

# Tom Grimm & Associates, Inc.

International Product Development

***Your Complete Product Development Resource***

***“Tom Grimm is the standard by which other product engineering and development professionals ought to be measured.”***

## Tom Grimm

- Over 30 years in consumer product industries
- Experience in the entire product development process from invention through engineering to manufacturing
- Engineering Director at Mattel's factory in Hong Kong
- Director of Far East D&D, Mattel's first product design organization in Asia
- Vice President of Engineering at Tekna in California
- Vice President of Product Development at OddzOn Products in California
- TG&A Product Development



## TG&A Offers

...an unusual combination of capabilities

- Creative conceptual product design
- Proof-of-concept models
- Technical product development and engineering based on a thorough understanding of manufacturing processes and design for them
- Execution of designs in CAD
- Personal connections with highly capable Hong Kong-based manufacturers with factories in Guangdong
- Project management to delivery of finished goods

All delivered in a client-focused, collaborative way



## Integrated Product Development

It is our objective to collaborate with US-based product development and project management teams to ensure that strategic goals, product visions, and specific project objectives are clearly understood and implemented.

The following pages briefly outline our product development process to emphasize its continuous nature and note TG&A's ability to integrate your product development and manufacturing processes to make them cost-effective and time-efficient.

**We understand the critical importance of  
on-time availability of your new products**



## **Product Development Phase 1 – Preliminary Design**

- Working closely with your US PD staff, explore or expand product ideas conceptually, visually, and technically
- Establish expected critical requirements
- Establish functional feasibility
- Obtain preliminary cost estimates to establish financial feasibility



## **Product Development Phase 2 - Development**

- Based on Phase 1 direction, develop the concept through mechanical and electronic engineering details
- Provide a functional looks-like / works-like mechanical model for final approval for tool start
- Recommend a new or current manufacturer as strategy, product, and cost dictate
- Work with the selected manufacturer to finalize development details while providing frequent status reports
- With the selected manufacturer, establish a development schedule to production



## **Product Development Phase 3 – Preparation for Production**

- Establish final performance and inspection specifications
- De-bug product
- Work with your Operations Group to plan production and shipments



## **Integrated Product Development**

**When all phases are integrated  
in a closely coordinated way,  
*cost-effective, time-efficient*  
product development is the result**





## Completed Projects



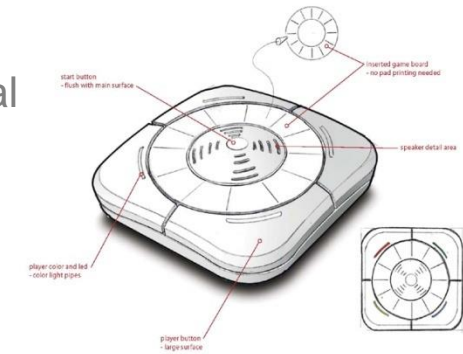
# Development of Snipe-It

## 1. Inventor's model

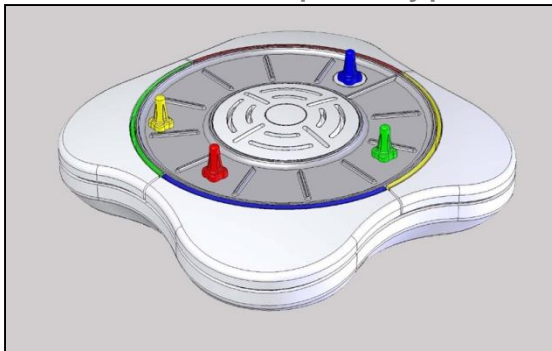


2. Evolved concept from LCD to voice interface to create a more engaging and cost-effective design

3. Created several visual design alternatives



## 4. CAD files for prototype



## 5. Functioning electronics



## 6. LL/WL Prototype



## 7. Created final CAD files for production

8. Provided information to selected vendors for quotation

9. Managed the project through release of finished game code and start of production tooling



## GPS Golf Computer



- Created in CAD mechanical design for plastic package
- Overall size: 104 mm x 51 mm x 17 mm



# ThermoCool Temperature-Regulated Therapy Device



- Created the visual design and mechanical design
- Developed the human interface and the resulting control panel
- Created CAD files and worked with the client and their Asian manufacturer to finalize the internal design and structure
- Delivered final CAD files for manufacturing



## Equipment for Radiation Therapy for Cancer



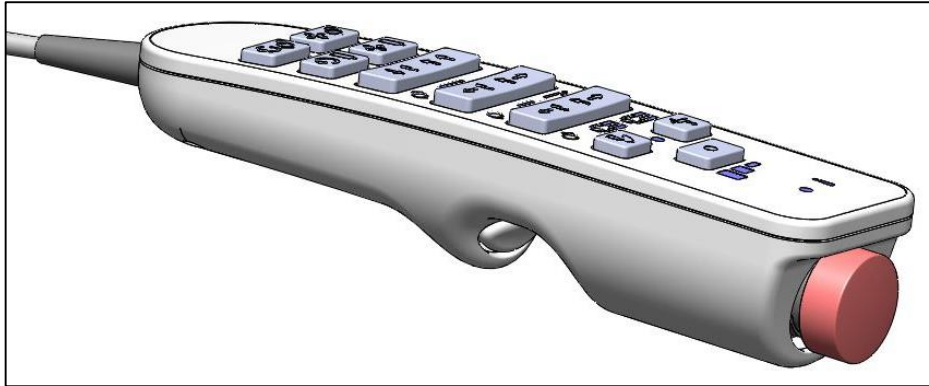
Developed a Couch-mounted  
Cradle for the Control Pendant



As part of the client's development team, designed and installed the large enclosures for the RoboCouch Patient Positioning System.

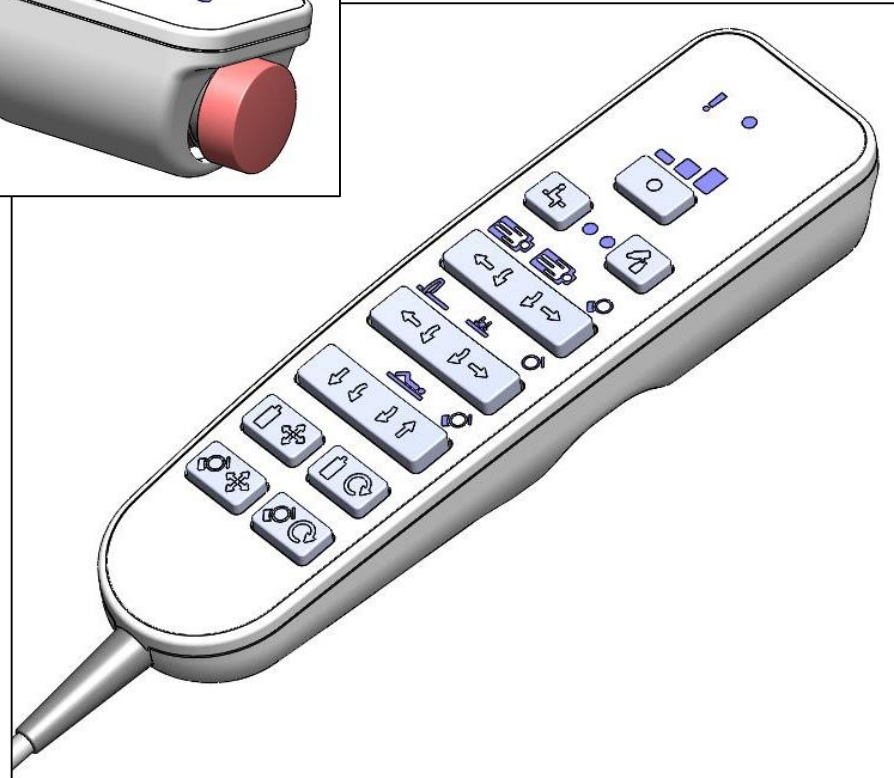


## Equipment for Radiation Therapy for Cancer



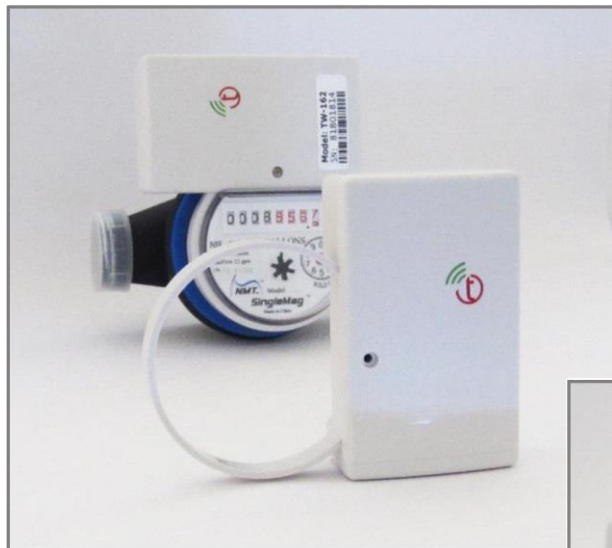
Updated a long-standing Pendant Controller for the RoboCouch to add new features.

- Updated CAD files
- Worked with client's User Interface experts to refine and implement function-identifying icons
- Suggested a manufacturer capable of making the many disparate parts and assemblies





## Enclosures for Electronic Products



Client was using off-the-shelf enclosures for their wireless utility monitoring devices. Designed new enclosures around their existing PCBA's to enable product-specific new features and a custom corporate "look". Snap-together assembly minimizes the cost of US final assembly.

Identified an Asian manufacturer to make the new designs at a significant cost savings.



## Replica of a StarWars Lightsaber Movie Prop



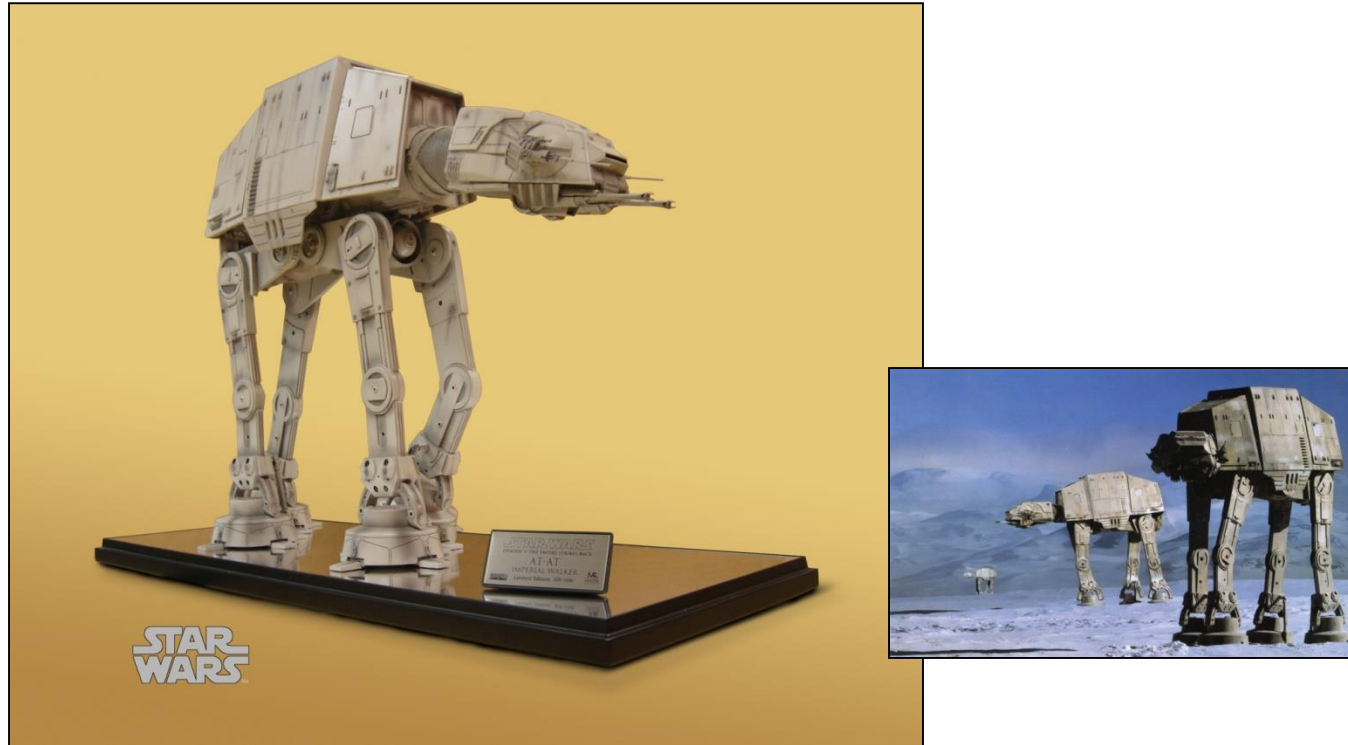
This is an accurate replica of the prop used by Samuel Jackson in his role as Jedi Master Mace Windu in StarWars, Attack of the Clones. The replica is really an “idealization” of the original prop, a better, more elegant version.

- Measured and photographed the original replica to establish the standard
- Working with the manufacturer, created the mechanical design and a prototype for approval by Lucas Films.
- Worked with the manufacturer through tooling and approvals to deliver the finished product to rave reviews from StarWars fans.





## Replica of StarWars AT-AT Filming Model



This is a replica of the models used for stop-motion filming of the AT-AT in StarWars, The Empire Strikes Back. It is an exact, studio scale replica of the original filming models.

Lead the processes to both develop and manufacture the product. Its design was the result of painstaking research and exceptional pattern making skills guided by sound engineering principles using CAD. Production used the clever application of known and available manufacturing techniques.



# Illuminating Sting Sword



- Worked with the client to develop functional feasibility and possible configurations within the approved appearance of Sting. The result was functional specifications.
- Designed and built a works-like prototype to test the sword's response to user motion.
- Developed and refined the electronic hardware and controlling software code to meet the functional specs.
- Delivered CAD files on which the manufacturer based their design for production.
- Delivered final software code for finished product.



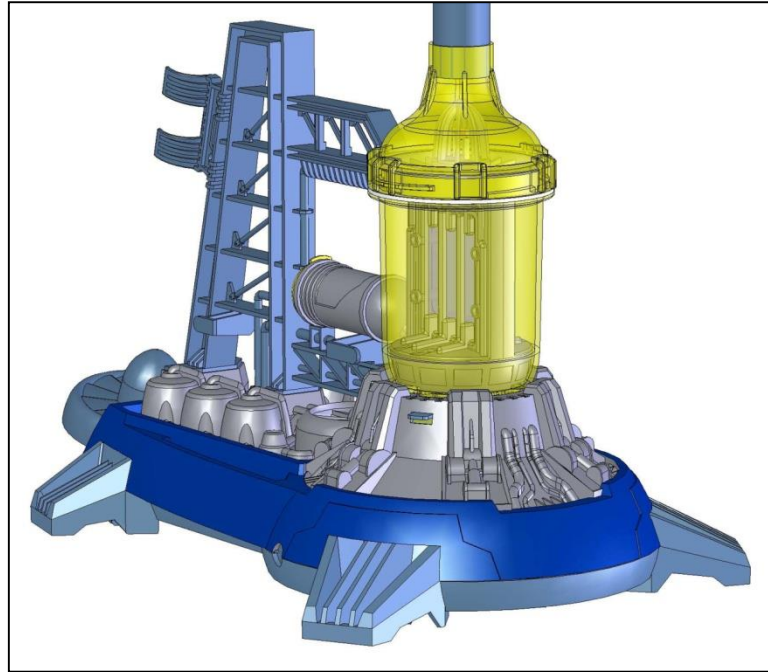
## “Working” Magic Wand



- Invented the electronic feature to enable the wands to light up at a snap of the wrist and control the illumination with a hidden button
- Created the mechanical design for both products
- Identified Hong Kong-based vendors for sculpting, tooling, and the finished products



## Hydrogen-Powered Hobbyist's Rocket

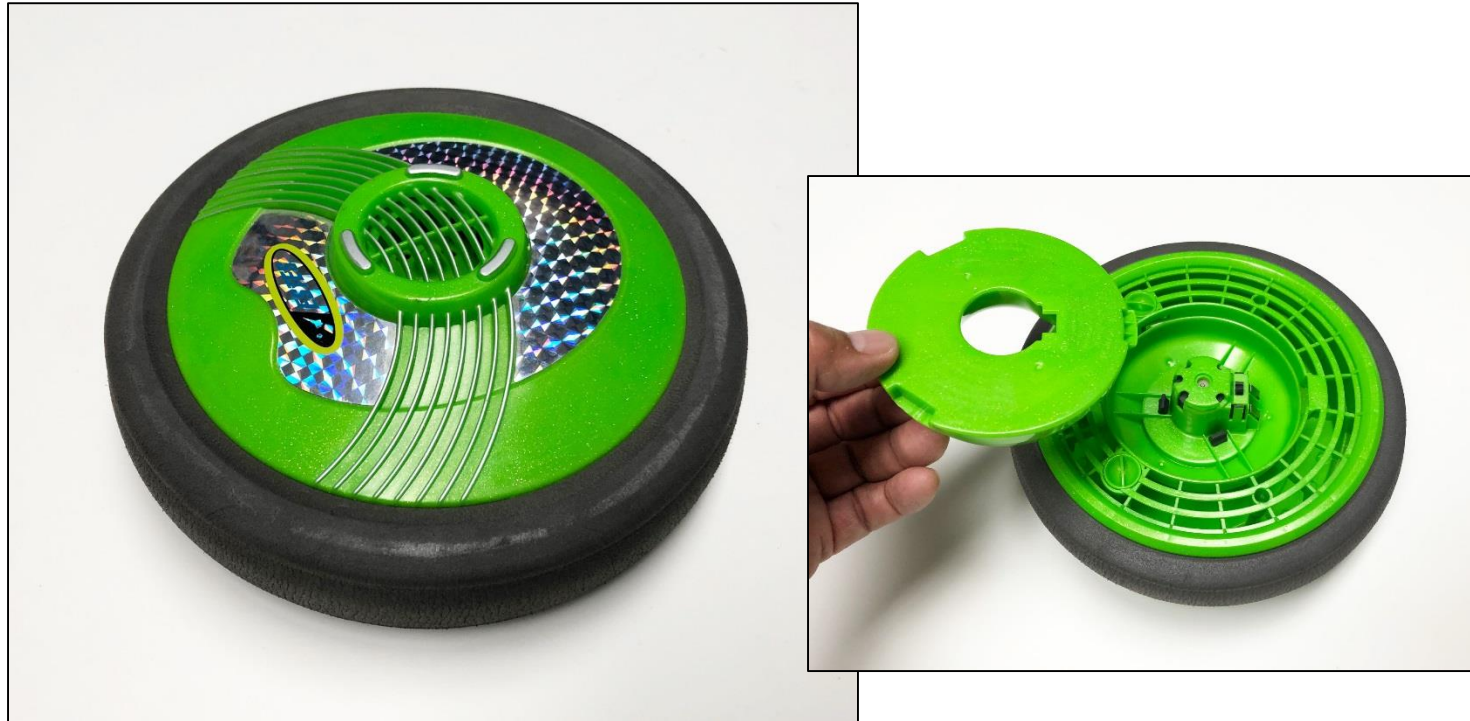


- Client had an existing hydrogen-powered rocket, but they sought a new product with improved performance. TG&A conducted experiments with alternative electrolysis electrodes, gas collection chamber designs, and launch tube designs. The resulting product launched a rocket that weighed 40% more to an altitude that was 25% higher in less than 70% of the time required for gas generation.
- Provided visual design alternatives that were executed in the CAD files illustrated above.





## Floating Puck



- The inventor's "Power Puck" was a very successful product. It was powered by 4 AA batteries, and the product's performance was determined by power available in those batteries. He asked that the product be redesigned for rechargeable batteries that could deliver more power for a longer time.
- Developed and proved the replaceable battery pack that significantly increased performance. Created the CAD design for the new product.



## BoZagga Bomber Pressurized Bat



- Reinvented (patented) a previously successful pressurized bat for reintroduction to the retail trade. Performance and “feel” were improved from the previous product.
- Working with specialized manufacturers in the US and Asia, created an engineered, manufacturable design.
- Delivered final CAD files for manufacturing.



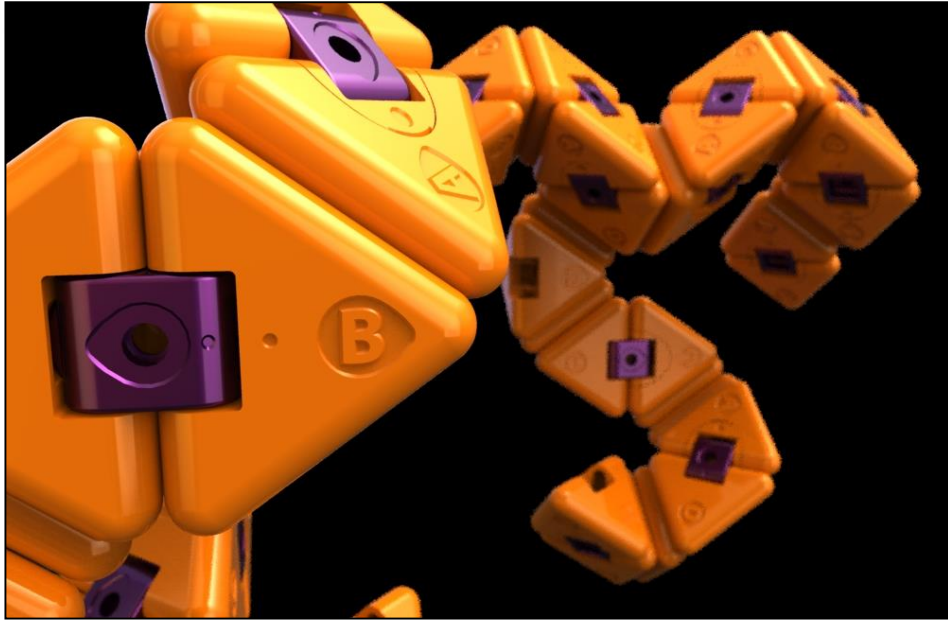
## JamFest 3-in-1 Music Machine



- Created an engineered, manufacturable design based on the inventor's prototype.
- Worked with both the inventor and the client to fine-tune the functional requirements.
- Delivered final CAD files for manufacturing.



## CODEE Coded Construction Set Development

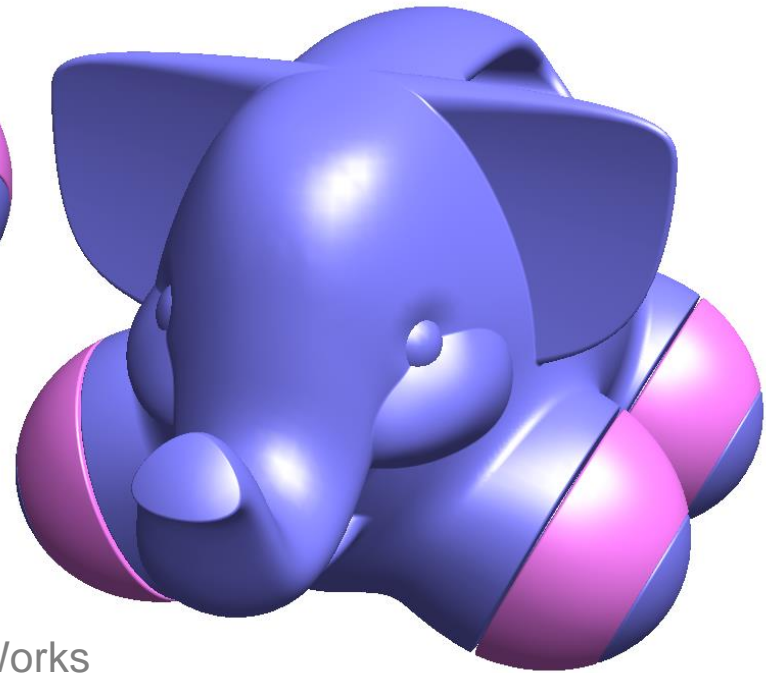
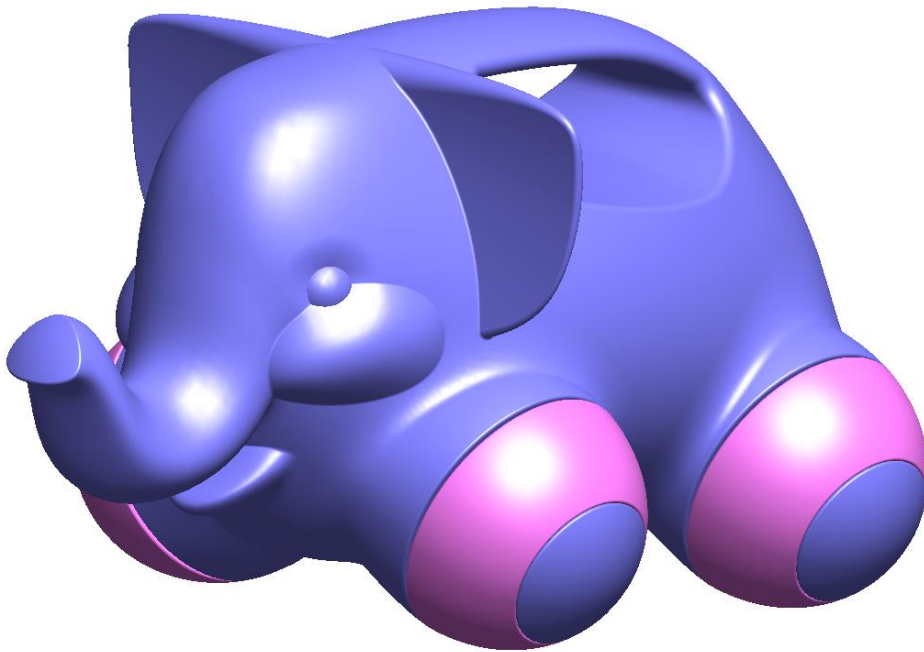


- Working with its inventor, developed in CAD this hands-on construction toy through several iterations to achieve the desired function and “feel”.
- Since many of the four-piece “tetra’s” were required to test the concept, sourced inexpensive prototype tooling and worked with the supplier through the iterations. Ultimately thousands of parts were made for testing and trade shows.





## Conceptual Surface Development



- Explored alternative sculpted forms in SolidWorks
- Tom is a Certified SolidWorks Surfacing Professional



## Table-It Handbag Hanger

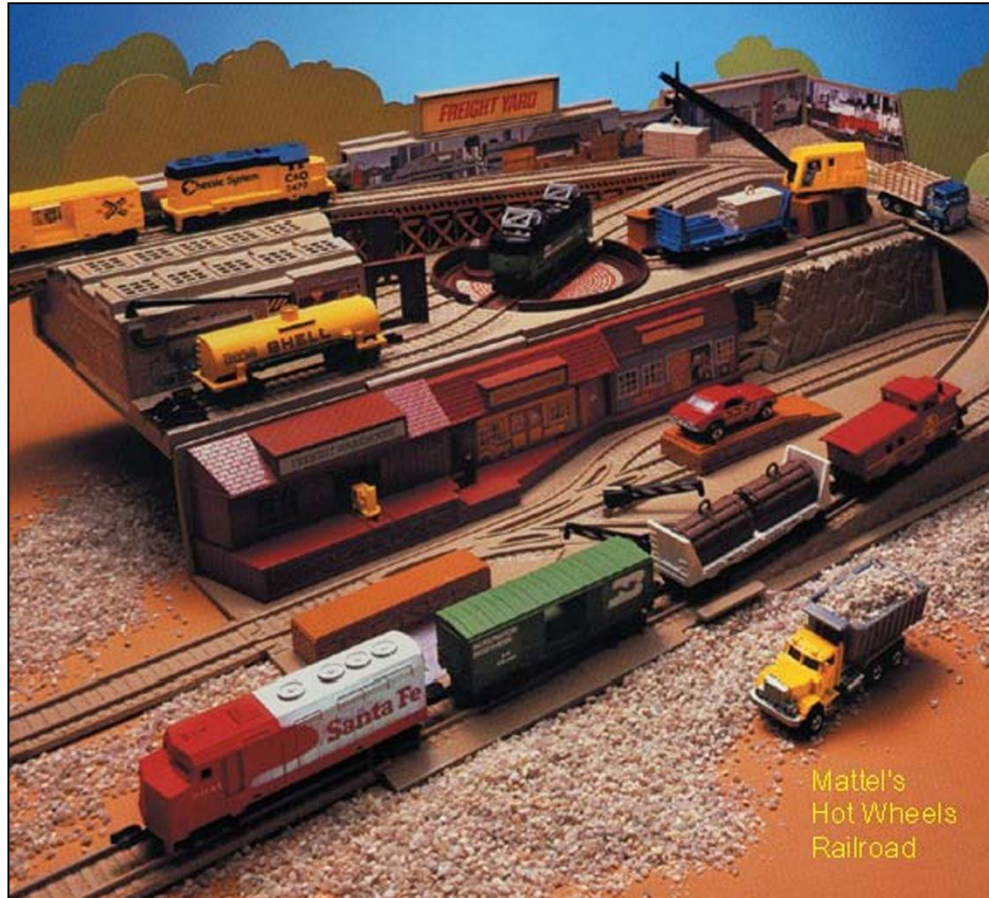


Complete commercialization of this fashion item from concept expansion to successful local placement at retail.

- Designed and built functional prototypes for evaluation.
- Worked with the inventor and a designer to select product finishes and decorative designs.
- Created CAD-based design including decorative panels.
- Created structural package design and managed graphic design.
- Identified and worked with a Hong Kong-based manufacturer to make the product.
- Designed and had made retail Point-of-Purchase counter display.
- Demonstrated Table-It at a local Gift Show and managed local retail introduction and distribution.



# Hot Wheels Railroad



- Researched and created a preschool railroad for Mattel's popular Sto'n'Go format.
- Researched and designed (at 1/100 scale for small hands) the highly detailed rolling stock.
- Developed mechanical features for which three utility patents were issued.
- Managed the entire project from initial concept to production start.



***“Tom Grimm is the standard by which other product engineering and development professionals ought to be measured. He is creative, accurate, and honest. He embraces projects with intensity and passion. The team he directs and with whom he works is of similar nature and skill. Rudell Design has worked with Tom for years, and he is our never-fail, go-to guy for development needs beyond our own organization.”***

***— Elliot Rudell, Founder, Rudell Design***



***Thank you for the Opportunity!***

