

The image shows a terracotta vase with a handle and a paper template for its mount. The vase is brown and has a flared rim and a pedestal base. The handle is a simple, curved piece. The paper template is white and has a shape that matches the profile of the vase, including the handle. The text "Template Techniques for Mountmaking" is overlaid on the image in a white, sans-serif font with a black outline.

Template Techniques for Mountmaking

The Challenge-



As mountmakers, we often faced with logistical challenges when we're creating a mount. Ideally, we have the object that we're working on sitting in front of us on our workbench, where its easily accessible while we're designing and fabricating our mount.

Well, as we all know that situation isn't always an option-

The Challenge-



Increasingly, this is scenario that my fellow Mountmakers and I in the Antiquities Conservation department at the Getty Museum are faced with when we work with large loan exhibitions. Typically there's very little time between when the objects arrive and when they're installed. So when its possible, we advocate seeing the objects in advance to gather as much information as we can. This permits us to design and fabricate many of our mounts in advance of the exhibition, allowing us to be prepared and manage tight installation schedules.

So, what are the options in gathering the necessary mounting information?

Well, fortunately most are quite simple-

I'm going to talk briefly about a range of methods that can be used to acquire essential mounting information and successfully transfer your mount design from the object to your workspace.

Obviously there are limitations on what's possible, depending on the complexity of the object and your mount design. But, with an understanding of the basic principals and little ingenuity, a lot can be done.

Preparing-



First off, as we all know, its best to have a plan- This means gathering as much information about the object and how its going to be displayed in advance. Even simple cardboard mock ups, like in this example, can be helpful. This information is always useful and will often direct your mount design.

Techniques- Paper Templates

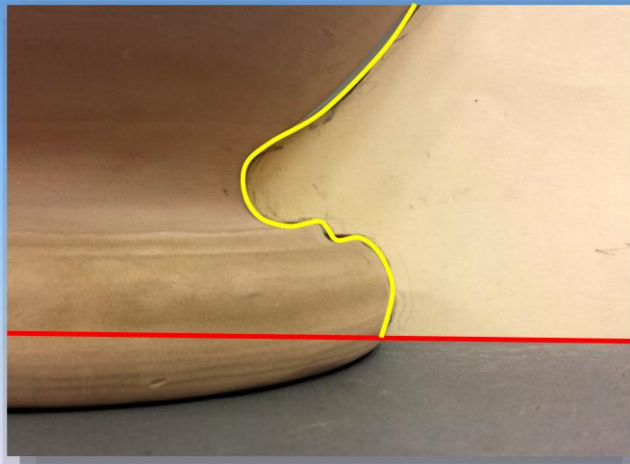


With a plan in hand- its time to look at few techniques that can assist you while working remotely from your object.

I'm going to start with a few straightforward ideas using with paper templates. This method works great for mount designs that don't involve too many complex curves, such as clips and basic contour mounts.

Using a heavier card stock tends to be easier to work with as you make your template- I like to use file folders, they're easy to cut, but stiff enough to hold their shape.

Techniques- Paper Template

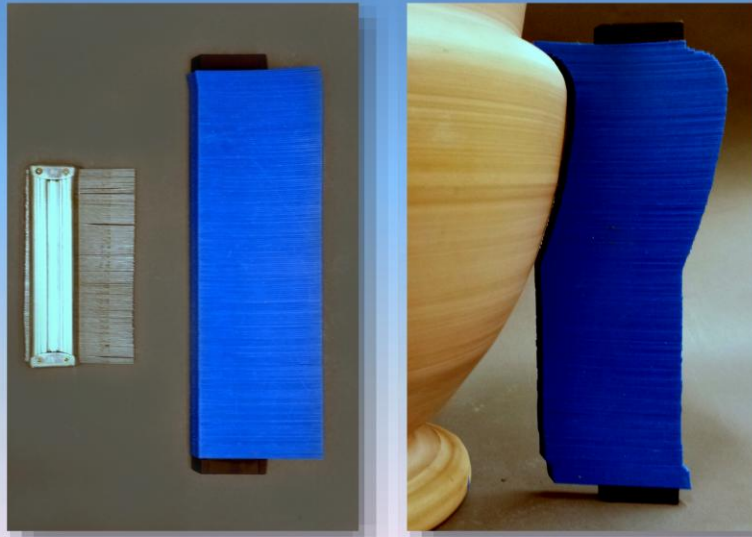


Before I go further, I want to bring up an important aspect to consider when creating a template-

This is establishing the relationship between the display surface, shown here in red in the example, to the profile of the object, shown in yellow.

Maintaining this relationship in your template can be crucial, especially ones used for contour mounts. And keeping this in mind while you're working will assist you in transferring your mount design from the object and ultimately result in a mount that fits properly with minimal adjustment.

Techniques- Paper Templates



There's a number of methods you can use to capture the shape of an object to transfer to your paper template, such as a profile or contour gauge-

These devices can work well, but are limited in capturing deep shapes since most of the gauges' measuring elements are pretty short. I've seen some homemade profile gauges with longer elements, but they tended to droop if pushed too far out. The metal gauges, like in this example, have sharp ends, which isn't ideal with artwork. There's also the problem of establishing the relationship of the display surface to the object, as I mentioned earlier.

Techniques- Paper Templates



Flexible curves can be an option too-

They're capable of capturing simple shapes quite quickly, but most aren't able to bend enough to mimic tight curves or capture finer details and most don't hold their shape very well.

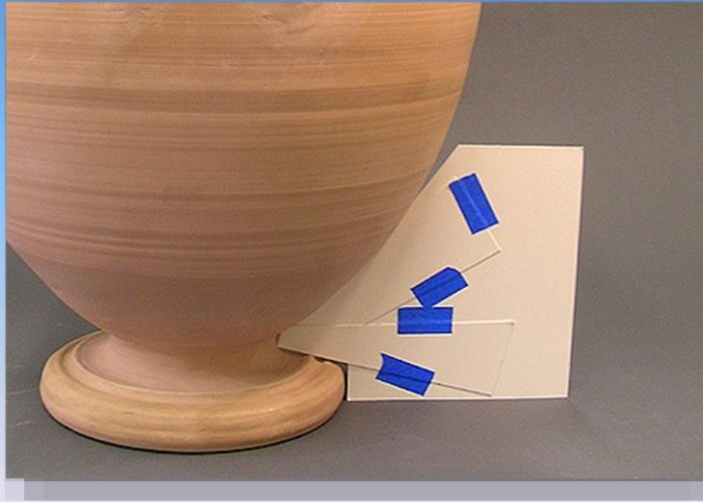
Also, like the profile gauge, there's no way of registering the object to the display surface.

Techniques- Paper Templates



There's also a device called a Log Scribe, which I've been experimenting with, but as you can see in the example, it takes a steady hand and I obviously need some more practice or less coffee!

Techniques- Paper Templates



One of the easiest methods I've used is to rough out the shape first with the card stock, then come back and fill in the detail by taping in smaller pieces along the profile. Once you're done, you can transfer the shape to a clean piece of card stock or just secure the individual pieces with more tape.

Techniques- Paper Templates

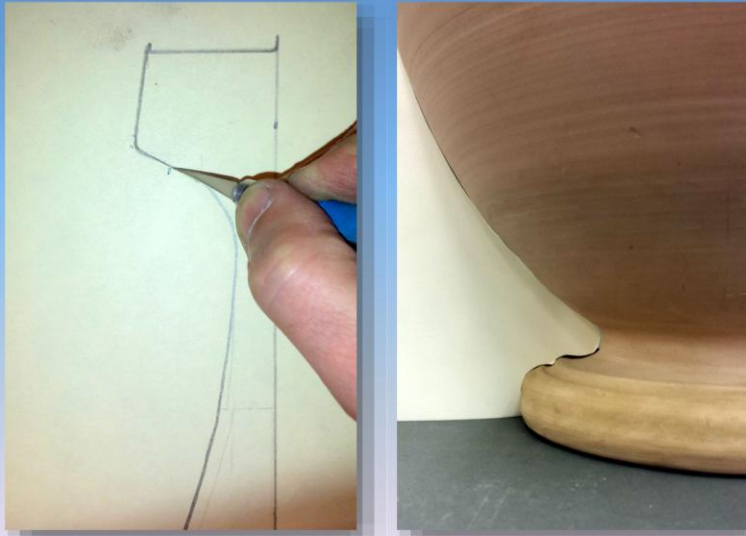


A few years ago my colleagues and I came up with this contraption to expedite the process of creating profile templates.

It's a simple device with a vertical and horizontal guides and an integrated panel that's used to hold the card stock. The horizontal guide has a small Teflon roller stylus on one end that contacts the surface of the object and on the other end a mechanical pencil.

As you move along the edge of the object, its profile is transferred to the card stock. The device works pretty well and will produce a fairly accurate profile template quickly, which has a good registration with the display surface. There are a couple minor issues with the unit- mainly with a slight shift in the profile output when going from horizontal surface to a vertical. This is due to where the stylus contacts the object- it's a small inconvenience and can be easily corrected when fitting the template to the object.

Techniques- Paper Templates



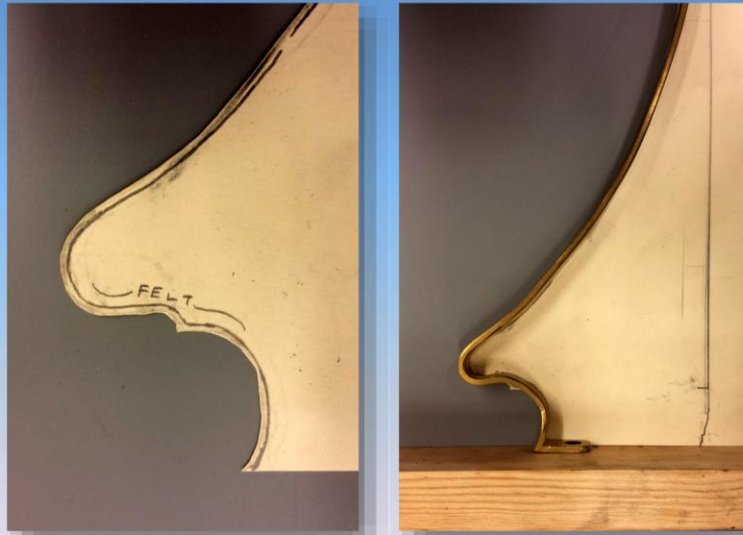
Once the object profile has been transferred to the card stock, the paper template needs to be carefully cut out and test fitted to the object. At this point, any inconsistencies can be addressed until the template fits well. Obviously, the more accurately the template is, the better the chances will be of having a mount that fits well later on.

Techniques- Paper Templates



Both sides of the cut template can be used during the mount fabrication process. The outside template can be used as a pattern for bending your material- And the inside template cutout can be used to represent the object and allow you to check the fit of the mount.

Techniques- Paper Templates



A couple of things to keep in mind when using your template to fabricate your mount-

If you're going to be using a thicker padded barrier, you'll want to add a little to your template, as you can see in this example. This can be helpful in tighter profiles or ones that have a more pronounced horizontal surface.

The other tip is to use a flat surface to register your template to your mount while you're fabricating. This helps a lot to keep everything lined up and will give you ground to work from.

Techniques- Paper Templates

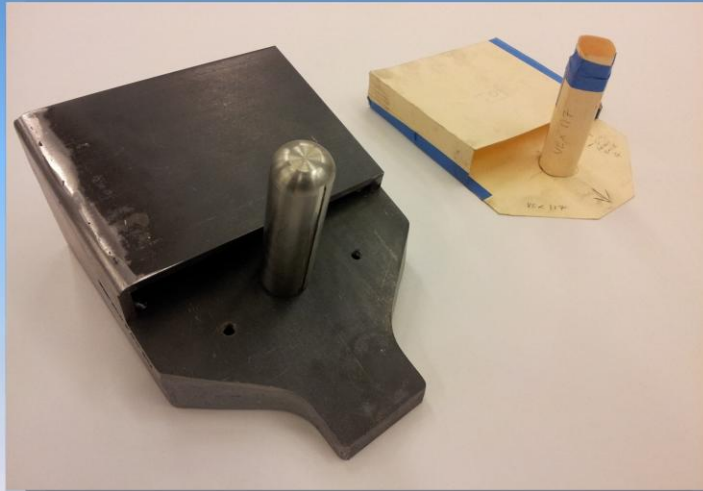


Paper templates can also be used for more complex object shapes and mount designs as well-

This examples shows a template for a mount design that's a little more complicated than a typical contour mount. This mount will follow the shape of the bronze statuette object along the backside of one of the legs. The mount designs also incorporates a horizontal element to that will retain the object around the waist.

When working with multiple template sections its important to make registration marks that show how the various elements line up. I also find it helpful to make take a lot of images and notes about object and the mount design for later reference, as you can see in this example.

Techniques- Paper Templates

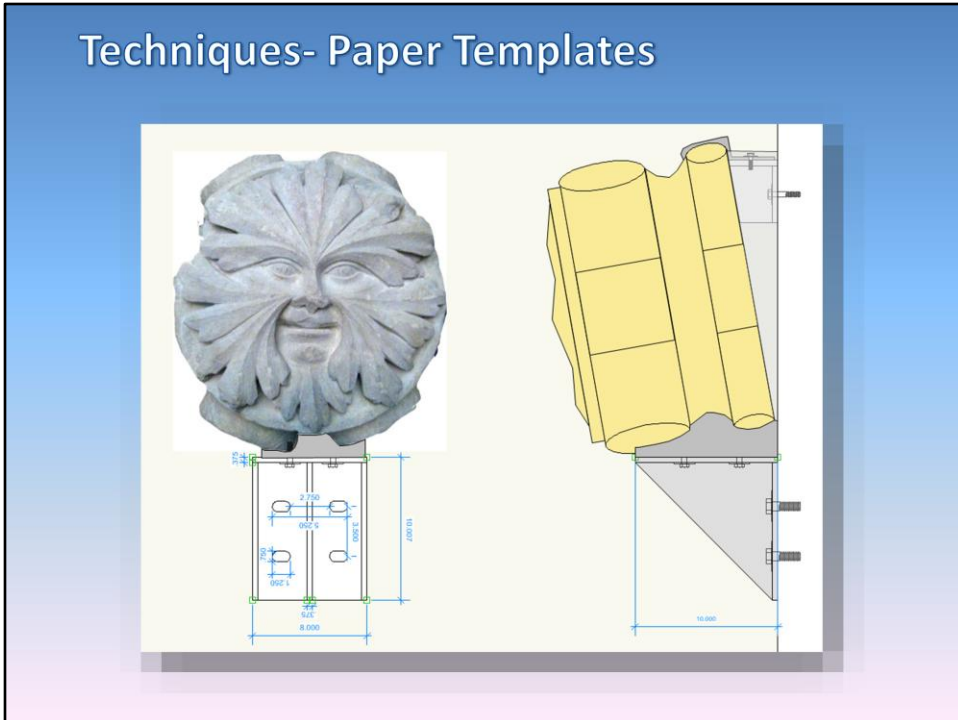


One last thought on paper templates, before I bore you to death on the subject!

This is a technique that I recently experimented with that I had very good results with.

Instead of using the template to transfer the shape of the object, I used it to create a maquette of a mount I was planning to fabricate.

Techniques- Paper Templates



The mount I need to design was for a Byzantine sandstone groin vault on loan from the Chlemoutsi Castle in Greece. The object was part of a large traveling exhibition that was on display at the National Gallery of Art, in Washington DC before coming to the Getty Museum and I was fortunate enough to have the opportunity to this object, as well as a number of other artworks in the exhibit, prior to their installation.

Before my visit, I had a preliminary display design for the groin vault, in which our curator and exhibition designer wanted to have the object mounted on a small shelf, 7ft up and titled looking down- as seen in this example. Having this information on hand when I saw the object gave me a good starting point for my mount design and I could verify the measurements and feasibility of the display at the same time.

Techniques- Paper Templates



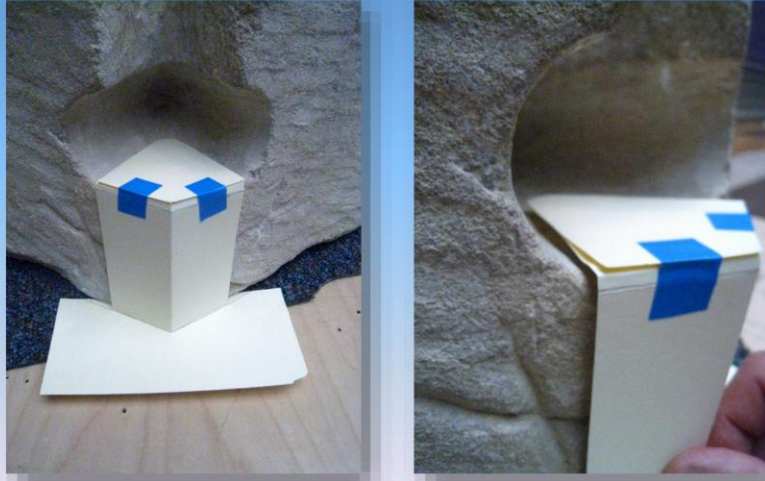
When I saw the groin vault, I pleased to find that it had two deep cavities on the top and bottom. Having these areas made the mount design process a lot easier were perfect spots to secure the object safely and discreetly.

Techniques- Paper Templates



I used the card stock to mock up the lower support-

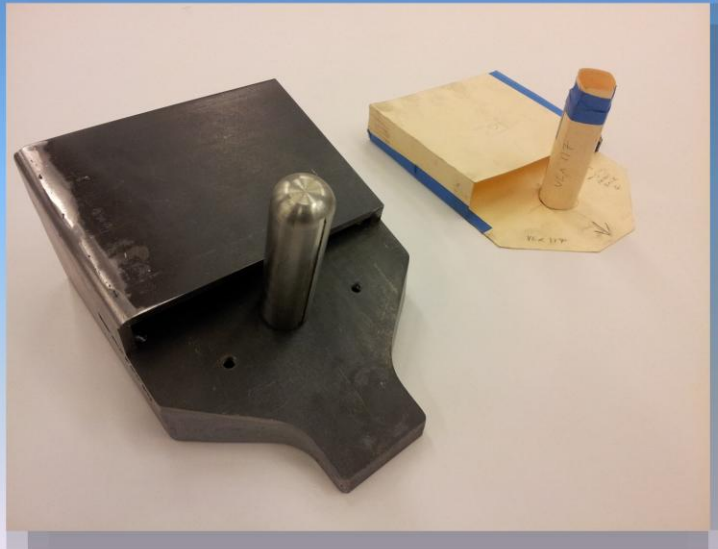
Techniques- Paper Templates



And the top retaining clip.

The completed maquettes gave me the approximate measurements and shapes that I would need to start prefabricating the mount.

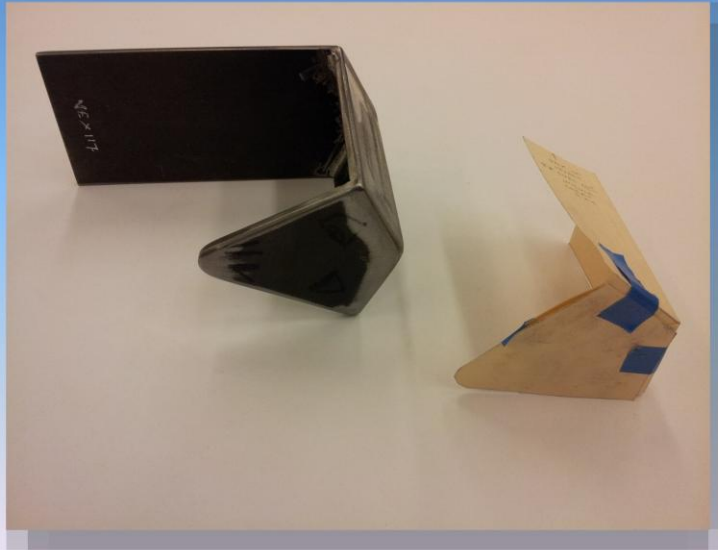
Techniques- Paper Templates



Later, the various mount components were then fabricated using the maquettes as the patterns.

Here's the prefabricated bottom support and the paper maquette.

Techniques- Paper Templates



And the top clip-

Techniques- Paper Templates



Once the object arrived at the Getty, the prefabricated mount parts were fitted to the object. Fortunately no modifications were needed- the maquettes had proved to be a good pattern to work from.

Techniques- Paper Templates



Having these mount parts ready in advance was a real time saver, especially since an epoxy interface still needed to be cast and the mount finished and painted.

Techniques- Paper Templates



Here's the final result-

Which was completed in a relatively short amount of time that we had during the installation- thanks to the templates!

This was just one of number of objects that are in the exhibition that my colleague Mac Lowry and I had an chance to see in advance at the NGA during their installation (thank you again to the NGA's mountmakers, Drew & Linda). The chance to examine these objects beforehand gave us an invaluable opportunity to develop mount designs, take templates, measurements and gather useful information, which really assisted us in preparing for this challenging exhibition.

Techniques- Casting



Another method worth exploring is casting-

With this technique, you can make an accurate impression of the object surface where the mount will be in contact.

My colleagues in the Decorative Arts Conservation department at the Getty have used this method in various applications to help prepare for large, loan exhibits- In this example they used fast curing dental silicone that was reinforced with a bendable, perforated aluminum sheeting to take impressions of an object. This made it possible for them to later, recreate the edge of the sculpture with a plaster positive, which was then used to determine the sizing of pre-made bronze clips.

Techniques- Casting



In another situation they used casting wax to create conformal fitting clips.

A hard machinable wax was used for the main portion of the clips, then a soft dental wax was used to capture the finer details and shapes of the object. The wax forms were then cast in bronze and prepared for the exhibition.

Techniques- Casting



I've experimented a bit with casting- as in this example, I used a fast setting epoxy putty to cast the shape of this object as well as the basic shape of the mount component that I was planning to fabricate. Later, I cleaned up the casting and used it as a template to manufacture the part out of steel. It also provided the size and location of the pin and post elements. The epoxy cast was ultimately adhered the steel mount section and used as a conformal interface.

Techniques- Scanning



There's also the feasibility of using 3d scanning to acquire object information. As the technology improves and the pricing becomes more affordable, this method seems have a lot promise.

We tried a simple profile test using this technique- which I have pictured here, where a scan was made of an object (on the left) and then opened in a 3d program and a back view was printed at 100% (on the right). A profile section was cut from the printout and fit to the object- and as you can see, it actually fit pretty well.

Obliviously, was is a pretty simple shape to test, and more experimenting needs to be done to see how consistent the results can be. But the technology opens up a range of possibilities, such as 3d printing, which is also becoming more affordable and could be used to create the parts you need*

**This was successfully shown at this year's forum by Megan Dattoria and Richard Gould who are with the Exhibits Central at the Smithsonian Institution.*

Who knows what the potential might be, but I think it's all very promising!

Conclusion-



As you can see there are number of different methods to acquire and transfer pertinent information of an object and your mount design to be used later on.

These are just a few ideas that I wanted to share, which I hope will assist you when faced with the challenge of fabricating a mount without having direct access to the object during process.

By taking a little time while acquiring your information, you'll end up having an accurate pattern to work from and ultimately a well fitting mount.

Thank You!