The work aims to render real–time forest with lighting. Detailed tree models created by professional application are used. A point–based method for level of detail is used for tree model simplification and rendering. The rendering of forest is based on hierarchical view–dependent pseudo–continuous level of detail. The frustum culling is used for scene visibility testing. Novelty hierarchical impostor system is presented to speed up rendering. Two forest lighting models are used. First is directional diffuse lighting to simulate sun light and

the second is ambient only lighting model. The work includes implementation of rendering system using shader programs running on graphic card. Utilities are provided for obtaining data from XFrog tree modeling utility, for converting tree to format for viewing, for creating level of detail representation of trees and placing trees into the forest.