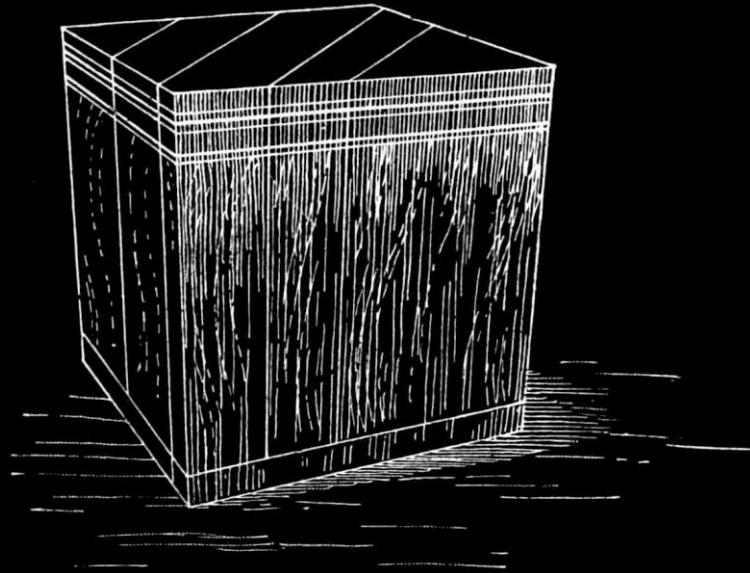


# WebGL



**2D Visualization** ➡

**CSS3 3D** ➡

**WebGL**



**FrameAnimation** ➡

**Flash**

**Java Applet**

# WebGL is...

- An API
- Based on OpenGL ES 2.0
- Combines with other web content
- Build for dynamic web applications
- Is cross-platform
- Is an open web specification

# Current Support:

# Canvas (basic support) - Candidate Recommendation							*Usage stats:		Global	
Method of generating fast, dynamic graphics using JavaScript							Support:		80.73%	
							Partial support:		4.8%	
							Total:		85.53%	
Show all versions	IE	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Blackberry Browser	IE Mobile
								2.1		
						3.2		2.2		
						4.0-4.1		2.3		
	8.0					4.2-4.3		3.0		
	9.0	23.0	28.0	5.1		5.0-5.1		4.0		
	10.0	24.0	29.0	6.0		6.0-6.1		4.1	7.0	
Current	11.0	25.0	30.0	7.0	17.0	7.0	5.0-7.0	4.2-4.3	10.0	10.0
Near future			31.0		18.0					

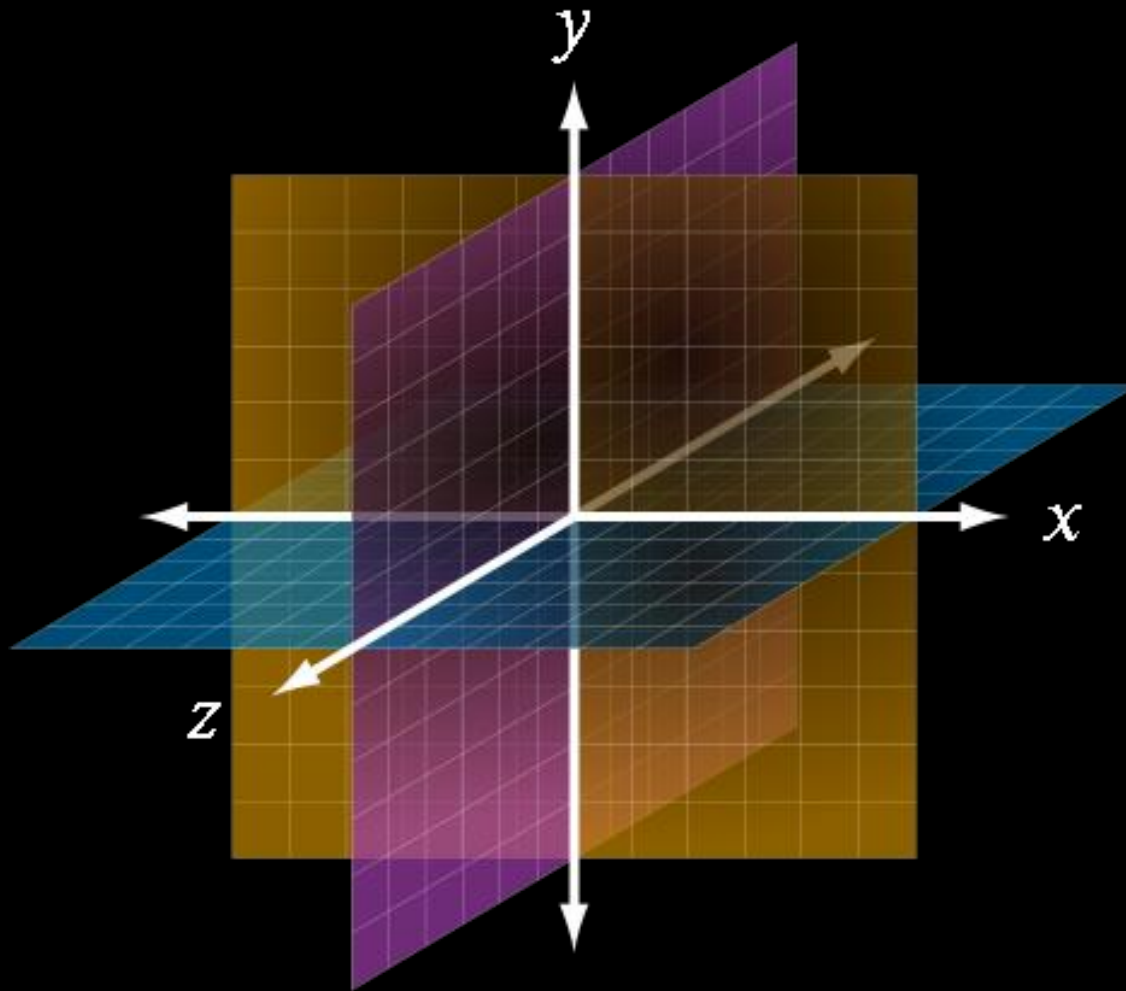
# WebGL - 3D Canvas graphics - Other							*Usage stats:		Global	
Method of generating dynamic 3D graphics using JavaScript, accelerated through hardware							Support:		32.43%	
							Partial support:		19.28%	
							Total:		51.71%	
Show all versions	IE	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Blackberry Browser	IE Mobile
								2.1		
						3.2		2.2		
						4.0-4.1		2.3		
	8.0					4.2-4.3		3.0		
	9.0	23.0	28.0	5.1		5.0-5.1		4.0		
	10.0	24.0	29.0	6.0		6.0-6.1		4.1	7.0	
Current	11.0	25.0	30.0	7.0	17.0	7.0	5.0-7.0	4.2-4.3	10.0	10.0
Near future			31.0		18.0					

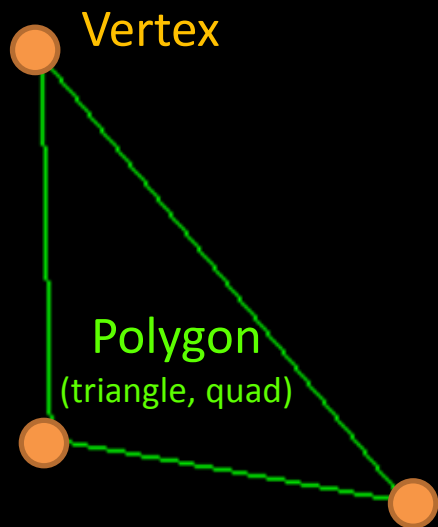
# Support CSS3D vs WebGL

# WebGL - 3D Canvas graphics - other										*Usage stats:		Global
Method of generating dynamic 3D graphics using JavaScript, accelerated through hardware										Support:		32.43%
										Partial support:		19.28%
										Total:		51.71%
Show all versions	IE	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Blackberry Browser	IE Mobile		
								2.1				
						3.2		2.2				
						4.0-4.1		2.3				
	8.0					4.2-4.3		3.0				
	9.0	23.0	28.0	5.1		5.0-5.1		4.0				
	10.0	24.0	29.0	6.0		6.0-6.1		4.1	7.0			
Current	11.0	25.0	30.0	7.0	17.0	7.0	5.0-7.0	4.2-4.3	10.0	10.0		
Near future			31.0		18.0							

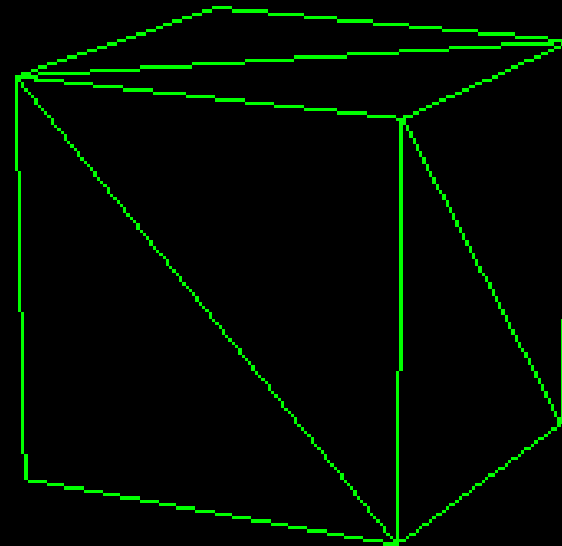
# CSS3 3D Transforms - Working Draft										*Usage stats:		Global
Method of transforming an element in the third dimension										Support:		63.51%
										Partial support:		10.36%
										Total:		73.87%
Show all versions	IE	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Blackberry Browser	IE Mobile		
								2.1				
						3.2		2.2				
						4.0-4.1		2.3				
	8.0					4.2-4.3		3.0				
	9.0	23.0	28.0	5.1		5.0-5.1		4.0				
	10.0	24.0	29.0	6.0		6.0-6.1		4.1	7.0			
Current	11.0	25.0	30.0	7.0	17.0	7.0	5.0-7.0	4.2-4.3	10.0	10.0		
Near future			31.0		18.0							

# Coordinate System





Polygon  
(triangle, quad)

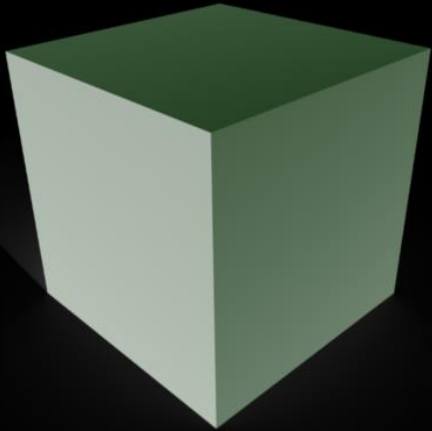


Mesh

Transform Matrix

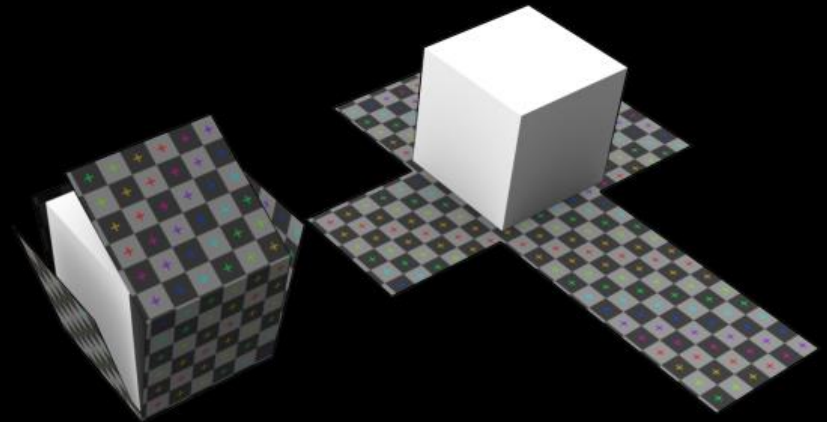
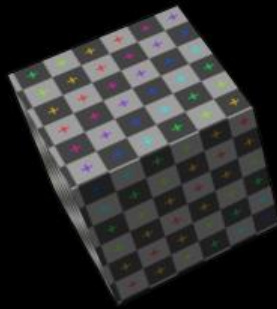
# Materials

Solid Color



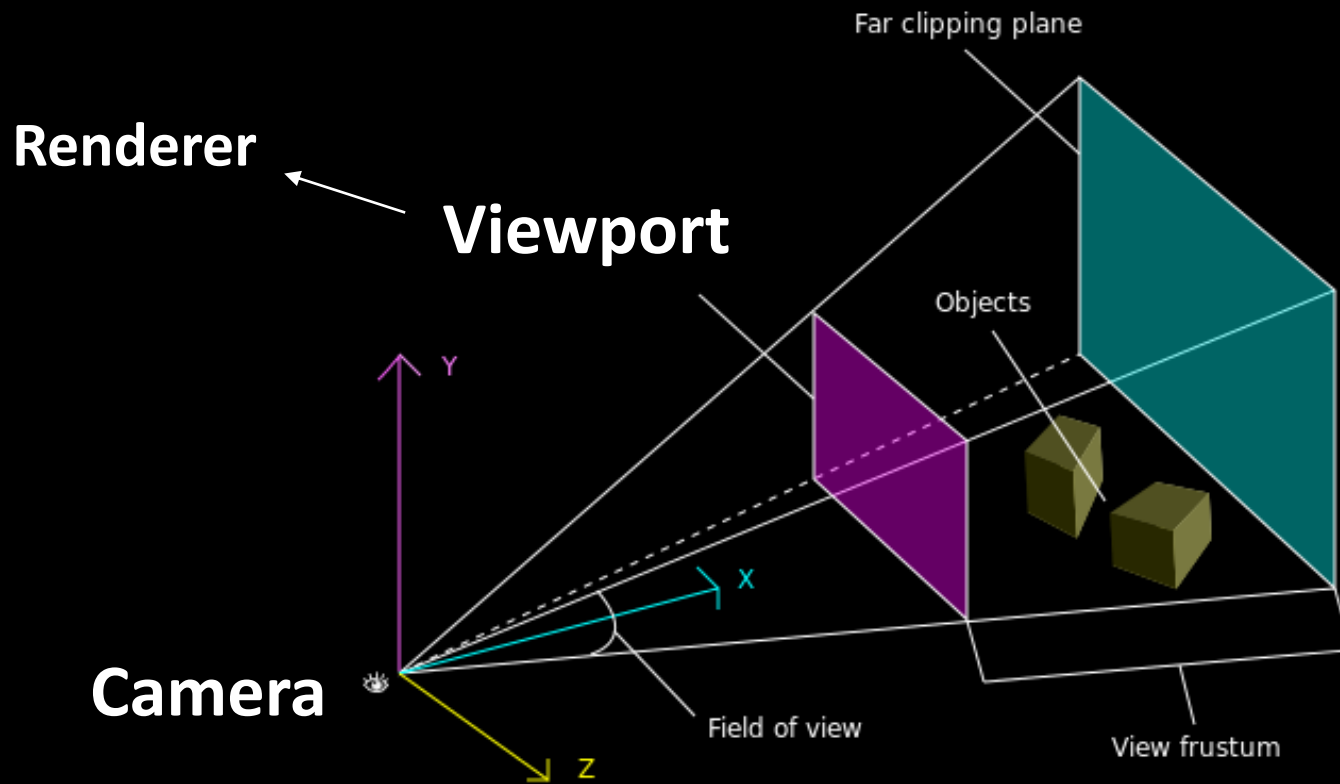
# Lights

Textures





# Scene



ThreeJs

SceneJs

**WebGL**

PhiloGL

GLGE

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