Introduction to Rasterization

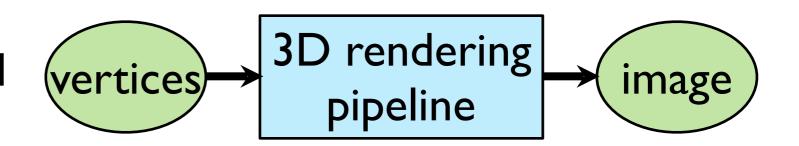
Rendering approaches

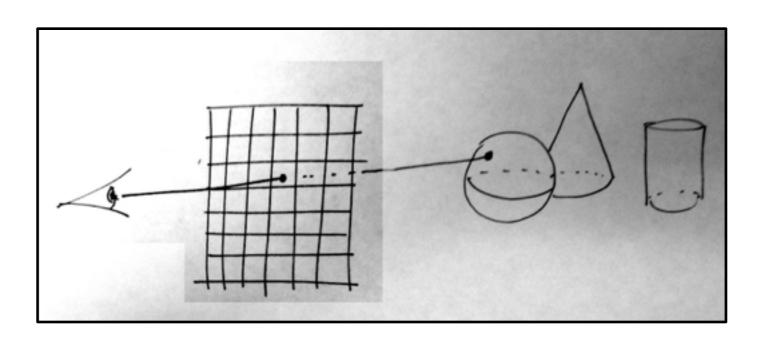
1. object-oriented

foreach object ...

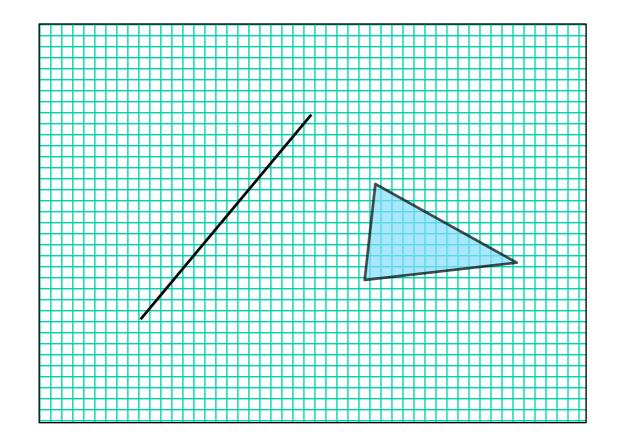
2. image-oriented

foreach pixel ...



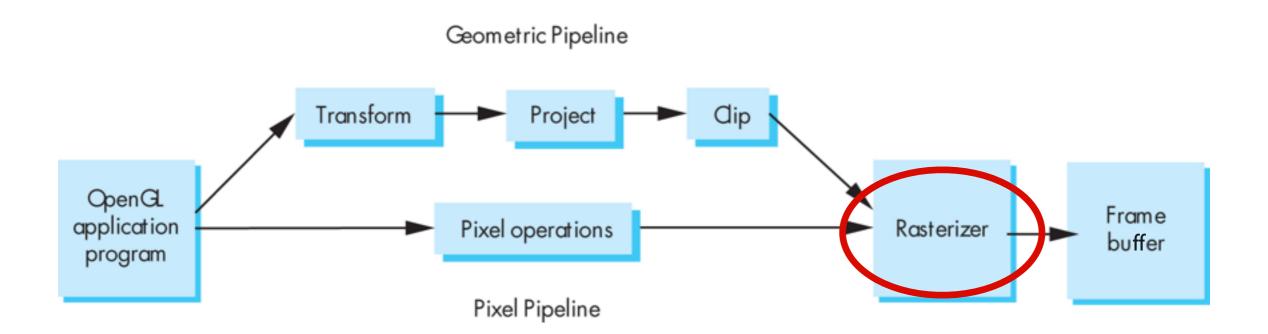


What is rasterization?



Rasterization is the process of determining which pixels are "covered" by the primitive

What is rasterization?



input: primitives output: fragments enumerate the pixels covered by a primitive interpolate attributes across the primitive

Rasterization

Compute integer coordinates for pixels covered by the 2D primitives

Algorithms are invoked many, many times and so must be efficient

Output should be visually pleasing, for example, lines should have constant density

Obviously, they should be able to draw all possible 2D primitives

Screen coordinates

y'						L
(0) ,4)	0	0	0	0	
(0.	3)	0	0	0	0	
(0,	2)	0	0	0	0	
(0	,1)	0	0	0	0	
		0	0	0	0	
(0	0)	(1,0)	(2,0)	(3,0)	(4,0)	x