Assumptions

When developing our software, we had to make a number of assumptions in order for us to be able to feasibly develop the software. Assumptions are an inherent part of software development, as throughout the entire development process, be it developing an algorithm or a user interface, we have to have some assumptions in place like the environment it will run in, or the expected user capability. The difference between an assumption from a specification is that assumptions aren’t explicitly provided to the developer, hence the developer has to make these assumptions on his own (Lewis et. Al 2004).

For our application, we too have made a couple of assumptions during the design process of the application. These assumptions are divided into 2 parts:

* Resources

It is technically unfeasible to make an application to be compatible with all kinds of computers, as there is such a large variety of computers available out there, from Windows PCs to Linux workstations and Macintosh computers, in addition to various form factor like desktops, embedded systems, laptops and tablets. Many of them come with various specifications too, some being more powerful than the others.

However, to ensure wide appeal and availability of our software, we are assuming that the customer would be using a Windows machine, as Windows computers are one of the most widely used computers in the market. We are specifically going to be building our application to be fully compatible with Windows 8 and above on the basis that it is currently the oldest version of Windows with full support from Microsoft. Windows 7 and prior is no longer getting mainstream support, which means it is about to be phased out in a few years. As we would like to ensure our application is futureproof and is able to take advantage of the new technologies released in Windows 8 and on, hence we chose to have Windows 8 as the minimum OS required for our application.

In addition, we are assuming that the user has access to a computer running an x86/x64 architecture, like a mainstream Intel or AMD chip. The main reason we aren’t supporting ARM based Windows 8 devices like the Surface RT is due to the lack of the number of people using such devices. It would be expected that the computer being used should have at least a single core 1GHz processer, with at least 1GB of RAM and at least 2GB of free hard disk space (however it is likely the final amount of hard disk space used would be less). We don’t require the computer to have a dedicated graphics card in our application, as we won’t be tapping into the power of a graphic card.

Essentially our system requirements are pretty similar to the minimum requirements for Windows 8, and in general any modern computer able to run Windows 8 will be able to run our application.

As part of our stretch goals, if we are able to implement support for VR and interaction using a digital steering wheel, we would assume that the user has a digital steering wheel connected over USB and an Oculus Rift VR headset.

* User skills

In terms of user skills, we would expect that in general the user should be able to install software using a wizard. It would be expected that the user is able to read instructions in English, and follow the instructions in the installation wizard to setup the software on his/her machine.

In addition, to use the software, we are under the assumption that the user is at least able to control a mouse properly and knows how to point, click and move the mouse around. The user is also assumed to have reasonably good vision and is able to read and understand English at least, as we don’t have any plans at the moment to setup any form of accessibility assistance like black and white display or a magnified interface.

http://resources.sei.cmu.edu/asset\_files/TechnicalNote/2004\_004\_001\_14327.pdf