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Ray Tracing Script Revision 2

Raymond: Hello everyone, we are Team Array and we will be speaking about ray tracing. In computer graphics, ray tracing is a technique for calculating the color of a virtual pixel of an image by calculating the effects of light rays (coming from a virtual light source) on that particular pixel. A ray tracing algorithm involves tracing a path from some imaginary "eye" to each pixel of the image, and calculating the color of that pixel based on what object it represents, that object's properties, and its position relative to the eye and light source.

Angel: Ray tracing first began in 1968 when Arthur Appel developed the first "ray casting" algorithm. Then, Turner Whitted introduced reflection, refraction, and shadows into the ray tracing algorithm in 1979. As time has passed, improvements have occurred in reflection, refraction, shadows, and time complexity as well as an increased realism and real-time ray tracing.

Rebecca: Now, we will show you examples of images made with ray tracing algorithms (show images and diagrams). The ray tracing algorithm is comprised of basic knowledge of vectors, dot products, and cross products. Also, ray tracing algorithms contain intersections with basic and complex geometry. (Talk about forward/backward ray tracing, recursion, color and shading, and techniques).

Yu: (Conclude presentation: where to use ray tracing, considerations to remember, advantages and disadvantages of ray tracing).