

Figure 10.1: Global and local compute work group dimensions

	A	B	C	D
t0	n = imageLoad(...) temp_storage[...] = n			
t1		n = imageLoad(...)		
t2			n = imageLoad(...) temp_storage[...] = n	
t3	n = temp_storage[...] imageStore(...)			
t4				n = imageLoad(...)
t5			n = temp_storage[...]	
t6				temp_storage[...] = n
t7				
t8		temp_storage[...] = n		
t9				n = temp_storage[...] imageStore(...)
t10			imageStore(...)	
t11		n = temp_storage[...] imageStore(...)		
t12				

Figure 10.2: Effect of race conditions in a compute shader

	A	B	C	D
t0	n = loadImage(...) temp_storage[..] = n barrier()			
t1		n = loadImage(...) temp_storage[..] = n		
t2			n = loadImage(...) temp_storage[..] = n barrier()	
t3		barrier()		
t4				n = loadImage(...) temp_storage[..] = n barrier()
t5			n = temp_storage[...]	
t6				n = temp_storage[...]
t7			imageStore(...)	
t8				imageStore(...)
t9		n = temp_storage[...] imageStore(...)		
t10	n = temp_storage[...] imageStore(...)			
t11				

Figure 10.3: Effect of barrier() on race conditions

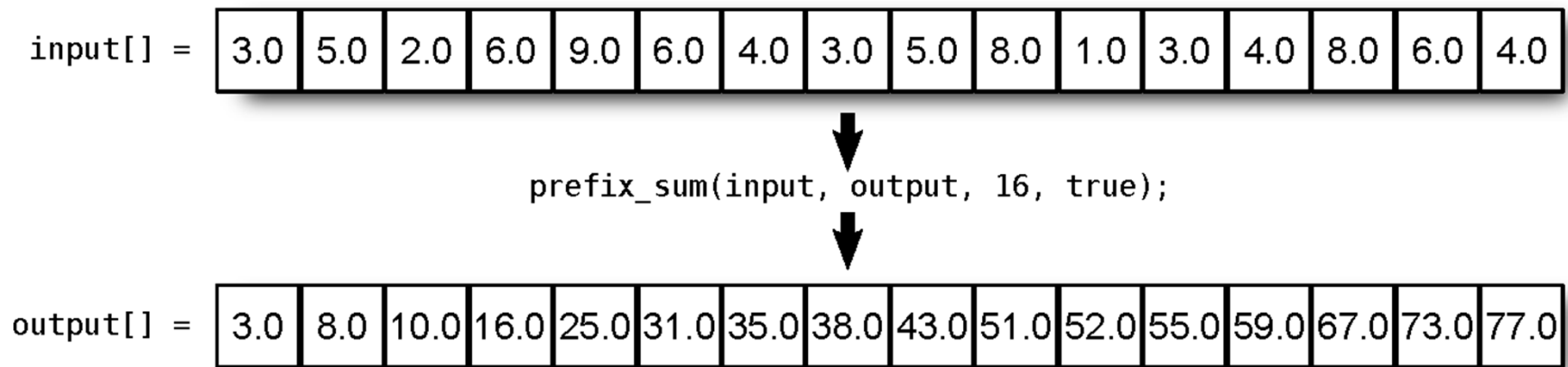


Figure 10.4: Sample input and output of a prefix sum operation

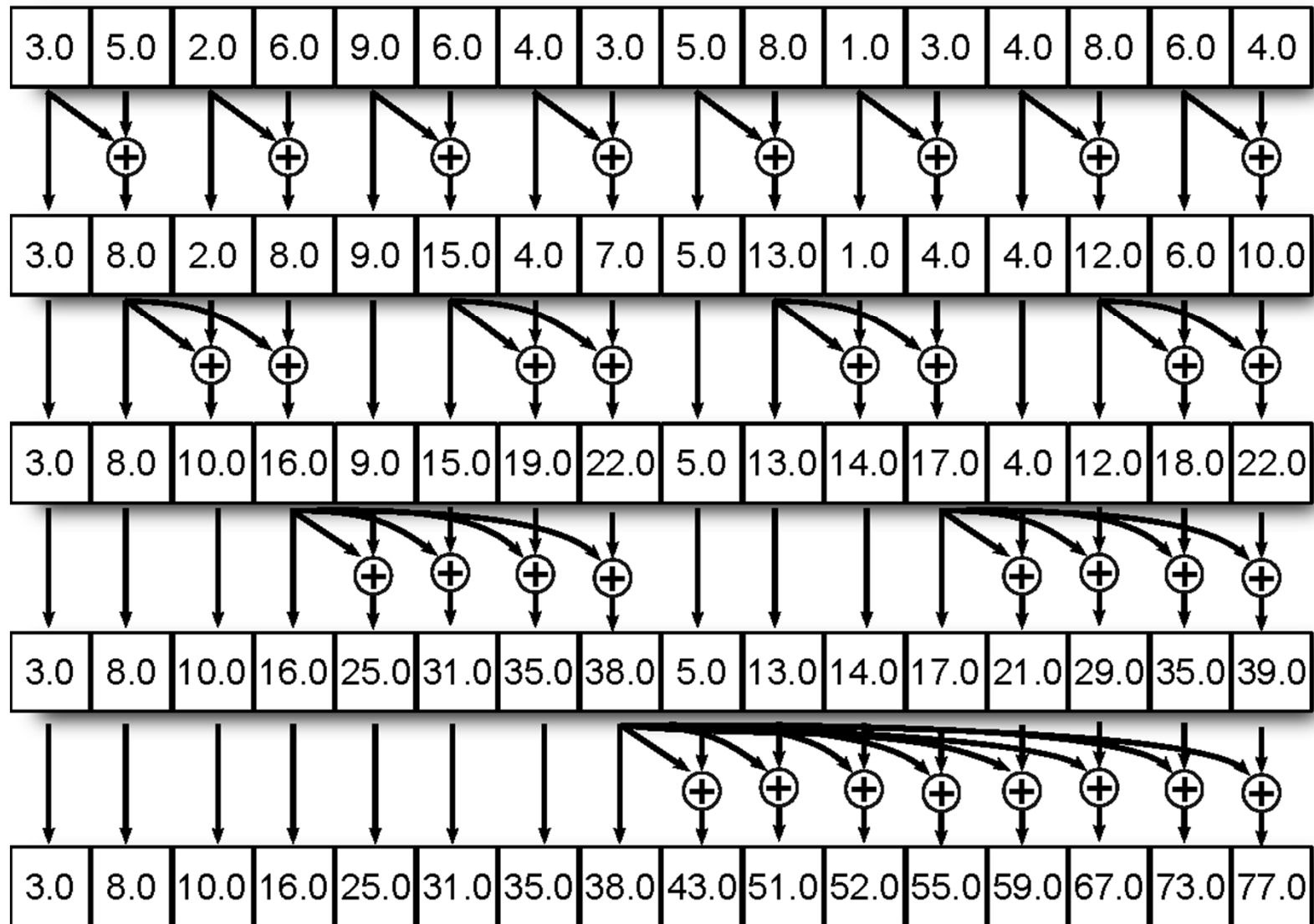


Figure 10.5: Breaking a prefix sum into smaller chunks

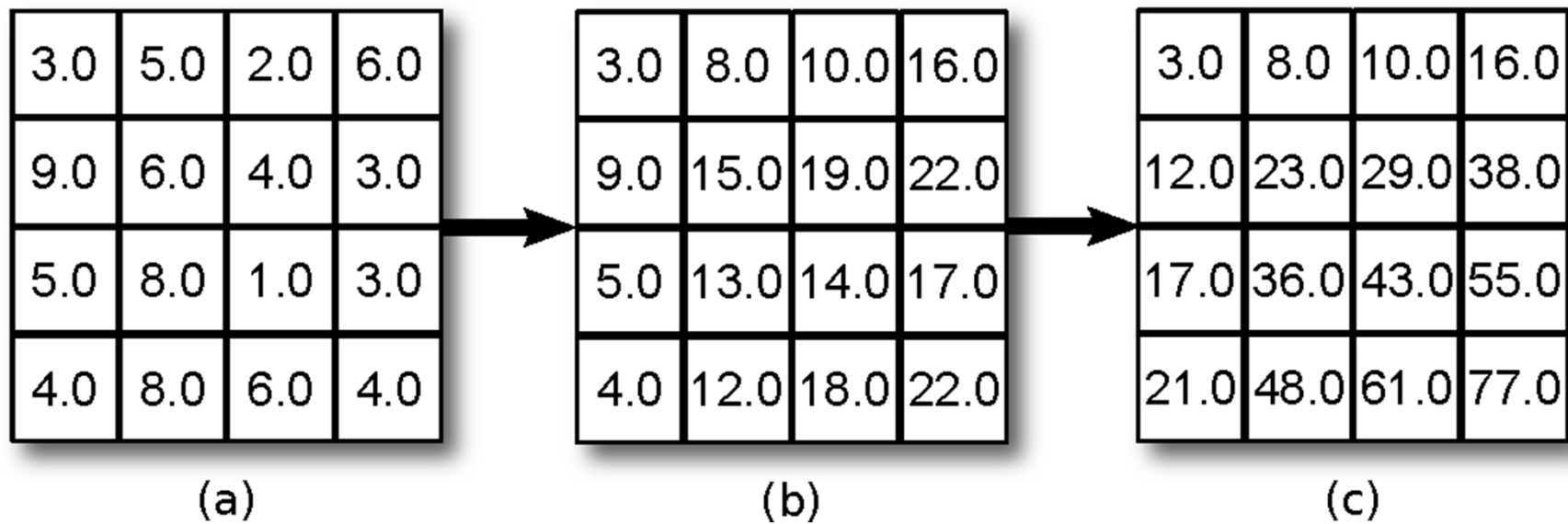


Figure 10.6: A 2D prefix sum

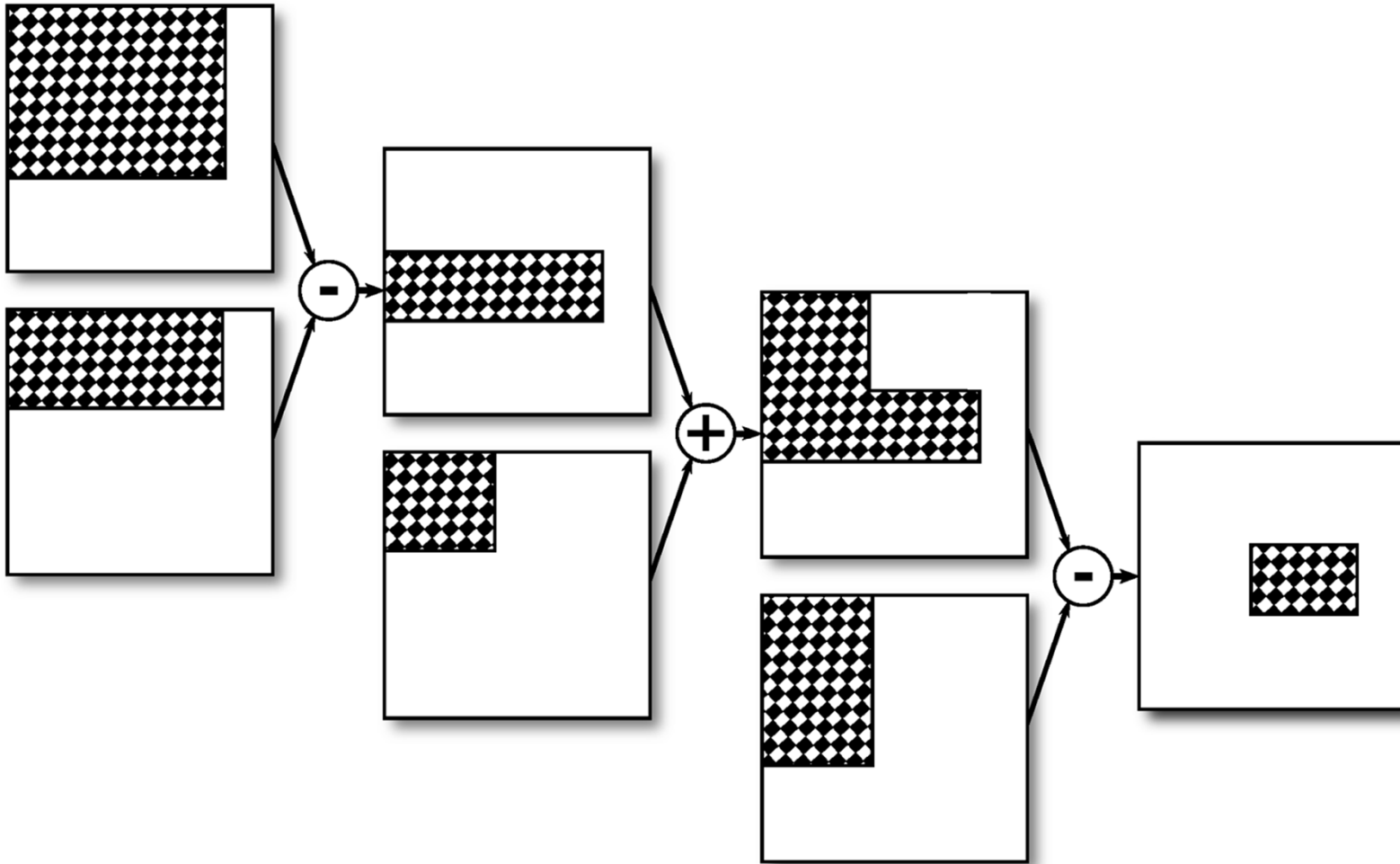


Figure 10.7: Computing the sum of a rectangle in a summed area table



Figure 10.8: Variable filtering applied to an image



Figure 10.9: Depth of field in a photograph

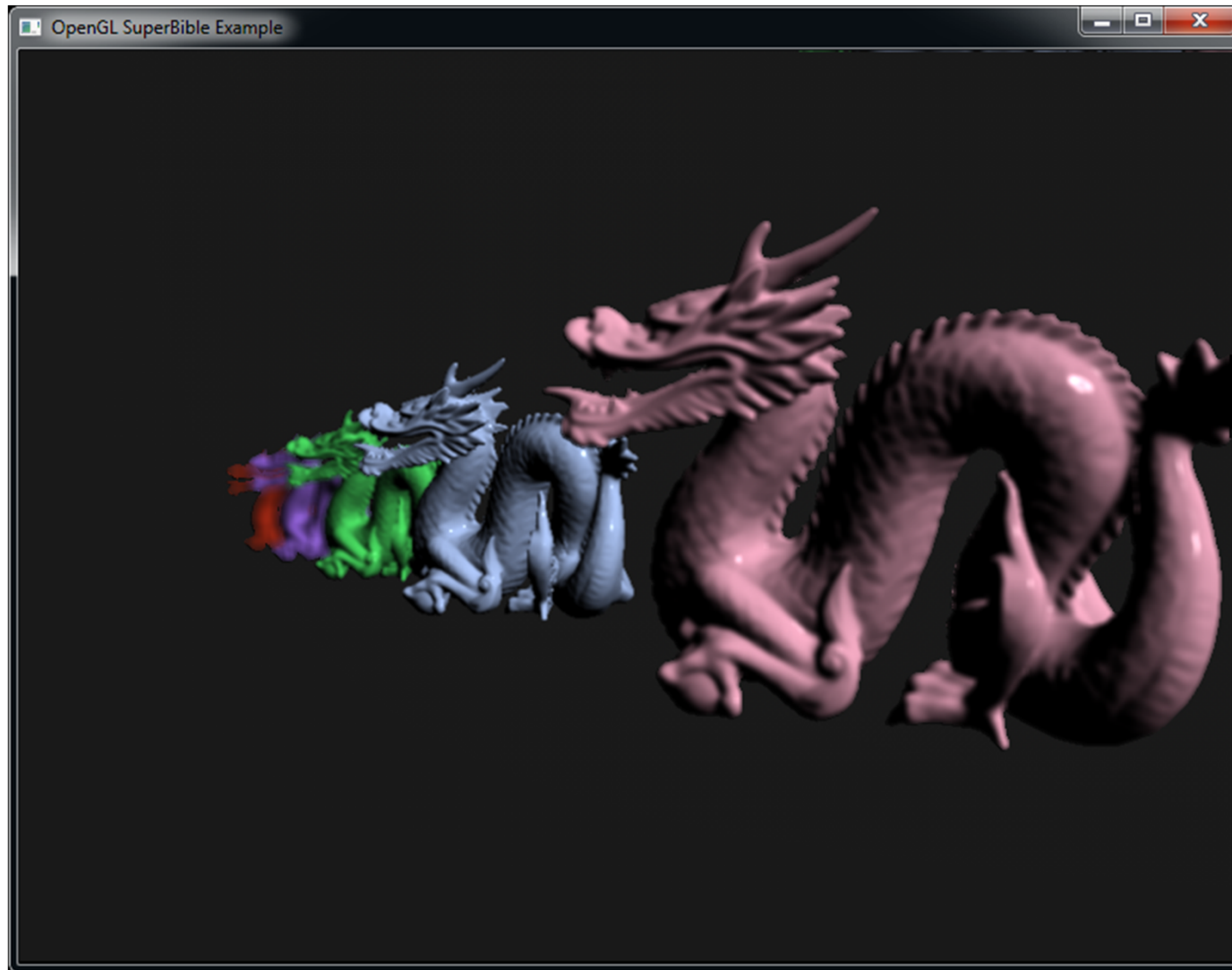


Figure 10.10: Applying depth of field to an image

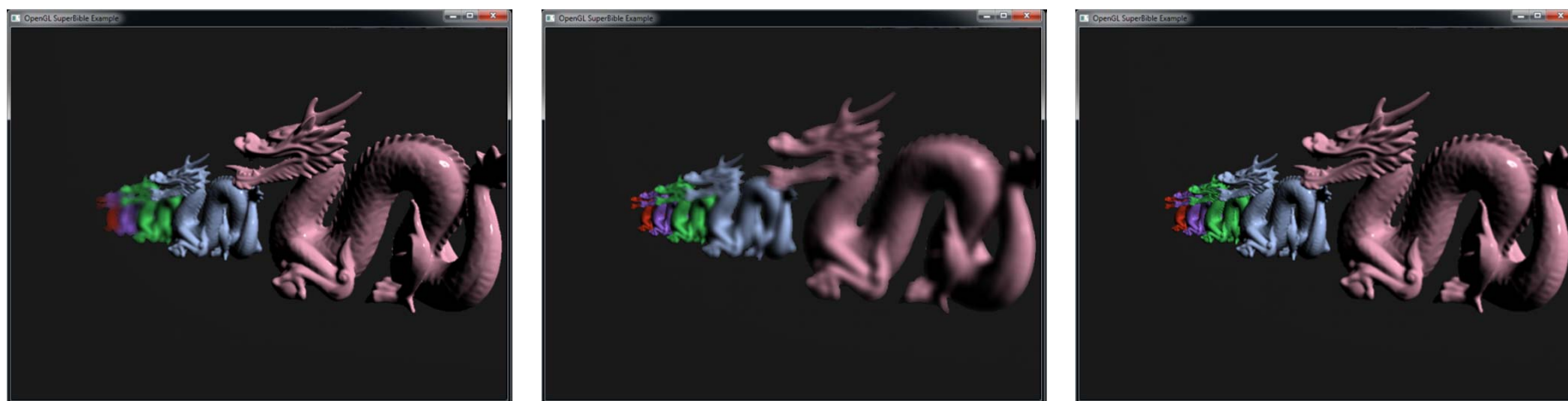


Figure 10.11: Effects achievable with depth of field

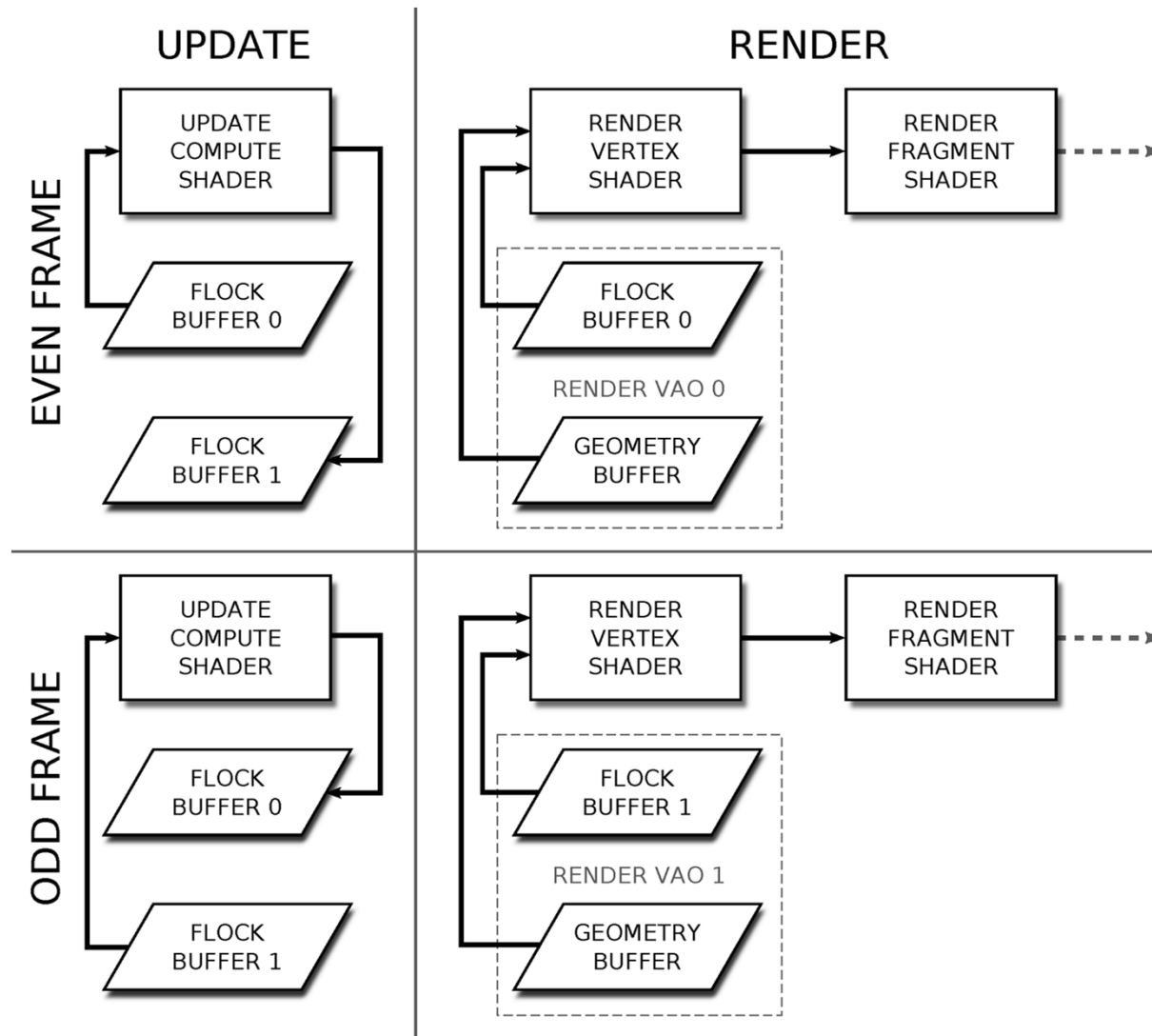


Figure 10.12: Stages in the iterative flocking algorithm

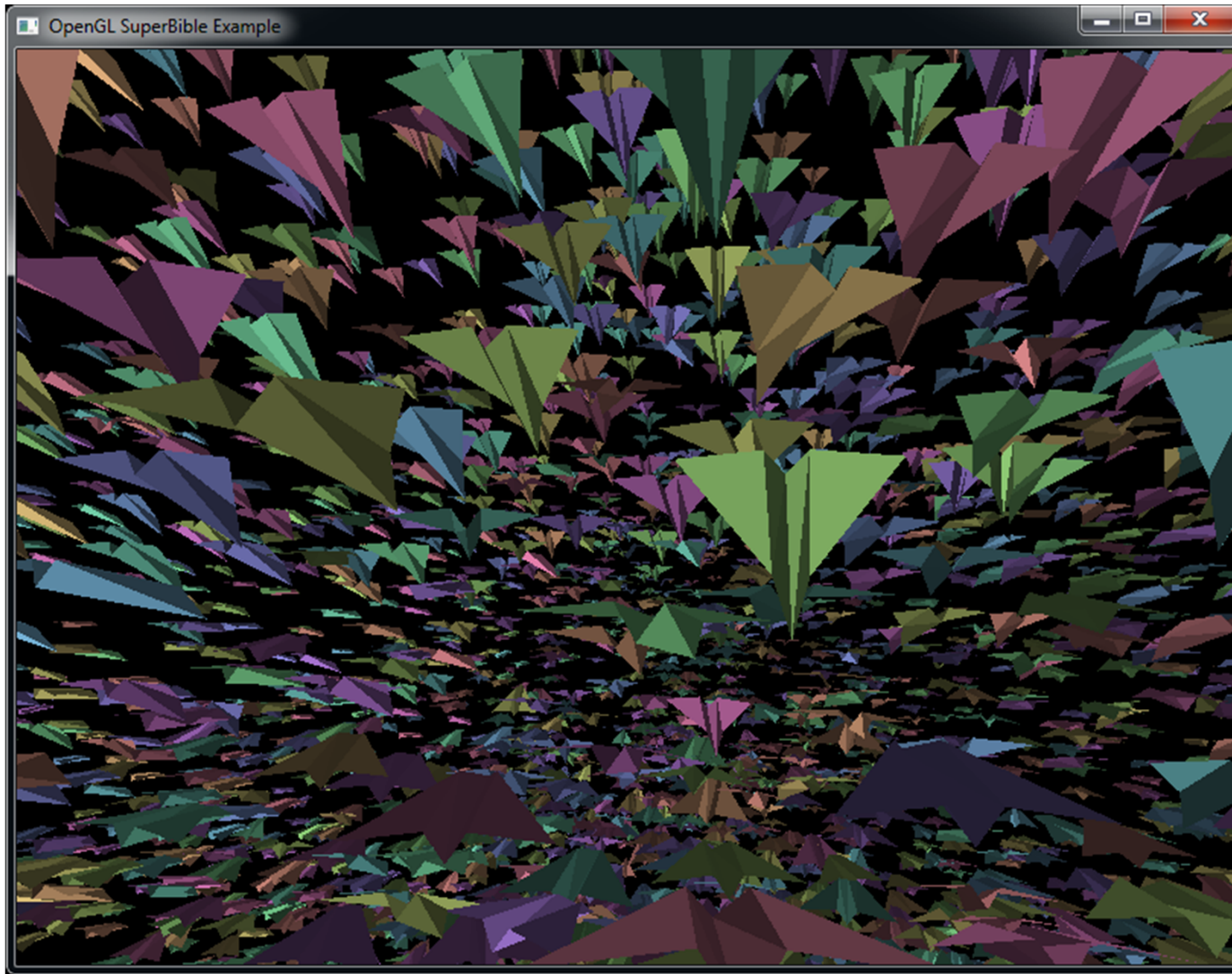


Figure 10.13: Output of compute shader flocking program