Learning business by doing business

TOPSIM-Planspiele
Learning business by doing business

TOPSIM –
Project Management

Participants' Manual

Appendix II
Notes on Using the
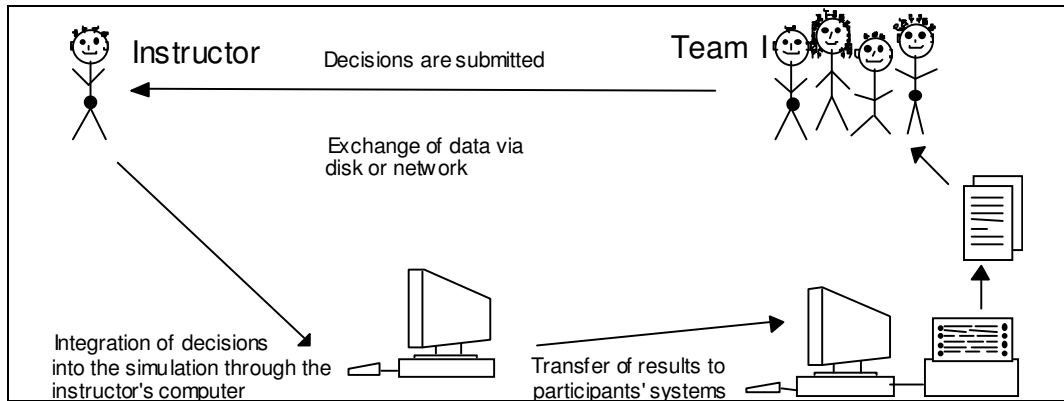Participants´ Software

Version 2.5

Table of Contents

1 Introduction

1.1 Flow of the Seminar with the Participants´ Software

In TOPSIM - Project Management the planning and simulation of a project phase takes place with the use of the Participants´ System. The instructor releases the starting situation and the next phase to you.

You can additionally print the reports of the previous phase, which the instructor will provide to you. Your decisions and project results are handed over to the instructor after the simulation.

1.2 Starting the System

After the installation of the participant's systems on the harddrives, you can start these easily by either double-clicking on the desktop-icon:
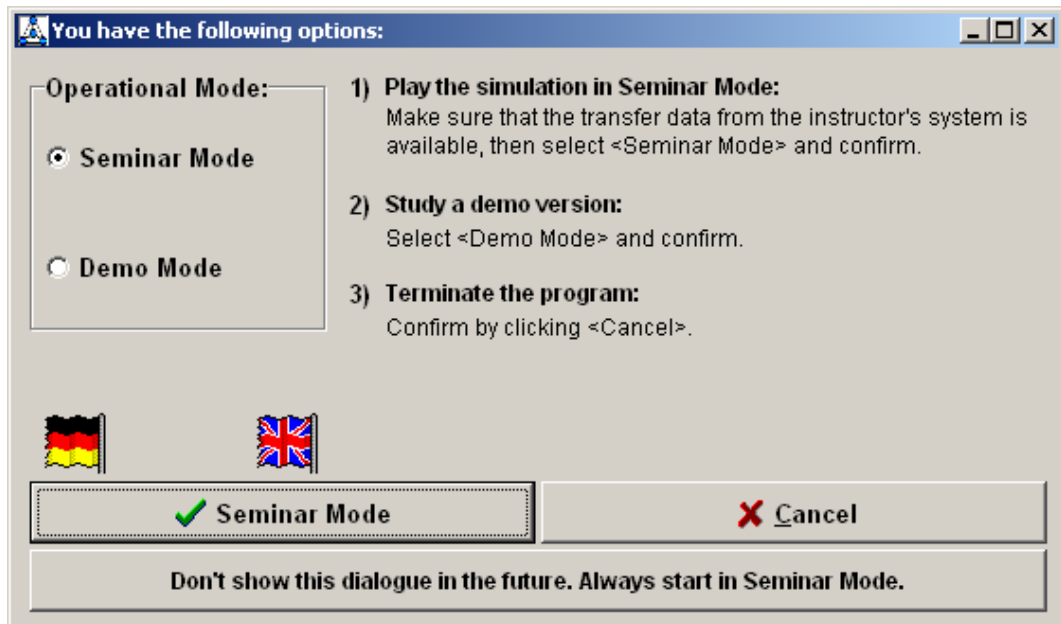

TOPSIM - Project
Management -
Participant

or by selecting the respective entry in the Windows- Start-menu:

Start -> Programms -> TOPSIM – Project Management - Participant

When executing the participant's system you can choose between **Seminar and DEMO mode**.

- In case of choosing **Seminar Mode** the program asks for the transfer data provided by the instructor's system, and starts then with the configuration deposited in this data.
- In case of choosing **Demo Mode** the participant finds himself after starting the program at the beginning of phase 3 of a demo scenario and has the possibility to simulate this one phase.

If the system should always start in seminar mode und this dialogue be skipped, this can be attained by selecting the button "Don't show this dialogue in the future. Always start in the Seminar Mode".

1.3 Data Exchange with the Instructor's Computer

TOPSIM – Project Management supports (almost) all standard media as data sources. You can exchange data, for example, with a USB stick, zip disk, or file path. Your seminar facilitator will make the specific mode of data exchange known to you.

1.3.1 Working with Removable Data Mediums

1.3.1.1 Selection of Data Source

Before starting the management simulation, you must connect your participants´ software to a data source according to the dialog box. The default in the dialog box is set at:
e:\ as a substitutable placeholder for a removable data source.

TOPSIM - Project Management
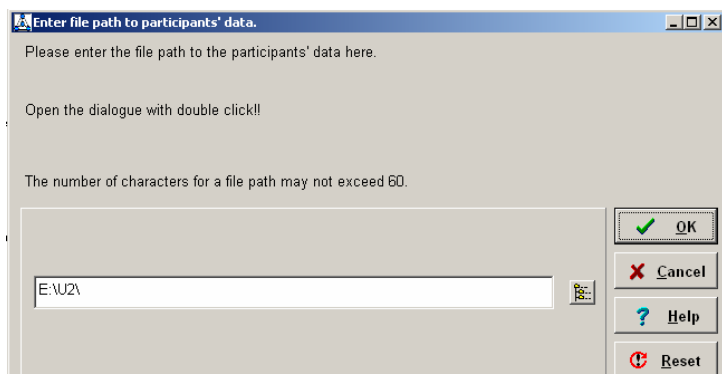
 By clicking on the list symbol, you can open a window in which you can specify a file path.

The example in this figure shows the preset data source: **e:**.

In the case that the instructor specifies a subfolder for your company, you can select this in the selection field. Confirm by pressing OK. The participants´ system will then recognize the file path from which data must be read, see Section 2.
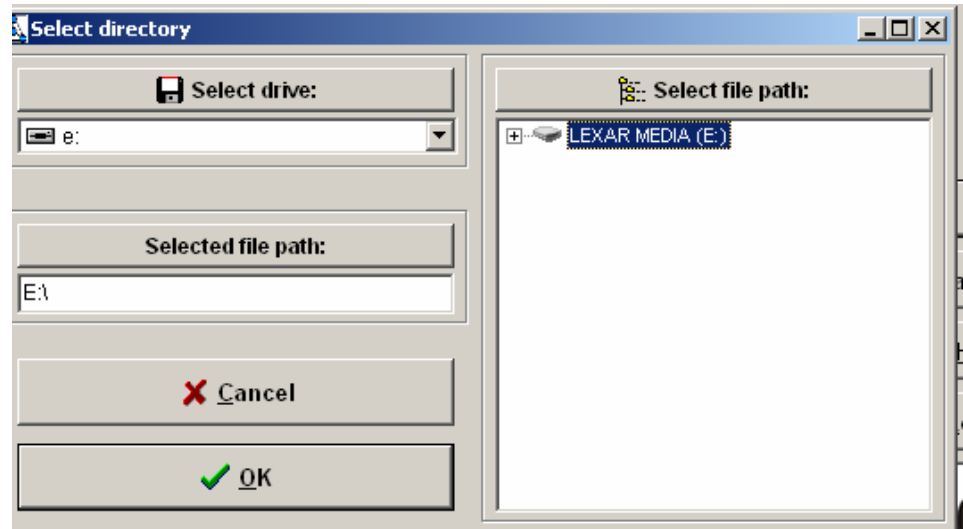
1.3.1.2   Saving Data Locally

**If you receive the data from the instructor on a removable data medium:**

Make a habit of saving the data locally from the data medium after the start of the management simulation. This can be done through the following menu:

File / Import Data from External Data Source

If the file path is available, confirm this with OK.
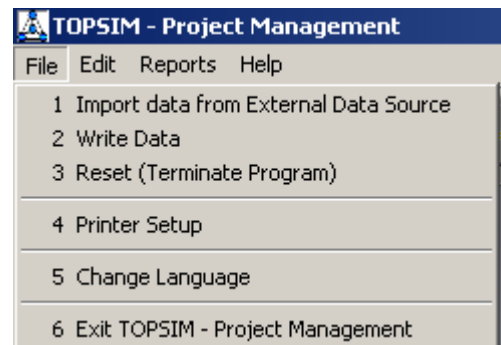
After the data is successfully read and saved, you will see the following message:
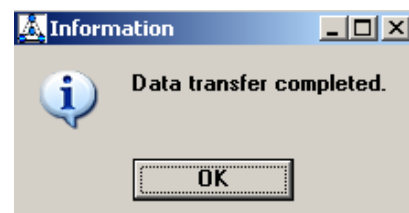
1.3.1.3 Making Decisions, Simulating Phases, and Saving Data

Make decisions together with your team members for all weeks in the next phase. The results are indicated in your participants' system. Save these at the end of the phase using your menu:

File / Write Data

The availability of the file path is again checked and after a successfully transfer, you receive a confirmation that the **Data Transfer is Completed**.
You can then give the data medium back to the instructor. Note the function to "**Remove Hardware Carefully**" with USB sticks.
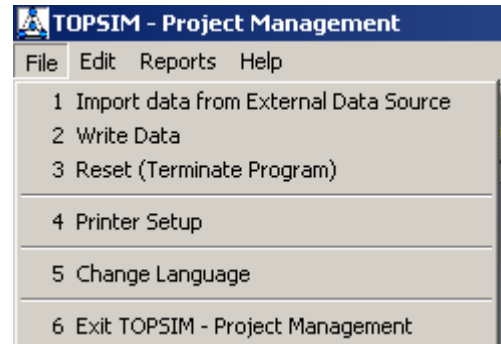
Note: Reading and writing data can take up to a minute depending on the data medium. Please do not remove the data medium UNDER ANY CIRCUMSTANCES while the data is being written.

End the program with **Exit TOPSIM - Project Management**.

1.3.2 Working within a Network

If you work within a network, reading and writing to a data medium is not necessary, and the above menus are non-applicable. When the program starts, you can begin planning immediately.
After a phase, end the program.

2 Working with the Participants´ Software

2.1 The Work Space

After the selection of the data source, the management simulation starts and displays your work space.

In the example, the project has not yet begun. You find yourself in Phase 1.

2.1.1 Overview of Functions

File		Printing, data handling, language selection, and ending TOPSIM.
	Decisions from Alternatives	Selection of alternatives in the planning of the current phase.
	Network Diagram: Planning and Simulation	Visual overview of the planning situation in network diagram format, and simultaneously an input mode for selecting alternatives in planning the current weeks of the phase. **Actual work within the management simulation**

	Reports	Reports on results from the previous phase provided by the instructor. Before the start of the project, these include the results of past planning, see the Participants´ Manual for more details.
	Information	Information / News conveyed by the instructor.

2.1.2 Printing

Please check that the printer is correctly installed.

When the management simulation is started, its printer is the one that is that specified in the computer's control panel (Start Menu / Control Panel / Printer). You can adapt the printer setup to your own management simulation requirements through the menu Data, Printer Installation. If you require certain printer settings for the entire course of the management simulation, it is advisable to make the changes through the control panel. You can, however, make changes before each print job.

2.2 Viewing the Starting Situation

After exchanging data, the instructor will release the next phase. For further planning you can have a look at your starting situation.

2.2.1 Reports

Using the Reports button, you can view the data from the current situation before the beginning of a new Phase.

2.2.2   Network Diagram

Using the Network Diagram button, you can view the current planning situation in a visual network diagram format.
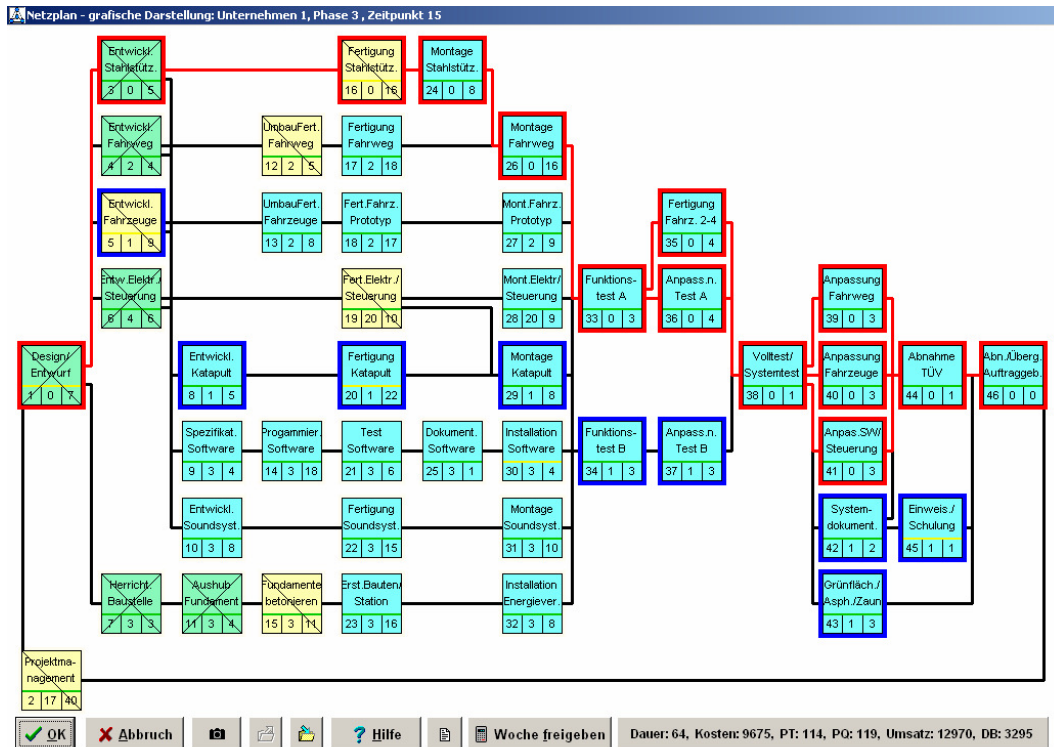
The buttons below allow you to execute various actions and access information.

OK   Quit the network diagram representation and return to your work space.

Print   Print the network diagram. Select the landscape format.

Help   Open TOPSIM Help.

View a project status report at any time.

Release Weeks   End planning and start the simulation of the next weeks. In the case that disturbances arise with individual work packages, these are indicated to you and you are offered alternative solutions for selection.

Project Value   In each case, the current values for
Duration, Costs, Technology (PT), Quality (PQ), Revenue, Profit Margin
are indicated to you.

At the request of the management simulation, you are shown the network diagram of the situation before optimization occurs.

Critical Path:

All work packages on the critical path and their relationships are bordered red and/or indicated as a red line.

In particular:

Work packages which are almost on the critical path, with buffers of at least one week, are bordered in blue.

Work Packages which have not yet begun:

Work packages which have not yet been started are shown in light blue.

Work Packages in Progress:

Work packages in progress are shown in yellow with a diagonal line.

Completed Work Packages:

Completed work packages become green and are crossed out.

The Network Diagram is an important planning and control instrument for the project.

2.3 Planning the Current Weeks

2.3.1 Planning Optimization: Deciding Among Alternatives through the Network Diagram

It is advisable to optimize your plan through the network diagram from the beginning.
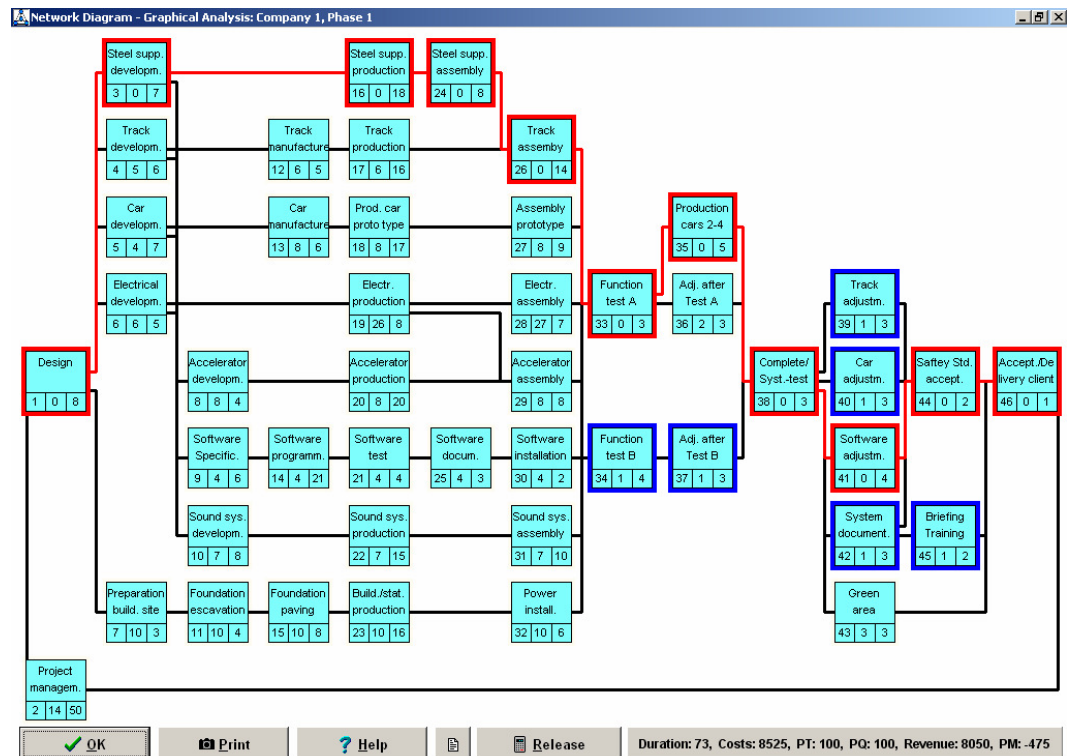
Clicking on a box of a work package which has not yet begun allows you to view a dialog box with a description of the work package along with alternatives available for your planning.

Select an alternative here by clicking on the corresponding checkbox.

If the critical path changes, this will be indicated to you immediately.

As long as you have not locked in your decisions or simulated the weeks, you can change your alternatives any number of times.

Using the Reports button on the network diagram screen you can view your project status report at any time and change your plan.

Example:

PARTICIPANTS' REPORT 3: Project Status Report

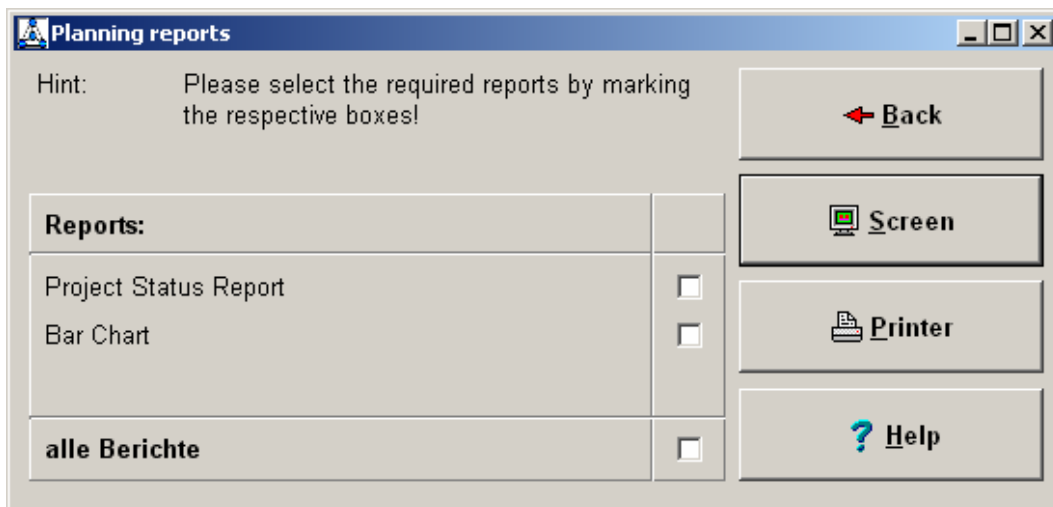| No.	Description of the Work Package	Status	Costs (TEUR)	Time (wks)	Buffer (wks)	Project: Techn.	Qual.	Earliest Start	End	Latest Start	End
1	Design	NS	210	8	0**	0	0	0	8	0	8
2	Project Management	NS	400	50	14	0	0	8	58	22	72
3	Steel Support Development	NS	130	7	0**	0	0	8	15	8	15
4	Track Design	NS	90	6	5	0	0	8	14	13	19
5	Car Development	NS	120	7	4	0	0	8	15	12	19
6	Electrical Development	NS	80	5	6	0	0	8	13	14	19
7	Building Site Preparation	NS	90	3	10	0	0	8	11	18	21
8	Accelerator Development	NS	180	4	8	0	0	15	19	23	27
9	Software Specification	NS	40	6	4	0	0	15	21	19	25
10	Sound System Development	NS	240	8	7	0	0	15	23	22	30
11	Foundation Excavation	NS	260	4	10	0	0	11	15	21	25
12	Track Manufacture	NS	90	5	6	0	0	14	19	20	25
13	Car Manufacture	NS	70	6	8	0	0	15	21	23	29
14	Software Programming	NS	270	21	4	0	0	21	42	25	46
15	Foundation laying	NS	380	8	10	0	0	15	23	25	33
.	.		.		.			.			
46	Acceptance/Delivery to the Client	NS	30	1	0**	0	0	72	73	72	73

Work Package Costs (TEUR)	8525	Technology (Index)	100	100	Quality (Index)
Change Costs (TEUR)	0	Bonus/Penalty PT (TEUR)	0	0	Bonus/Penalty PQ (TEUR)
Delay Costs (TEUR)	0				
Total Work Package Costs (TEUR)	8525	Bonus/Penalty End Date		-1950 (TEUR)	
		Bonus Milestone Date		0 (TEUR)	
Profit Margin Phase 0 (TEUR)	-475	Total Bonuses/Penalties		-1950 (TEUR)	

** = critical work package

```
                                                    PARTICIPANTS' REPORT 5: Bar Chart

            based on weeks ---->  Earliest   Latest    PP              P     P                      P
 No. | Description               Start  End  Start End  0    5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85

   1 | Design                      1     8     1    8   00000000
   2 | Project Management          9    58    23   72        XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX--------------
   3 | Steel Support Development   9    15     9   15        0000000
   4 | Track Design                9    14    14   19        XXXXXX-----
   5 | Car Development             9    15    13   19        XXXXXXX----

   6 | Electrical Development      9    13    15   19            XXXXX------
   7 | Building Site Preparation   9    11    19   21        XXX----------
   8 | Accelerator Development    16    19    24   27              XXXX--------
   9 | Software Specification     16    21    20   25              XXXXXX----
  10 | Sound System Development   16    23    23   30              XXXXXXXX------

  11 | Foundation Excavation      12    15    22   25          XXXX----------
  12 | Track Manufacture          15    19    21   25             XXXXX------
  13 | Car Manufacture            16    21    24   29              XXXXXX--------
  14 | Software Programming       22    42    26   46                  XXXXXXXXXXXXXXXXXXXXX----
  15 | Foundation laying          16    23    26   33              XXXXXXXX----------

  16 | Steel Support Production   16    33    16   33              00000000000000000
  17 | Track Production           20    35    26   41                 XXXXXXXXXXXXXXX------
  18 | Production of Car I - Prototype  22  38  30  46                  XXXXXXXXXXXXXXXX--------
  19 | Electrical Production      14    21    40   47          XXXXXXXX------------------------
  20 | Accelerator Production     20    39    28   47                 XXXXXXXXXXXXXXXXXXX--------

  21 | Software Test              43    46    47   50                                         XXXX----
  22 | Sound System Production    24    38    31   45                  XXXXXXXXXXXXXX-------
  23 | Building/Station Production 24   39    34   49                  XXXXXXXXXXXXXXX----------
  24 | Steel Support Assembly     34    41    34   41                              00000000
  25 | Software Documentation     47    49    51   53                                           XXX----

  26 | Track Assembly             42    55    42   55                          0000000000000000
  27 | Assembly of Car I Prototype 39   47    47   55                            XXXXXXXX--------
  28 | Electrical Assembly        22    28    49   55                  XXXXXXX--------------------------
  29 | Accelerator Assembly       40    47    48   55                             XXXXXXXX--------
  30 | Software Installation      50    51    54   55                                           XX----

     .                            .     .     .    .               .                                .
     .                            .     .     .    .               .                                .
     .                            .     .     .    .               .                                .

  46 | Acceptance/Delivery to the Client  73  73  73  73                                                                          0
```

0 = duration critical work package
X = duration non-critical work package
- = total float work package

2.3.2 Deciding Among Alternatives (Plan Optimization) Through a Dialog Box (Help Function)

Before the start of a phase you can change your latest planning conditions by selecting work packages that did not yet begin to accelerate procedures, or obtain more favourable cost, technology, or quality levels.

Displays a dialog box for selecting alternatives and the network diagram in a visual format.

In the example shown, the project has not yet begun. No alternatives have been selected in relation to the original plan.

If you select an alternative, click on the corresponding field and enter a „Y". If you want to cancel the decision for an alternative course of action, enter a „Y" in the column „None"

By double clicking on the work package you enter the decision form.

The Print function provides you with a list of the selected alternatives.

2.3.3. Completion of planning and simulation of the current weeks

The current week can only be simulated using the corresponding button in the network diagram:

If you have completed planning, release the week for simulation. The week will run immediately.

Corrections to your plans are no longer possible at this point. In order to prevent you from releasing a phase to early, you are asked to confirm your decision twice.
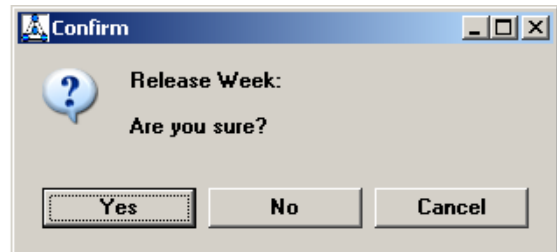

2.4 Weeks Run / Simulation

While the week is being simulated, disturbances may arise. These are shown together with alternative solutions in a dialog box. You have the option of selecting solution alternatives as the case may be. Click in the checkbox and then click on **OK**.

A solution alternative that has been selected can no longer be cancelled!
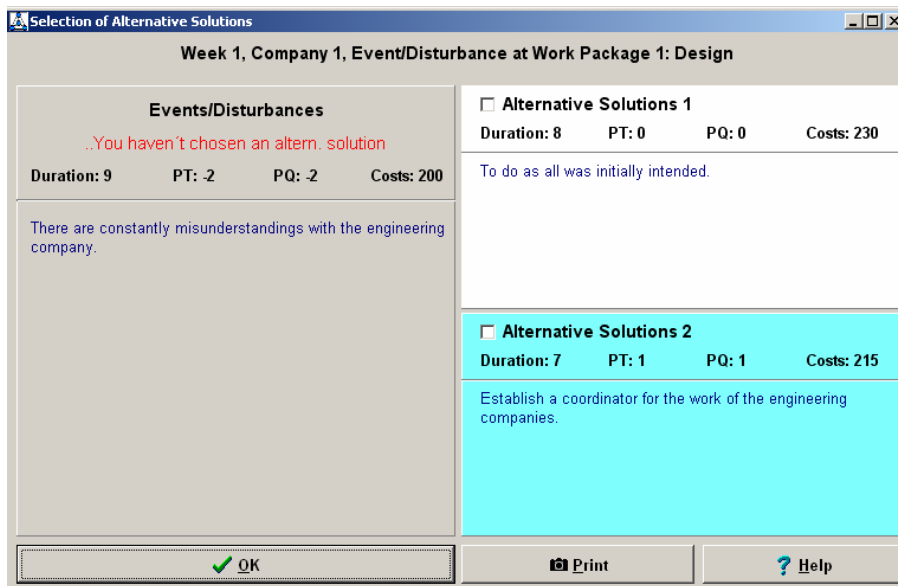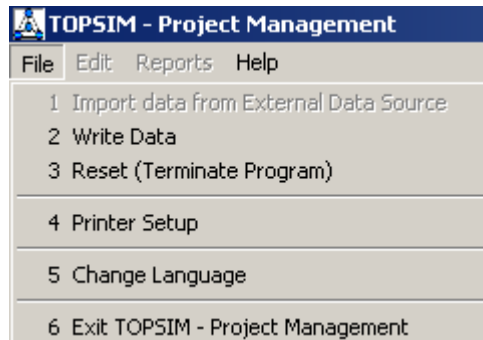

All disturbances which may occur in this phase are successively shown.

2.5   Data Exchange with the Instructor's System and Program Termination
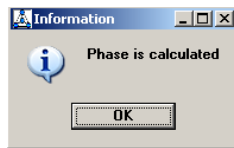
If all weeks of a phase is computed, the release button is not active. The phase is terminated.

If your phase has been computed, put your data at the instructor's disposal. If you are exchanging data through a removable data medium, write your data back to it.

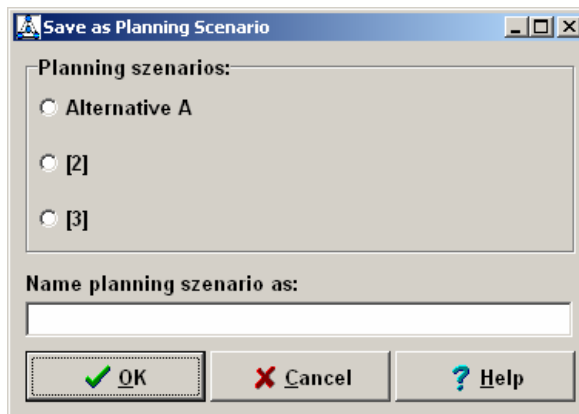Finally, terminate the program by clicking **Exit TOPSIM - Project Management**.

2.6   Saving of up to three planning alternatives

If the function of saving up to **three different planning variants** is activated, you can optimize you planning initially by clicking on a work package and by choosing the best and most reasonable alternative. **The instructor is able to activate this function in every single period.** At the beginning of the simulation please consult your instructor to establish when this function will be available.

In case you would like to test a different possibility of optimization, you can save the current planning alternative in order to be able to return to this alternative later.

In order to save a planning alternative, click on the Button , which opens the following window:

At first choose the spot in which you would like to save the current scenario. Afterwards give it a representative name. By clicking on **OK** the current scenario is saved.

After clicking on **OK**, the name of the saved planning scenario is displayed in the upper right-hand corner of the network diagram. Thus you can always recognize which planning scenario is active.

If you want to save a different planning scenario after having made one or more decisions, you can save it in one of the other two spots, named e.g. Alternative B. With this procedure you can save up to three different planning alternatives.

TOPSIM - Project Management
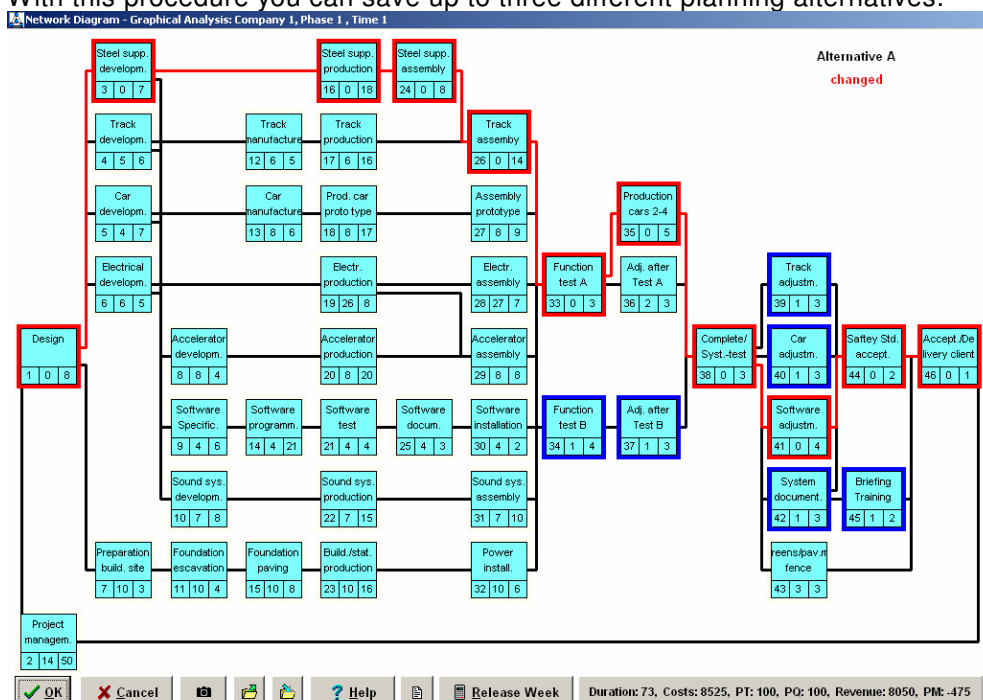
As soon as you go on with the optimization after having saved the scenario and generate a planning status which differs from the recently saved/opened one, you can see a note in the upper right-hand corner of the network diagram. In this case **"Alternative A"** is changed.

By clicking the button you can open one the previously saved planning scenarios.
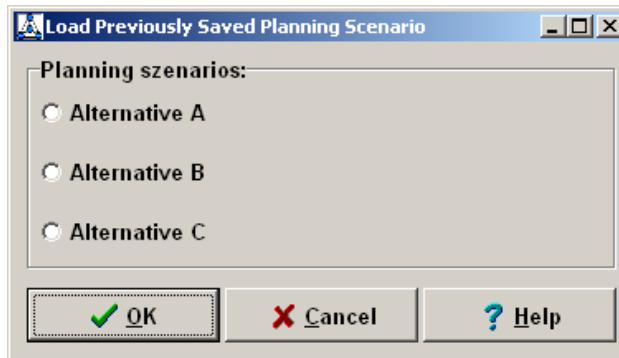
Simply choose the desired planning scenario and confirm the selection with **OK**.

If you have saved several planning scenarios, you can compare them with the additional planning report **Comparing overview of planning alternatives**.

PLANNING REPORT: Comparison of the Planning Scenarios

		Scenario 1 [1]		Scenario 2 [2]		Scenario 3 [3]	
No.	Work Package	Alternatives	Rsk	Alternatives	Rsk	Alternatives	Rsk
1	Design	0 0		0 0		0 2	
2	Project management	0 0		0 0		0 0	
3	Steel support development	0 0		0 0		0 0	
4	Track development	0 0		0 1		0 1	
	. . .	. . .		. . .		. . .	
46	Acceptance/Delivery to client	0 0		0 0		0 0	

Cost of Work Packages	(TEUR)	8525	8825	9225
Duration	(weeks)	73	69	64
Bonus/Penalty End Date	(TEUR)	-1950	-850	300
Technology	(index)	100	99	95
Bonus/Penalty PT	(TEUR)	0	-50	-300
Quality	(index)	100	97	93
Bonus/Penalty PQ	(TEUR)	0	-200	-540
Cost of Changes	(TEUR)	0	60	89
Total Costs	(TEUR)	8525	8884	9315
Turnover	(TEUR)	8050	8900	9460
Profit Margin	(TEUR)	-475	16	146

Risk estimation (Rsk): X = low risk, XX = medium risk, XXX = high risk

2.7   Risk assessment in the phase of optimization

Behind the planning alternatives of each work package a lesser or greater risk of disruptions is hidden. As a consequence next to the time factor, the cost of alternatives, the quality impact and technological impact, the description of the possible alternatives in addition to the hints of possible risks in the descriptions, play a decisive role when optimizing.

In order not to loose the risk of the single alternatives out of sight during the various phases of optimization, you can edit your personal risk assessments of the alternatives in the system. For this, each alternative comes with a "set of risk-lights", in which you can choose by simple clicking one of the following values:

- **red   = high risk**
- **yellow = mediate risk**
- **green = low risk**

If you have chosen in the phase of optimization an alternative, for which you made a risk assessment, this assessment is also displayed in the network diagram.
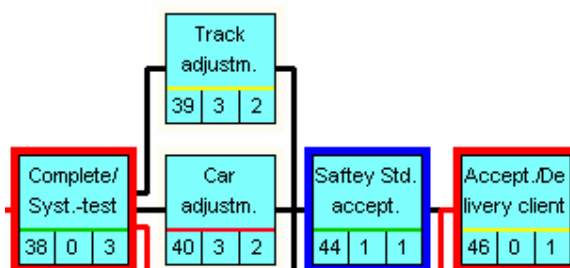
The risk assessment of the chosen alternative is made visible through an accordingly coloured bar.

The instructor is also able to activate this function in every single period. At the beginning of the simulation please consult your instructor to establish when the risk assessment function will be available.