


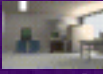


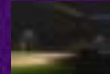
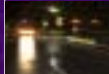
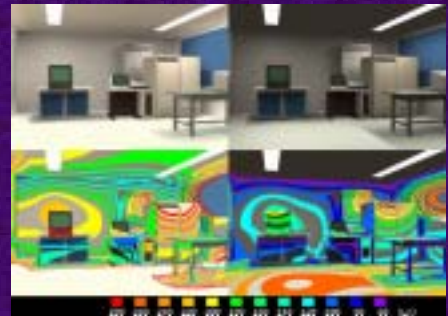


1: Illumination Model

many types of light sources & optical effects

linear	area	torus	cylindrical	sky light
				
1982				1986
radiosity (diffuse)	radiosity (specular)	spot light (scattering)	shafts of light (scattering)	diffraction
				
1985				

interreflection of light (Radiosity)


















1985 (first image in the world)

Univ. of Tokyo




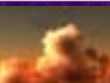
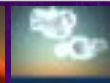










2: Rendering (Bezier clipping)

			
Ray tracing SIG87			
			
Scan line algorithm		Curved Tubular Objects	1992
			
Metaball EG87			GPU-based Metaball EG08

3: Natural Phenomena (1991-)

Terrain	mountains, dunes, stones, sands			
Atmosphere	sky color (skylight) fog effects, shafts of light			
Water	waves, caustics water color, shafts of light			
Natural Light	sunlight path through atmosphere, skylight, lightning			
Volumetric objects/gas	clouds, smoke/gas snow			

Clouds/smoke

				
	SIG87	Multiple scattering SIG96		
				
Image-based PG98		Cell auto. SIG2000		CFD PG2001
				
casa2006		sketch-based SIG2008		

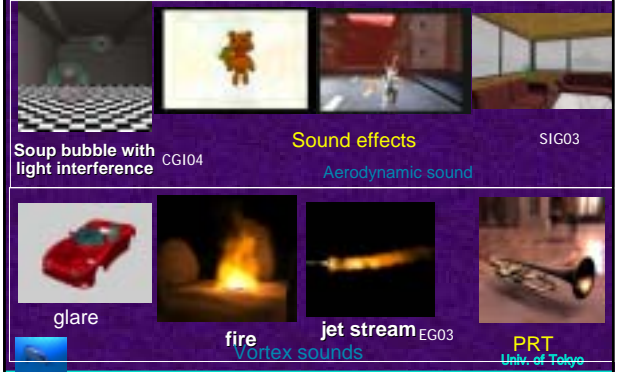
4: Visual impact

		
montage sig86		Illuminated by sky light
		
terrain model sig89		

5: Interactive Rendering (1)



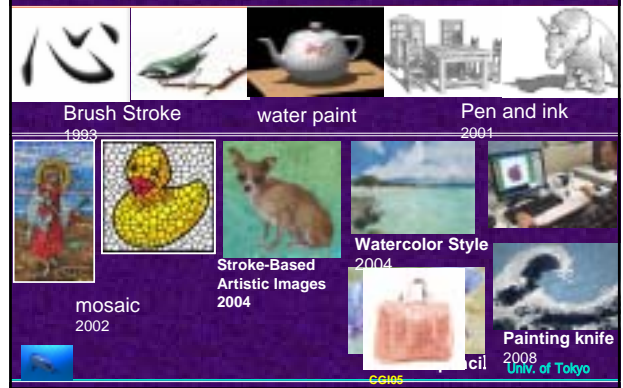
Interactive Rendering (2)



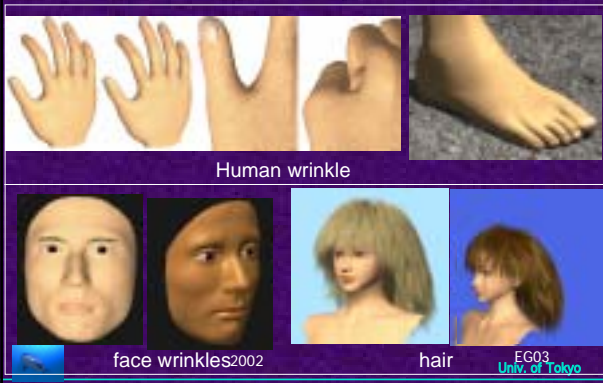
Interactive Rendering (3)



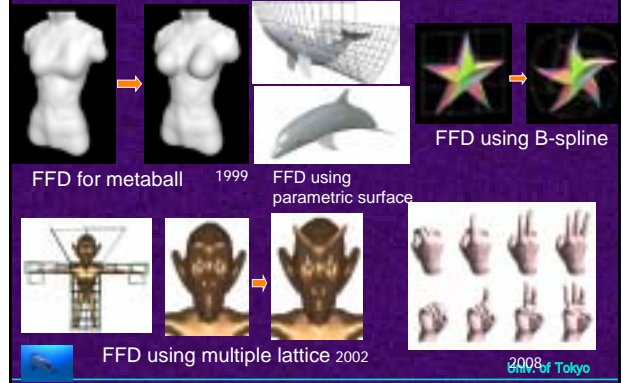
6: NPR



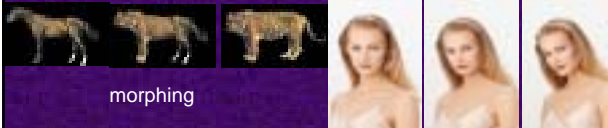
7: Human body



8: Deformation



9: 2D shape processing (8)



10: Lens simulation/Computational photography

