

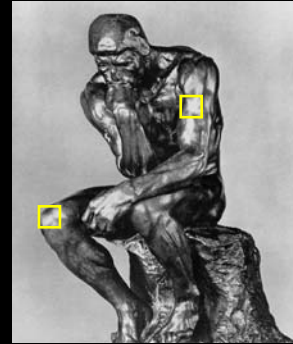
Example-based Photometric Stereo



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Shiny things



"Orientation consistency"

Problem definition

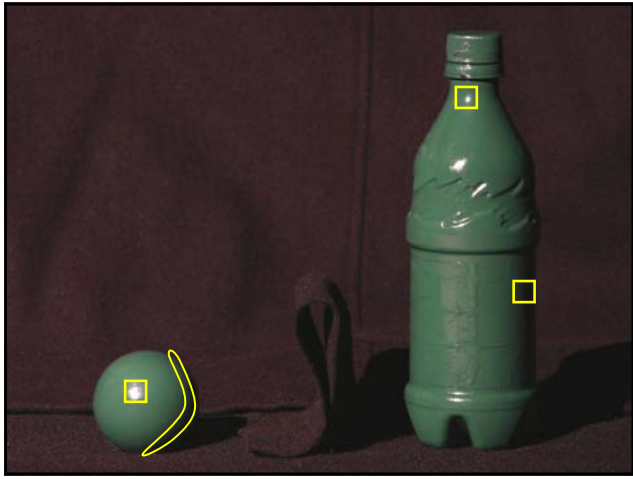
Estimate 3D shape by varying
illumination, fixed camera

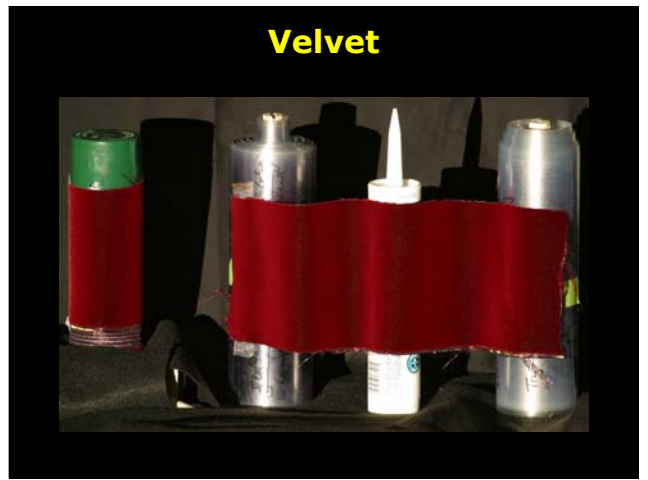
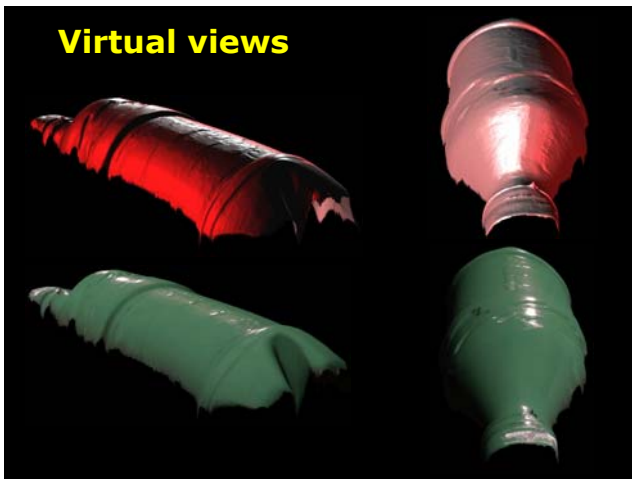
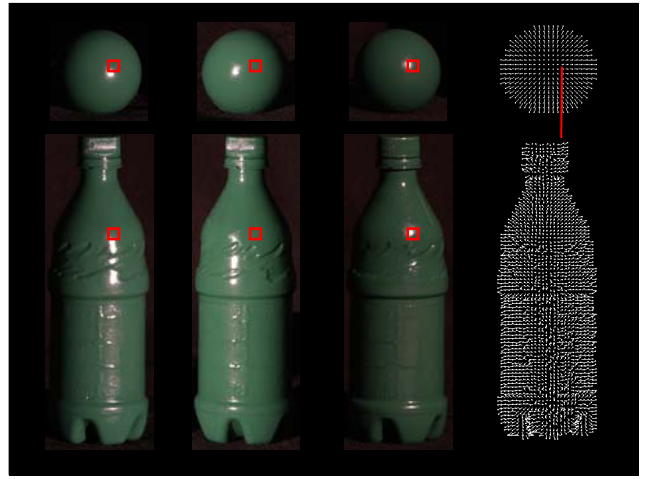
Operating conditions

- any opaque material
- distant camera, lighting
- reference object available
- single material (will relax later...)
- no shadows, interreflections, transparency

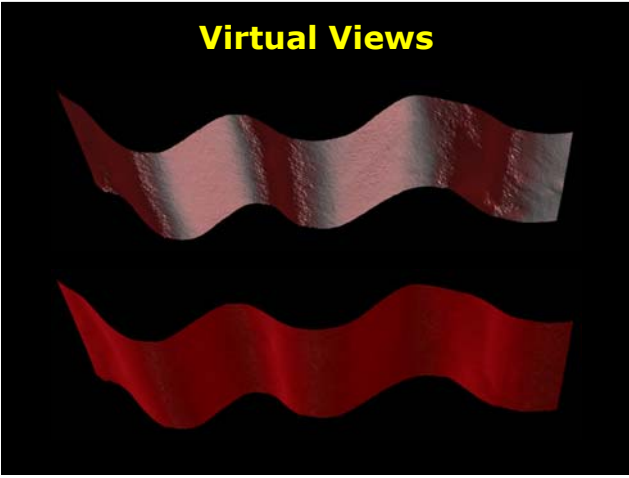
same surface normal







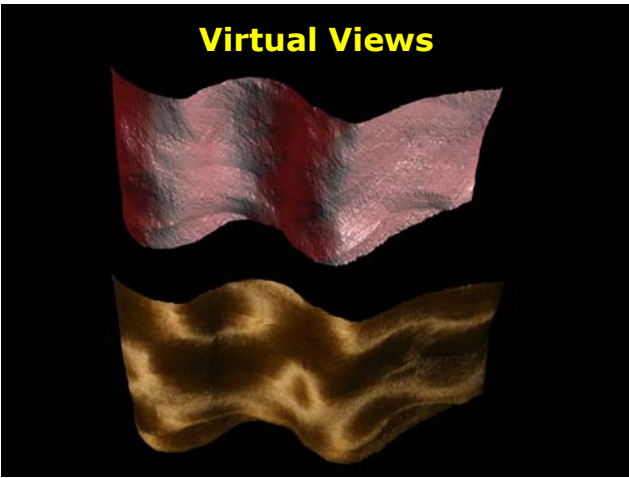
Virtual Views



Brushed Fur



Virtual Views



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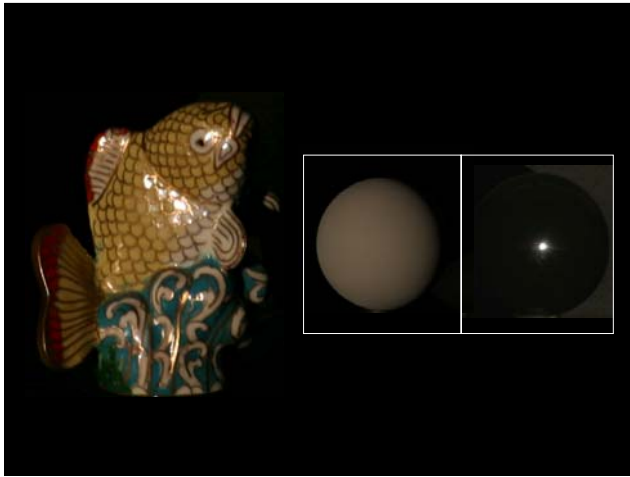
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Salem Specialty Ball supplies industrial grade balls that are used in bearings, pumps, valves and other commercial applications. We can supply balls in just about any size that is machineable. We have produced precision balls from 0.07" all the way up to 17.0" and beyond. We can also produce these balls in any material. **Almost without exception, if the material exists, we can make it into a ball.** Not only do we specialize in hard to find materials, we also carry standard materials such as [chromium steel](#) and the [stainless steels](#). We stock an extensive [inventory](#) of ready to ship balls. Most orders are shipped the same day. And if it isn't in stock, we can make it for you in matter of days. In addition, you will find that our prices are very competitive.



Located in the beautiful northwest corner of Connecticut, Canton has been our company's home for the last three years and we have been in complete operation for over ten years. Proud of our reputation, Salem Specialty Ball Company has over fifty years of combined experience allowing us to provide top-notch quality technical support and expert engineering consultation.





Linear combinations of materials

$\text{White Sphere} = \text{Red Sphere} + \text{Green Sphere} + \text{Blue Sphere}$
 $\text{Dark Sphere} = \text{Red Sphere} + \text{Green Sphere} + \text{Blue Sphere}$

$0.9 \text{ Red} + 0.6 \text{ Green} + 0.2 \text{ Blue} + 2.0 \text{ Red} + 2.1 \text{ Green} + 2.1 \text{ Blue}$
 $= \text{Brown Sphere}$

0.9
 0.6
 0.2
 2.0
 2.1
 2.1



