Table 4: Industrial HPCC Applications 11 to 13: SIMULATION

Item	Application Area and Examples	Problem Comments	Machine and Software
11 Sec. 4.1	Particle Transport Problems	Monte Carlo Methods as in neutron transport for (nuclear) explosion simulations	MIMD HPF
12	**Graphics** (rendering) • Hollywood • Virtual Reality (VRML needs parallelism?)	• Several Operational Parallel Ray tracers • Distributed model hard	HPF for simple ray tracing but MPF for best algorithms MIMD & Asyncsoft for distributed database
13	**Integrated Complex System Simulations** • Defense (SIMNET, DSI, Flight Simulators) • Education (SIMCITY) • Multimedia/VR in Entertainment • Multiuser Virtual Worlds • Chemical and Nuclear Plants	• Event Driven (ED) and • Time stepped (TS) simulations • Virtual Reality Interfaces • Database backends • Interactive	• Timewarp or other Event Driven Simulation needs Appropriate Asyncsoft • Integration Software • Database HPF+ for TS Simulation