

10.0 FEMIS Evacuation Applications

The FEMIS Evacuation interface (`fmevac.exe`) resides on the PC. The Evacuation SIMulation (ESIM) model resides on the UNIX server and is invoked by the Evacuation interface via the FEMIS command server (see Section 4.0, FEMIS Command Server). Import, export, and post processing utilities also reside on the UNIX server to pass information between the ESIM model and the FEMIS database. These utilities, like ESIM, are invoked by the Evacuation interface through the FEMIS command server.

10.1 FEMIS Command Server

The command server is used by the Evacuation interface via the following three paths:

- File-->Import... (Uses `fmevacim` utility on the UNIX server)
- File-->Export... (Uses `fmevacex` utility on the UNIX server)
- File-->Run Case (Uses `fmevacex`, `fmevacrn` (ESIM), `fmevacpp` utilities on the UNIX server).

10.1.1 Import Function

The import function allows the user to import an existing ESIM or IDYNEV evacuation case into the FEMIS database. Once it is in the FEMIS database, it may be run, modified, and/or exported.

10.1.2 Export Function

The export function allows the user to export an existing evacuation case from the FEMIS database to a flat file. This evacuation input file may then be imported elsewhere.

10.1.3 Run Case Function

The run case function extracts input information from the database to create an ESIM input file, runs ESIM, and places the model output into the FEMIS database for reporting/animation.

10.1.4 Operation Status

If the command server is invoked for any of the above operations, a Working bar will appear on the Evacuation interface. When the operation is complete, the command server notifies the Evacuation interface, and the appropriate message is displayed to the user. In addition to waiting for a response from the command server, the Evacuation interface polls the command server for a status every 8 seconds. If the process is still running, the Working bar is updated. Therefore, if the Working bar is updating about every 8 seconds, then the function is still operating.

Note: The working bar does not accurately reflect the percent completion status of the job.

10.2 Directories and Files

Each FEMIS evacuation case has its own directory on the UNIX server. This directory may contain input and output files for the case as well as command server logs for the case. Most of these files may be accessed via the Evacuation interface from File → View Output Reports. Below are lists of possible import and export/execute files for each case on the UNIX server:

Import Files:

casefile.rni	Output log for import program
casefile.ini	Control file for import program
nnnnnnn.eri	Log file from command server for import

Export/Execute Files:

nnnnnnn.in	Input file created by export
nnnnnnn.1	ESIM output link statistics
nnnnnnn.2	ESIM output signal information
nnnnnnn.3	ESIM output centroid information
nnnnnnn.4	ESIM output loading information
nnnnnnn.5	ESIM output summary statistics
nnnnnnn.6	ESIM output network-wide vehicle statistics
nnnnnnn.7	ESIM output error report
nnnnnnn.grf	ESIM output link statistics (unused)
nnnnnnn.out	ESIM output cumulative link statistics (unused)
nnnnnnn.inx	Control file for export
nnnnnnn.rnx	Log file from export program
nnnnnnn.inr	Control file for model
nnnnnnn.rnr	Log file from model
nnnnnnn.inp	Control file for post processor
nnnnnnn.rnp	Log file from post processor
nnnnnnn.erx	Log file for command server for export
nnnnnnn.err	Log file for command server for run
nnnnnnn.erp	Log file for command server for post processor
nnnnnnn.ere	Log file for command server for execute.

The directory for a particular case may be found by starting at the directory referenced by FemisUserTopDirNFS in the FEMIS.INI file. From here, the case should be in the subdirectory /evlog/<case id>/e<exercise number>. If you want to find the case ID for your current case, you will find it in the header of any of the output files available under View Output Reports under File, with the exception of the one listed as Error Report.

10.3 Evacuation and the GIS

Evacuation network information is stored in the database. If users want to view this information on a particular PC, they must click the File → Create Network. The Create Network option uses the most recent graphical information for your current evacuation case to create a network diagram in the GIS. Once Create Network has been selected for a particular case on a particular PC, it does not need to be repeated unless the network is updated on a different PC. When you first open a case, a message will inform you if you need to run Create Network or if you need to execute the case.

10.4 Show Status

To check the status of your current case, click the Show Status button on the main Evacuation window. A message will appear saying whether your local copy of the evacuation network is current and whether the case has been run.

10.5 Oracle Tablespace

Evacuation data require a significant amount of tablespace in the database. It is recommended that you closely manage the evacuation cases in the database. For example, delete cases that you do not want to keep, and do not copy evacuation cases into exercises unless absolutely necessary.

10.6 Troubleshooting for Evacuation Utilities

If for some reason, you cannot import or run an evacuation case through the FEMIS PC interface, you may do so via UNIX scripts as listed below.

Note: Importing or running an evacuation case from the UNIX side should be treated as a last resort for debugging purposes. Running cases through the user interface is the preferred method for importing and running cases.

To import the ESIM model, copy the case to be imported to the EVLOG directory, e.g., /home/femis/user/evlog/1/e0/tead.tdt. Then run a script similar to the following, but substitute your local site values for the values in the example.

```
#!/bin/sh
cmdserv - 9015 <<EOD
run import
```

```
DEBUG=Y
IDYNEV=N
CASEID=1
EXERNUM=0
FILENAME=tead.tdt
DATABASE=fi6
```

```
USERNAME=AEMA  
PASSWORD=AEMA  
WHERE=NW
```

```
EOD
```

To execute the ESIM model, run the following script.

```
#!/bin/sh  
cmdserv - 9015 <<EOD  
run execute
```

```
DEBUG=Y  
IDYNEV=N  
CASEID=1  
EXERNUM=0  
FILENAME=tead.tdt  
DATABASE=fi6  
USERNAME=AEMA  
PASSWORD=AEMA  
SUBCODE=ere
```

```
EOD
```