

# Feature



## Warrior Angel

**Philip Gust\***

*A request for a costume to include in an exhibit becomes one of the most challenging projects the author has ever undertaken.*

Costume-Con 26 in San Jose, California included a costume exhibit with the theme, “Midnight in the Garden of Good and Evil.” Sally Norton of the *Greater Bay Area Costumers' Guild* was the curator, and invited members of the community to submit costumes around this theme.

She approached my wife, Kathe, for a costume that fit the “Good” theme. Kathe offered to recreate Billie Burke's “Glinda the Good” costume from the 1939 *Wizard of Oz*, since she was the same age at the time as Burke was when she played the role. Then Sally slyly turned to me and asked, “What about you? Are you a 'Good' costumer or a 'Bad' costumer?”

I should explain that at that point, I was still learning to be any kind of costumer at all. My specialty is props and special effects, and when Kathe and I team up on a project, I do the “hard” stuff and Kathe does the 'soft’ stuff. A couple of years earlier, though, I had decided to learn to sew under Kathe's patient tutelage, and completed my first sewn costume only the year before.

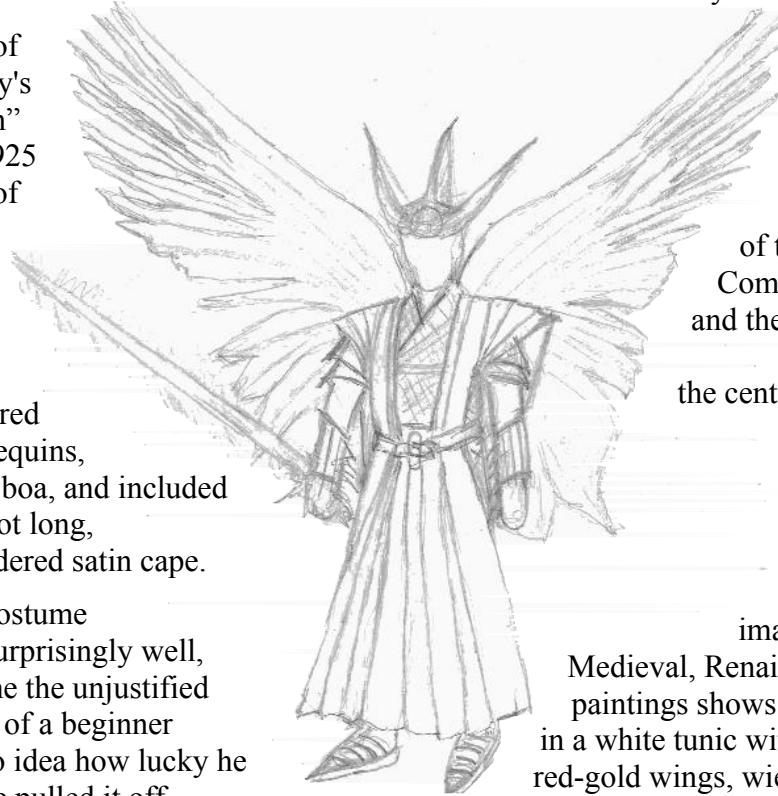
That was when I discovered my fatal attraction to “difficult” fabrics. For someone who enjoys special effects, shiny, shimmery fabrics are simply a lot more fun! My first costume, a recreation of Lon Chaney's “Red Death” from the 1925 “Phantom of the Opera” film, was made entirely of red velvet, red satin, red sequins, red feather boa, and included a fifteen foot long, sequin-bordered satin cape.

The costume came out surprisingly well, and gave me the unjustified confidence of a beginner who had no idea how lucky he was to have pulled it off.

I was surprised that Sally even asked me, since all the other costumers she recruited were so much more experienced. As Sally looked at me expectantly and Kathe gave me a wary eye, I thought of what I could possibly do that would earn a place

in an exhibit with such a distinguished group of costumers.

Then, an entire concept for a costume flashed into my mind, and without thinking I replied, “How about the Archangel Michael?” Sally looked surprised and thought for a moment, then asked which side of the exhibit the Commander of God's Army and the Angel of Death would go on. I replied, “In the center of the exhibit, and at the highest point.” So with that, my fate and the layout of the exhibit was settled.



The traditional image of Michael from Medieval, Renaissance and Baroque paintings shows a fair, muscular figure, in a white tunic with a red overcoat or sash, red-gold wings, wielding a shining sword. The entire treatment suggests an Angel of Fire, battling the forces of evil.

The concept I had in mind was very different: an Angel of Ice rather than Fire, visually inspired more by the crystal “Fortress of Solitude” of the *Superman* movies. This angel draws on the Kabbalistic



Archangel Michael. [Guido Reni](#). Rome, early 1600s.

tradition from [Sefer Ha-Bahir](#) (Book of the Brightness). There, Michael is associated with the element water and an electric blue color, and is depicted with a flaming sapphire sword.

Instead of the traditional biblical clothing depicted in European art, my concept of a warrior angel was a Japanese samurai of the Edo period (1615-1868) in a *Kamishimo*. This traditional costume is made up of the *Kataginu* or pleated-front vest and a *Hakama* or pleated pants/skirt.

The two garments were typically worn over a knee-length kimono for formal occasions, martial arts, and historic reenactment.

The costume would have a set of extendable wings with a span wide enough to be impressive, and in the same hues of blue used for the *Kashimo*, I also wanted a battle helmet in a traditional Japanese style with a design element that suggests a halo. Finally, I absolutely *had* to have a flaming blue sword!

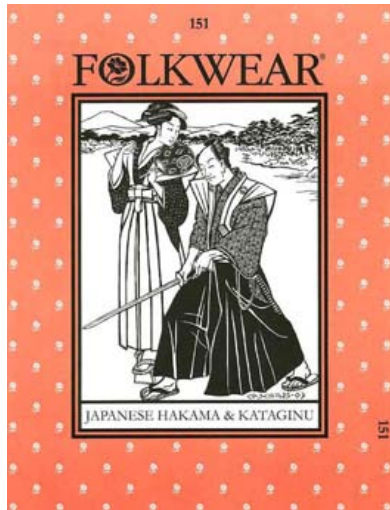
I did an initial costume sketch (previous page) to help guide the costume construction and reassure Sally that I actually was working on what she had impulsively agreed to make the centerpiece of her exhibit. When the costume was completed several months later, I assembled it on the dress form that I use for draping and fitting, and sent her the photo below by email, so she would finally stop worrying. Her four-character reply told me that she was reassured at last: “OMG!”



Photo of completed Archangel Michael sent to exhibit curator Sally Norton.

## The Kamishimo

I decided to use the FolkWear #151 pattern for the Hakama and Kataginu. Their instructions looked clear, and they provided good illustrations and measurements to aid construction. For one of the larger pieces they provided a scale drawing with measurements for you to draft the full size version.

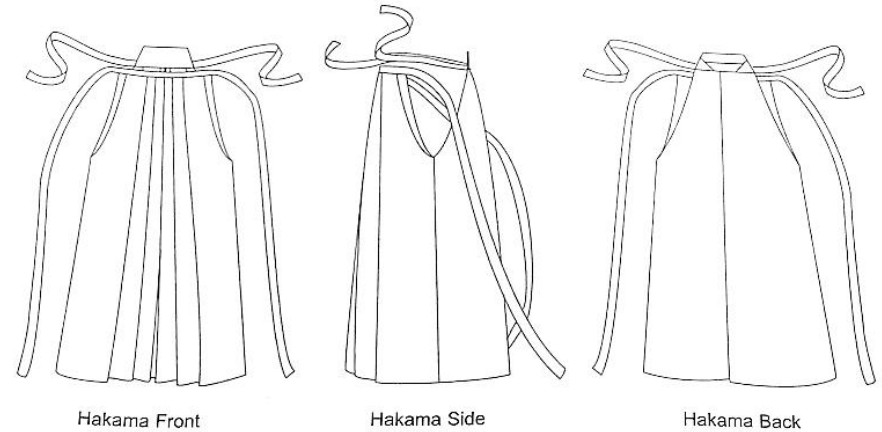


A number of different fabrics choices were recommended, including tightly-woven cottons and linens, with matching fabrics for a traditional samurai look. In this case, however, I would be using very different fabrics to achieve the effect I was after, ones arguably unsuitable for the construction of a Hakama and Kataginu.

I was after icy blue fabrics that glow and shimmer. I also wanted the fabrics to graduate from solid at the top to transparent at the bottom, providing a ghostly, ethereal effect. Luckily, there are some specialty

fabric sources in the San Francisco Bay area, including a silk shop in the mid-peninsula and several that cater to theatrical costumers and the fashion industry in San Francisco itself. Having a clear idea of the effect I wanted, and the flexibility to shop opportunistically enabled me to find what I was after.

Once again, achieving the effect I wanted meant learning to work with an entirely different set of “difficult” fabrics to those I had previously worked with. Not just different, but also much more difficult. I won't go into all the details of constructing these garments. The instructions do a very

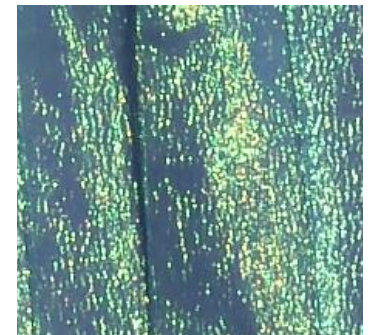


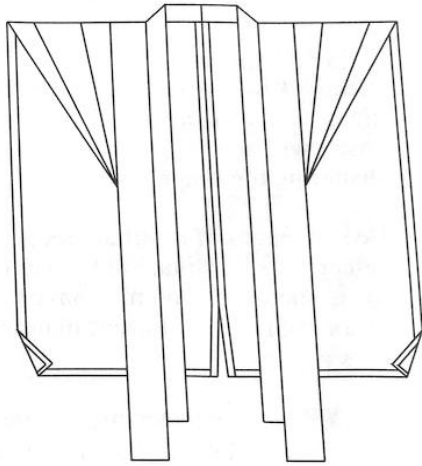
good job of that. Instead, I'll discuss my choice of fabrics and issues that I had to face as a result of those choices.

The Hakama is the bottom-most layer, so, I chose a very sheer fabric called *crystal organza* (below center). This fabric has a lot of phenomenon (shimmer), but almost no structure. It could never hold the kind of pleating required to give the Hakama its distinctive shape. To give it more structure, I flat lined it with *silk organza* which provided just enough structure so it would take a pleat. To ensure that it held its pleats, I ran a very thin stitch just as close to each pleat edge as possible. I added an extra layer of silk to the four ties for durability.



Ultra-thin crystal organza is icy yet fiery.





Kataginu Front

The Kataginu is at the top, so the materials I used were heavier and not at all transparent. The back is crystal organza lined with *tissue lamé*. The front is a sandwich of two layers of crystal organza and a center lining of tissue lamé. The outer layer of crystal organza provides the necessary shimmer and ties the top and bottom together, while the lining of tissue lamé provides a more vibrant blue that shows at the point where the Katingu goes over the shoulders and drapes down the back.

I used heavy wire to stiffen the front, shoulders, and sides of the back. The wire runs through channels sewn into the seams. This makes up for the fact that the fabric has little structure of its own, which is normally used to form the arch where the piece goes over the shoulders and drapes down the back. The wire is removable, and could be replaced by EL wire if desired.



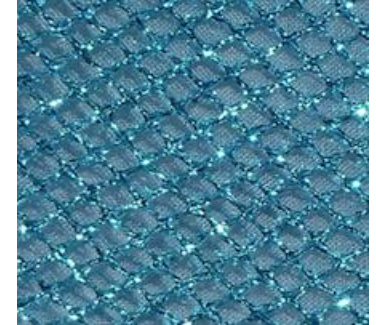
Kataginu (above) and Hakama (below) both overlaid with crystal organza, with different materials underneath for different effects.



## The Kimono

I created a short Kimono by adapting a standard bathrobe pattern, with alterations to the sleeves. I chose a short Kimono because I wanted to ensure that it interfered as little as possible with the transparent effect on the Hakama

Because Michael is a soldier, I chose a metallic blue mesh pattern reminiscent of chain mail. The fabric is manufactured on the bias and consequently offers very little structure.



I flat lined the Kimono with silk organza to add enough support to work with, and to hold its shape when worn.



Kimono of metallic mesh, lined with silk organza.

I altered the sleeve pattern of the kimono as a two-layer, half-sleeve design to give it a more armor-like appearance.



### **Serging Ahead**

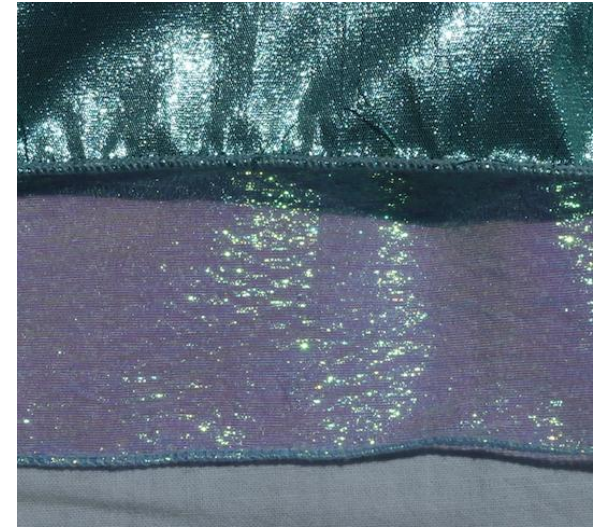
Before moving on to other parts of the costume, I want to mention a technique I learned that was absolutely necessary for working with the fabrics I've already mentioned, and those that I'll discuss later. That technique is the *overlock stitch*.

An overlock stitch sews over the edge of one or two pieces of cloth for edging, hemming or seaming. Usually an overlock sewing machine or *serger* cuts the edges of the cloth as they are fed through, although some are made without cutters. *Serging* technically refers to overlocking with cutters, but in practice the terms are used interchangeably.

A number of past projects would have benefitted from using a serger, but it was an absolute necessity for this one. Kathe's "costuming therapist" owned a BabyLock "Enlighten" and absolutely loved it because it was so easy to thread. When we saw one on sale at a quilting and button fair shortly before I started this project, we decided to take the plunge, and I'm glad we did. Talk with *your* "costuming therapist" to get his or her recommendation.



I did not have time in advance for a practice project, so I had to learn the necessary techniques "on the job" by practicing with scraps of the fabrics before working on the real thing. I did alright, but I would have done much better with a few months of practice on something less challenging, and by taking the classes that came with the serger in advance. As it was, I had to make due with a DVD that came with the machine, and several books that taught beginning and intermediate techniques.



Serged edges on the hem of the Kataginu.

One lesson that I learned very quickly was to buy the very best thread available. Less expensive thread breaks frequently, and requires you to rethread before picking up where you left off. Finding just the right color of thread in enough quantity was a challenge. It generally requires three or four spindles of thread to serge an edge.

### **The Wings**

I designed the wings to have a span of about nine feet. That is the [golden ratio](#) (~1.618) to my height, which give them a visually balanced appearance. The wing construction needed to be sturdy enough to support itself when fully extended, and be light enough to wear for reasonably long periods of time. It also had to be designed in such a way that the wearer can easily extend and fold the wings in a relatively smooth and graceful gesture, without any assistance.

For these reasons, I decided to use an accordion style design made of wood molding, attached to a light wood box frame that is strapped on to the body under the Kataginu.



The molding is 3/4" wide by 3/8" thick. It was cut to the correct lengths, and assembled with Chicago screws (left) that allow the pieces to pivot.



You can see from the photo below how the spurs overlap and are bolted together. The exact lengths of the pieces depend on a number of factors, including the height of the wearer and the desired wing span. The top wing spur for mine is thirty six inches. You should be able to come up lengths for the spurs that are right for you from this.



The box frame was made of 2" wide by 3/8" thick molding cut to length and glued together (right). My wings hinge so they can fold back, and swing forward as they extend, so I left room for a piano hinge on each side. Another piece of molding attached to each hinge and the wings attached to those. If you don't need your wings to fold back, you can omit the hinge and attach them directly to the frame.

Next I attached belt webbing to the frame with nuts and bolts. I used grommets to prevent the webbing from tearing or stretching. I also attached two "pockets" made from webbing to the bottom of the frame that hold the bottom ends of the vertical spurs when the wings are extended.

I measured the belts and added buckles that fasten when the webbing wraps around your shoulders and waist (see next page). I found that it works best for the shoulder straps to form an "X" across your chest. Most webbing is made of a synthetic, and it



Glue the box frame together, leaving room for hinges on both edges (above). Attach the wings to molding pieces attached to the hinges (below).





Wings with harness belt webbing and clips attached.

is best to “sing” the edges that you cut with a match to prevent them from raveling.

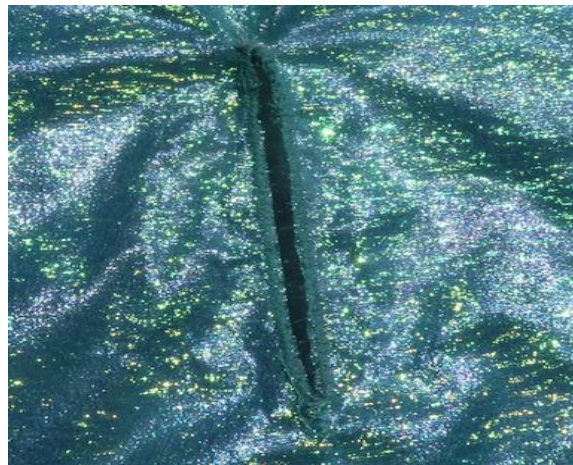
I settled for grey webbing because I couldn't locate any shade of blue. Then, several weeks before the exhibit, I found exactly the right color blue at Britex in San Francisco, and happily replaced the straps. They had not had that shade before nor have they had it since. Divine intervention?



Blue webbing replace the grey just before the exhibit.



Back view showing wings in place.



Two slots sewn into the back of the Kataginu allow the waist belt to pass through and buckle in the front.



Sparkle organza used for wing cover.

The wing covering was made with a sparkle organza base and tissue lamé “feathers.” Designing the covering is beyond the scope of this article, but I want to go on record as saying that working with tissue lamé can be really nasty! The Kataginu went alright but the lamé kept puckering as I tried to sew the wings. I finally called in my wife for a consultation. She told me that it behaves better if you fuse it to interfacing before trying to sew it.

She also said that the needle makes a big difference. People have had luck with various kinds of needles, but the most important thing is to use a new one, and to keep replacing it the second something starts going wrong. With encouragement and some team sewing, the covering finally got done. The puckering that did occur actually gives the lamé a “feathery” appearance (above), so it all worked out in the end.

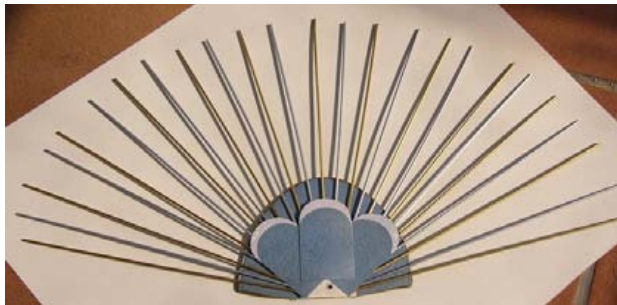
## The Helmet

I wanted a Japanese style helmet that had a lighter look than the traditional “Darth Vader” kind worn with samurai armor, and one that fit in with the costume color scheme. I also wanted a design that would give the impression of a halo using traditional Japanese elements. I was considering a crescent shaped ornament on the front of the helmet when I ran across a photo of an antique samurai helmet (below) that finally sparked an idea for the design.

I started with the ubiquitous baseball batting helmet from a thrift store, and used poster board to build out the shape (top at right). Then, I applied a coat of blue

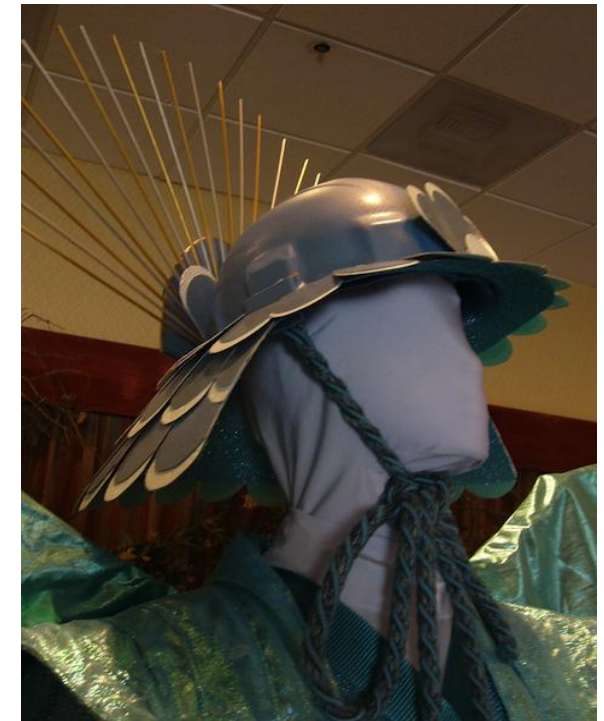


Antique surumi helmet with ray-like ornamental crest.



hammered metal finish to the helmet. Next, I created a fan-shaped ornament similar to the one on the antique helmet (middle at left). The alternating gold and silver painted bamboo skewers glued in a fan shape give a halo-like impression of light rays emanating from Michael's head. This ornament attaches to the back of the helmet with a Chicago screw that is hidden by a decorative half-circle once it is attached (bottom at left).

Finally, I covered the hood of the helmet with poster board feathers painted with the same hammered blue metal paint and tipped with crystal organza. The inside of the helmet is lined with the blue metallic mesh used for the Kimono. The helmet ties on with a decorative blue cord (below).



## The Sword

The final element of the costume is the flaming blue sword. I took some liberties because I needed a fearsome weapon and did not want to slavishly copy a katana. It also had to have enough room for the blue EL wire array and electronics that I would use for flame effect. I was lucky enough to have access to a jigsaw and sander, so cutting the two outer shell pieces and inner spacer from sheet acrylic was not difficult.

The blue EL wire to make the flame array, and the electronics that drive it and make it flash in patterns, came from an on-line store because they were not available locally. Cutting the wire to length and soldering the connections is not especially difficult. If you are not comfortable doing

this, you can almost always find a friend or friend-of-a-friend to do it for you.

I glued the sword together using acrylic cement, and built a handle reminiscent of a Japanese sword that could accommodate the electronics. I also built a stand to hold the sword in position when the costume is displayed on my dress form.

An AC adapter powered the sword in the exhibit, since it would be turned on continuously for several days. The EL wire electronics were set to a pattern that caused the sword to shimmer, with lightning bolts seeming to dance from the hilt of the sword. Under-lighting inside the skirt helped show off the gradient effect in the fabrics. The dimness of the exhibit hall helped enhance both lighting effects.



Sword made of clear acrylic plastic with embedded blue EL wire array and electronics.



Archangel Michael - "Midnight in the Garden of Good and Evil" costume exhibit. Costume-Con 26, 2008.

As people entered the exhibit hall, they saw the Archangel Michael at the highest point, on a pedestal and riser in the center of the exhibit, wings extended and flaming sword in hand, standing guard between the costumes of "good" and "evil."

*Philip Gust* enjoys sci-fi and fantasy costuming, and has particular interests in props, special effects, and prosthetic makeup. He also costumes in historical periods, including Regency, Victorian, and early 20th C.