MeshQuery

Assumptions

- The mesh contains no data associated with triangles, and is hence degenerated into a point cloud.
  - Only a 3D mesh is supported.
- The point cloud is implemented as a k-d tree.
- Searching is done using the properties of the k-d tree e.g. splitting on appropriate axes to exclude subtrees.
- The main reference for this work was *"The design and analysis of spatial data structures"* by Hanan Samet, 1989. The implementation of the k-d tree follows the text.
- C++11 features are available in the form of the compiler switch -std=c++0x

Notes

- Generated documentation given in the *html* subdirectory.
- Binary *meshquery* is included for x86-64 Linux.
- A Makefile is included and the resulting binary is located in the *dist* subdirectory.
- The main() runs basic tests included in main.cpp, which should then write "All tests passed" to stdout, unless an assertion error is found.
- The *glm* header-only library is used to perform basic vector operations.