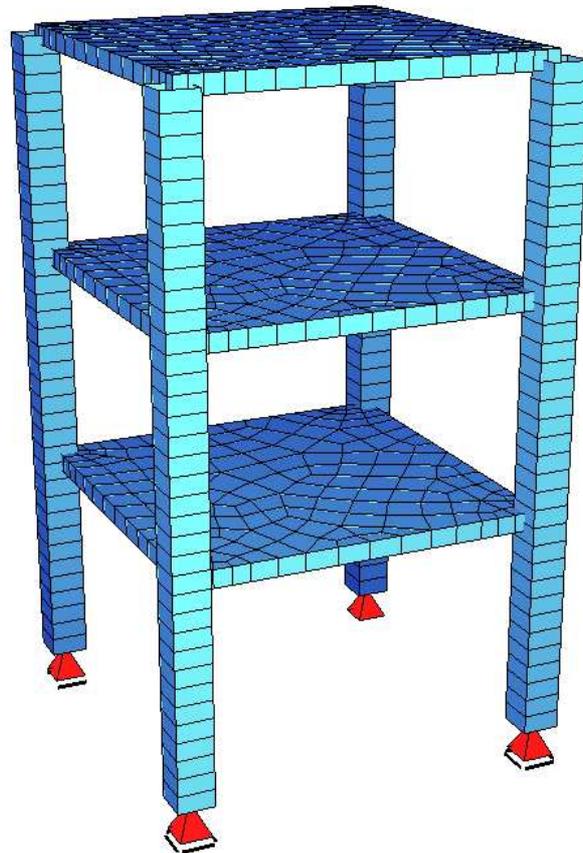


Feature example

Import of data into

SOFiMSHA



1 Description

This example shows how to import a system from another database using record IMPO in SOFiMSHA.

1.1 Creating Import System

Before you can import a system it has to be defined. For that you have to do the following steps:

- Create a new SSD project – project name “impo”
- System: 3D FEA
- SOFiSTiK coordinate system and orientation of dead load: positive z-axis

Insert a new cross section:

- Rectangle: width = height = 0.5m

Open SOFiPLUS(-X) via doubleclick on “GUI for Model Creation (SOFiPLUS(-X))”

- Draw four structural lines with the cross section defined above:
 - start: 0,0,0; end: 0,0,3
 - start: 5,0,0; end: 5,0,3
 - start: 0,5,0; end: 0,5,3
 - start: 5,5,0; end: 5,5,3
- Define a structural area (thickness = 0.25cm)
 - ○ ... through the initial points of the lines defined above (z=0)
 - Create structural points at the endpoints of the structural lines (z=3) with these support conditions:
 - at structural line 1: *PXX, PYY, PZZ*
 - at structural line 2: *PXX, PZZ*
 - at structural lines 3 and 4: *PZZ*
- export the system

The system cdb is part of our input files. Therefore this chapter is optional.

1.2 Import System

Next, create a new Teddy file to import the created system. It is convenient to have this input file saved in the same project folder as the database which should be imported.

Close SSD and open TEDDY; create a new TEDDY file.

- First you define desing code, materials and cross sections in AQUA:

```
+prog aqua
  HEAD material + cross sections
  NORM din 1045-1
  CONC 1 C 30      TITL 'Concrete C 30'
  STEE 2 BST 500  TITL ' Reinforcement Steel '
  SREC NO 1 H 0.5 B 0.5 MNO 1 MRF 2 REF C TITL 'rectangular cross section'
  END
```

- Then you can import the structure from the SSD project:

```
+PROG SOFIMSHA
  HEAD system
  SYST spac GDIR POSZ GDIV 10000
  IMPO FROM impo.cdb

  TRAN TYP ALL DX 0 DY 0 DZ 0 FIX F  $ import with supports
  TRAN TYP ALL DX 0 DY 0 DZ -3      $ import again, but z-shift -3
  TRAN TYP ALL DX 0 DY 0 DZ -6      $ import again, but z-shift -6

  IMPO $switch back to primary database for further import

  END
```

Meaning of the used commands:

- „IMPO FROM <database>“: This command does not import the database, it only selects the database as source for further commands.



If the teddy file is in the same directory as the database that should be imported, it is enough to write the name of the *.cdb in record IMPO. Else you can use absolute or relative path; but no more than 29 characters. example:

- absolute path\ directory: `c:\directory`
- relative path:
 - coming from the current path: `./path`
 - coming from the superior path: `../path`

- `„TRAN . . . “`: this command imports the data from the selected database



The new structure uses automatic generated node numbers starting with 1001 as a default. In case you want to change the default number use CTRL NODE <number> (Please refer to manual SOFiMSHA, record CTRL).



Further information about this feature can be found in the manual of SOFiMSHA, description of command IMPO.

1.3 Support condition filter

Please pay attention to the support conditions filter `„TRAN FIX <filter>‘`: supports will only be created if support condition of the original system is included in the filter option.

Example:

- `TRAN . . . FIX F`: all support conditions are adopted
- `TRAN . . . FIX PP`: only *PX*, *PY* and *PZ* supports are adopted
- `TRAN . . . FIX PZ`: only *PZ* supports are adopted

1.4 Example files

Please extract the file `impo_1.zip` in your working directory. It is important that both files are in the same directory.