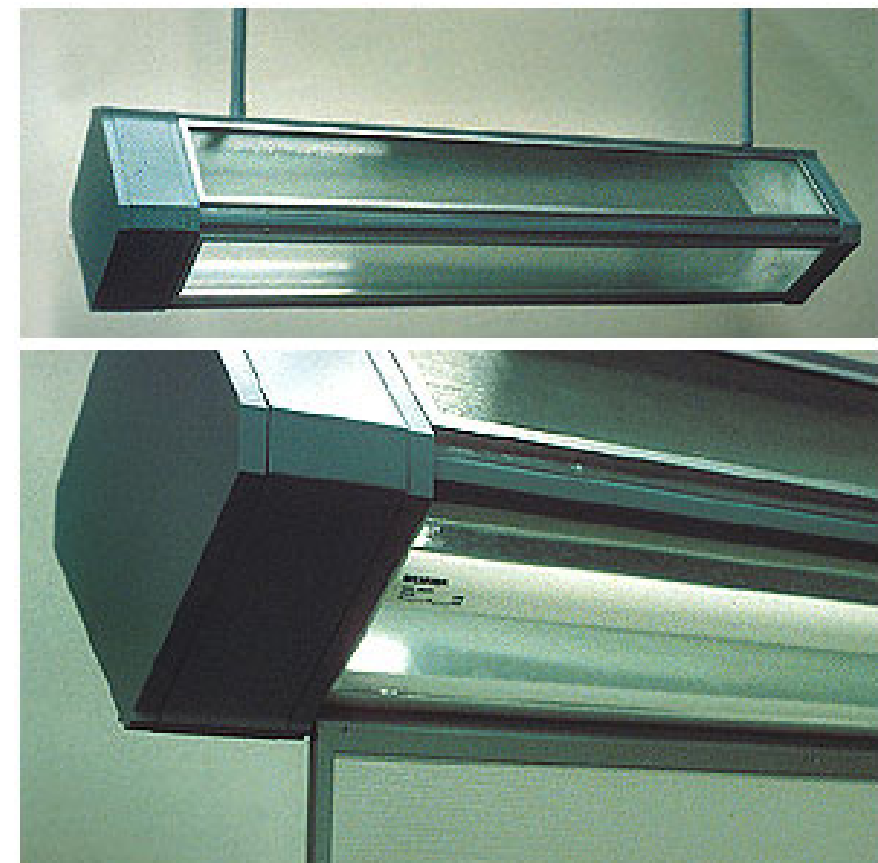
To mechanically design and prototype a suspended lighting fixture that meets the challenges of the Toronto Transit Commission (TTC) subway system environment.

Accomplishments:

- incorporated features allowing for easy relamping
- incorporated prismatic plastic diffusers for improved light dispersion
- cost effective and robust extruded aluminum construction
- individual units are daisy chainable
- designed for survivability from vandalism and environmental conditions

Responsibilities:

Liaison with the lighting designer, mechanical design, prototyping and production liaison.



BLUELINE TAXI CAB LIGHT

COMMERCIAL PRODUCTS

The Challenge:

DW was approached by Ottawa based Blue Line Cabs, a division of Coventry Connections, to develop a new taxicab status light. The goal was to raise the public's impression of the cab company by developing an image of service and quality. Visual imagery relating back to the Streamline era of the 1930's and 40's was desired.

Accomplishments:

- the solid look and feel of streamlined stainless steel passenger rail cars was achieved
- in order to meet durability and price point requirements a blow molded plastic shell was developed
- a combination of strap and magnet attachment was used for security
- bulb replacement was simplified

Responsibilities:

Conceptual design exploration, final ID development, mechanical design, working prototypes, and graphic development.



ESPIAL COMPUTER PLATFORM

HIGH-TECH PRODUCTS

The Challenge:

For a start up company that focuses on development of user-interface software, DW was asked to design and fabricate fully functioning computer software demonstration platforms, suitable for tradeshow and exhibition use

Accomplishments:

- developed a design aesthetic that is consistent with leading edge, high end PDA and internet appliance products
- met and exceeded our client's aggressive schedule
- eye-catching design attracted many potential customers

Responsibilities:

Industrial design, full mechanical design, 3D CAD modeling, in-house production of ten functional prototypes.



NORTEL NETWORKS FAN PACK

HIGH-TECH PRODUCTS



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The Challenge:

DW was asked to develop a high power cooling fan pack for fiber optic bays that addressed double redundancy and back-flow issues within a very short development timeline.

Accomplishments:

- optimized intake vent hole pattern for superior air flow
- plastics components were designed to be both highly cosmetic as well as structural
- designed for manufacture and assembly (DFMA) kept part count and unit cost low
- in-house mold base with cavity inserts was used to shoot prototype louver parts out of production material for validation

Responsibilities:

Human factors analysis, concept generation, industrial design development, plastic part design, 3D CAD modeling, prototyping, mold fill analysis, manufacturing specs and vendor liaison.



NORTEL NETWORKS FIBER MANAGEMENT

HIGH-TECH PRODUCTS



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The Challenge:

Based on an existing 6 part sheet metal assembly, DW was asked to cost reduce the component and make it suitable for higher volume production.

Accomplishments:

- reduced the parts count from 6 to 1 part using a simple straight draw tool
- successfully addressed restricted space requirements while complying fully with fiber management guidelines
- created functional prototypes for full design evaluation prior to tool commissioning
- a high strength hinge design allowed for improved flip down fiber access and the incorporation of a usable work surface

Responsibilities:

Human factors analysis, concept generation, industrial design, plastic part design, 3D CAD modeling, prototyping, mold fill analysis, manufacturing specs and vendor liaison.



MOBILE KNOWLEDGE TAXI GPS UNIT

HIGH-TECH PRODUCTS



dwcanada.com

The Challenge:

To design a rugged taxi-cab dispatch terminal, with integral global positioning capability, that is suitable for use in taxi's around the world.

Accomplishments:

- produced a timeless design aesthetic and robust housing, to ensure this product's longevity
- liaised with client's engineering group and outside molder to facilitate prompt rollout of product
- integrated an extensive array of multimedia capabilities that enhanced the customer experience and allowed our client to generate new revenue streams
- the unit is in service in Asia, North America and Europe

Responsibilities:

Industrial design, developed product architecture, prototyping and validation, visual models, costing verification, 3D CAD capture, plastics and mechanical design, and supplier liaison.



NORTEL NETWORKS PHONE HOLSTERS

HIGH-TECH PRODUCTS



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The Challenge:

Originally designed for the office environment, the CT2 handset was unable to withstand the abuse it received from industrial customers. DW was challenged to create rugged holsters that would protect the handset from repeated 2 meter drops on all faces onto concrete.

Accomplishments:

- thorough impact testing using video was used to reveal all points of failure
- developed and tested protection levels to mitigate each type of failure
- prototyped elastomeric over mold onto a rigid Nylon skeletal armature
- the resulting product protects the CT2 and improves comfort and usability
- securely retains the CT2 handset
- all controls are accessible when worn
- the innovative integral carry hook reduces the holster part count and overall cost

Responsibilities:

Human factors analysis, industrial design development, CT2 handset protection strategy, prototypes, 3D CAD modeling, rapid prototyping, impact performance validation, and vendor liaison.

Awards/IP:

- I.D. Magazine's Annual Design Review Winner 1995



DEW ENGINEERING LAND MINE PROBE

HIGH-TECH PRODUCTS



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The Challenge:

To design a rugged, ergonomic, water proof hand-held military land mine probe.

Accomplishments:

- careful materials selection makes the unit usable in extreme temperature ranges
- the resulting product is water submersible up to 1m deep
- gas assist injection molded handle keeps the part count down and increases ruggedness
- thorough in-progress prototyping was performed to evaluate the design
- the unit meets stringent drop, impact and temperature standards requirements

Responsibilities:

Human factors analysis, industrial design, plastic part design, 3D CAD modeling, mold fill analysis, prototyping and validation, and vendor liaison.



MOTOROLA MODULAR PHONES

HIGH-TECH PRODUCTS



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The Challenge:

CML Emergency Services asked DW to develop a desktop set appropriate for the Motorola family of radio dispatch and emergency response products. It needed to be easily and cost effectively configurable to 4 levels of product functionality.

Accomplishments:

- the top housing is reversible allowing for both desk and wall mounting.
- significant capital cost was saved by using 4 different labels to de-feature the interface allowing for a single fully featured tool cavity (as opposed to four different cavities)
- common components from the Command Star console were reused for greater cost savings

Responsibilities:

Concept generation, industrial design development, graphic overlays, mechanical design, plastic part design, 3D CAD capture, tool commissioning and vendor liaison.



NORTEL / ACCELIGHT ENTERPRISE RACKS

HIGH-TECH PRODUCTS



dwcanada.com

The Challenge:

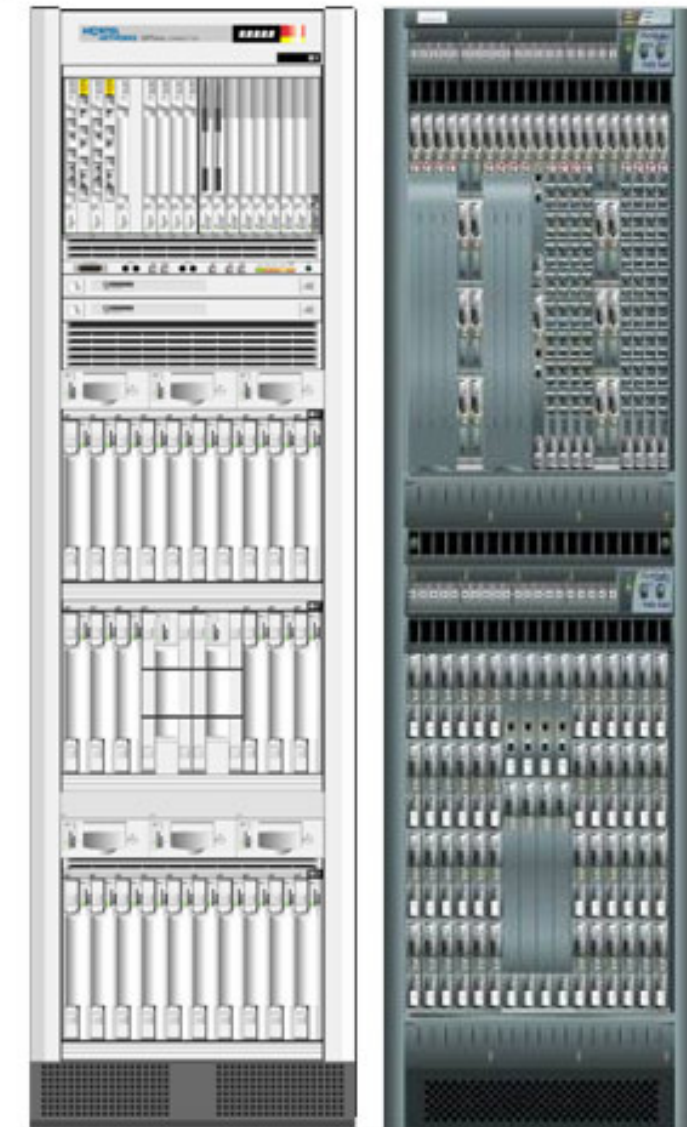
Providing our clients with cost effective and timely solutions based on their specific product identity, physical packaging, installation, human factors, prototyping and graphic needs.

Accomplishments:

- developing ground up identity for startups while working closely with their product architecture engineers for cost effective solutions
- creating design solutions to enhance product cooling and EMI shielding performance
- maintaining family image while communicating product specific innovation
- supporting our clients with visual models, prototypes and even short parts runs from bridge tooling
- part reduction and cost reduction programs
- helping our clients transition from sheet metal to plastics for increased savings
- developing solutions for supporting carrier class fiber optic handling and space savings

Responsibilities:

Human factors analysis, concept studies, industrial design development, graphic development and fault navigation support, functional/massing models, presentation visual modeling, Pro-E 3D CAD geometry modeling, mold filling analysis, cost reduction programs, manufacturing specifications, client team integration, supplier evaluation support and liaison.



NORTEL NETWORKS ENTERPRISE SWITCH

HIGH-TECH PRODUCTS



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The Challenge:

To work with an existing mid-sized wall mounted switch/router platform in order to develop a new set of grills for improved air flow and a new door to improve the accessibility ergonomics.

Accomplishments:

- the update image supported market repositioning
- air flow was improved over the previous generation grill
- part reduction was achieved by integrating the lower grill into the door
- more space for updated electronics was made available because of the crowned door geometry
- EMI shielding performance was improved with the new design
- the large glass filled PC door (22"x26"x14") incorporates easy to use latches

Responsibilities:

Human factors analysis, concept studies, industrial design development, functional/massing models, presentation visual modeling, Pro-E 3D CAD geometry modeling, mold filling analysis, manufacturing specifications, supplier liaison.



FAST RESCUE CRAFT CREW HELMET

SPORTS & PROTECTIVE PRODUCTS



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The Challenge:

To develop a helmet for medium/low production using injection molding technologies to provide a high performance helmet for Canadian Coast Guard fast rescue craft crew. This project was in partnership with Biokinetics and Associates.

Accomplishments:

- created advanced surface features to accommodate the 2D specialized retro- reflective tape required to meet the Coast Guard specifications
- a tight helmet nape was created to reduce helmet bucketing for the purpose of reducing neck injuries

Responsibilities:

Industrial design, prototyping, and visual models. This project was in partnership with Biokinetics and Associates.



EQUESTRIAN RIDING HELMETS

SPORTS & PROTECTIVE PRODUCTS

The Challenge:

To help IRH innovate in the market by offering high performance riding helmets using bicycle helmet technology (expanded EPS foam impact liners). Initial helmets were sporty, light weight and positioned as entry level helmets and later designs were for the higher performance rider.

Accomplishments:

- brought innovation to the riding helmet industry by using bicycle technology
- increased clients bottom line by implementing a single piece shell and visor
- worked seamlessly with Biokinetics and Associates when required
- enhanced user comfort by introducing extra venting
- created packaging for the new product line

Responsibilities:

Product definition, industrial design, part prototyping, visual modeling, package artwork and design, 3D CAD capture. Varied per project.

Awards/IP:

- ISDA & Business Week's 1996 IDEA Bronze Award



CLEAR VISION HOCKEY - SHIELD SUPPORT

SPORTS & PROTECTIVE PRODUCTS



dwcanada.com

The Challenge:

To design a clear hockey-shield support, replacing aluminum, to be used with acrylic sheets which are currently replacing tempered glass throughout the NHL. The new support had to be strong, yet flexible, to protect players during impacts.

Accomplishments:

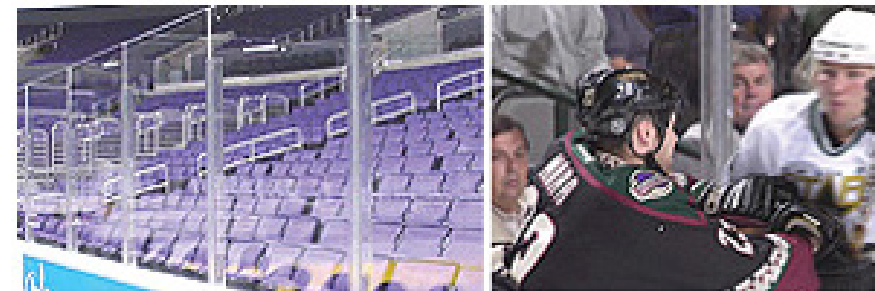
- designed with extensive use of non-linear FEA analysis
- can be used with both thicknesses of acrylic shield now in use
- the support does not block spectators view
- acts as a light pipe allowing visual effects
- first installed in the Dallas Star's American Airlines Arena
- retrofitted to eight other NHL arenas
- the final product has a near optical finish from a PC grade GE Lexan that provides six times more flexibility than aluminum, therefore reducing player injury

Responsibilities:

Human factors and impact review, performance evaluation, product definition, mechanical design, 3D capture, materials selection, functional prototypes, preproduction evaluations and testing.

Awards/IP:

- recipient of Modern Plastics Innovation Design award in 2002selection, functional prototypes, preproduction evaluations and testing.



LOFOX BICYCLE HELMET

SPORTS & PROTECTIVE PRODUCTS



dwcanada.com

The Challenge:

To develop a full face protection bicycle helmet that met the client's protection levels while offering the consumer a compelling purchase option.

Accomplishments:

- developed a design that provided full face protection for the rider without requiring a hard shell system
- incorporated a liner that is resilient to multiple impacts

Responsibilities:

Industrial design development, prototyping. This project was in partnership with Biokinetics and Associates.



BEST THERATRONICS - BLOOD IRRADIATOR

MEDICAL PRODUCTS



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The Challenge:

To design an X-ray based blood treatment device for ease of use in hospitals and blood collection facilities

Accomplishments:

- low volume product designed with cost effective use of local sheet metal and twin sheet thermoformed plastic parts
- DW solution ensured ease of use for blood pouch insertion / removal while providing optimal mechanical interfaces
- overall mechanical simplification achieved with RP part validation of solutions
- the product has an adoptable, contemporary appearance while still maintaining hygienic and medical functions
- developed critical interlocks and interfaces

Responsibilities:

Full industrial design, 3D CAD geometry of external sheet metal and molded plastic housing, injection molded part design.



SPARTAN - RX

MEDICAL PRODUCTS



The Challenge:

External packaging design a real-time PCR unit to detect the presence of specific DNA sequences within a source sample.

Accomplishments:

- low volume product designed with cost effective use of local sheet metal and molded plastic parts
- DW solution ensured ease of use for sample insertion
- mechanism lifts Cuvette samples for ease of extraction.
- RP part validation resulted in simplified mechanical solutions
- airflow strategy to control critical internal temperatures and light ingress

Responsibilities:

Industrial design, 3D CAD geometry, input on mechanical layout, on-screen UI, physical UI, Cuvette sample access and retention, external sheet metal and injection molded part design.



ORAGENE™ DNA SELF-COLLECTION KIT

MEDICAL PRODUCTS



The Challenge:

To create an easy to use, all-in-one system for the collection, preservation, transportation and storage of DNA from saliva

Accomplishments:

- designed a non-invasive, reliable self-collection kit that increases compliance by users and decreases costs
- trained staff are no longer required to take samples
- the chemistry is safely stored in the lid behind a heat sealed film which is released by cutters in the base when the lid is threaded on
- the ergonomic form is sympathetic and easy to handle, even for elderly donors
- the product has an adoptable, contemporary look while still maintaining hygienic and medical functions
- compact, robust design is ideal for storage and mailing
- specifically designed to fit through European mail slots

Responsibilities:

Full industrial design, 3D CAD geometry, development of an improved Oragene release system, product testing, and manufacturer liaison.



SURGICAL WOUND DRAINAGE SYSTEM

MEDICAL PRODUCTS



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The Challenge:

DW was asked to develop a sterile, mobile and disposable wound drainage device for accelerated post-operative healing. The product innovation necessitated the ability for the caregiver to set the desired level of vacuum since full vacuum can damage some tissue.

Accomplishments:

- a cost-effective manual pump allowed for resetting of the vacuum which increases the lifespan of the unit and minimizes waste (unit is only used with one patient before disposal)
- the integration of a hydrophobic filter was incorporated into the design to contain potential contaminants
- designed for cost-effective manufacture and assembly
- materials were selected for robustness and sterilization
- industry standard stock fittings were used where appropriate

Responsibilities:

Industrial design, ergonomic evaluation and recommendations, pump system design, component sourcing, mechanical design, multiple prototypes for validation, 3D CAD capture, artwork.



LABORATORY STIRRER

MEDICAL PRODUCTS



dwcanada.com

The Challenge:

DW was tasked with developing a cost effective entry level product for Caframo's line of high-end industrial stirrers. Many usability enhancing features were introduced in this tough, compact, and fully sealed product.

Accomplishments:

- an onboard light was introduced for improved viewing of sample
- a useful hand grip area was integrated without the addition of extra parts
- housing materials were carefully selected for chemical resistance
- housing was designed to keep the tooling cost low

Responsibilities:

Industrial design, massing model, product and label graphics, mechanical design, housings, 3D CAD capture.



OXOID INC. PETRI DISH READER

MEDICAL PRODUCTS



The Challenge:

This innovative visioning unit scans and records growth characteristics of samples while in Petrie dishes in a laboratory environment. DW's challenge was to review the product's ergonomics and come up with a housing configuration that was cost effective in low volumes. The solution had to allow easy access to the camera compartment for proper cleaning and sterilization.

Accomplishments:

- the configuration of the product was changed to improve the operator's access
- removable housing allows access to the video scanner as required
- the housings ensured controlled lighting within the scan area
- large sloped surfaces allow for thorough disinfecting
- material selection resists typical laboratory cleaning fluids

Responsibilities:

Ergonomic evaluation, industrial design, 3D CAD capture of external components, production thermoform tool build.



DNA GENOTEK SHIPPING CLAM SHELLS

MEDICAL PRODUCTS



dwcana.com

The Challenge:

To create value building shipping packaging for DNA saliva collection kits to be distributed through international postal services.

Accomplishments:

- designed the clamshells to be suitable for shipping by postal services with delivery through standard mail slots while effectively protecting sterile or saliva-filled collection devices
- detailed for contents to be easily identified as a high value product, to be easily accessed and protected through clear clamshell
- designed to carry exterior corporate branding, interior use graphics as well as full paper printed instructions
- easy to open and close, allowing use by elderly users

Responsibilities:

Industrial design, prototypes, 3D CAD, manufacturing liaison.



LUSH BEVERAGE PACKAGING

PACKAGING PRODUCTS



dwcanada.com

The Challenge:

To develop an elegant and functional blow molded PET bottle for Lush Vodka based fruit coolers to be comfortably held on a bar dance floor.

Accomplishments:

- form exploration to arrive at a sleek and sophisticated moldable bottle shape
- differentiation and positioning with respect to competitive products
- design accommodation for PET preform limits
- conveyer and filling performance established through same diameter upper and lower contact points
- comfortable to hold and tilt while on a dance floor
- coordinated with McMillan Creative Agency to develop product graphics and packaging

Responsibilities:

Product positioning, industrial design, prototypes, CAD capture.

Awards/IP:

Successful in being accepted by LCBO and SAQ



BROOKSTONE PACKAGING

PACKAGING PRODUCTS



dwcana.com

The Challenge:

To work with our client to develop a flexible and approachable packaging layout and aesthetic that can communicate the benefit of their innovative products.

Accomplishments:

- designed a layout that is adaptable to diverse product types and sizes.
- designed an aesthetic that is easily altered to convey specific product innovation
- contributed to a quickly identifiable brand and product name
- provided strong information hierarchy to increase legibility and distinguish layers of communication

Responsibilities:

Packaging aesthetics, packaging templates, art direction, talent and photography procurement, layout, pre-press comps, print files.

