Areas of considerations

1. Data
2. Runtime/Platform constraints
3. SIRT
4. Data
   1. Input
      1. In what format will the data be fed to the program?
         1. Will it be in a raw text file, or a binary file, or some sort of database file? Or is the file format not going to be static, will it change from one data set to the next?
         2. The problem requires that I am given the coordinates of an event and its receiver, also the travel time between the two of the seismic wave. Will this always be the extent of the information provided? The example data set you sent me included distance data.
      2. Size of the data set? (i.e. upper and lower bounds)
         1. The example you emailed me had about eight hundred reports. Whereas in your office you showed me an example with a 500x500x500 grid, which brings the node count up to 125 million nodes. Resulting in an upper bound of about 125 million reports per event. At this size storing all the information in RAM starts to take up a very nontrivial amount of memory and warrants large considerations.
      3. Reusability of past information?
         1. If you are intending to repeat the process on the same rock volume over time, feeding old data back in as the assumed data could greatly improve runtime.
   2. Output
      1. What format should the output data conform to?
         1. Where do you the output to be sent? A text file, an excel file, a database, or something else?
         2. How should the data be arranged in the output file?
5. Runtime and Platform concerns
   1. Runtime
      1. How quickly do you need the program to take a given input and deliver output?
   2. Platform
      1. Where do you intend to run this program? Will it be on your laptop or something with much larger resources?
      2. How much of the platforms resources (memory, both RAM and hard drive memory, as well as CPU usage) can this program use? Would you be running this by itself or while performing other tasks?
6. SIRT
   1. I could really use another face to face session to get a better understanding of SIRT.