

# FabSim

## FabSim Interactive

for MS Windows

### Download and starting instructions for demo versions

#### FabSim Demo

Download fab.zip or fab.exe and store in any directory of your choice. To use fab.zip, you will need an unzipping tool like WinZip. Fab.exe is also a zipped file, but is self extracting.

Start extraction by double clicking on fab.exe. A window showing the self-extracting archive opens and asks if file should be extracted into the chosen folder. If you want to store the files into another folder, type in it's name or press the "Browse" button which opens a folder search box. If your selection is o.k. you may choose to overwrite or rename files if the folder already exists and you want to update. Fab.exe then extracts all files into the folder of your choice.

For example if you have chosen the standard C:\fab\_sim, you now will find the following files in C:\fab\_sim: fab\_start.bat, fab\_start\_NT.bat, FAB\_START\_ME, FabSim5.exe, FABSIMSTART.HLP, FabSim\_manual.pdf, and getting\_started.txt.

If you use WinZip, select a folder, e.g. C:\fab\_sim, select "Use folder name" and then choose "Actions" and "Extract" to copy the files into this folder.

The \*.bat files and FAB\_START\_ME contain a definition of where to find the \in and \out folders and a sequence of 4 simulation runs being executed as batch processes. FabSim5.exe is the executable. FABSIMSTART.HLP a Windows help file with detailed instructions how to use FabSim, getting\_started.txt gives some information on the 4 simulation runs.

There are now two subdirectories:

C:\fab\_sim\in contains necessary input files for the demo simulation. You will find flow chart files 1000.proc, 10000002.proc (rework flow chart), 2000.proc, and 2009.proc (scrap lot flow chart). Lot\_sequence.strt and lot\_single.strt define two lot start sequences for different demo runs. Mach\_dat.fto is a from-to matrix with transport times for lot transport between toolsets. Mach\_dat.mset and mach\_dat2.mset are toolset definition files.

C:\fab\_sim\out contains three of FabSim's EXCEL data evaluation tools. EVAL\_ct.xls will plot cycle time vs. lot start time, EVAL\_fablog.xls helps to evaluate the created \*.log file, EVAL\_use.XLS will plot toolset usage for each toolset.

Start simulation demo by double clicking on fab\_start.bat in C:\fab\_sim. If you run Windows ME, you should double click on FAB\_START\_ME, if running NT, XP, Vista, 7, you may double click on fab\_start\_NT.bat.

Simulation now runs for a few seconds. Four simulation sessions are performed.

Several output files are created: In C:\fab\_sim you will find run1.log to run4.log which contain some console log outputs for the 4 sessions. In \out now you will find a lot of new output files. Four groups of files have been generated, each starting with a different name (fab\_sim, new, new2, newp1) determined by the command line option -out in the batch file fab\_start.bat. The file name endings \*.out and others denote the different file types. \*.out lists all lots processed and ready. \*.log prints an output for each lot entering a machine (-d option on the command line). \*.use lists the usage of each toolset and the average waiting time of lots. For the content of the other files (\*.buf, \*.occ, \*.scp, \*.tra, \*.exo) please refer to FABSIMSTART:HLP, chapter 3.5 "Output files".

Data evaluation and plotting is offered by several EXCEL evaluation tools. With FabSim Demo there are available EVAL\_ct.xls, EVAL\_fablog.xls, EVAL\_use.xls. EVAL\_ct.xls will plot cycle time versus lot start or lot out time. You will need MS EXCEL to make use of these tools. Double click on EVAL\_ct.xls in MS Explorer, select the appropriate output file (type \*.exe, which is similar to \*.out) and plotting will start. EVAL\_fablog.xls allows to analyze the \*.log file. EVAL\_use.xls will plot the toolset usage (in percent) versus toolset name.

## **FabSim Interactive Demo**

Download FabSimDemo.zip or FabSimDemo.exe and store in any directory of your choice. To use FabSimDemo.zip, you will need an unzipping tool like WinZip. FabSimDemo.exe is also a zipped file, but is self extracting.

Start extraction by double clicking on FabSimDemo.exe. A window (entitled FabSim Interactive 2.7 Demo) opens and asks if file should be extracted into folder C:\fab\_sim\_int. If you want to store the files into another folder, type in it's name or press the "... " button which opens a folder search box. If your selection is o.k. you may choose "Overwrite" if the folder already exists and you want to update. Then press the "Start" button. FabSimDemo.exe now extracts all files into the folder of your choice.

For example if you have chosen the standard C:\fab\_sim\_int, you now will find the following files in C:\fab\_sim\_int: fab\_start.bat, FabSim5.dll, FABSIMSTART.HLP, FabStart5.exe, and getting\_started\_dll.txt.

If you use WinZip, select a folder, e.g. C:\fab\_sim\_int, select "Use folder name" and then choose "Actions" and "Extract" to copy the files into this folder.

The \*.bat file contains a definition of where to find the \in and \out folders and a sequence of 4 simulation runs being executed as batch processes. FabStart5.exe is the supervisor program, FabSim5.dll the simulator executable. FABSIMSTART.HLP a Windows help file with detailed instructions how to use FabSim Interactive, getting\_started\_dll.txt gives some information on the 4 simulation runs.

There are now two subdirectories:

C:\fab\_sim\_int\in contains necessary input files for the demo simulation. You will find flow chart files 1000.proc, 10000002.proc (rework flow chart), 2000.proc, and 2009.proc (scrap lot flow chart). Lot\_sequence.strt and lot\_single.strt define two lot start sequences for different demo runs. Mach\_dat.fto is a from-to matrix with transport times for lot transport between toolsets. Mach\_dat.mset and mach\_dat2.mset are toolset definition files.

C:\fab\_sim\_int\out contains three of FabSim's EXCEL data evaluation tools. EVAL\_ct.xls will plot cycle time vs. lot start time, EVAL\_fablog.xls helps to evaluate the created \*.log file, EVAL\_use.XLS will plot toolset usage for each toolset.

Start simulation demo by double clicking on FabStart5.exe in MS Explorer from folder C:\fab\_sim\_int. The interactive control window opens. Start simulation by clicking on the "Run Batch" button. FabStart5.exe will read in fab\_start.bat, and after loading FabSim5.dll, it will start the four simulation runs set in fab\_start.bat as batch processes.

Simulation now runs for a few seconds. Four simulation sessions are performed.

Several output files are created: In C:\fab\_sim\_int you will find console.log which contain some console log outputs for the 4 sessions. In \out now you will find a lot of new output files. Four groups of files have been generated, each starting with a different name (fab\_sim, new, new2, newp1) determined by the command line option

–out in the batch file fab\_start.bat. The file name endings \*.out and others denote the different file types. \*.out lists all lots processed and ready. \*.log prints an output for each lot entering a machine (-d option on the command line). \*.use lists the usage of each toolset and the average waiting time of lots. For the content of the other files (\*.buf, \*.occ, \*.scp, \*.tra, \*.exo) please refer to FABSIMSTART:HLP, chapter 3.5 “Output files”.

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