



Antialiasing

CSE167: Computer Graphics

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Texture Minification

- Consider a texture mapped triangle
- Assume that we *point sample* our texture so that we use the nearest texel to the center of the pixel to get our color
- If we are far enough away from the triangle so that individual texels in the texture end up being smaller than a single pixel in the framebuffer, we run into a potential problem
- If the object (or camera) moves a tiny amount, we may see drastic changes in the pixel color, as different texels will rapidly pass in front of the pixel center
- This causes a flickering problem known as *shimmering* or *buzzing*
- Texture buzzing is an example of *aliasing*



Small Triangles

- A similar problem happens with very small triangles
- Scan conversion is usually designed to *point sample* triangles by coloring the pixel according to the triangle that hits the center of the pixel
- This has the potential to miss small triangles
- If we have small, moving triangles, they may cause pixels to flicker on and off as they cross the pixel centers
- A related problem can be seen when very thin triangles cause pixel gaps
- These are more examples of *aliasing* problems

