Steering wheel (EI)

**FTR:** 0

Input comes directly from the steering wheel device, no files are involved

**DET:** 1

Heading change

Accelerator pedal (EI)

**FTR: 0**

Input comes directly from the accelerator pedal, no files are involved

**DET:** 1

Speed Increase

Brake pedal (EI)

**FTR: 0**

Input comes directly from the brake pedal, no files are involved

**DET:** 1

Speed decrease

Gear shifter (EI)

**FTR:** 0

Input comes directly from the gear shifter, no files are involved

**DET:** 1

New gear

Dash display (EO)

**FTR:** 0

No files are involved, input comes directly from the cars systems into the dash display

**DET:** 1

Dash information

Speakers (EO)

**FTR:** 1

Sound data file

**DET:** >50

All sound files

Windshield display (EO)

**FTR:** 2

Map database

Environmental database

**DET:** 2

Map data

Environmental data

Feedback module (EO)

**FTR:** 0

No files are involved, input into the feedback module comes directly from the physics calculator

**DET: 1**

Feedback response

Instructor display (EO)

**FTR:** 2

Map database

Environmental database

**DET:** 2

Map data

Environmental data

Record simulation statistics (EO)

**FTR:** 1

Driver profile database

**DET:** 1

Session statistics

Display current simulation statistics (EO)

**FTR:** 0

**DET:** 1

Session statistics

Select map (EQ)

**FTR:** 1

Map Database

**DET:** 1

Map data

Select scenario (EQ)

**FTR:** 1

Environmental database

**DET:** 1

Environmental data

Physics calculator (EQ)

**FTR:** 0

**DET:** 1

Speed increase

Speed decrease

Heading change

Feedback response

Map database (ELF)

**RET:** 1

Map data

**DET:** 10

The product would probably be delivered with about 10 maps to start

Environmental database (ELF)

**RET:** 1

**DET:** 10

The product would probably be delivered with about 10 environmental scenarios to start

Driver profile database (ILF)

**RET:** 1

Driver profiles

**DET:** 3

Name

Identification number

Session statistics record

VAF

1. Does the system require reliable backup and recovery: 3

2. Are specialized data communications required to transfer information to or from the application: 5

3. Are there distributed processing functions: 3

4. Is performance critical: 5

5. Will the system run in an existing heavily utilized operation environment: 0

6. Does the system require on-line data entry: 5

7. Does the on-line data entry require the input transaction to be built over multiple screens or operations: 5

8. Are ILFs update on-line: 5

9. Are the inputs, outputs, files, or inquiries complex: 3

10. Is the internal processing complex: 3

11. Is the code designed to be reusable: 5

12. Are conversion and installation included in the design: 0

13. Is the system designed for multiple installations in different organizations: 1

14. Is the application designed to facilitate change and for ease of use by the user: 5

1. Back up is needed for the driver profile database.

2. Being a visual simulator communication of how the data is highly critical for the training process.

3. The simulator is one large device that contains all the needs for processing, within the simulator there are a few distributed processes. The inputs pass through the physics calculator then passed to the outputs.

4. Performance is highly critical because this needs to simulate real-life driving as much as possible for proper training.

5. The system is new and large so it will be in its’ own environment.

6. An instructor will input the data needed such as the environment and map data.

7. The simulation video will need to go to both a view screen inside the simulator and an external screen for the instructor to observe.

8. The driver database will be updated at the end of each session.

9. Most are simple feeds of data, the most complex being the physics calculator.

10. The most complex internal processing is the conversion of the data to the visual output.

11. The code should be designed to be reusable and easily updated so the simulator can have lasting value.

12. The simulator will not need these included. It should be fully installed on arrival.

13. As a whole many organizations can use the simulator, but it is a buy one get one product and so it will be installed onto its hardware and that will be it. From there it should only be updated.

14. It is important that the instructor or main operator can change and set up the simulator. Also, if there are updates to the software or databases these should be easily implemented.

|  |  |
| --- | --- |
| Type of component | Complexity of components |

|  |  |
| --- | --- |
| Total number of unadjusted function points | 67 |
| Multiplied value adjustment factor | 1.13 |
| Total adjusted function points | 76 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Low | Average | High | Total |
| External Inputs | 4x3= | x4= | x6= | 12 |
| External Outputs | 6x4= | 1x5= | x7= | 29 |
| External Inquiries | 3x3= | x4= | x6= | 9 |
| Internal logical files | 1x7= | x10= | x15= | 7 |
| External logical files | 2x5= | x7= | x10= | 10 |