ABSTRACT

Computing area progressed very significant every year , all these things made for a single purpose , make the size getting a compact device used for data processing and greater cooperation .According to supercomputer are am beowulf. 1 and mpp is very complicated and complex to be developed and takes charge of the large , While computer clusters can be built from computers as nodes with a lower price with a network of high-speed .A device that is getting old ditingggalkan and become pile was an idea to make use of some old computers into a single entity (parallel) having higher performance .Computer performance in parallel will increase computing time , this is what became the basis for the formulation of computer clusters .

Research duty end of this will discuss how low cost clusters can be used to working the case high-performance computing , in this case rendering animation .In rendering , absolute requiring the performance computer of particular importance .In indonesia own , producers animation have started to home , make renderfarm simple low-cost , will be an option efficient than rent or buy computers server high-cost .This research using pc desktop 32 node , to 1 master to make renderfarm .Operating system used is linux , with rendering tools that is a blender and brender .

The result of the research indicated that the increase in the number of node doubled not linear with increase the computing .Speed up best to ray tracing rendering acquired at the increase in 4 node to 8 node , namely 87 % , speed up cycles rendering best there are in improving 8 node to 16 node is as much as 89 % , and speed up motion capture best is in improving 16 node to 32 node , is as much as 85 % .

Key Word: computer cluster, high performance computing, rendering, renderfarm, animation, blender, brender.