

Feature



DeLorean Time Machine Transformer Venessa Koch*

A recent recipient of SiW's 'Dreamcatcher' award describes how she created her amazing costume.

I started my DeLorean Time Machine Transformer costume because I needed to submit a thesis project as part of earning my Bachelor of Fine Arts degree from Ryerson University. If ever there was a time to meet a personal goal and complete an academic obligation, this was it.

Having built four Transformer costumes prior to this one, I was frequently asked 'Can you transform?' And I'd grudgingly reply 'no.' Because of this I knew I wanted to build a Transformer costume that actually transforms. I'm not the first, nor will I be the last, to build such a thing.

At the outset I had to figure out what my costume would look like. It started with considering options such as going with an established Transformers character, analyzing transformation methods of said characters, considering reworking those characters to suit my needs as the wearer, and ultimately deciding on creating something original. Well, as 'original' as picking Doc Brown's infamous DeLorean Time Machine and designing everything from scratch.

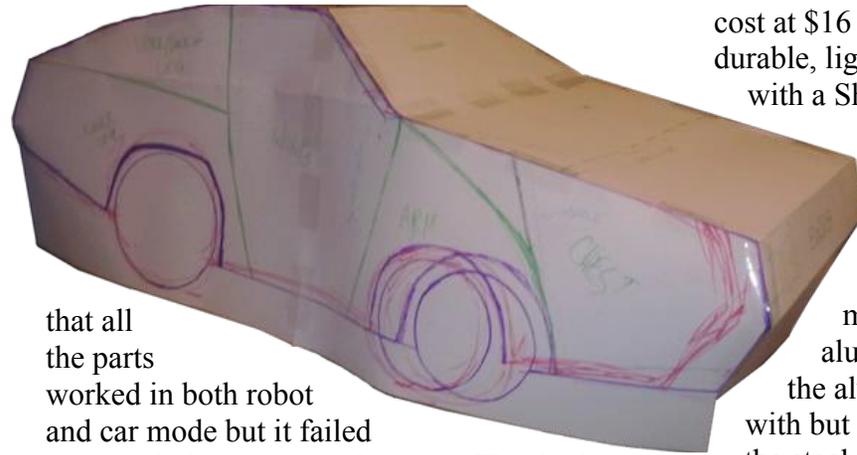


It started with a few preliminary sketches, scale reference photos, and a rough 3D cardboard car. There is definitely madness to my methods as I used no technical drawings or CAD schematics to figure out exact dimensions and other measurements. This inevitably resulted in a first version of the costume, a puzzle of a thing that ended in tears. I was expecting too much of myself to have a complete product after only four months of work. At the same time I was working a part-time job, attending classes, completing assignments, set and costume designer for the 2nd year acting class' performance of 'Antigone', and fulfilling social obligations. However, I met the objectives of my thesis: transforming costume with working lights. I got an A+ for my efforts.

DeLorean Time Machine Transformer costume. Photos: Christine Mak

It could have ended there. But I was already in too deep. I had materials to finish the thing and I wanted to create something I could wear in public. My workspace (aka my bedroom) became quite cramped as I kept the first version on hand for reference while working on the second.

The hardest part of the whole thing was figuring out the transformation process. How was I supposed to get from car to robot and back again without looking clumsy? I wanted to avoid what's known as 'kibble' and being a 'shell-former'. Kibble refers to the parts of a Transformer toy/character that are necessary in one mode but have no purpose in the other. Shell-former refers to the robot mode not being integral to the makeup of the alternate mode. But I am human and can only bend and fold in certain ways. Version 1.0 succeeded in the sense



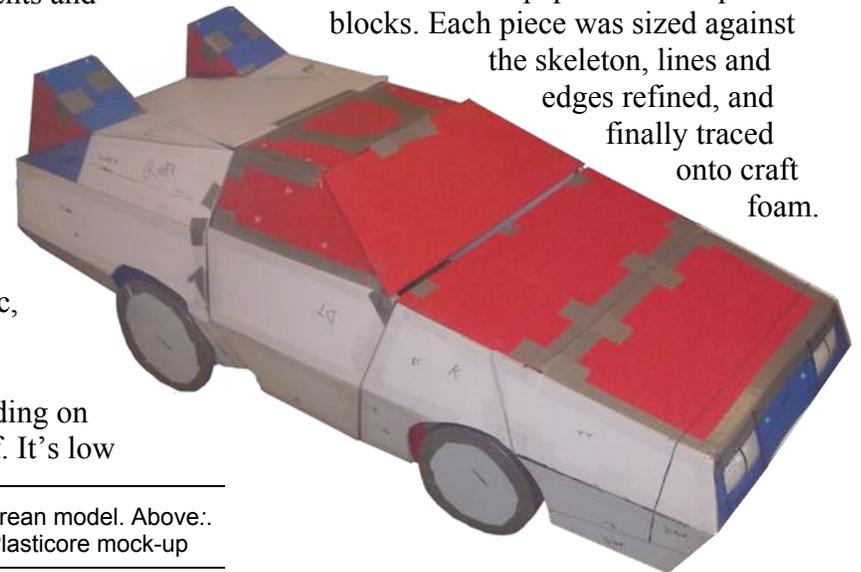
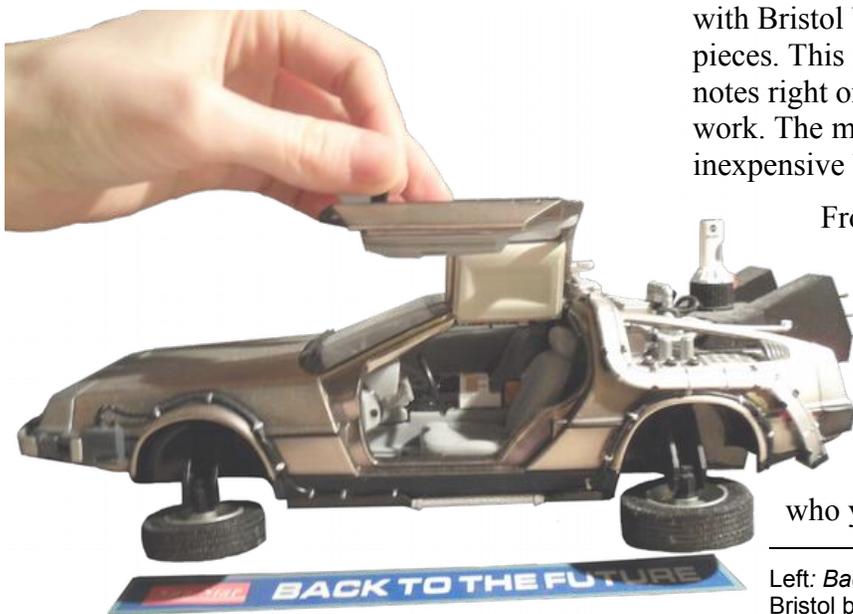
that all the parts worked in both robot and car mode but it failed spectacularly in every other area. That had to change for 2.0 to be even better.

The body of the car became a single piece. Not only does the transformation process have to work but all the bits have to line up for a clean look. One unit instead of many facilitated the change in design. As with all my Transformer costumes I started with Bristol board mock-ups of all the pieces. This allows for adjustments and notes right on the board while I work. The materials were inexpensive but costs add up.

From the mock-ups I cut, fold, and construct the pieces out of corrugated plastic, also known as 'Coroplast' or 'Plasticore' depending on who you ask. Great stuff. It's low

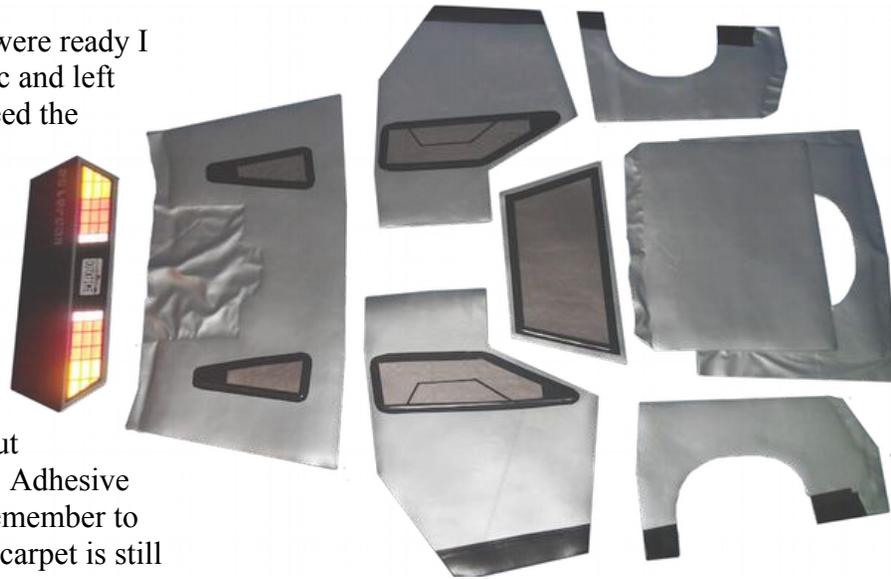
cost at \$16 for a 8'x4' sheet, incredibly durable, lightweight, and you can draw on it with a Sharpie. However, it isn't forgiving like fabric. Due care must be taken before making a piece because if you make a mistake, starting over is usually the only option. I rivet my pieces together with steel or aluminum rivets and washers. I find the aluminum rivets easier to work with but they cost quite a bit more than the steel rivets. A lot of rivets and washers are needed, somewhere in the realm of 200+.

My DeLorean has a yellow skeleton. To flesh it out I used regular craft foam and PVC vinyl fabric, the latter of which was ordered online. It took some pre-planning for layout of the 'skin' pieces. To get accurate shapes and sizes for the bits being covered I used newspaper to create pattern blocks. Each piece was sized against the skeleton, lines and edges refined, and finally traced onto craft foam.



Left: *Back To The Future* DeLorean model. Above: Bristol board mock-up. Right: Plasticore mock-up

Once all the foam pieces were ready I laid them out on the vinyl fabric and left room for margins as I would need the excess material for cleaning up edges and creating the distinct smoothness of a real DeLorean's stainless steel body. Gluing everything together was a matter of trial and error. One method involved using rubber cement to glue the foam to the fabric but it came out lumpy and horrible. Adhesive spray works so much better. Remember to follow safety instructions! The carpet is still sticky in places.



Above: Vinyl fabric pieces for exterior surfaces. Left: Photographic hubcap image. Left bottom: DMC logo on front bumper. Below: Mr. Fusion piece added later. Right: headlight electronics and 9V batteries. Right top: replica wing mirrors – a gift from DeLorean Club members.

I'm keen for details and cars need detailing. I used a lot of electrical tape to create lines and other shapes to bring out recognizable DeLorean features. The tail-lights are reflective tape to get that authentic car look. The DMC logo (below) on the front bumper, license plate, rear bumper logo, and hubcaps are all high resolution images printed on photo paper. The image for the hubcaps (above) is authentically from one of



the cars owned by an Ontario DeLorean Owners Club member.

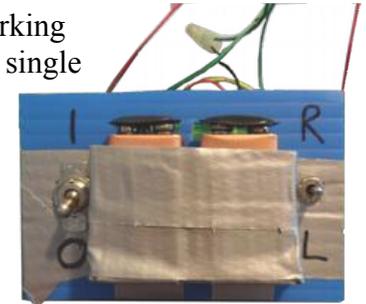
To keep costs down I didn't go nuts on all the bits and pieces found on the back of Doc Brown's ride. The exhaust ports are made from one piece of coroplast and are riveted in place. The Mr. Fusion (right) was a later addition after the costume's debut. It's made of styrene, matte board, craft foam, and paint.



My favourite aftermarket addition is the wing mirrors. (above) These were a surprise gift from two DeLorean Club members. They collaborated on designing the mirrors in CAD and creating a physical copy with a 3D printer. I added self-adhesive aluminum sheets for that real mirror look.

The headlights and turn signals are real working lights and run on a single 9V battery each.

(right) I bought everything at Princess Auto. As part of the original thesis, I needed a mentor to assist in grading me on the assignment. I was allowed to select my dad as my mentor and he made sure my schematics and wiring were correct. Confession: electricity terrifies me; I was scared I would cause a fire. The headlights are wired to a simple on/off switch and the turn signals on a two-way switch (sorry, no flashing the hazards. Left or right only).



An added expense but ultimately necessary detail – the kind you can't simply live without – I ordered some EL wire from online. The DeLorean's flux bars glow blue in the movie. Mine will too. I got the 3' and 5' length wires with attached control. Both run off two AA batteries. Both make a high-frequency noise when turned on and one of them happens to sit right beside my head when wearing the costume and in car mode. At least as I age, I'll be less likely to hear it. My dad couldn't. Science, kids!

Initially I had the wire placed under the flux bars and out of sight. The brightness wasn't strong enough to create the blue glow I wanted so they were remounted on the top edge of the flux bars.



Let me tell you a thing about feet. Real shoes are the best, especially if they're yours and they're old and comfy. The feet for this costume took on three different versions. The first version was boxy and served its purpose but out of necessity came improvement. I was going to wear the



Above: Interior showing backpack and straps. Left bottom: EL wire "flux bar" attached to car. Below: "Boxy" version of feet worn at conventions. Right: As DeLorean Club mascot in St. Patrick's Day parade (photo: Grant Thomas).

costume in the Toronto St. Patrick's Day Parade and march alongside my fellow DeLorean Club members. I'm the mascot. I couldn't possibly walk the entire route in made-for-convention-hall feet. The boxes were stripped down into the bare



lower side panels with wheels, re-rigged, and the shoes cleaned up with some acrylic paint. The feet were modified one more time because I was never pleased with my inability to easily line the pieces up while in car mode. The wheels became their own entity and the panels attached to the main body of the car.

I had to figure out how to wear the costume. Does this car make me look like a box? I bought a cheap backpack from Walmart, trimmed off the bulk, and riveted it to the main body of the car. (left) A variety of nylon straps, clips, and Velcro go into keeping all the 'armor' pieces in place. The abdominal plate features a Flux Capacitor design, it wears like a belt.

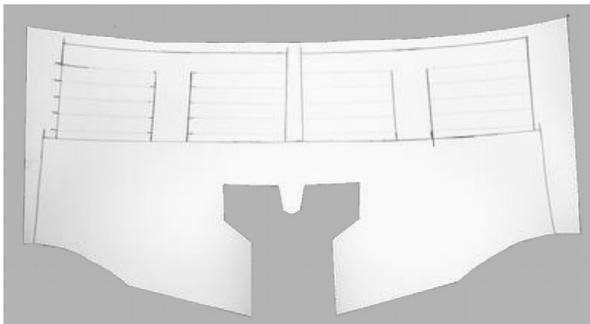


The 'pants' are coroplast with fabric skin and some detailing. Fun fact regarding them: they are fitted precisely to my measurements and need no method of holding them in place. Since it was -2 C on the day of the aforementioned parade, I was wearing several layers of clothing and therefore added a couple inches to my waist

and thighs. I spent most of the parade hitching up my DeLorean pants. For safety and aesthetic, I used a standard set of hand, elbow, and kneepads. These were painted over in acrylic.



I could start each paragraph by saying ‘No, the hardest part is actually...’. The helmet. I used plastic needlepoint canvas (above right) for the base structure and roughed it out using Bristol board (below) before creating the second layer with styrene. It’s all covered over in the foam/fabric skin and the details are painted on. The blue stripe is craft foam. The eyes are sunglass lenses. Most people are surprised to learn that I can see incredibly well while wearing the helmet. Since the bottom is left open I’m able to hear, speak, and breathe without issue.



Storage and transport for such a large costume can be rather difficult. To make it easier, I built a custom box using two full 8’x4’ coroplast sheets and old luggage, the kind with handle and wheels. I sized the box to fit the car perfectly so it wouldn’t slide around during transport. All armor bits fit inside the box with the car. It’s big and ugly but it works.

I knew from the start that this would be an expensive costume. When I finally tallied the receipts I was surprised to find that my total wasn’t sitting around \$700, or more. Only \$525 was sunk into this money pit. That includes the cost of the custom box.

The time and money invested have been well worth it. I’ve won a few awards for it, been featured in the Metro, made a cameo in a student film, and best of all, delighted many a fan. As it stands, it is my magnum opus.

Venessa Koch has been surprised by her rise to minor fame in the costuming community. The Canadian BFA graduate boasts several awards for her multiple costumes, particularly the transforming DeLorean Time Machine. When not costuming, she pursues other interests including astronomy, reading, animals, and thrift-shop treasure hunting.

Left top: Kneepads painted over in acrylic. Left: pattern for mask. Top: Needlepoint canvas helmet form and sketches. Above: Finished helmet with fabric/foam skin. Right top: Custom storage box made from coroplast and luggage.