



Σ

I

N



Δ

A



ADONIS[®]

Version 3.81

Volume I

Introduction Manual

Volume 1: Introduction Manual

Volume 2: User Manual

Volume 3: Method Manual

Volume 4: Method definition and Administration Manual

Volume 5: Installation and Database Administration Manual

Addresses:

Austria:	BOC Information Technologies Consulting GmbH A-1010 Wien, Baeckerstrasse 5
Germany:	BOC Information Technologies Consulting GmbH Mosse-Palast am Leipziger Platz D-10117 Berlin, Vossstraße 22
Spain:	BOC Business Objectives Consulting Ibérica, S.A. E-28006 Madrid, Calle Velázquez 71 - 1º Izda.
Ireland:	BOC Information Technologies Consulting Ltd. Haddington Hall Dublin 4 – Ireland, 80 Haddington road
Greece:	BOC Information Technologies Consulting EPE GR-10680 Athen, Mavromichali 16
Poland:	BOC Information Technologies Consulting Sp. z o.o. PL-00-679 Warsaw, ul. Wilcza 44/8
Hotline:	hotline@boc-eu.com
Home page:	http://www.boc-eu.com http://www.boc-us.com

© User documentation for ADONIS® Version 1.0	1996
© User documentation for ADONIS® Version 2.0	1997
© User documentation for ADONIS® Version 3.0x	1999/2000
© User documentation for ADONIS® Version 3.53	2002
© User documentation for ADONIS® Version 3.7	2003
© User documentation for ADONIS® Version 3.8/3.81	2005

No part of this work covered by the copyright hereon may be reproduced or used in any form or by any means – graphic, electronic, or mechanical, including photocopying, recording, or information storage and retrieval systems – without the prior written approval of BOC GmbH.

Table of Contents

Preface	1
1. New features in ADONIS version 3.81	1
1.1 New features in the Business Process Management toolkit	2
1.1.1 General innovation	2
1.1.2 Modelling	2
1.1.3 Import/Export	3
1.2 New functionality in the Administration toolkit	3
1.2.1 General news and improvements	3
1.2.2 Library management	3
1.2.3 LEO, AdoScript and Expressions	4
2. Note	5
I. ADONIS	7
1. ADONIS product palette	7
1.1 ADONIS Business Edition	8
1.2 ADONIS Professional Edition	8
1.3 Additional ADONIS components	9
1.3.1 ADONIS process cost analysis	9
1.3.2 Personal and Capacity Management	9
1.3.3 Call Centre Management	9
1.3.4 case/4/0 interface	10
1.3.5 objectiF interface	10
1.4 ADONIS modelling methods	10
1.5 ADONIS interfaces	11
II. Fundamentals of modelling	13
1. Introduction to modelling with ADONIS	13
1.1 Identification of Business Processes	13
1.2 Process Flow	14
1.2.1 Preparation for modelling	14
1.2.2 Modelling objects	14
1.2.3 Inserting connectors	15
1.2.4 Naming objects and connectors	16
1.2.5 Further object modelling	16
1.2.6 Control	16
1.3 Organisational structure	16
1.4 Entering model information	16
2. Example models	17
III. General information about the Business Process Management toolkit ...	19
1. Terms and context	19
2. ADONIS user interface	23
2.1 Window bar	23
2.2 Menu bar	24
2.3 Component bar	24
2.4 Quick-Access bar	24
2.5 Working area	25
2.6 Explorer	25
3. Functionality elements	26
3.1 Functionality selection	26
3.1.1 Model types	26
3.1.2 Refresh	27
3.1.3 Entry search	27
3.1.3.1 Display search results	28

Table of Contents

3.1.4	Save as.....	28
3.1.5	Expand/Shrink.....	29
3.1.6	Select all items.....	30
3.1.7	Selected items.....	30
3.1.8	Expand/Shrink version threads.....	30
3.2	Functions in ADONIS notebooks.....	31
3.2.1	"Save" icon.....	32
3.2.2	"Print" icon.....	32
3.2.3	"Info" icon.....	32
3.2.4	"Large text field" icon.....	33
3.2.5	"Dialog" icon.....	33
3.2.6	"Expression Dialogue" icon.....	33
3.2.7	"Add" icon.....	33
3.2.8	"Delete" icon.....	33
3.2.9	"Execute/Follow" icon.....	33
3.2.10	"File Dialogue" icon.....	34
3.2.11	"Notebook" icon.....	34
3.2.12	Input window.....	34
3.2.12.1	Input dialogue for text.....	34
3.2.12.2	Text input field.....	35
3.2.12.3	Input dialogue for expressions.....	35
3.2.13	Accelerators.....	36
4.	ADONIS-Explorer.....	38
4.1	Models in the database.....	39
4.2	Opened models.....	40
4.3	Update the view.....	41
4.4	Set up visible model types.....	41
4.5	Showing or hiding branches (levels).....	41
4.6	Open models.....	42
4.7	Renaming model/model group.....	42
4.8	Delete model/model group.....	42
4.9	Model group management.....	42
4.10	Finding entries.....	42
4.11	Saving tree structure.....	43
5.	ADONIS Browser.....	44
5.1	Classification.....	44
5.2	Structure.....	46
5.2.1	Editable ADONIS browser.....	48
5.2.2	Hierarchical ADONIS browser.....	49
5.2.3	Representation of attribute values.....	49
5.2.3.1	Representation of program call attribute values.....	50
5.2.3.2	Edit references.....	51
5.3	Enter column width.....	53
5.4	Adjust column width.....	54
5.5	Enter row height.....	54
5.6	Adjust row height.....	55
5.7	Expand and shrink all.....	55
5.8	Select attributes/columns.....	56
5.9	Sort.....	57
5.9.1	Sort using attribute columns.....	57
5.10	Align attribute values.....	58
5.11	Show (attribute) values.....	59
5.12	Search.....	59
5.13	Save.....	60
5.13.1	Properties.....	61
5.13.2	Formats.....	62
5.13.2.1	Save as table (*.txt).....	62
5.13.2.2	Save as comma separated value (*.csv).....	63
5.13.2.3	Save as text (*.txt).....	63
5.13.2.4	Save as RTF file (*.rtf).....	63
5.13.2.5	Save as HTML file (*.htm).....	63

5.13.2.6	Save as comparing representation(*.acr).....	63
5.14	Copy to clipboard.....	63
5.15	Print.....	64
6.	Swimlanes.....	65
7.	Versioning.....	66
7.1	Basic elements.....	66
7.1.1	Model-related versioning.....	66
7.1.2	Time-related versioning.....	66
7.2	Effects.....	67
IV.	Components of the Business Process Management toolkit.....	69
1.	Information acquisition.....	69
2.	Modelling.....	70
2.1	Introduction.....	70
2.2	Model editor.....	71
2.2.1	The Working area of the model editor.....	71
2.2.2	Class panel.....	72
2.2.2.1	Class panel.....	72
2.2.2.2	Relation panel.....	73
2.2.3	Model window.....	74
2.2.4	Modelling modes of the model editor.....	75
2.2.4.1	Editing mode.....	75
2.2.4.2	Drawing mode.....	75
2.2.5	Drawing objects.....	75
2.2.6	Drawing connectors.....	76
2.2.6.1	Bendpoints.....	77
2.2.6.2	Adding new relations via the context sensitive menu.....	77
2.2.6.3	Adding new relations.....	78
2.2.6.4	Relation "is inside".....	79
2.2.7	Editing objects and connectors.....	80
2.2.7.1	Undo.....	81
2.2.7.2	Select objects and connectors.....	81
2.2.7.3	Focus.....	82
2.2.7.4	Moving objects.....	83
2.2.7.5	Change object size.....	84
2.2.7.6	Define object size and position.....	85
2.2.7.7	Changing the appearance of a connector.....	87
2.2.7.8	Re-linking connectors.....	88
2.2.7.9	Rename connector marks.....	89
2.2.7.10	Changing the representation of connectors.....	89
2.2.7.11	Managing connectors in ADONIS notebooks.....	92
2.2.7.12	Editing attributes in the ADONIS notebooks.....	92
2.2.7.13	Change visualised attribute values.....	94
2.2.7.14	Move connectors edge middle point.....	94
2.2.7.15	Copy.....	95
2.2.7.16	Cut.....	96
2.2.7.17	Paste.....	97
2.2.7.18	Delete.....	98
2.2.7.19	Find.....	99
2.2.7.20	Align.....	100
2.3	Model navigation.....	100
2.3.1	Navigating through open models.....	100
2.3.2	Activate model window.....	100
2.3.3	Activate submodel.....	101
2.4	Model management.....	102
2.4.1	Create new model.....	102
2.4.2	Open existing models.....	103
2.4.3	Close model.....	104
2.4.4	Save models.....	104
2.4.4.1	Auto save.....	105
2.4.5	Save model with a different name.....	105
2.4.6	Printing models.....	107

Table of Contents

2.4.6.1	Select pages.....	110
3.	Analysis	111
4.	Simulation	112
4.1	Introduction.....	113
4.1.1	Overview of the simulation algorithms.....	113
5.	Evaluation.....	114
6.	Import/Export.....	115
6.1	Documentation	115
6.1.1	Generate documentation	116
V.	Appendix	119
1.	Starting ADONIS	119
1.1	Start ADONIS	119
1.2	Start ADONIS (Single-Sign-on).....	121
2.	Closing ADONIS	124
3.	Current configuration	125
4.	Service information	126
5.	File formats in ADONIS.....	127
5.1	ADONIS Binary Language (ABL).....	127
5.2	ADONIS Comparable Representation (ACR)	127
5.3	ADONIS Definition Language (ADL)	128
5.4	ADONIS Protocol Format (APF)	128
5.5	Windows-Bitmap (BMP).....	128
5.6	Comma Separated Value (CSV).....	128
5.7	Windows Enhanced Metafiles (EMF).....	128
5.8	Flow Definition Language (FDL).....	128
5.9	HyperText Markup Language (HTML).....	128
5.10	JPEG File Interchange-Format (JPG)	129
5.11	ZSoft Paintbrush Graphic (PCX).....	129
5.12	Portable Network Graphics (PNG).....	129
5.13	Rich Text Format (RTF).....	129
5.14	Scalable Vector Graphics (SVG)	129
5.15	ASCII-Text (TXT)	129
5.16	User Definition Language (UDL).....	130
5.17	Extensible Markup Language (XML)	130
6.	Index.....	131

Preface

Welcome to



The integrated Business Process Management and Knowledge toolkit from BOC GmbH.

ADONIS offers you a wide-range of various functionalities in the following operational areas:

E-Business:

E-business application development, as well as constant and integrated modelling of business models, Business Processes, products, IT systems and IT infrastructures.

Business process management:

Acquisition, modelling, analysis, simulation, evaluation, documentation and realisation of Business Processes.

Process-based application development:

Application development with workflow, CASE-, groupware and object technology as well as process-based introduction of standard software.

Process Warehouses:

Operational data management and Evaluation based on business process and integrated solutions with different workflow products .

Knowledge management - Training and Learning:

Production of training supports through graphic models and process orientated knowledge management.

ADONIS is a client/server multi-user system, which has an object-oriented structure. Additionally, **ADONIS** has a remarkable adaptation possibility, so it can be configured according to your needs and developed according to your requirements(ADONIS-customising)".

We hope that our tool meets your requirements and that you have a lot of fun working with ADONIS.

Your BOC team

Vienna, 2005

1. New features in ADONIS version 3.81

If you have already used ADONIS version 3.7, you will find here a short description:

- of the innovations in ADONIS Business Process Management toolkit (see chap. 1.1, p. 2),
- of the innovations in Administration toolkit (see chap. 1.2, p. 3),

More detailed information can be found in the PDF file "News in ADONIS 381.pdf" which can be found on the ADONIS installation CD in the folder "books".

1.1 New features in the Business Process Management toolkit

1.1.1 General innovation

- **The user interface view** was adjusted for Windows XP.
- Immediate **Mouse wheel support** (turn = vertical scroll <Ctrl>+turn = horizontal scroll,<Shift>+turn = quick scroll,<Alt>+turn = changing zoom factor) .
- Four **ADONIS tools** (Component Bar, Quick Access-Bar, Modelling Bar and Explorer) can be moved and docked to any edge or can be freely put in any place. It is possible to expand/shrink them individually or together. The last configuration will be saved and stored.
- New **ADONIS explorer** provides improved overview and faster access to Models (and model groups) - either all models with access rights in the Database or all open Models.
- Particular **Context sensitive menus** can now be called by corresponding shortcut key.
- The key <F2> now has the function "Rename". Option "Save all" is now under <Shift>+<Ctrl>+S.
- The tab of the active chapter in the **ADONIS notebook** now has a colour frame. Pointing the mouse arrow on another chapter-tab, will highlight this tab.
- **Administration of model windows** has been improved during the Explorer-Development. The menu "window" has been restructured and is now present in all components - as Window-Smart Icons ("back", "previous", "Models in Database", "Opened Models").
- Selection lists in **the context menu** have all **"Expand/Shrink"** functions in a common submenu.
- Key controls in the **selection window** have been expanded: Both left/right "Arrow Keys" are now context-dependent Functions.
- **Quick Access Bar** can no longer be adjusted by an ADONIS-User.
- Performance has been improved in different areas.

1.1.2 Modelling

- **Snap grid** can be helpful in changing different objects' size. With this feature, it is easy to scale different objects to identical dimensions. The snap-grid coupling can be deactivated by pressing <Ctrl>-key.
- There are two improved dialogs to **generate graphics** (also for model- and model parts as for Page section arrangement).
- Horizontal and vertical **connector** edges can now be moved in parallel.

- Connectors that cross can be represented by bridges, so that it is possible to present modelling levels for connectors as well. Bridges can be expanded or shrunk by ADONIS-User. Default setting is made by ADONIS-Administrator.
- It is possible to add an object in **tabular modelling**. When a new object is added, in a graphical diagram it is placed in a free spot. Because of that, it is now possible to switch to classes (in the tabular modelling), that **have not been used in the active model**.
- During graphical modelling, the **empty space tool** provides a desirable amount of space at any place in a model in which a new object can be placed.
- **Print scaling options** can also be changed in Print dialogue as in Page layout and they can be saved for each model individually.
- **Improved printing dialogue**. Scale factor will be shown, with every chosen scale. Most models can be printed directly from the printing dialogue.
- **Incoming inter-model references** are also available through drawing area in the context menu.
- Customising allows for the creation of objects that stretch over more than one swimlane.

1.1.3 Import/Export

- Improved options for Models and Attribute profiles in **ADL-Import** and **ADL-Export**.
- ADONIS has an integrated **XML Import**, which can be freely used after entering the corresponding license number.

1.2 New functionality in the Administration toolkit

New features in Administration toolkit are included in the following components or functions:

- **General news and improvements** (see chap. 1.2.1, p. 3)
- **Library management** (see chap. 1.2.2, p. 3)
- **LEO, adoScript and expressions** (see chap. 1.2.3, p. 4)

1.2.1 General news and improvements

- **Quick access bars** are no longer defined in library management, but in AdoScript. As a result the ADONIS-Administrator has more freedom. For example, personal favourite icons can be added or removed.
- Performance has been improved in different places.

1.2.2 Library management

- The possibility to show **multiple references** on the drawing area has been implemented. It is now possible to show multiple references together with a text in one line, so that the hyperlink mechanism will not be omitted.
- **The setting for connection bridges**, can be pre-set by the Administrator.
- **The notebooks of the library attributes'** have been restructured. Additionally, some text fields have been enlarged in a new chapter.

- The behaviour of detailed incoming references, can be modified by customising under **"Save as"**.
- **The customising of access rights** for user groups on given program functions, has been expended.
- **The GraphRep** commands ATTR, ATTRBOX, AVAL and FRONT have been expanded. The new command ROUNDRECT draws a rectangle with rounded corners.
- **The value of a class attribute** can be determined in the **GraphRep-Element**.
- Model types can now be split into groups. **A method diagram** allows to structure application libraries with numerous model types semantically and in a graphical manner.

1.2.3 LEO, AdoScript and Expressions

- Improvements of graphical representation, allow **AdoScript commands to show/hide an individual object**. Hidden objects are not visible and cannot be clicked either. This does not apply to tabular modelling or analysis .
- Through the GraphRep expansion, it is now possible to **distribute text and attribute values at any angle**.
- **Import and Export Dialogues** can now be used in AdoScript.
- **New or changed AdoScript commands** can be found in (all) message ports.
- Through **PROGRAMCALLS in attribute profiles**, it is now possible to fall back on wrap object.
- Improvement of **LEO Operators and Functions**.
- A new LEO data type **"Array"** with corresponding functions.
- It is now also possible to have access to **variables** in expressions, that have a minus sign in their name.
- Within expressions, it is now possible to write comments by using both characters: (# and (*..*)).

2. Note

Designation of people within this documentation

We would like to explicitly state here that wherever the third person singular is used within this manual, this is intended to include female as well as male persons. The use of the male form of description is not intended to be discriminatory in any way but is simply used in order to ensure consistent descriptions.

Pictures within this documentation

The pictures within this documentation were created using ADONIS 3.81 for Windows 2000 and Windows XP. If you are using different operating system, the appearance of some screens may be slightly different.

IMPORTANT: Further publication of this documentation in any form (including copies) is not permitted without the express permission of BOC GmbH.

Part I

ADONIS

Successful and dynamic enterprises can achieve decisive competitive advantage through the ability to adapt their Business Processes quickly to the rapidly changing market conditions and through the active arrangement of their core competencies. The increasing dynamic, globalisation and increasing competition makes efficient Business Process Management an essential goal.

To enable this, the Procedural Modelling, Analysis, Simulation and Evaluation of Business Processes is an decisive success factor. The goals of Business Process Management are the optimisation of both the processes of an enterprise as well as the resources and technology which execute those processes.

The ADONIS Business Process Management toolkit, which was developed by BOC Information Technologies Consulting GmbH in co-operation with the University of Vienna offers essential tool support for Re-engineering and Reorganisation of projects.

ADONIS was specifically designed for the particular needs of financial services organisations and provides functionality primarily for the following application areas:

- Business Process Optimisation / Business Process Re-engineering (BPR)
- Quality Management / ISO9000 Certification and Maintenance
- Controlling (Process Costing)
- Personnel Management (Personnel and Resource planning)
- Organisation Management (Enterprise documentation, Job descriptions etc.)
- Information Management (Creation of technical concepts for IT systems, Interfaces to Workflow and CASE systems, Introduction of ERP Systems)
- Creation of electronic handbooks which can be made available over an intranet with the use of powerful multi media functionality
- Evaluation of Business Processes (Benchmarking, Monitoring, "Should-be" comparison)

The "Meta-concept" of ADONIS means that through customising, the tool can be configured to optimally suit the particular requirements of any user. The ADONIS user can decide by himself how he should build the processes and how he can best use the ADONIS mechanisms. As ADONIS is method independent, the management of Business Processes on different levels is guaranteed.

ADONIS® as a tool for business process management and also complies with the requirements for software ergonomics.

1. ADONIS product palette

ADONIS version 3.81 is offered as:

- ADONIS Business Edition (see chap. 1.1, p. 8) or
- ADONIS Professional Edition (see chap. 1.2, p. 8).

Part I

The following **additional components** are not contained in the standard configuration of ADONIS (Business or Professional Edition) and can be acquired additionally and integrated into ADONIS (into any existing modelling method):

- "Process Cost Analysis" (see chap. 1.3.1, p. 9)
- "Personal- and Capacity Management" (see chap. 1.3.2, p. 9)
- "Call Centre Management" (see chap. 1.3.3, p. 9)
- "case/4/0 interface" (see chap. 1.3.4, p. 10)

To use ADONIS (Business and Professional Edition) a set of different **modelling methods** (see chap. 1.4, p. 10) are available.

By utilising our **interfaces** (see chap. 1.5, p. 11) data can be exchanged with ADONIS (Business and Professional Edition).

Note: For further information regarding products and services of BOC GmbH please contact your ADONIS consultant.

1.1 ADONIS Business Edition

Within the "**ADONIS Business Edition**" the following components of the ADONIS Business Process Management toolkit are available:

- Modelling
- Analysis
- Documentation
- Import/Export

Note: The components "Process Cost Analysis (Process Costing Component)", "Personal- and Capacity Management", "Call Centre Management" as well as "case/4/0 interface" are additional components and therefore they are not contained in the ADONIS Business Edition.

When needed it is possible to acquire new components or further modules within a component of the ADONIS Business Process Management toolkit, which then can be provided for the ADONIS users by entering a new license key. Alternatively it is also possible to further restrict the composition of the ADONIS Business Edition.

Note: When using the ADONIS Business Edition smart icons of not supported components will not be displayed in the component bar. The same applies to smart icons in the quick access bars. If the ADONIS user or the ADONIS Administrator did not change configuration, only the smart icons corresponding to functionality of ADONIS Business Edition will be displayed.

1.2 ADONIS Professional Edition

Within the "**ADONIS Professional Edition**" all components of the ADONIS Business Process Management toolkit are available.

Note: The components "Process Cost Analysis (Process Costing Component)", "Personal- and Capacity Management", "Call Centre Management" as well as "case/4/0 interface" are additional components and therefore are not contained in the ADONIS Professional Edition.

1.3 Additional ADONIS components

The additional components:

- "Process Cost Analysis"
- "Personal and Capacity Management"
- "Call Centre Management"
- "Case/4/0 interface"
- "ObjectiF interface"

can be integrated into your existing ADONIS installation. They are not contained in the default configuration of ADONIS (Business or Professional Edition).

1.3.1 ADONIS process cost analysis

The ADONIS Process Cost Analysis, supports cost optimisation, especially overhead costs. The system is capable to set informative analysis on the available savings possibilities..

The ADONIS Process Cost Analysis simulates the Business Process models. This identifies further potential for analysis and optimisation of the process costs - the course of the control structure can contain decisions and parallelism and above this many optional process levels are allowed.

1.3.2 Personal and Capacity Management

The **Personal and Capacity Management** supports the time period based evaluation of Business Processes and Working Environments. In particular the periods of validity assigned in the period-related versioning will be used.

The **key figures** determined in the Personal and Capacity Management **could be corporate-specific configured**. Next to quantitative Evaluation **quality evaluation** will also be supported. For instance, questions such as "What are the roles and skills that I need to realise my Business Processes?" can be answered.

1.3.3 Call Centre Management

The **Call Centre Management component** supports a personal planning (FTEs) and skill management within Call and Multi-Media Service-Centres.

The processes in Call and Multi-Media Service-Centres are used as the basis and input for crucial information regarding time, costs and knowledge, for instance:

- How long does it take for a helpdesk query or an address change?
- What capacity is needed for a given time interval and what costs do arise?
- How do you document for your employees what action to take in different scenarios?

1.3.4 case/4/0 interface

Through the coupling of **case/4/0** from **microTOOL GmbH, Business Process oriented application development** is possible, to create the required building blocks for a new system in case/4/0 from ADONIS and to maintain consistent links to the specific activities of the Business Processes. The link is established online from special Business Process models to an Application Development environment.

Through this direct integration from specialised Business Process models to IT models before the construction of an application system, it is possible to identify the Business Process **affected** by the new system. The functionality of ADONIS allowing personnel capacity and cycle time to be calculated is very useful for deriving the qualifications necessary to carry out the Business Processes. This means that when changing existing applications, we already have an effective **qualification system**.

The **IT company map** together with the Business Processes provide comprehensive documentation. As a result of the links between the two toolkits, changes to either the applications or the Business Processes can be accurately described and evaluated. In this way modern **Information and Migration Management** is possible.

ADONIS and case/4/0 also offers components for **the generation of documentation** which can then be distributed over the Internet or an Intranet. Through the coupling with case/4/0 Business Process and application documentation can be integrated and distributed to target groups within the enterprise.

1.3.5 objectiF interface

Through the coupling of **objectiF** from **microTOOL GmbH Business Process oriented application development** is possible, to create the required building blocks for a new system in objectiF from ADONIS and to maintain consistent links to the specific activities of the Business Processes. The link is established online from specialised Business Process models to an Application Development environment.

Through this direct integration from specialised Business Process models to IT models before the realisation of an application system, it is possible to identify the Business Process **affected** by the new system. The functionality of ADONIS allowing personnel capacity and cycle time to be calculated is very useful for deriving the qualifications necessary to carry out the Business Processes. This means that when changing existing applications, we already have an effective **qualification system**.

The **IT company map** together with the Business Processes provide comprehensive documentation. Because of the links between the two toolkits, changes to either the applications or the Business Processes can be accurately described and evaluated. In this way modern **Information and Migration Management** is possible.

ADONIS and objectiF also offers components for **the generation of documentation**, which can then be distributed over the Internet or an Intranet. Through the coupling with case/4/0 Business Process and Application Documentation can be integrated and distributed to target groups within the enterprise.

1.4 ADONIS modelling methods

The modelling in ADONIS (Business or Professional Edition) is effected applying a defined methodology (= application library). Within one ADONIS database several methods can be administered and provided to the users.

In addition to the possibility to adapt the modelling methodology to the needs of the customer the ADONIS standard method (ADONIS Standard Application Library) is contained within the ADONIS (Business or Professional Edition).

The following (de-facto standards) for modelling methodologies are offered in addition:

- UML method
- LOVEM method
- E-Business method
- EPC method
- QM method (ISO9000/2000)

Note: For further information regarding customer-specific ADONIS modelling methods please contact your ADONIS consultant.

1.5 ADONIS interfaces

Using the interfaces to/from ADONIS (Business and Professional Edition) data can be

1. imported from other applications into ADONIS,
2. edited in ADONIS and
3. exported from ADONIS into other applications.

For the tools listed below interfaces already have been realised and can be integrated and adapted for your modelling method (application library) if required:

- Data acquisition:
 - HOMER (BOC) - contained in the ADONIS Professional Edition
 - Visio (Visio Corporation) - modelling tool
- Workflow Management systems:
 - MQSeries Workflow (IBM)
 - Components (Fabasoft)
 - EasyFlow / Heyde / TOPAS
 - WPDLC (WfMC - Workflow Management Coalition)
 - Staffware 2000 (Staffware)
 - Unisys Workflow (Unisys)
- CASE tools:
 - case/4/0 (microTOOL) - interfaces provided directly in ADONIS (see chap. 1.3.4, p. 10)
 - objectiF (microTOOL) - interfaces provided directly in ADONIS (see chap. 1.3.5, p. 10)
 - Rose (Rational)
- ERP systems:
 - R/3 (SAP) - reference models
 - R/3 (SAP) - Online interface to integrate R/3 calls

Part I

- R/3 (SAP) - HR integration
- JuraPack (PELI) - Claims management
- Groupware systems:
 - Notes (Lotus) - Export interface for company documentation
 - Notes (Lotus) - Online interface to call and integrate Notes documents
- BPM tools:
 - ibo (ibo)
- Relational databases:
 - via an ODBC interface
- Document management systems (DMS):
 - Notes (Lotus)
 - Document management systems supporting ODMA

Note: For further information regarding customer-specific ADONIS interfaces please contact your ADONIS consultant.

Part II

Fundamentals of modelling

In this chapter you will find short instructions how to model business processes, working environments with use of ADONIS. There is also a description of exemplary models (see chap. 2., p. 17).

This section is a good introduction for novice ADONIS users. It will assist the user in understanding how to properly model business processes.

The introduction chapter should be helpful to when trying to understand the modelling techniques. In the beginning, the created models can be incomplete. To avoid this, the user can find in the description of the modelling component (see chap. 2., p. 70) some helpful instructions what model types are necessary to be modelled.

Additionally, basic tips to ensure the clarity and quality of the Business Process models are provided.

With the help of the example models, the creation of the ability to simulate models in ADONIS is presented.

1. Introduction to modelling with ADONIS

The comprehensive and integrated modelling of Business Processes takes into account the following aspects:

- Identification of Business Processes (see chap. 1.1, p. 13)
- Modelling of the flow of business processes (see chap. 1.2, p. 14)
- Modelling of the organisational structure (see chap. 1.3, p. 16)
- Entering the model information in the attributes of objects (see chap. 1.4, p. 16).

The model type Business Process Model is used to model flows of processes, and accordingly, the model type Working Environment to model organisational structure.

1.1 Identification of Business Processes

According to the BPMS Methodology, during the organisational projects following approach is followed]>:

- Identify the products or services produced by the enterprise or its part being examined
- Identify the Business Processes that answer the question "with which processes or activities are these products or services realised?"

Workshops and brainstorming techniques can be used to identify these aspects.

1.2 Process Flow

The process flow is shown in a Business Process Model. The creation of Business Process Models can be carried out in either a top-down or bottom-up.

In **bottom-up modelling** sections of the process (possibly later sub processes) are modelled in great detail. These excerpts - sub processes and single activities - are aggregated into a Business Process Model.

Top-down modelling begins at a higher level with the depiction of the overall process to which more detail is then added through further activities and sub processes.

During modelling within ADONIS both methods can be used.

Flowing modelling guidelines are provided a Business Process:

1. Preparation for modelling (see chap. 1.2.1, p. 14)
2. Modelling objects (see chap. 1.2.2, p. 14)
3. Inserting connectors (see chap. 1.2.3, p. 15)
4. Naming objects and connectors (see chap. 1.2.4, p. 16)
5. Further object modelling (see chap. 1.2.5, p. 16)
6. Control (see chap. 1.2.6, p. 16)

1.2.1 Preparation for modelling

Before starting modelling, please prepare a draft containing your working plan. The plan should contain activities and timetable concerning the work to be done. Thus, it serves as a basis throughout the actual modelling. This is especially useful for large processes. It will also be useful when deciding where to implement sub processes.

The introduction of sub processes can be used, especially when:

- the sub processes can be re-used in other business processes,
- to provide a reasonable overview of the Business Processes (guideline: ca. 20 activities per model) or
- the part of the main model, which is shown as sub process should be modelled in detail.

Your plan can also be used to design a standard naming system for activities and sub processes, which will improve clarity (e.g. infinitive + subject such as "Write letter").

1.2.2 Modelling objects

Open the Model editor (see chap. 2.2, p. 71) and place a manageable number of objects (see chap. 2.2.5, p. 75) (activities, decisions) on the drawing area.

To draw an object select it in the class list (by clicking on it with the left mouse button) and then place it on the drawing area by clicking on the required position there.

When beginning modelling, the objects "Activity" and "Decision" are the most important, because these objects enable you to model a Business Process.

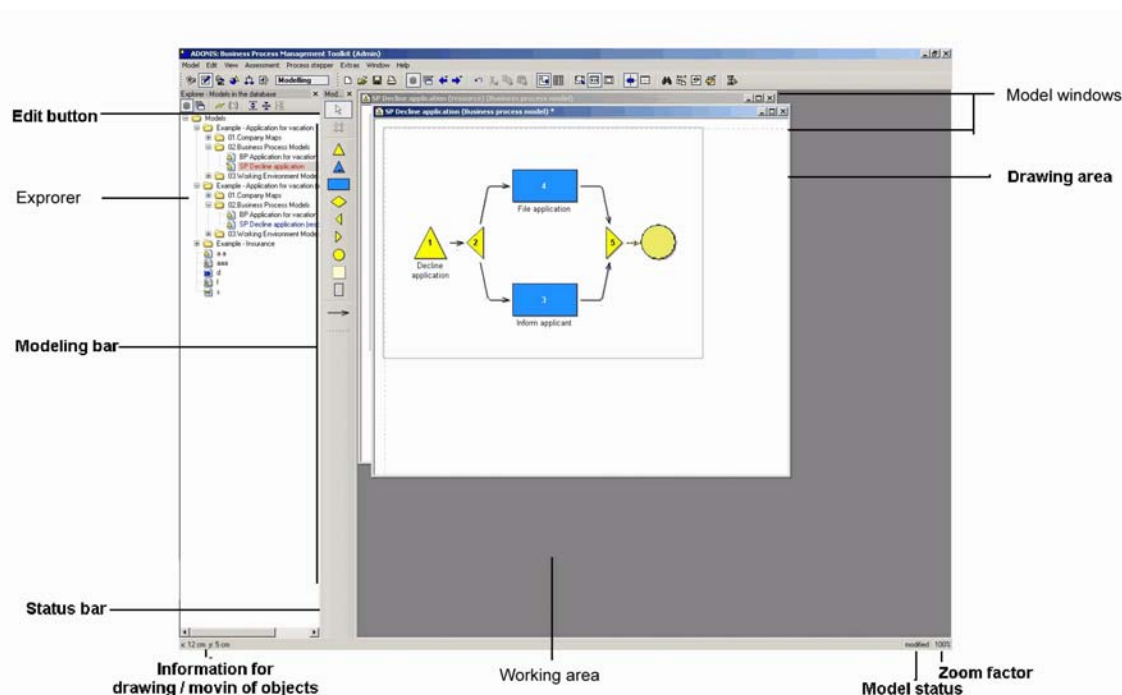


Figure 1: Model-Editor

Place an object of a class "Process start" at the beginning of your process and an object of class "End" at its end. These two objects are placed on the modelling surface not only to improve clarity of the process, but also to be used by other ADONIS components within the Business Process management toolkit. A "Process start" and an "End" object must be defined within a Business Process Model.

Please rearrange the objects according to the flow in your previously prepared plan. Remember that you can always change the order of objects if required.

Concerning the modelling direction (horizontal/vertical), the horizontal ordering of objects has proved itself in terms of clarity in providing an overview or comparison of the Business Processes. Detailed Business Processes are more legible when created in a horizontal direction over a number of pages.

1.2.3 Inserting connectors

The flow logic is shown through the insertion of connectors, in particular through the relation "Subsequent". Through this relation, which joins any object with the next object, the logical flow of your Business Process can be identified.

To add a connector to the model, select the relevant relation from the relation list by placing the mouse on it and clicking with the left mouse button. Then click (again with the left mouse button) on the two objects in the drawing area, which this relation should join.

At the beginning you can ignore relations such as: "Sets" and "Sets variable". These are necessary for the Simulation (see chap. 4., p. 112) of Business Processes.

1.2.4 Naming objects and connectors

The next step is to name the objects (see chap. 2.2.7.12, p. 92) (activities and decisions) and the relations. The relation "Subsequent" should only be labelled when it starts at the object "Decision" and then holds the conditions under which the following activities will be executed.

1.2.5 Further object modelling

For modelling additional objects, see "object modelling" (see chap. 1.2.4, p. 16) which describes the method.

1.2.6 Control

Finally, you should check your model. An efficient manual method is to follow the flow within your model. Check the order of activities and decisions as well as the object and relation labels (see chap. 1.2.4, p. 16). Correct any invalid objects, relations and labels and insert any of them as required.

1.3 Organisational structure

The Working Environment model presents the organisational structure connected with the modelled business process. You must identify which performers are available for the execution of the Business Process. ADONIS offers the possibility of modelling the Working Environment and then connecting it with the Business Process Models. The Business Processes modelled are executed within this Working Environment. The different effects of the Working Environment on business processes can be compared in this way.

The actual structure of the enterprise (or part of the enterprise) which carries out the important Business Processes is modelled in a Working Environment model. First model the performers and define their roles (e.g. Specialist, Secretary etc.). When modelling the organisational units (e.g. departments, enterprise areas) you can identify which performers belong to which organisational units.

1.4 Entering model information

In addition to the labels, it is possible to enter information into the attributes of the objects and relations modelled. This can be done by double-clicking on the required object or relation. This opens the ADONIS notebook, which contains many input fields, divided over various pages and chapters.

The information, which you enter in the ADONIS notebooks provides on the one hand a description (information and documentation for you and other ADONIS users), and is also used by other components of the Business Process Management toolkit (e.g. in the Simulation component).

2. Example models

During the installation of the ADONIS Business Process Management toolkit several ADL files with example models are installed in the ADONIS directory. These files contain a few examples of models which can be imported into ADONIS.

The example models serve to illustrate the modelling of business processes and Working Environments with ADONIS .

IMPORTANT: The example models are based on the **ADONIS standard application library**.

Note: The description of the example models is to be found in volume III of the user documentation ("ADONIS standard method manual") or the online documentation "ADONIS standard method" ("Extras" menu, "ADONIS standard method") menu item.

Part III

General information about the Business Process Management toolkit

Note: All examples and descriptions in this part of the user manual refer exclusively to the ADONIS standard application library. Text and numeric entries in the pictures may differ from those on your screen.

1. Terms and context

In this chapter you will find an introductory description of the terms used in ADONIS as well as their context. For a better understanding, these terms and context are graphically represented as follows (see fig. 2, p. 19).

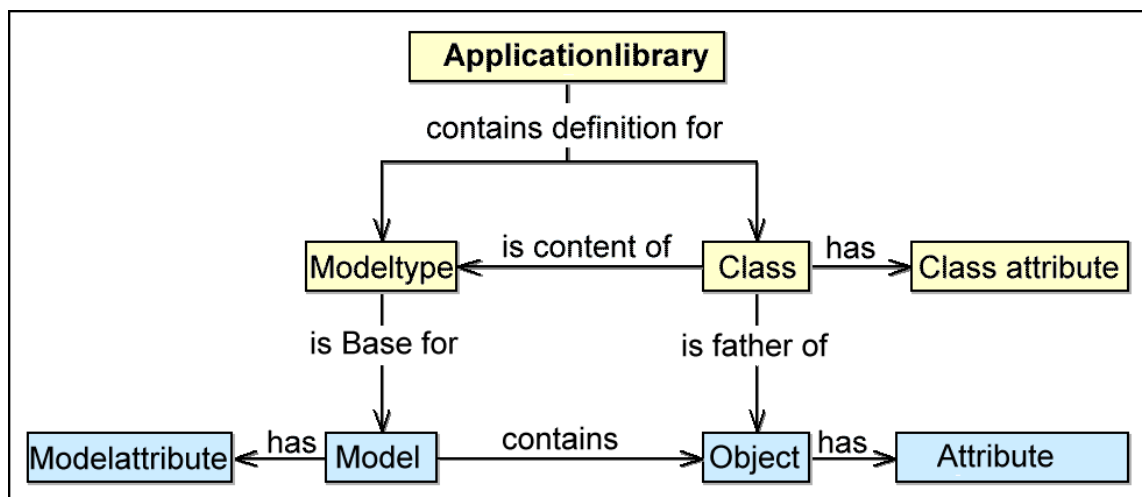


Figure 2: Terms and context in Business Process Management toolkit

Note: You can find the name of the application library which you are assigned to in the state information .

Application libraries contain the definitions for **model types** and **classes**.

A **model type** is a grouping of classes. The picture below shows for instance the model types of the ADONIS Standard Application Library (see fig. 3, p. 20).

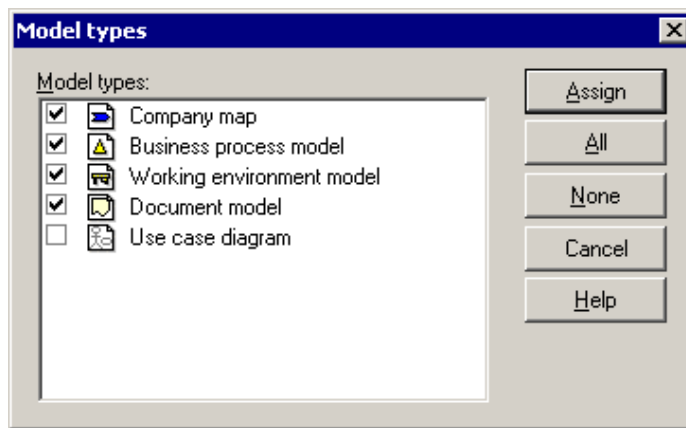


Figure 3: Model types of the ADONIS application library

Classes represent the pattern for the objects created by an ADONIS user (in ADONIS Business Process Management toolkit). Classes have **class attributes**, which control for instance the graphical display of an object or the arrangement of the object attributes in the ADONIS notebook in ADONIS Business Process Management toolkit. In addition, the **(object) attributes** are also defined in classes. Each **(object) attribute** will be assigned to an attribute type and a standard value during the definition.

Models based on a model type (e.g. Business Process Models) will be created in the ADONIS Business Process Management toolkit. Models have **model attributes**, which provide general information about the model (e.g. date of creation, status).

A model is made up of **objects**, which are derived (= instanced) from classes. Objects have **(object) attributes**, which contain the information describing the model and its contents.

Example from the Business Process Management toolkit:

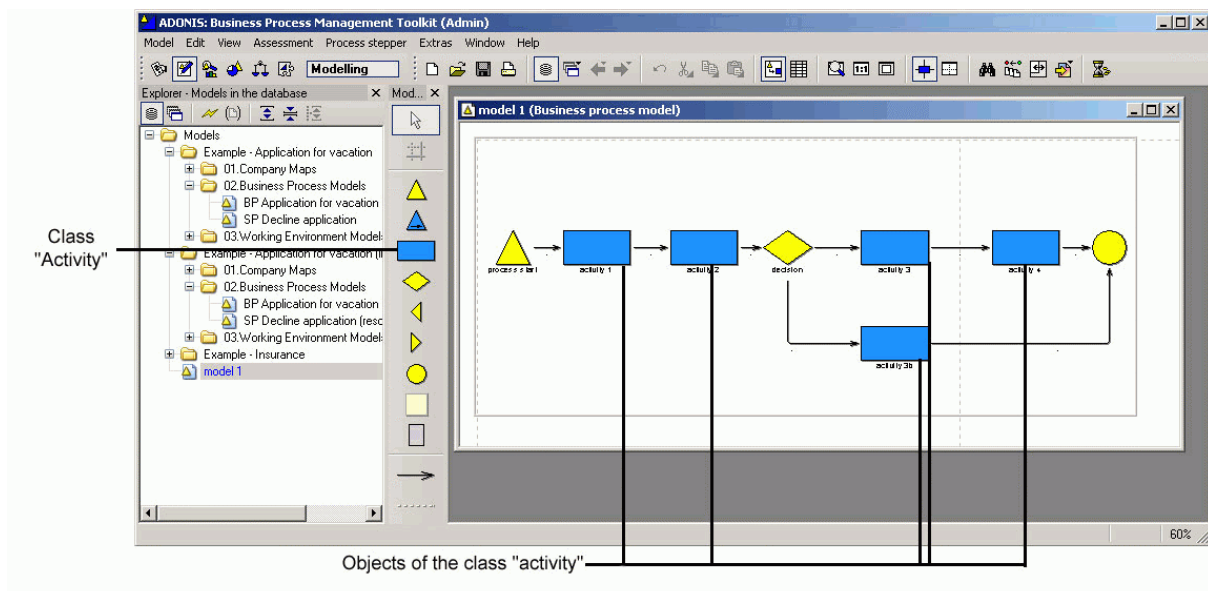


Figure 4: Model, classes and objects in ADONIS

The representation above (see fig. 4, p. 20) shows the model "BP model 1" of the model type "Business Process Model".

All classes available for the modelling of models are shown in the modelling bar (see chap. 2.2.2, p. 72) on the left side, like for instance the class "activity".

Note: The display of the available classes depends on the view mode, i.e. some classes and relations can be shrunk or expanded for the modelling.

In the model "BP model 1", objects of the available classes are modelled (= instanced), such as the objects "activity-1", "aktivity-2a", "activity-2b" and "activity-3" of the class "activity".

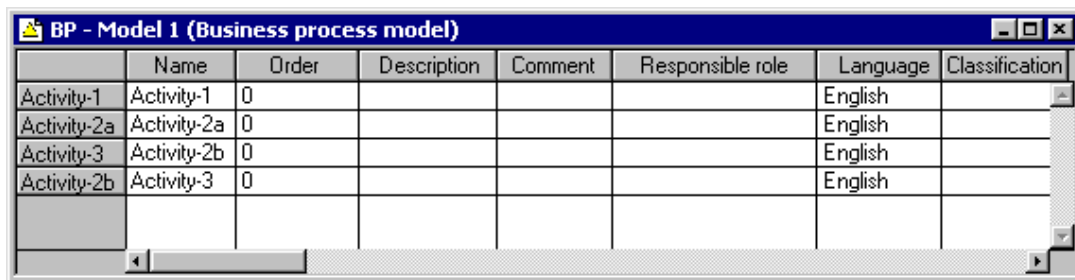
By double-clicking on an object with the left mouse button, you will open its ADONIS notebook, which contains all the (object) attributes defined for this class (see fig. 5, p. 21).

Figure 5: ADONIS-Notebook for the object "activity-1" of the class "activity"

The values for the available (object) attributes will be entered into the ADONIS notebook according to their type of attribute.

Part III

The tabular model display enables viewing and editing of the attribute values of all the objects of a class (see fig. 6, p. 22).



The screenshot shows a window titled "BP - Model 1 (Business process model)". Inside the window is a table with 8 columns: Name, Order, Description, Comment, Responsible role, Language, and Classification. The table contains four rows of data, each representing an activity object. The first row is "Activity-1", the second is "Activity-2a", the third is "Activity-3", and the fourth is "Activity-2b". Each row has a corresponding "Order" value of 0, and the "Language" is set to "English". The "Classification" column is empty for all rows. The table is scrollable, as indicated by the scrollbar on the right.

	Name	Order	Description	Comment	Responsible role	Language	Classification
Activity-1	Activity-1	0				English	
Activity-2a	Activity-2a	0				English	
Activity-3	Activity-2b	0				English	
Activity-2b	Activity-3	0				English	

Figure 6: Tabular display of all the objects of the class "activity"

In this way, the editing of attribute values in several objects of a class is quicker and clearer in the tabular display than in the graphical display, where you have to open and close the ADONIS notebook of each single object.

2. ADONIS user interface

The following chapter provides some useful information on the structure of the graphical user interface of ADONIS.

The ADONIS user interface follows the structure of other applications. However, the ADONIS user interface contains some additional features.

The ADONIS window (see fig. 7, p. 23) appears on the screen after the ADONIS Business Process Management toolkit (see chap. 1.1, p. 119) has been started. This window consists of the following six parts:

- Window bar (see chap. 2.1, p. 23)
- Menu bar (see chap. 2.2, p. 24)
- Component bar (see chap. 2.3, p. 24)
- Quick Access bar (see chap. 2.4, p. 24)
- Working area (see chap. 2.5, p. 25)
- Explorer (see chap. 2.6, p. 25)

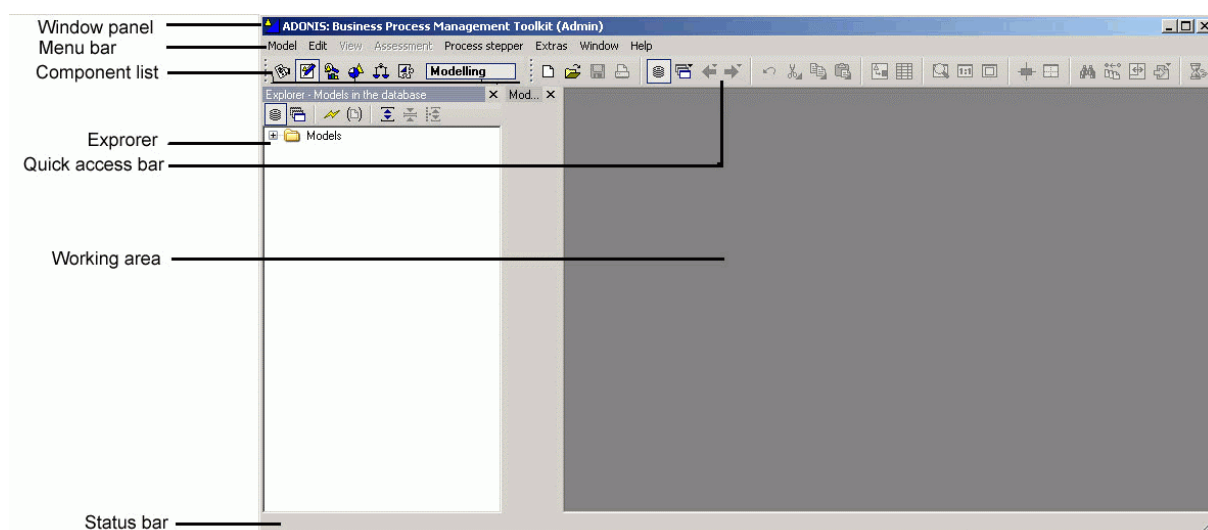


Figure 7: Working area in the Business Process Management toolkit

Explorer, components and the quick access bar, can be freely moved by means of "Drag and Drop". (hold mouse on the bar, drag it and drop it in a desirable place). They can be docked to the edge of the window or set in any place. At the end of the work, settings will be stored and used in the next program session. By pressing key **<F11>**, all opened tools can be hidden and afterwards shown again.

2.1 Window bar

The window bar (header bar) consists of the exit button (small program symbol), information on the working area (see chap. 2., p. 23) (ADONIS component and the user name in brackets) and the buttons "Minimize", "Maximize" and "Close" (see fig. 8, p. 24).

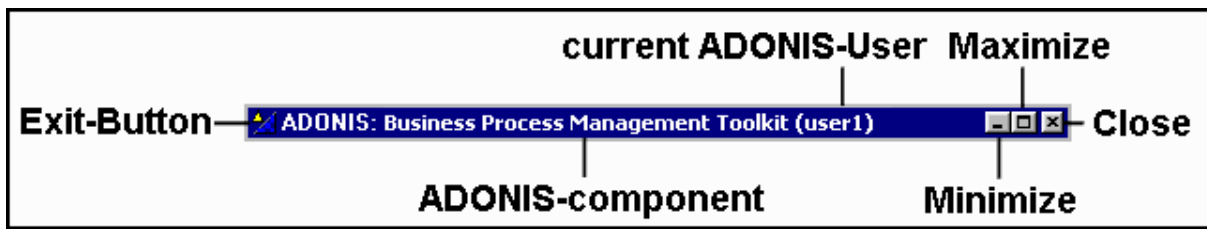


Figure 8: Window bar in the Business Process Management toolkit

2.2 Menu bar

The menu bar is placed below the window bar (see chap. 2.1, p. 23).

When starting the Business Process Management toolkit, the modelling component is activated and its menus are displayed in the menu bar (see fig. 9, p. 24).

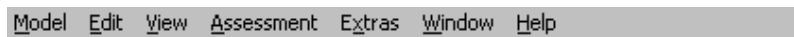


Figure 9: Menu bar (modelling component)

2.3 Component bar

You can find the component bar below the menu bar (see chap. 2.2, p. 24).

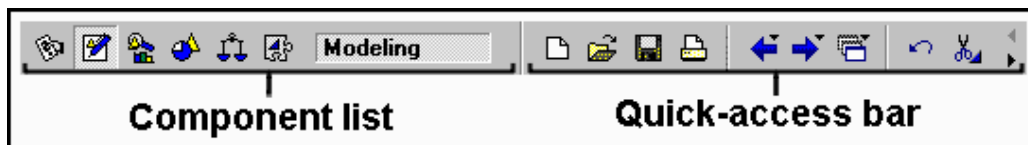


Figure 10: Component bar (modelling component)

The component bar (see fig. 10, p. 24) holds the symbols (smart icons) for the single components of the Business Process Management toolkit (the components "Acquisition", "Modelling", "Analysis", "Simulation", "Evaluation" and "Import/Export"). You can activate a component by clicking on the appropriate smart icon.

You may also activate a component by clicking on the component bar (to the right of the component icons) with the right mouse button. By selection of the required component a popup menu appears. Alternatively, you can open this popup-menu by pressing the function key <F9> and activate a component by using its accelerator (=underlined letter in the component name).

The name of the component currently active is displayed to the right of the component symbols.

2.4 Quick-Access bar

The Quick-Access bar is located below the menu bar (see chap. 2.2, p. 24) right next to the component bar (see chap. 2.3, p. 24)



Figure 11: Quick-Access-Bar (Modelling component)

The quick-access bar (see fig. 10, p. 24) offers symbols for actions frequently used when working with this component. The structure of the Quick Access bar can be configured (see chap. 4., p. 38) for a specific user.

2.5 Working area

The working area is the part of the window directly below the component and Quick Access bar. (see chap. 2.3, p. 24). The working area is used especially when working within the modelling component of the Business Process Management toolkit.

2.6 Explorer

ADONIS Explorer is a universal tool, that provides easy access to models and their status information. It has its own Quick-Access bar, with special smart icons (see fig. 12, p. 25).

Explorer's description and functionality can be found in the chapter "ADONIS-Explorer" (see chap. 4., p. 38).

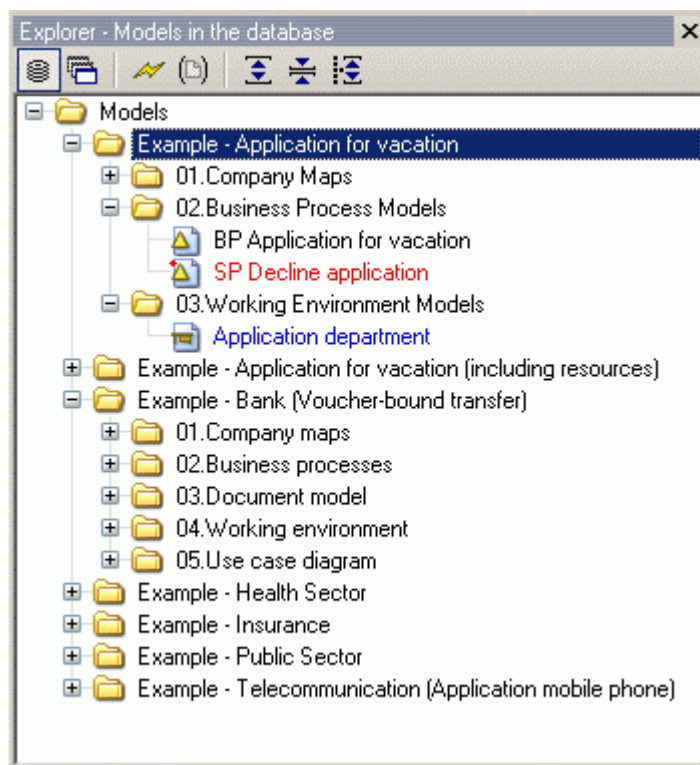


Figure 12: ADONIS-Explorer

3. Functionality elements

Operation elements (buttons, accelerator keys) are found in a number of areas in ADONIS in order to provide support.

Operating elements are available:

- **by selection** (see chap. 3.1, p. 26) and
- **in ADONIS notebooks** (see chap. 3.2, p. 31).

3.1 Functionality selection

The operation elements, which can be selected are displayed in every window (e.g. Open model, Queries, ADL Export) when opening the context sensitive menu by clicking with the right mouse button.

The following general functions are available in most windows as well as the specific functions relevant to the particular area:

- "Model types" (see chap. 3.1.1, p. 26)
(This function is only available in the model selection list.)
- "Manage model groups"
(This function is only available in the model selection list.)
- Refresh (see chap. 3.1.2, p. 27)
- Entry search (see chap. 3.1.3, p. 27)
- Save as (see chap. 3.1.4, p. 28)
- "Expand/Shrink" (see chap. 3.1.5, p. 29) with the following options
 - "Expand all branches"
 - "Shrink all branches"
 - "Expand selected level"
 - "Expand selected levels and corresponding sublevels" and
 - "Shrink selected levels"(available only in hierarchical selection lists)
- "Select all items" (see chap. 3.1.6, p. 30)
- "Selected items" (see chap. 3.1.7, p. 30)
- "Shrink/Expand time related versioning" (see chap. 3.1.8, p. 30)
(This function is only available in model and attribute profile selection lists if time related versioning is being used.)

3.1.1 Model types

A list of all defined model types is displayed in the window "Model types" (see fig. 13, p. 27).

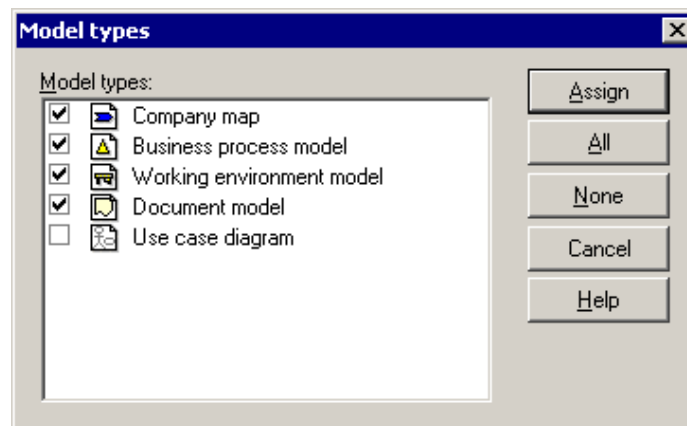


Figure 13: Model types of the ADONIS standard library

The current status of each model will be displayed (activated ☒ or deactivated ☐). Click in the status square to change the status.

If you click on the **"All"** button, all model types will be activated. By clicking on the **"None"** button, all model types will be deactivated.

After the successful change, click on the **"Assign"** button to display the updated model selection list, i.e. only the models of the activated model types will be shown.

Note: In the standard display all model types are activated.

Note: The "model types" menu item is only available in the model selection lists.

3.1.2 Refresh

By selecting the "Refresh" option (icon ) , the selection list will be updated, i.e. a comparison with the current status of the ADONIS database will be carried out.

3.1.3 Entry search

By selecting the button "Entry search..." you can search for entries in the list. When this button has been selected, the window "Entry search" is displayed (see fig. 14, p. 27).

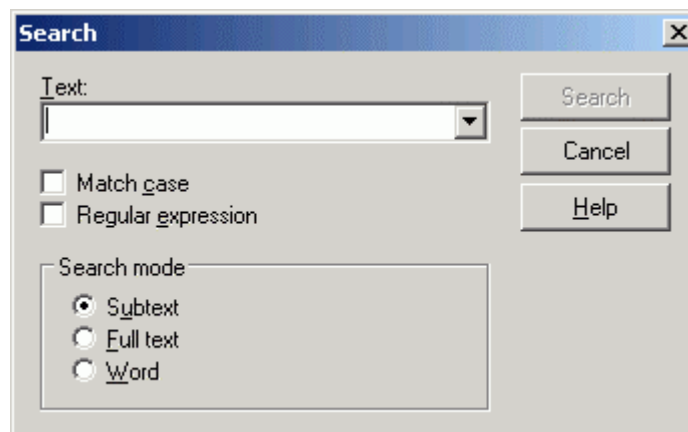


Figure 14: Entry search

Part III

Enter the text for which you wish to search into the field "Text" (or select an item already in the list).

The option "Match case" determines whether or not the actual case of the text for which you are searching should be taken into account.

The option "Regular expression" allows a search for regular expressions.

Additionally you can specify the type of search you are carrying out:

- **"Subtext"**: means that the text being searched for can be part of a larger word or sentence.
- **"Full text"**: searches for an entire piece of text, which matches the text for which you are searching.
- **"Word"**: assumes that the piece of text you are searching for is an entire word and will only locate matching words. A word must be a single grouping of text, it may be followed by blanks or a full-stop etc...

Start the search by clicking on the "Search" button. When entries matching the search criteria are found in the list, the search results will be displayed (see chap. 3.1.3.1, p. 28).

3.1.3.1 Display search results

The entries matching the search criteria will be displayed in the "Found entries"<Search criteria>" according to the hierarchy (see fig. 15, p. 28).

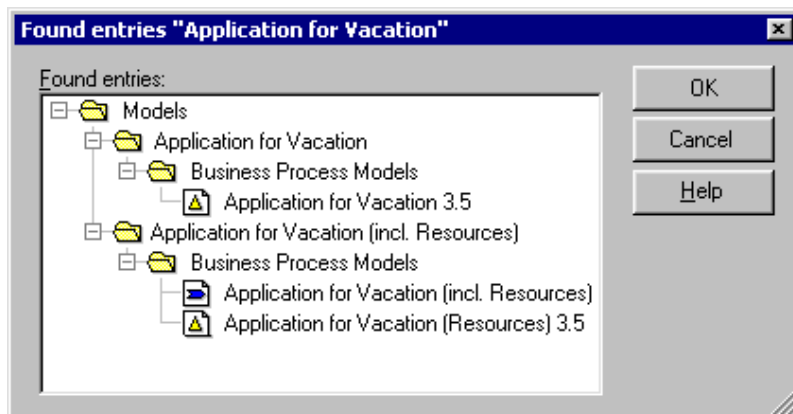


Figure 15: Search results

Select any result in the "Found entries" and then click the OK button. The search results window will be closed and the selected entries copied into the original selection list. Therefore you can carry out the action (e.g. open model, export models) on the selected search result.

3.1.4 Save as

By selecting the menu item "Save as..." you can save the contents of the list to a text file. Once this menu item has been selected the "Save as" window is displayed (see fig. 16, p. 29).

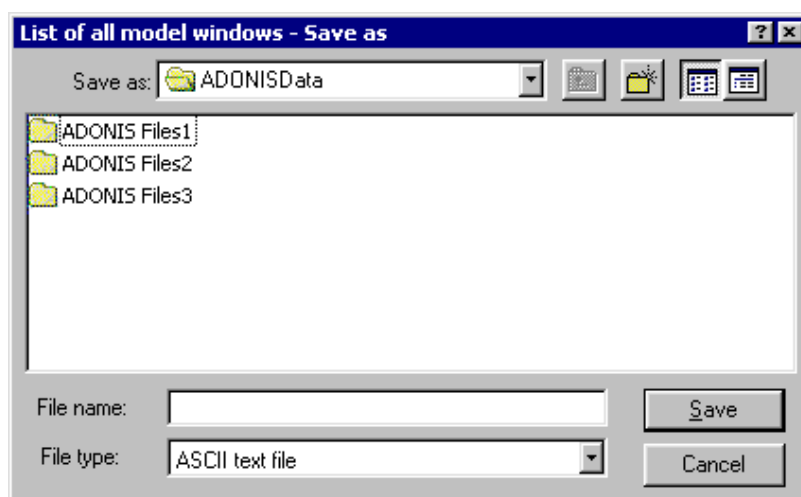


Figure 16: Save as

Enter a file name and select a path in which the contents of the list should be saved.

3.1.5 Expand/Shrink

Note: "Expand/Shrink" functions are available only in lists with hierarchical levels

The menu point "Expand/Shrink" leads to a sub menu, where the hierarchical view in the selection window can be expanded or condensed, the following options are available:

- "Expand all branches"
- "Shrink all branches"
- "Expand selected levels"
- "Expand selected levels and corresponding sublevels"
- "Shrink selected levels"

Individual options are as follows:

Expand all branches:

All hierarchical levels of the list will be fully displayed.

Shrink all branches:

Only main hierarchical levels of the list will be displayed.

Expand selected levels:

This option has the same effect as clicking on the symbol  and it is only available when at least one list entry has been previously selected. Entries that are immediately below the next hierarchy level will be collapsed.

Expand selected levels with corresponding sublevels:

This function is also only available when at least one entry has been previously selected. All entries on all hierarchical levels below this one, will be selected regardless of a number and depth of the structure.

Shrink selected levels:

This option is called in the same manner as clicking on the symbol  and it is only available when, at least one entry of the list has been selected. All entries below the selected entry will be collapsed.

3.1.6 Select all items

By selecting the "Select all items" menu item or by pressing keys **<Ctrl>+<A>** will select all selectable items in the selection list.

Note: Only the selectable items of the selection list will be selected, i.e. the items shrunk are not selected. To select all the items of a selection list, first select the "expand all" menu item (see chap. 3.1.5, p. 29) and then the menu item "Select all items".

3.1.7 Selected items

By selecting the "Selected items" menu item (keys **<Strg>+<V>**), all items selected in the list will be displayed in the window "All selected items" (see fig. 17, p. 30).

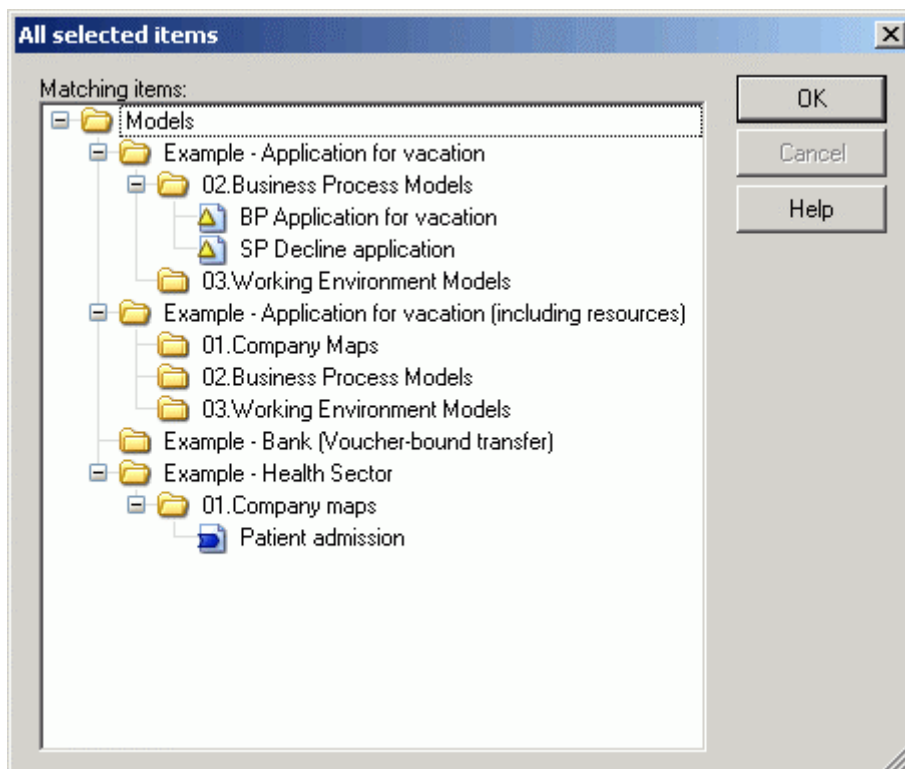


Figure 17: Display of all selected items

3.1.8 Expand/Shrink version threads

Note: The "Expand/shrink version threads" function is only available, if a **time-related versioning** (see chap. 7.1.2, p. 66) is defined in the application library.

The expansion of version threads is possible by clicking on the icon  (right above the model/attribute profile selection list) and causes the display of all the versions of a model/attribute profile saved in the ADONIS database (see fig. 18, p. 31).

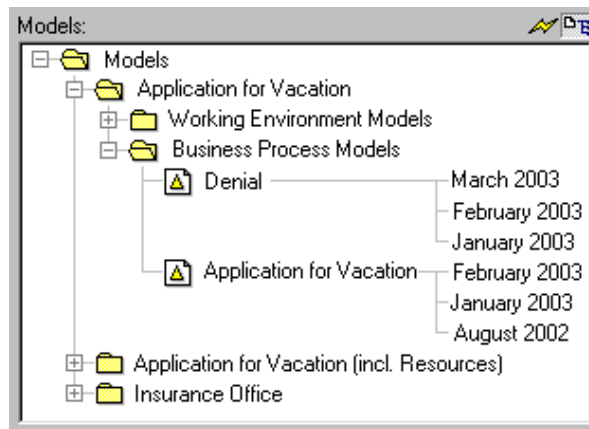


Figure 18: Model selection list with expanded version threads

In case of the hidden version thread, only the latest version of a model/attribute profile will be displayed in the selection list (see fig. 19, p. 31).

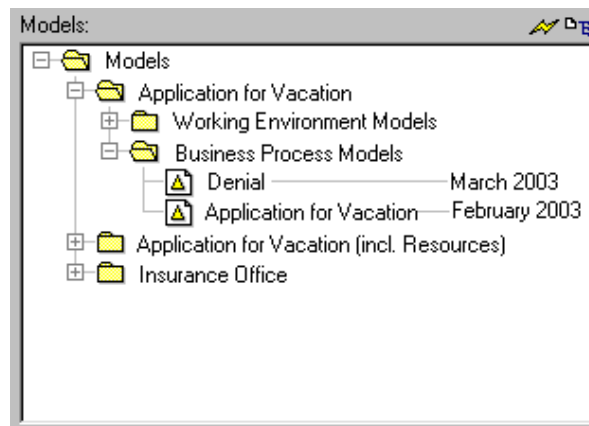


Figure 19: Model selection list with shrunk version threads

3.2 Functions in ADONIS notebooks

The ADONIS notebooks in the Business Process Management toolkit are used for the attribute management of objects, connectors and models.

Each ADONIS notebook consists of one or more chapters, which in turn contain one or more pages. Tabs on the right-hand side of the ADONIS notebook indicate the chapters. If a chapter contains more than one page, then the pages are numbered. By clicking on the tabs, the first page of the selected chapter is displayed. The arrow buttons  and  in the bottom right-hand corner enable you to move forwards and backwards through each page of the ADONIS notebook.

The ADONIS notebooks contain a number of icons, which carry out specific functions and assist in the input of various attribute values. There are also accelerators (see the under-lined letters) in the attribute and chapter names - these in combination with the Alt-key provide another method for navigating through the notebooks.

The ADONIS notebooks contain the following functions:

-  "Save as" icon (see chap. 3.2.1, p. 32)
-  "Print" icon (see chap. 3.2.2, p. 32)
-  "Info" icon (see chap. 3.2.3, p. 32)
-  "Large text field" icon (see chap. 3.2.4, p. 33)
-  "Dialog" icon (see chap. 3.2.5, p. 33)
-  "Expression dialogue" icon (see chap. 3.2.6, p. 33)
-  "Add" icon (see chap. 3.2.7, p. 33)
-  "Delete" icon (see chap. 3.2.8, p. 33)
-  "Execute/Follow" icon (see chap. 3.2.9, p. 33)
-  "File dialogue" icon (see chap. 3.2.10, p. 34)
-  "Notebook" icon (see chap. 3.2.11, p. 34)

A Accelerators (see chap. 3.2.13, p. 36)

The "Save" and "Print" icons can be found in the top right hand corner of the ADONIS notebook.

The "Info" icon can be found on the top right hand corner of the ADONIS notebook to provide information on the specific class and can also be found over a number of attributes within the notebook to provide information on the particular attribute.

The "Large text field" icon can be found on the right hand side above attribute fields of this type.

3.2.1 "Save" icon

By clicking on the Save icon  the entire contents of the ADONIS notebook can be saved in a TXT file (see chap. 5.15, p. 129) (ASCII-Text).

3.2.2 "Print" icon

By clicking on the Print icon  the entire contents of the ADONIS notebook can be printed.

An information window is displayed when the contents have been successfully sent to the printer.

3.2.3 "Info" icon

When the "Info" icon is selected , a window with additional information on either the class or the particular attribute as appropriate is displayed.

Note: The "Info" icon is only available in the ADONIS notebooks of objects and connectors.

3.2.4 "Large text field" icon

When you click on this icon , a large input field is displayed for the particular attribute. In this way an overview of the input for long attribute values can be taken. The "Large text field" icon is available for all multi-line attributes.

It is also possible to print out the contents of these fields.

3.2.5 "Dialog" icon

When you click on this icon , a support dialogue for the particular attribute value is displayed. It supports the entering of complex attributes (e.g. performer assignment, statistical distributions for the generation of variables, graphical representation of objects and connectors etc.).

Note: The "Dialogue" icon is only available in the ADONIS notebooks of objects and connectors in the BPM toolkit as well as in the Class Attribute "GraphRep" within Library Configuration in the Administration toolkit.

3.2.6 "Expression Dialogue" icon

When you click on this icon , an input window for the expressions (see chap. 3.2.12.3, p. 35) for each attribute value will be displayed. This makes the activity of entering expressions easier.

3.2.7 "Add" icon

When you click on this icon , a window, in which the attribute values to be added are listed, will be displayed.

Note: The "Add" icon is only available in the ADONIS notebook of objects for enumeration lists, creation of inter-model references and attribute profile references

3.2.8 "Delete" icon

When you click on this icon , a previously selected attribute value will be deleted.

Note: The "Delete" icon is only available in the ADONIS notebook of objects for enumeration lists, creation of inter-model references and attribute profile references

3.2.9 "Execute/Follow" icon

When you click on this icon , a program call will be executed or the referenced model will be shown - depending on the attribute type.

Note: The "Execute/Follow" icon is only available in the ADONIS notebook of objects and connectors.

3.2.10 "File Dialogue" icon

If you click on this icon , a window for the input of a file name to call a program is displayed. The file entered will automatically be loaded when carrying out the program call.

Note: The "File dialogue" icon is only available in the ADONIS notebook of objects and connectors.

3.2.11 "Notebook" icon

If you click on this icon , the ADONIS notebook of the previously selected connector will be displayed and you can edit the attribute of this connector (see chap. 2.2.7.12, p. 92).

Note: the "notebook" icon is only available in the ADONIS notebooks of objects, which contain the chapter "relations".

3.2.12 Input window

3.2.12.1 Input dialogue for text

In the input dialogue for text (see fig. 20, p. 34), texts (e.g. attribute values) are displayed in a field changeable in size and information where functions are available.

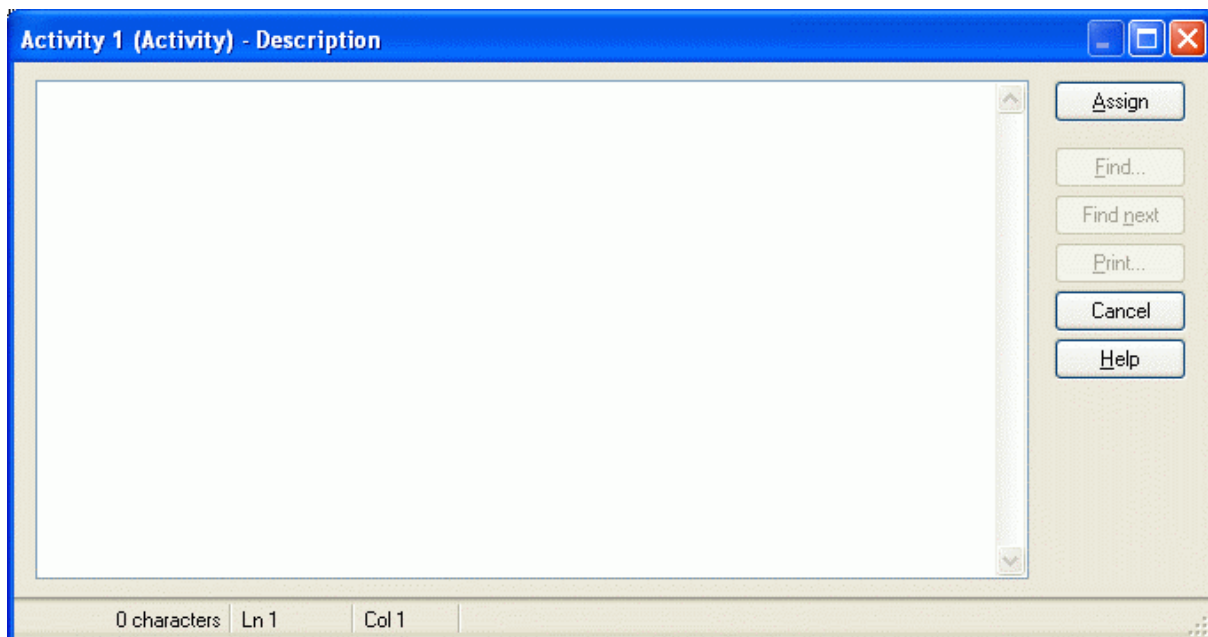


Figure 20: Input dialogue for text attributes

In the first field of the status row (at the bottom of the window), you can find the number of characters contained in the text. This will support you for the entry of attribute values, since for example attribute of type "text" (STRING) must contain at most 3700 characters. In the second field of the status row, the position of the cursor is given (row, column).

Once you have edited the text, click on **"Assign" button**, to copy your entries.

Note: The "Assign" button is only available if the text displayed can be edited.

By clicking on the **"Find..." button** you can search for entries in the text (see chap. 3.1.3, p. 27). According to the definition of a search text, further entries will be found in the text, if you click on the **"Find next" button**.

You can print (see p. 35) the contents of this input field by clicking on the **"Print..." button**.

Print text field

Before printing the text, the window "Print text field" will be displayed (see fig. 21, p. 35).

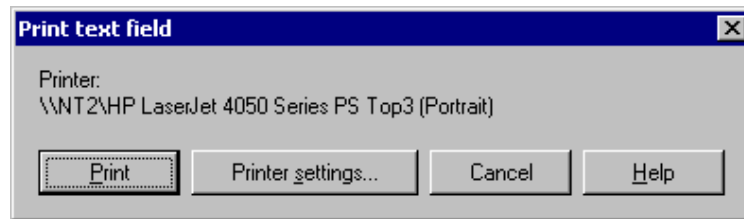


Figure 21: Print text field

Click on the "Print" button to send the text to the indicated printer.

Click on the "Printer settings..." button to change the settings for the printout.

3.2.12.2 Text input field

In the text input field (see fig. 22, p. 35) a one-line field for the input of text is available.

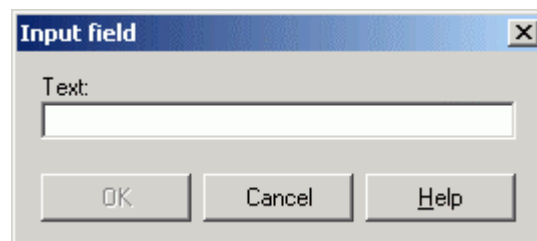


Figure 22: Text input field

Note: The label of the text input field (window title and field label) as well as some standard text entries will be defined in the application library.

3.2.12.3 Input dialogue for expressions

An input dialogue is available for the changeable attributes of the type "Expression" (see fig. 23, p. 36).

Note: The changeability of expression attributes will be defined in the library.

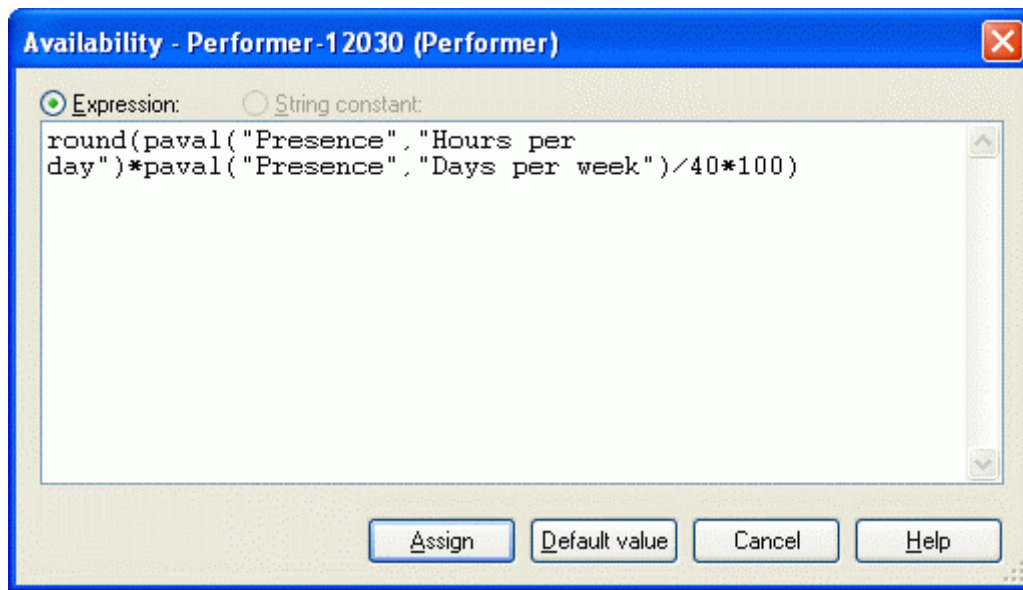


Figure 23: Input dialogue for expressions

You can enter either an expression or a string. Click on the **"Standard value" button** to enter the standard value defined in the application library.

By clicking on the **"Assign" button**, the entered value will be copied into the attribute.

Note: The entered value must contain at most 3600 characters.

3.2.13 Accelerators

The accelerators in the ADONIS notebooks support you in navigating through the notebook and entering attribute values.

The accelerators are identified by underlined letters and are contained in all chapter names and attribute names (see fig. 24, p. 37).

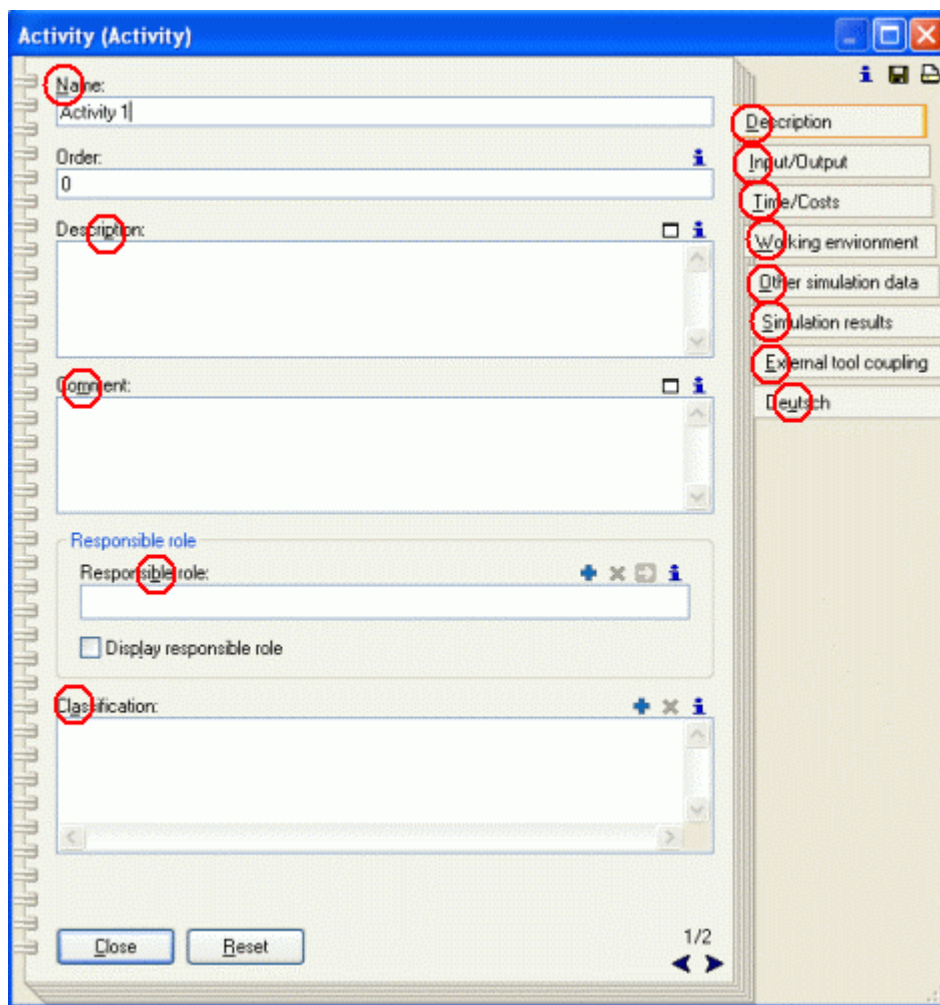


Figure 24: Accelerators in ADONIS notebook

Navigation using accelerators is carried out using a key combination of <Alt> and the underlined letters. When you enter the accelerator of a chapter, the first page of the chapter is displayed. By entering the accelerator of an attribute name, the cursor is placed in the relevant attribute so that you can input a value or edit the existing value.

When you wish to turn the pages of the notebook, you can use either the arrow buttons in the bottom right corner of the notebook, or the key combination <Alt>+<+> for the next page and <Alt>+<-> for the previous page.

4. ADONIS-Explorer

The Explorer is a window, that displays ADONIS models and their status (see fig. 25, p. 38). It has its own Quick Access Bar, that provides fast access to the functions and views. Additional functions are located in the context menu.

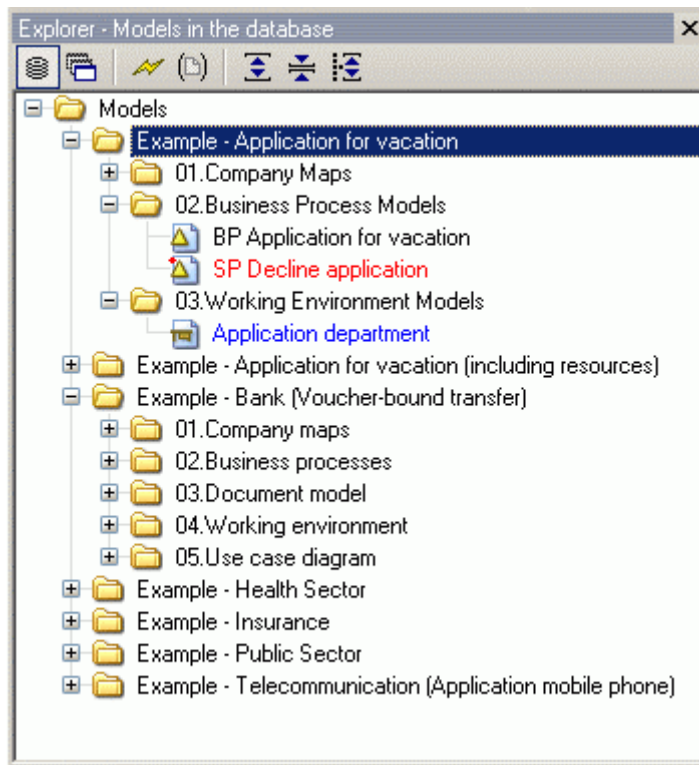


Figure 25: ADONIS-Explorer

The explorer can be visible or hidden by pressing **<Ctrl>+<E>** or selecting the option **"Explorer"** in the menu **"Window" -> "Tools"**. It can be moved and docked to any edge or can be freely put in any position. With use of **<Tab>** key, a user can change the focus between the Explorer and the active model window.

Description of text colour in Explorer:

- **Black** text displays model group names and models that are closed.
- **Blue** text displays models that are currently open and have no unsaved changes.
- **Red** text displays models that are open and contain changes that have not been saved.

Double clicking on the model in explorer (or explorer's context menu -> Open) will select the model and show its details. With use of keys **<Ctrl>** or **<Shift>** more models can be opened at the same time. Double clicking on the name of an already opened model (that is minimised or hidden in the background) will display the model in the drawing area.

Description of explorer's smart icons:

-  "Models in the database" (see chap. 4.1, p. 39)
-  "Opened models" (see chap. 4.2, p. 40)
-  "Update the view" (see chap. 4.3, p. 41)
-  "Set up visible models" (see chap. 4.4, p. 41)
-  "Show all items" (see chap. 4.5, p. 41)
-  "Hide all branches " (see chap. 4.5, p. 41)
-  "Fully expand selected branch" (see chap. 4.5, p. 41)

Explorer's context menu provides the following functions:

Open	to load selected models from the database (see chap. 4.6, p. 42)
Rename	to rename selected model or model groups (see chap. 4.7, p. 42)
Delete	to delete selected model or model groups (see chap. 4.8, p. 42)
Model types	to filter the visible model types (see chap. 4.4, p. 41)
Model groups management	to manage the structure of model groups
Update	to update the view (see chap. 4.3, p. 41)
Find entry	to search for a model in the Explorer (see chap. 4.10, p. 42)
Save tree structure	to save the current structure in a text file (see chap. 4.11, p. 43)
Expand/Shrink	to show or hide branches and selected levels (see chap. 4.5, p. 41)
Select all entries	to select all models and model groups in a current view (see chap. 3.1.6, p. 30)
Selected entries	to display selected models and model groups (see chap. 3.1.7, p. 30)

4.1 Models in the database

Clicking on the icon  or accessing it from the menu **"Window" -> "Navigation" -> "Models in the database"** or pressing the keys **<Ctrl>+<D>** will display in Explorer folders of saved models together with all the models in that are stored in those folders: An active model will be marked on the drawing board:

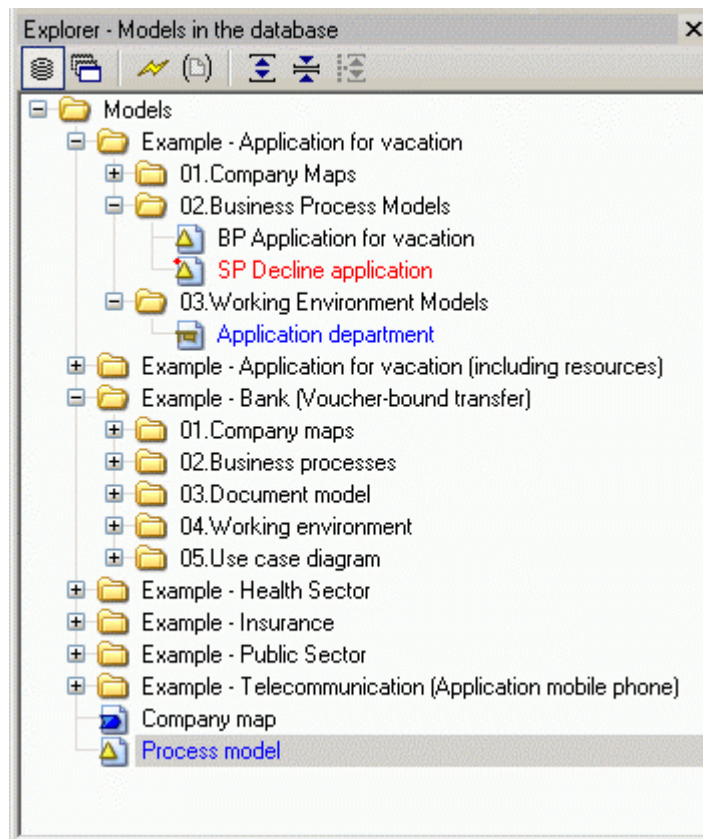


Figure 26: View option: Status of a model

4.2 Opened models

Clicking on the icon  or accessing it from the menu **"Window" -> "Navigation" -> "Opened models"** or pressing keys **<Ctrl>+<L>** will display (in explorer) the list of all opened models, sorted by model type. An active model will be marked on the drawing board:

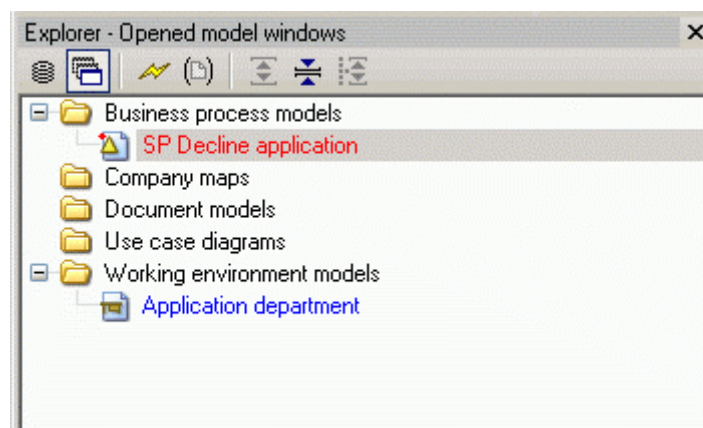


Figure 27: View option: Opened models

Note: Both menu and key combinations, will make hidden explorer visible.

4.3 Update the view

The icon  (alternatively *Explorer's option in the context menu -> "Update"*.) is used to make a connection to a ADONIS database to display the newest status. Regular updates are suggested especially in the distributed environments, where many users can access the same model at the same time. An active model will be marked on the drawing board.

4.4 Set up visible model types

Also for the view "Models in database" as "Opened models" it is possible to filter the display of given model types. The icon  (or. Explorer's context menu -> "Model types") opens a dialogue, where the user can select preferred model types to be displayed:

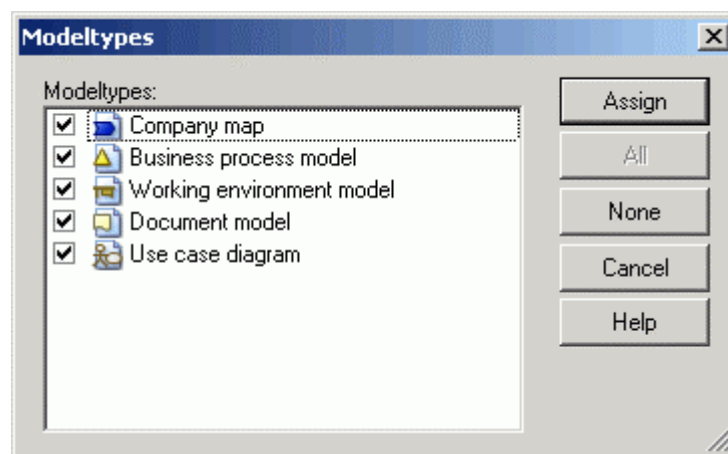


Figure 28: Showing or hiding model types

By clicking on the checkboxes next to the model types, the user can choose which type to show (☒) or hide (☐). After clicking on **"Assign"** button, the view will be adjusted accordingly.

4.5 Showing or hiding branches (levels)

In ADONIS models are displayed and managed in a hierarchical tree structure. As in all such structures to expand or shrink the desirable branch or level, the user needs to click on  or  to get a clear lay-out.

Through clicking on the icon  the whole tree structure will be expanded.

Through clicking on the icon  the view on the main model groups in a window "Models in the database" and model types list in the window "Opened models" will be collapsed.

If you selected a model group, with a collapsed submodel group, you can display all the substructure by clicking on the icon .

Note: All above functions are also located in the Explorer's **context menu** under **"Expand / Shrink"**.

4.6 Open models

Every selected **model** can be opened by selecting "open" in the context menu or by pressing a corresponding key.

The name of the opened model will be displayed with a blue text in the ADONIS explorer.

4.7 Renaming model/model group

Every selected **model** can be renamed by selecting "rename" option in the context menu or by pressing a corresponding key. <F2> rename.

Every selected **model group** can be renamed by selecting "rename" option in the context menu or by pressing a corresponding key. <F2> rename.

4.8 Delete model/model group

Every selected **model** can be deleted by selecting "delete" option in the context menu or by pressing a corresponding key deleting.

Every selected **model group** can be deleted by selecting "delete" option in the context menu or by pressing a corresponding key deleting.

Note: Model groups can only be deleted if they do not contain the other model groups or model references in those model groups.

4.9 Model group management

The model group management will start after selecting "**Model group management**" in the **Context menu**.

4.10 Finding entries

By selecting "**Find entry**" in the **Context menu** the general ADONIS search function will appear:

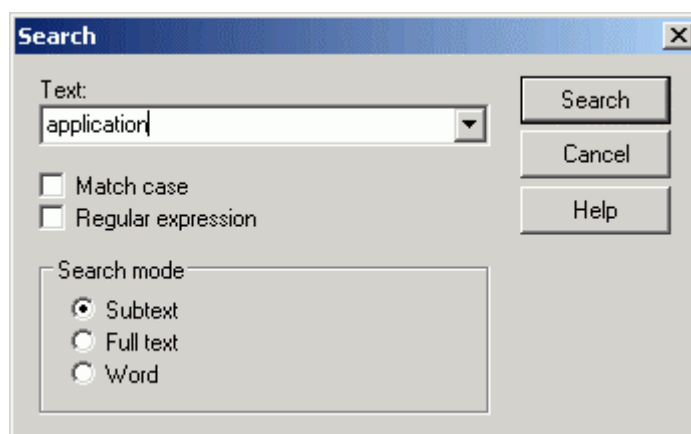


Figure 29: An Example: Looking for a model, that contain the string "application" in the name

The following options are available:

- Case sensitive: capitals and small letters will be distinguished, while finding the given term.
- Regular expression: searched entry will be interpreted as a regular expression not a string of signs.
- Subtext: a searched term can be found in the text, that does not have to be a whole word.
- Full text: only the results that exactly match the search string will be taken into consideration.
- Word: A searched term must be a word. The "word" is defined as a string of signs of desired length, that is on both sides separated by punctuation mark (space, period ...).

4.11 Saving tree structure

To save tree structure click on **"Save tree structure"** in the **context menu**. The contents of explorer can be exported to the external data under a name assigned by a user. Information will be stored in the ASCII-Text format..

5. ADONIS Browser

A browser included in ADONIS provides an overview, work can be distributed and further work (printing, saving...) can be carried out. Regardless of where you are in ADONIS, the ADONIS browser provides a standard layout.

The ADONIS browser is used in the modelling Component (see chap. 2., p. 70), Analysis Component (see chap. 3., p. 111), Simulation Component (see chap. 4., p. 112) and the Evaluation Component (see chap. 5., p. 114).

5.1 Classification

In ADONIS different types of browsers are available. They can be divided into:

- **hierarchical** and
- **non hierarchical** browsers

and depending whether the information can be changed into

- **editable** and
- **non editable** browsers.

The information in an **editable browser** (see chap. 5.2.1, p. 48) can be edited and saved while the information in a non editable browser will only be used to show results.

The information in a **hierarchical browser** (see chap. 5.2.2, p. 49) is shown in different levels (e.g. models and sub models) while information in a non hierarchical browser is shown in a one-dimensional structure.

Both groups of browsers (hierarchical and editable) can be combined in the actual ADONIS browser depending on the information shown.

Examples:

- editable/hierarchical:

Query result: (<"Activity">)

	Referenced documents	Execution time	Waiting time
1. BP Voucher-bound transfer			
Execute order in calculation center		00:000:01:00:00	00:000:00:00:00
2. SP Accept transfer			
Order is validated by bank clerk	Transfer form (Document) - Documents (transfer) (Document model)	00:000:00:05:00	00:000:00:00:00
Resolve issue	Transfer form (Document) - Documents (transfer) (Document model)	00:000:01:00:00	00:000:00:00:00
Send the transfer order back to the customer	Transfer form (Document) - Documents (transfer) (Document model)	00:000:00:10:00	00:000:00:00:00
Sort the transfer orders according to the transfer amount	Transfer form (Document) - Documents (transfer) (Document model)	00:000:00:45:00	00:000:00:00:00
Validate transfer details	Transfer form (Document) - Documents (transfer) (Document model)	00:000:00:10:00	00:000:00:00:00
3. SP Control signature/blocks			
Check if account is blocked		00:000:00:00:10	00:000:00:00:00
Check signature	Transfer form (Document) - Documents (transfer) (Document model)	00:000:00:00:30	00:000:00:00:00
Decide on the release		00:000:00:30:00	00:000:00:00:00
Send the order back to the customer		00:000:00:10:00	00:000:00:00:00
4. SP Digitalize transfer			
Check mistakes in file image		00:000:00:00:00	00:000:00:00:00
Complete the image		00:000:00:00:00	00:000:00:00:00
Gather credit transfer receipts into a batch	Transfer form (Document) - Documents (transfer) (Document model)	00:000:00:00:00	00:000:00:00:00
Process batch of receipts	Transfer form (Document) - Documents (transfer) (Document model)	00:000:00:00:00	00:000:00:00:00
Send the order back to the customer	Transfer form (Document) - Documents (transfer) (Document model)	00:000:00:00:00	00:000:00:00:00

Save... Print... Search... Diagram... Close Help

Figure 30: Example for an editable, hierarchical browser (analysis result)

- editable/non hierarchical:

	Execution time	Waiting time	Costs
Order is validated by bank clerk	00:000:00:05:00	00:000:00:02:00	4,00
Validate transfer details	00:000:00:10:00	00:000:00:00:40	22,00
Resolve issue	00:000:01:00:00	00:000:00:10:00	7,00
Sort the transfer orders according to the transfer amount	00:000:00:45:00	00:000:00:41:00	6,00
Send the transfer order back to the customer	00:000:00:10:00	00:000:00:00:03	9,00

Figure 31: Example for an editable, non hierarchical browser (tabular model representation)

- non editable/hierarchical:

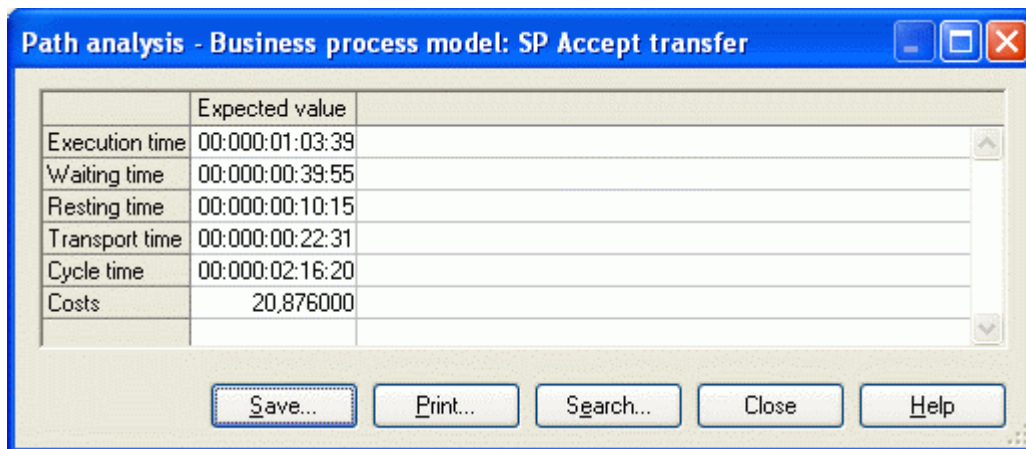
Capacity analysis (Process related/Per process) - Application model: APPLICATION MODEL

Business process	Activity	Performer	Number	Execution time	Waiting time	Resting time	Transport time	Cycle time	Pe
1. SP Control signature/blocks									
Check signature (SP Control signature/blocks)			1,000000	00:000:00:26:41	00:000:00:00:00	00:000:00:00:00	00:000:00:00:00	00:000:00:26:41	
Check if account is blocked (SP Control signature/blocks)		Backoffice clerk	1,000000	00:000:00:00:30	00:000:00:00:00	00:000:00:00:00	00:000:00:00:00	00:000:00:00:00	
Decide on the release (SP Control signature/blocks)		Backoffice clerk	1,000000	00:000:00:00:10	00:000:00:00:00	00:000:00:00:00	00:000:00:00:00	00:000:00:00:00	
Send the order back to the customer (SP Control signature)		Backoffice clerk	0,743000	00:000:00:22:17	00:000:00:00:00	00:000:00:00:00	00:000:00:00:00	00:000:00:00:00	
Total			0,372000	00:000:00:03:43	00:000:00:00:00	00:000:00:00:00	00:000:00:00:00	00:000:00:00:00	

Save... Print... Search... Diagram... Close Help

Figure 32: Example for a non editable, hierarchical browser (simulation result capacity analysis)

- non editable/non hierarchical:



	Expected value
Execution time	00:000:01:03:39
Waiting time	00:000:00:39:55
Resting time	00:000:00:10:15
Transport time	00:000:00:22:31
Cycle time	00:000:02:16:20
Costs	20,876000

Buttons: Save... Print... Search... Close Help

Figure 33: Example for a non editable, non hierarchical browser (simulation result path analysis)

5.2 Structure

The window of the ADONIS browser displays data (results) in tables and offers the functionality to save, print and display the data graphically.

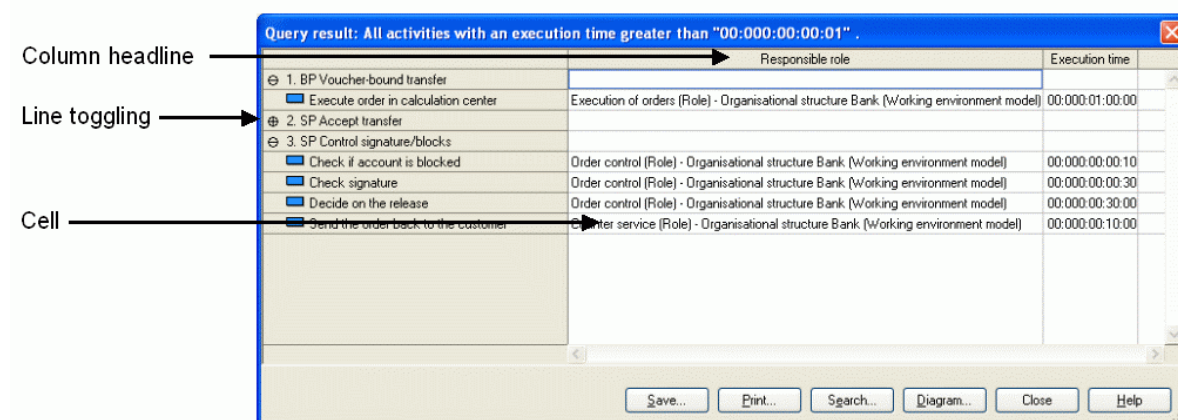
The column headings (first row, grey background) show the type of data in each column (e.g. "attribute"). The first **column** (grey) contains the structure of the rows or the row names for each of the data sections (lines).

The rows group the results in individual data sections. Each data section contains one or more cells.

Within the **cells** the corresponding attribute values or calculation results are displayed.

Note: In hierarchical ADONIS browsers (see chap. 5.2.2, p. 49) empty cells will also be shown.

The picture below (see fig. 34, p. 46) shows the results of a Capacity Analysis in the ADONIS browser. Some information about the results is also shown.



Query result: All activities with an execution time greater than "00:000:00:00:01".

	Responsible role	Execution time
1. BP Voucher-bound transfer		
Execute order in calculation center	Execution of orders (Role) - Organisational structure Bank (Working environment model)	00:000:01:00:00
2. SP Accept transfer		
3. SP Control signature/blocks		
Check if account is blocked	Order control (Role) - Organisational structure Bank (Working environment model)	00:000:00:00:10
Check signature	Order control (Role) - Organisational structure Bank (Working environment model)	00:000:00:00:30
Decide on the release	Order control (Role) - Organisational structure Bank (Working environment model)	00:000:00:30:00
Send the order back to the customer	Order service (Role) - Organisational structure Bank (Working environment model)	00:000:00:10:00

Buttons: Save... Print... Search... Diagram... Close Help

Figure 34: ADONIS browser structure

In a **hierarchical ADONIS browser** (see chap. 5.2.2, p. 49) a number indicating the level will be shown in the (grey) header of each row indicating the hierarchy level of the current row.

The display area (white background) contains the results.

The structure of the browser in terms of the rows and columns labels and contents varies according to the way results are displayed.

In an **editable ADONIS browser** (see chap. 5.2.1, p. 48) you can change the values displayed in the cells. The availability of this function depends on the one hand on the data displayed and on the other hand on the write access to models from which the data is taken from. For example, you can edit the results of an Analysis query directly into the ADONIS browser, if you have previously opened the models for the query with a write access.

Note: The active (current) cell or the selected area will be indicated by a frame using the colour for the frame as defined in the system settings.

Note: Write protected attributes in editable ADONIS browsers will be shown in grey font.

The **context sensitive menu** (right mouse button) in the ADONIS browser contains among other things the following functions:

- **Expand all** (see chap. 5.7, p. 55): show the entire contents of the browser by expanding all areas,
- **Shrink all** (see chap. 5.7, p. 55): only shows the highest level,
- **Save** (see chap. 5.13, p. 60): save the contents of the browser in a file,
- **Print** (see chap. 5.15, p. 64): print the contents of the browser as currently displayed (WYSIWYG),
- **Find** (see chap. 5.12, p. 59): search for specific text within the browser,
- **Copy to clipboard** (see chap. 5.14, p. 63): copy the contents of the browser to the clipboard,
- **Select attributes/columns** (see chap. 5.8, p. 56): select the columns, which have to be shown (attributes).
- **Sort** (see chap. 5.9.1, p. 57): sort the browser contents.
- **Column width** (see chap. 5.3, p. 53): enter the column width
- **Adjust column width** (see chap. 5.4, p. 54): adjust the width of the columns to the optimum size.
- **Row height** (see chap. 5.5, p. 54): enter the row height.
- **Adjust row height** (see chap. 5.6, p. 55): adjust the height of the rows to the optimum size.

Note: The functions "Expand all (see chap. 5.7, p. 55)" and "Shrink all (see chap. 5.7, p. 55)" are only available in the hierarchical ADONIS browser (see chap. 5.2.2, p. 49)

The **context menu** (right mouse click) **for the column header** in general contains the following functions:

- **align attribute values** (see chap. 5.10, p. 58): align the attribute value of the current column left, centre or right,

- **sort ascending/descending** (see chap. 5.10, p. 58): ascending or descending sorting of the attribute values of the current column.

5.2.1 Editable ADONIS browser

The editing of the displayed value in an editable ADONIS browser is possible by:

- directly entering a value in any cell,
- copying and inserting values inside the browser,
- inserting values which have been copied onto the clipboard, for instance from a table calculation program.

Enter an attribute value **directly into the appropriate cell**, by double-clicking on the cell or select the cell using the cursor keys and press the <Enter> key.

If you want to **edit several (related) values of the same attribute** (i.e. in the same column), press the <Shift> key, click on the cell with the first (highest) value (the mouse pointer changes to ) and mark - with pressed mouse- and <Shift> key - the domain of the value to edit. Press the <Enter> key to start the input. If you press the <Enter> key again, you will finish the entry of the current value and start the entry of the next value.

Note: You can abort the editing of several values at any time by pressing the <Esc> key.

Note: If a support of input is available for the attribute you wish to edit, an appropriate window will be opened. Otherwise you can edit the attribute value directly in the cell.

Copy an attribute value, by clicking the cell with the value to copy or select it using the cursor keys and then select the "Copy" menu item in the context sensitive menu (right mouse button) or press the key combination <Ctrl>+<C>.

Paste the copied attribute value, by clicking on the cell in which the value should be inserted or select it using the cursor keys and then select the "Paste" menu item in the context sensitive menu (right mouse button) or press the key combination <Ctrl>+<V>

Note: The copy and paste function is also possible for several values (areas) at the same time, by selecting the appropriate areas with the mouse and then carrying out the functions "Copy" and "Paste".

If you want to **copy the value of a cell into several (related) cells** of the same attribute (i.e. in the same column), press the <Ctrl> key, click on the cell with the value to copy (the mouse pointer will change to ) and select the target-area - by pressing the mouse button and the <Ctrl> key- .

Additionally, it is also possible to insert cell values **from another application** (e.g. Microsoft Excel) into ADONIS browser .

Note: When copying and pasting values, note that the type of attributes must match with each other, i.e. the type of attributes of the copied value must correspond to the type of attribute in which you want to insert the value.

Exception: In attributes of the type "String" or "Longstring", you can insert the values of other types of attributes.

5.2.2 Hierarchical ADONIS browser

The hierarchical ADONIS browser enables the representation of hierarchical structures (tree structures), making it possible to shrink and expand each tree (see fig. 35, p. 49). In addition a number indicating the level will be shown in the (grey) header of each row indicating the hierarchy level of the current row.

The screenshot shows a window titled "Capacity analysis (Process related/Per process) - Application model: APPLICATION MODEL". It contains a table with the following data:

	Business process	Activity	Performer	Number	Execution time
⊖ 1.	SP Control signature/blocks				00:000:00:26:14
⊖		Check signature (SP Control signature/blocks)		1,000000	00:000:00:00:30
			Backoffice clerk	1,000000	00:000:00:00:30
⊖		Check if account is blocked (SP Control signat		1,000000	00:000:00:00:10
			Backoffice clerk	1,000000	00:000:00:00:10
⊖		Decide on the release (SP Control signature/bl		0,733000	00:000:00:21:59
			Backoffice clerk	0,733000	00:000:00:21:59
⊖		Send the order back to the customer (SP Cont		0,358000	00:000:00:03:35
			Backoffice clerk	0,358000	00:000:00:03:35
	Total				00:000:00:26:14

At the bottom of the window are buttons for Save..., Print..., Search..., Diagram..., Close, and Help.

Figure 35: Hierarchical ADONIS browser (Example simulation result)

Before each section either ⊕ or ⊖ is displayed in the first column. This icon ⊕ indicates that the current row contains a summary of results and can be broken down further by clicking on the symbol. This symbol ⊖ means that all information is displayed. By clicking on this symbol only summary information is displayed.

Note: Lines without a symbol represent the lowest hierarchy (tree) and therefore have no other subordinated data.

Note: Due to the hierarchical representation the ADONIS browser will also show empty cells.

5.2.3 Representation of attribute values

The attribute values shown in a ADONIS browser are shown as text whereas the representation of the following attribute types differs from the normal representation in the ADONIS notebook:

- Records** A record in the tabular modelling is represented by the word "[Record]" and in the analysis results represented by the symbol ⊕
- Program call** The representation of a program call attribute (see chap. 5.2.3.1, p. 50) depends on the definition of your application library.
- Reference** A reference to a **model** is represented by "<model name> (<model type>)" whereas multiple references within one attribute are shown using several lines..
- A reference to an **object** within a model is represented by "<object name> (<class name>) - <model name> (<model type>)" whereas multiple references within one attribute are shown using several lines.

- Enumeration list** The enumeration values selected from the list will be displayed separated by " , " .
- Calendar** A process or performer calendar is represented by the word "[Calendar]" .

To **edit the displayed attribute values** double click on the respective cell. Depending on the attribute type the following input support dialogs are available:

Edit record attributes

To edit attributes of type "Record" (RECORD).

Colour definition

To select a colour (for the graphical representation of an object).

Choose enumeration value

To choose an attribute value (in the tabular representation).

Selection enumeration value from list

To select an attribute value from an enumeration list.

Edit external program call

To edit an external program call (in the tabular representation).

Edit date

To edit attributes of type "Date" (DATE).

Edit date/time

To edit attributes of type "Date and time" (DATETIME).

Edit time

To edit attributes of type "Time" (TIME).

Add references

To create model and object references of the type "Reference" (INTERREF).

Distribution definition

To define a distribution function to assign to variables.

Transition condition

To define transition conditions in Subsequent relations.

Performer assignment

To define performer assignments.

Resource assignment

To define resource assignments

Definition of a performer calendar

To define a performer calendar and therefore when the performer will be present.

Definition of a process calendar

To define a process calendar.

5.2.3.1 Representation of program call attribute values

The attribute values of program calls can be represented differently depending on the definition in your application library. Depending on the definition the values will be shown as follows:

- "-> [Executable]"

Instead of **Executable** the name of the defined program will be shown. The program is started by double clicking on the cell.

Note: The name of the program and the parameter are defined by the ADONIS administrator and cannot be changed.

- "-> [<automatically>]"

Double clicking on the cell will start the program associated with the parameter.

Note: The parameter is defined by the ADONIS administrator and cannot be changed.

- "*Executable*"

Double clicking on the cell will show the input dialogue for the program call suppressing the display of the parameter.

Note: The parameter is defined by the ADONIS administrator and cannot be changed.

- "*Parameter*"

Double click on the cell to show the input dialogue for the program call.

- "[*Parameter*]"

Double clicking on the cell will show the input dialogue for the program call whereas the executable program has been predefined.

Note: The executable program is defined by the ADONIS administrator and cannot be changed.

5.2.3.2 Edit references

By clicking on a cell with references a window showing the reference targets is displayed.

References to models in the list "Reference targets" (see fig. 36, p. 52) will show the following information:

- Reference status
- Model type icon of the referenced models
- Name of the referenced models

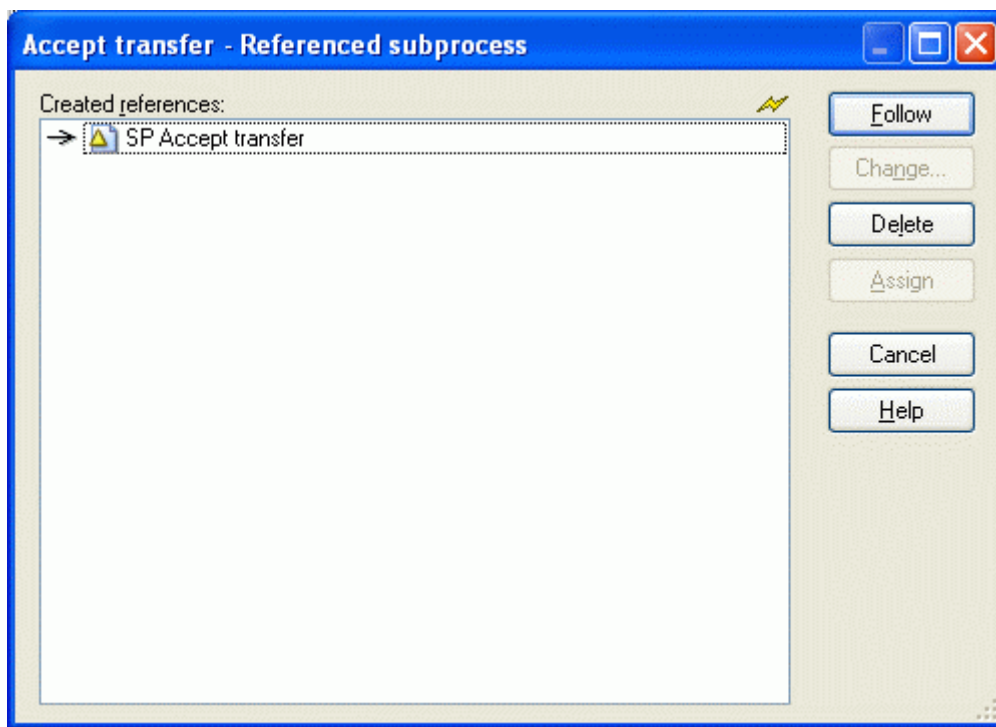


Figure 36: Editing a model reference attribute

References to objects in the list "Created references" (see fig. 37, p. 53) will show the following information:

- Reference status
- Class symbol of the referenced object
- Name of the referenced object
- Model type icon of the model containing the referenced object
- Name of the model containing the referenced object

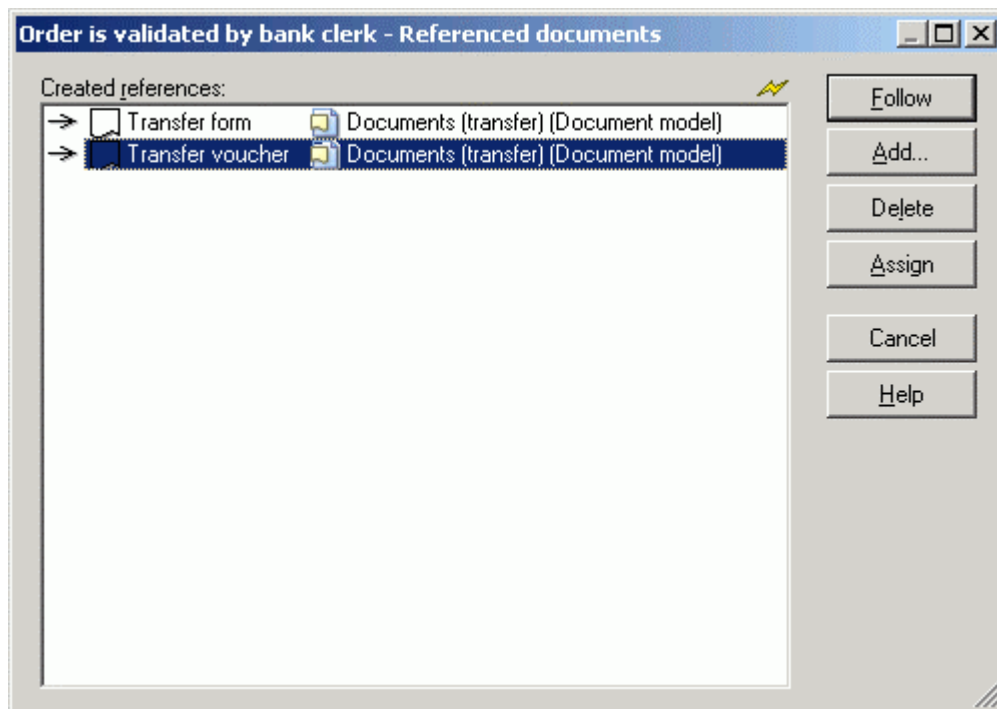


Figure 37: Editing an object reference attribute

The status of the reference at the beginning of each line indicates whether the reference is valid (→) or broken (→✗).

By clicking on the button:

- "Follow"** you can follow the previously selected reference and display the referenced model or object;
- "Change"** enables you to edit the reference;
- "Add"** helps you to define new references;
- "Delete"** removes the previous references;
- "Assign"** confirms the changes performed.

5.3 Enter column width

The ADONIS browser enables the user to define the width of any column. To enter a column width, place the mouse pointer on the appropriate column, open the context sensitive menu (right mouse button) and select the "Column width" menu item.

In the "Set column width" (see fig. 38, p. 54), the current column width is shown in the "width" field.

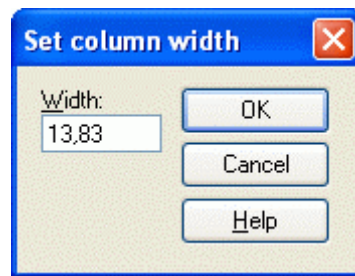


Figure 38: Set column width

Enter the value of the column width and then click on the OK button.

Note: Every value between 0 and 200 is allowed for the column width.

Note: The column width will be given in so-called norm signs, i.e. the entered value defines the number of characters, which will be displayed in the standard font in the cell.

5.4 Adjust column width

Within the ADONIS browser it is possible to dynamically adjust the width of any row. In order to do this, place the mouse pointer at the division point between two columns (see fig. 39, p. 54) in the header column.

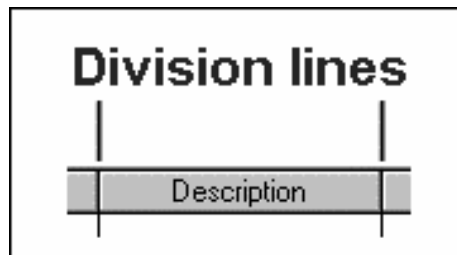


Figure 39: Column separator

The mouse pointer will change to  when it is placed in the correct place. Once the mouse pointer changes, it is possible to increase or decrease the width of a column by pressing the left mouse button and moving the mouse in the required direction. In this way it is possible to display the results in columns wider than the standard maximum.

It is also possible to adjust the width of a particular column by double-clicking in the header of that column (this will adjust to the optimal width).

Note: By selecting "Adjust columns" in the context sensitive menu (right mouse button) all the columns in the ADONIS browser are adjusted to their optimal width (wide enough to display the entire contents of the largest value in the column to a maximum of 80 characters).

5.5 Enter row height

The ADONIS browser enables the user to define the height of any rows. To enter a row height, place the mouse pointer on the appropriate row, open the context sensitive menu (right mouse button) and select the "Row height" menu item.

In the "Set row height" window (see fig. 40, p. 55) , the current number of visible rows is shown in the "Row" field.

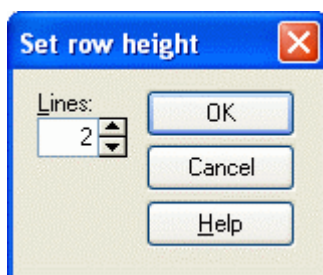


Figure 40: Set row height

Enter the number of rows you want to display and then click on the OK button.

5.6 Adjust row height

With the ADONIS browser it is possible to dynamically adjust the width of any column, so that cells that contain several lines can be shown completely.

To adjust a row height, place the mouse pointer on the division line between two rows (see fig. 41, p. 55) in the first column.

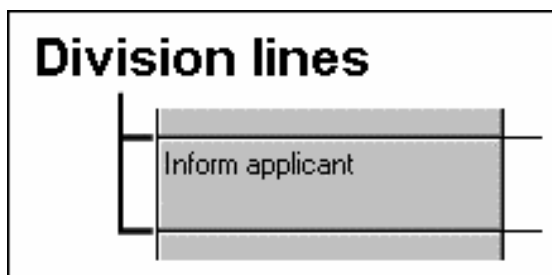


Figure 41: Row separator

The mouse pointer will change to  when it is placed in the correct place. Once the mouse pointer changes, it is possible to change the height of a row by pressing the mouse button and moving the mouse in the required direction. In this way it is possible to display results containing line breaks.

Note: By selecting the **"Adjust row height"** menu item in the context sensitive menu (right mouse button), the row will be adjusted to it's optimal height.

Note: By selecting the **"Adjust all rows height"** menu item in the context sensitive menu (right mouse button), all rows will be adjusted to their optimal height.

5.7 Expand and shrink all

The ADONIS browser stores the output of queries, capacity and workload analysis in groups (e.g. models). In order to present an overview to the user and to allow the user to find particular results quickly. These groups can then be expanded (or shrunk) to display more detail.

Unexpanded rows are characterised by the symbol . By clicking on this symbol, the rows will be expanded and this symbol  will be shown.

To restore to the original state click on the symbol again and it will change from  to .

Note: By selecting the menu item **"Expand all"** in the context sensitive menu (right mouse button) all rows of the ADONIS browser will be displayed.

By selecting the menu item **"Shrink all"** in the context sensitive menu (right mouse button) only the highest-level row will be displayed.

5.8 Select attributes/columns

With the ADONIS browser it is possible for specific displays to shrink or expand any columns with attribute values or evaluation results

Note: The function for the selection of attributes/columns to display is not available in all ADONIS browsers.

Note: If you want to sort the browser contents according to a specific attribute, this attribute must be expanded before you call the "Sort" function (see chap. 5.9.1, p. 57).

Select attributes

To select the attributes to display (i.e. columns with attribute values), open the context sensitive menu of the browser (right mouse button) and select the "Select attributes" menu item. A window will be displayed (see fig. 42, p. 56), in which all the attributes that can be displayed are shown following the notebook structure.

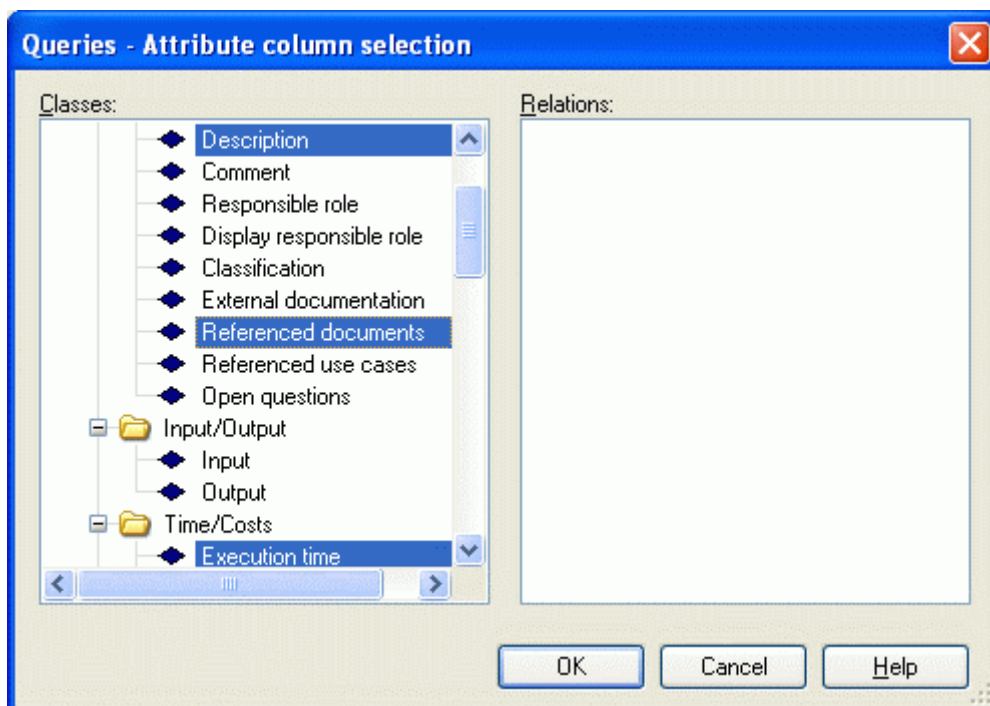


Figure 42: Select attributes (Example from the "Model search")

Note: In the browser, the editable attributes are marked with the  symbol, and the write-protected attributes with the  symbol.

Select attribute that the sort should be applied to and then click on the OK button.

Select columns

To select the columns to display, open the context sensitive menu of the browser (right mouse button) and select the "Select columns" menu item. All columns, that can be displayed in the browser are shown in the "Select visible columns" window (see fig. 43, p. 57).

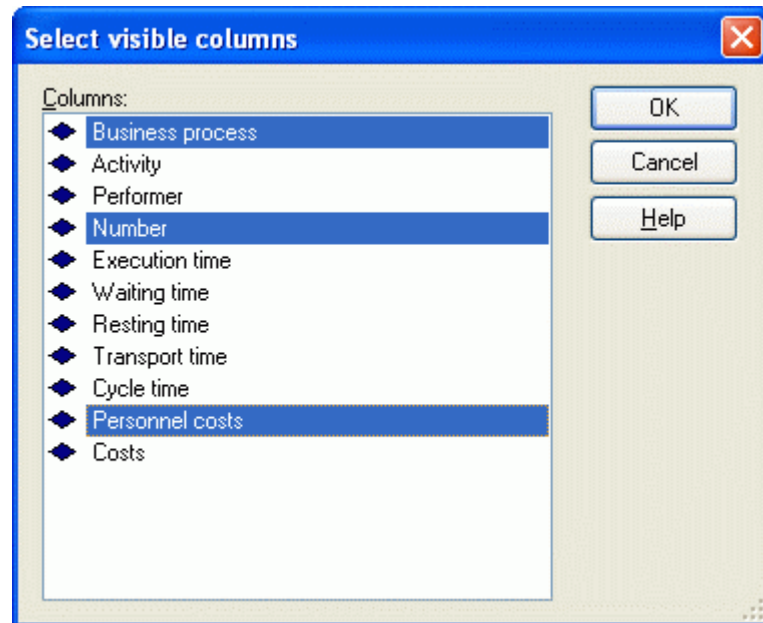


Figure 43: Select columns (Example from the "Analytical evaluation")

Select the columns you want to display and click on the OK button.

5.9 Sort

In the ADONIS browser, it is possible for specific displays to sort the browser contents using the attribute values displayed (within a column).

Note: The function to sort is not available in every ADONIS browser.

To sort the browser contents displayed move the mouse to the top of the column and select the menu item "Sort (ascending)" or "Sort (descending)" from the context sensitive menu of the browser (right mouse button).

In addition it is possible to select the attribute to use (= column) for the sort using a dialogue for selection (see chap. 5.9.1, p. 57). Therefore open the context sensitive menu of the browser (right mouse button, the mouse pointer must not be on the header of a column) and choose the menu point "Sort".

5.9.1 Sort using attribute columns

After selecting the menu point "Sort" within the context sensitive menu of the browser, all attribute columns within the respective notebook structure are displayed (see fig. 44, p. 58).

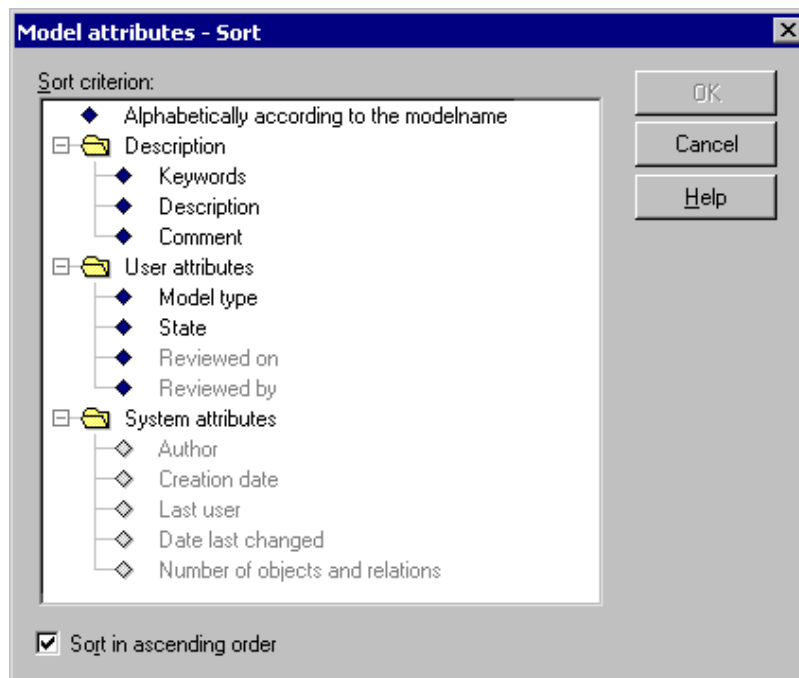


Figure 44: Attribute selection to sort (Example from tabular model display)

Note: It is only possible to sort with columns being displayed in the browser. Columns/attributes not shown in the browser will be shown in the selection dialogue using grey font. If you want to sort using a column currently not displayed you will have to include the column beforehand (see chap. 5.8, p. 56).

Note: In editable browsers, changeable attributes are marked with the  symbol, and write protected attributes with the  symbol.

Select the attribute, according to which the sort should be ordered by and then click on the OK button.

5.10 Align attribute values

The ADONIS browser offers the possibility to to align the displayed attribute values of a column

- left,
- centred or
- right.

Align the values of a column by moving the mouse to the top of the column, open the context sensitive menu (right mouse click) and select the alignment ("Left", "centred" or "Right").

Note: The current setting is indicated by a hook in the context menu.

Note: The default for text values is left, while numbers will be shown right aligned.

5.11 Show (attribute) values

To improve the readability of the results or to show texts which are longer than 80 characters, you can display (attribute) values in an appropriate window. This is of an advantage when an (attribute) value cannot be shown completely in the ADONIS browser.

If you want to show an (attribute) value, double-click on the cell with the (attribute) value to display and the following window will be opened (see fig. 45, p. 59).

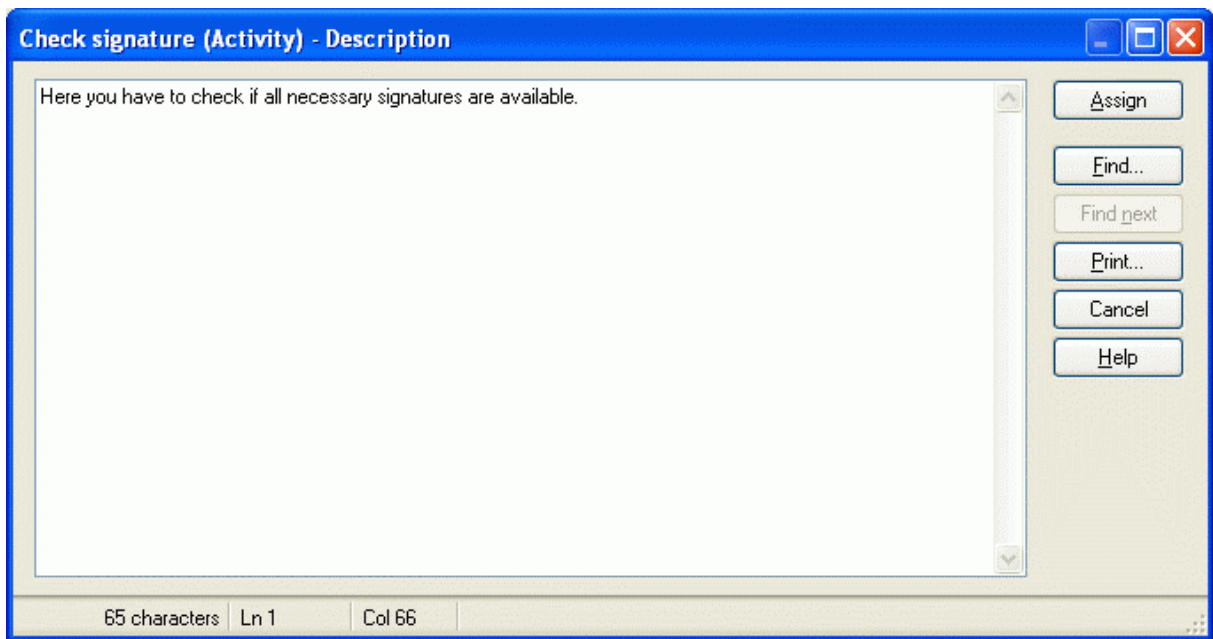


Figure 45: Show (attribute) values

You can save the displayed (attribute) value to a file ("Save" button) or print it out (button "press").

Note: It is not possible to change the (attribute) value.

5.12 Search

Using the button "Search..." (or the same menu item in the popup menu) you can search for a specific piece of text in the browser (in all expanded rows). The window "Search for browser contents" (see fig. 46, p. 60) is displayed after clicking on this button.

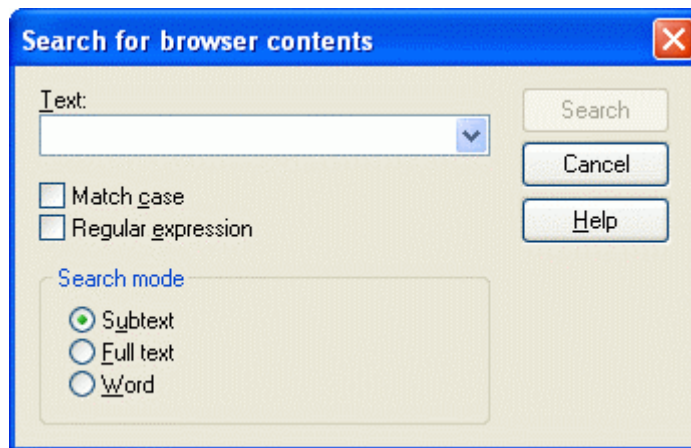


Figure 46: Search for browser content

Enter the text (character or expression) for which you would like to search for, into the input field "Text".

The following options are available for your search:

- **Match case:** when this option is selected the search will differentiate between capital and small letters.
- **Regular expression:** the default is to deactivate this option when searching for standard text. However by activating "Regular expression" you can search the contents with the help of special characters.

Note: It is possible to use wildcards in the field "Text" ("*" for any number of characters, "?" for exactly one character).

In order to use wildcards, the option "Regular expression" must be deactivated.

In addition, the following options are also available when searching for text:

- **Subtext:** means that the text being searched for can be part of a larger word or sentence.
- **Full text:** this is the default option - finds all cells which match exactly the full text being searched for.
- **Word:** finds all texts where the text being searched occurs as a single word (may be bounded by blanks or a full stop).

Clicking on the button "Search" begins the actual search. Each row, which is matched successfully during a search, will be highlighted in red.

5.13 Save

With the "Save..." button you can save the displayed results in a file. The window "Save - options" (see fig. 47, p. 61) is displayed once the button is selected.

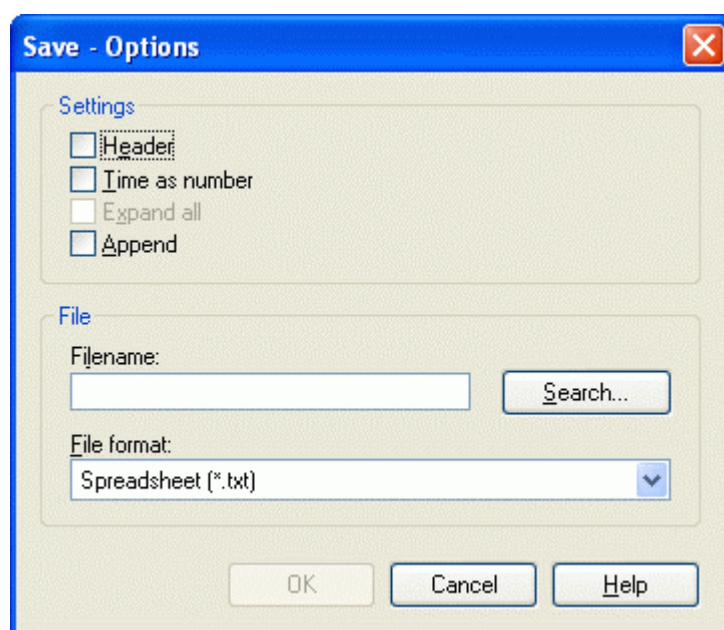


Figure 47: Save - properties

Within the "Save - properties" window you can choose:

- Properties (see chap. 5.13.1, p. 61)
- File formats (see chap. 5.13.2, p. 62) for external data

that have an effect on format and contents of the data.

IMPORTANT: The available options depend on the type of results being displayed (e.g. Query results), i.e. not all options are always available.

In addition you must enter the filename and path to which the results should be saved in the input field "Filename".

Click on the OK button to continue.

5.13.1 Properties

The "Properties" allow you to influence the contents of the file being saved. The following properties are available:

Header:

When this option is selected, a header is added to the beginning of the file being created, which contains general details on the results (including date, time, the query run and model name(s).

Time as number:

If this option is selected, then attributes which are currently saved in the ADONIS time format YY:DDD:HH:MM:SS will be converted to seconds in the file (e.g. the expression 00:000:00:30:00 will be converted to 1800 seconds).

Expand all:

Selecting this option will cause the entire contents of the browser to be saved regardless of how many levels of a hierarchical ADONIS browser (see chap. 5.2.2, p. 49) are actually expanded.

Note: This option is only available when the browser tree is not entirely expanded.

Append:

The contents of the browser will be appended to an existing file.

5.13.2 Formats

By clicking on the file format list, you can select the type of file in which the results should be saved. It is very important to choose the correct format especially when you wish to work further on the results in a spreadsheet program (e.g. Microsoft Excel) or when you wish to carry out a Comparison of results.

You can save the results

- for Spreadsheet (*.txt),
- for Spreadsheet (*.csv),
- for Word processor (*.txt),
- in Rich Text Format (*.rtf),
- as HTML file (*.htm) or
- as comparing representation (*.acr)

5.13.2.1 Save as table (*.txt)

When the "**Spreadsheet (*.txt)**" format has been selected, you can specify user-defined cell separators to enable the resulting file to be easily used in spreadsheet applications.

After selecting the path and filename in the "Save - options" (see fig. 47, p. 61) window and clicking on the OK button, the window "Separators for spreadsheet" is displayed (see fig. 48, p. 62).

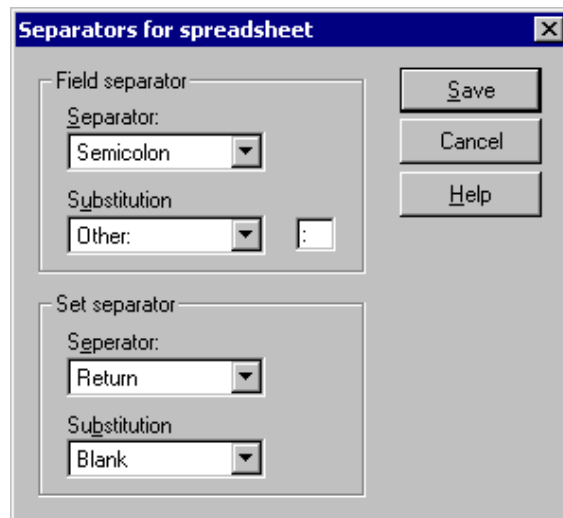


Figure 48: Save as spreadsheet

An entire row in the ADONIS browser - including the row description - is defined as a set. The "Set separator" identifies what character is used to indicate the end of a single row. A single cell is defined as a field and the "Field separator" is used to indicate an appropriate character to separate all cells.

In case the separator characters are already used within the data in the ADONIS browser, a "Substitution" character must also be defined which will be used to replace any separator characters that already exist.

The separator for the decimal point indicates which character should be used to separate decimal numbers (i.e. comma, full stop or other).

Note: To guarantee that also the cells which contain line breaks will be correctly copied into a spreadsheet program, you can also save the contents of the browser to a CSV-file (see chap. 5.13.2.2, p. 63).

5.13.2.2 Save as comma separated value (*.csv)

When you have selected the format **"Spreadsheet (*.csv)"**, you can edit the contents of the browser window without losses for a later integration into a spreadsheet program.

Like the file format **spreadsheet (*.txt)** (see chap. 5.13.2.1, p. 62), the CSV format enables the definition of a whole line as a record. Additionally the line breaks which may appear in the cells will be correctly interpreted.

5.13.2.3 Save as text (*.txt)

The format **"Word processor"** saves the contents of the ADONIS browsers as pure text to the selected file, (file extension .TXT). The single lines will end in the file with a line break.

5.13.2.4 Save as RTF file (*.rtf)

The format **"Rich Text Format"** saves the content of the ADONIS browser as an RTF file (file extension. RTF). The table format is kept and this RTF file can be opened and further edited in a word processing program.

5.13.2.5 Save as HTML file (*.htm)

By selecting the format **"HTML file"** the contents of the browser are saved in a file in HTML format (file extension .HTM) which can then be viewed through a HTML browser (e.g. Internet explorer).

5.13.2.6 Save as comparing representation(*.acr)

When the format **"Comparing representation"** is selected, the results are written in ACR format (ADONIS Comparable Representation). The results can then be compared using the Comparison of results option in the Evaluation component (see chap. 5., p. 114).

5.14 Copy to clipboard

When you select the menu item "Copy to clipboard" in the ADONIS browsers popup menu (right mouse button), the contents currently displayed in the ADONIS browser are copied to the clipboard and can then be pasted into Microsoft Excel for example in order to carry out some further work or calculations.

5.15 Print

In order to print the results displayed in the ADONIS browser, click on the button "Print". This will cause the window "Print" (see fig. 49, p. 64) to be displayed:

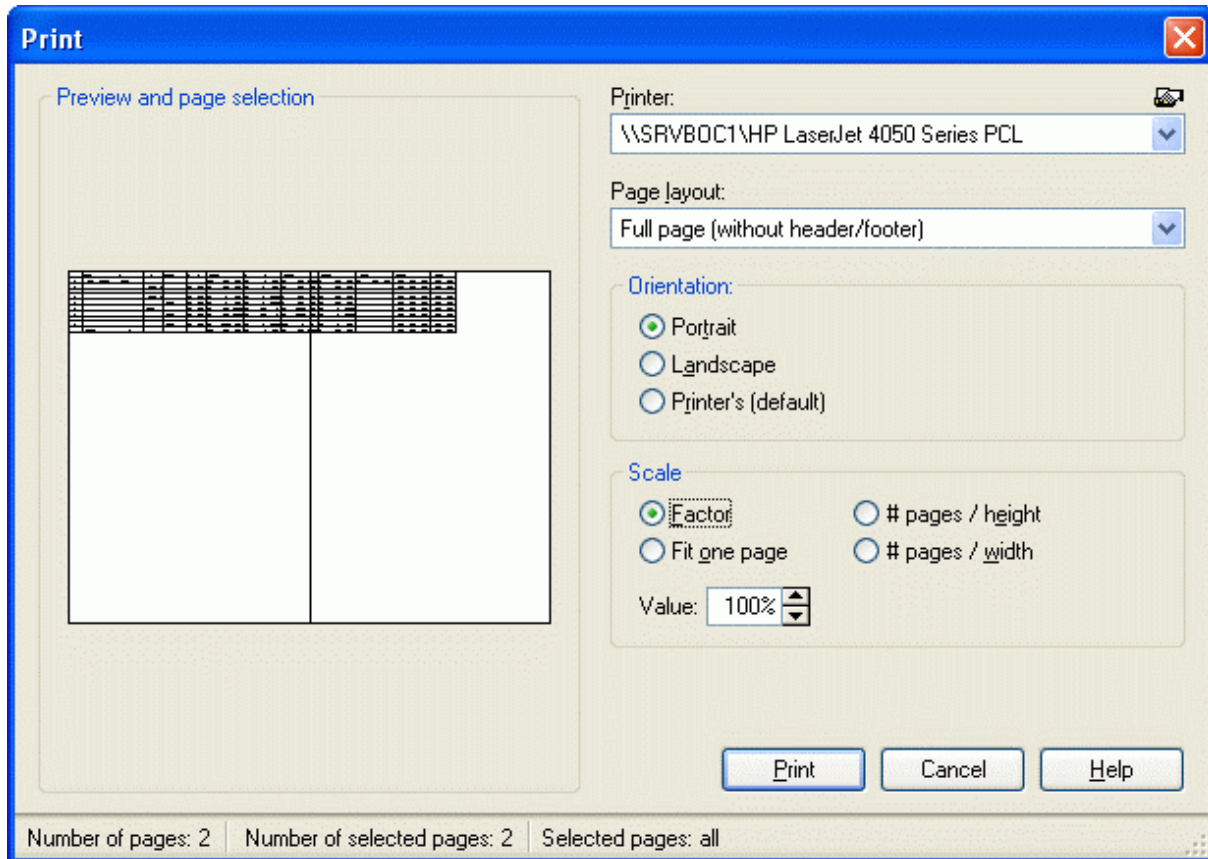


Figure 49: ADONIS-Browser-Print

Print:

The field **"Print"** contains a list of all available printers. Select a printer from the list (default printer is pre-selected). The printer settings can be checked and if necessary changed by clicking on the smart icon . If any problem with printers occurs contact your system administrator.

Choose your settings for **"Page layout"**, **"Layout parameters"** and **"Scale"**. Check the "Layout parameters" chapter for details.

The window **"preview and page selection"** is updated with each change. This print preview helps to choose pages (see chap. 2.4.6.1, p. 110) for the printout.

In the **status line** you will find information about the printout of several pages depending on the current layout and scale (total number of pages, number of selected pages, numbering of selected pages).

Note: The numbering of pages is done by the line from the left to the right.

To start printing click on the **"Print"**. In the status window, you will find information about current printing status. By clicking on the "Cancel" button, the printing process will be cancelled immediately.

6. Swimlanes

Swimlanes are special modelling objects stretching horizontally or vertically over the entire drawing area of a model.

Note: The availability of swimlanes depends on the definition of your application library. Please contact your ADONIS administrator for further information.

Swimlanes in ADONIS have the following characteristics:

- Horizontal swimlanes start at the upper side of a model and are placed below each other without any spaces.
- Vertical swimlanes start at the left side of a model and are placed next to each other without any spaces.
- Swimlanes are always on the lowest possible level, i.e. all other modelling objects will always be visible when they are placed on a swimlane.
- The modelling objects on a swimlane are automatically connected with the swimlane via the relation "is inside".
- All other modelling objects are either entirely inside or outside of a swimlane.
 - If a modelling object is placed on the edge of a swimlane the size of the swimlane automatically adjusts.
 - When moving a selected modelling object with the cursor the size of the swimlane is extended accordingly when the object is moved out of the existing boundaries of the swimlane.
- Swimlanes cannot be copied.
- Swimlanes cannot be moved.
- When deleting a swimlane all objects placed on it and all connectors leading to these objects will be deleted as well.

7. Versioning

7.1 Basic elements

ADONIS supports the following types of model and attribute profile versioning:

- **model-related versioning** (see chap. 7.1.1, p. 66)
- **time-related versioning** (see chap. 7.1.2, p. 66)

Note: In the application library, exactly one versioning type is defined and used for all model types available.

7.1.1 Model-related versioning

In the model related versioning, a version number can be assigned to each model. This is the case when creating (see chap. 2.4.1, p. 102), saving as another version (see chap. 2.4.5, p. 105) or renaming the model.

ADONIS gives neither a specific format nor a specific semantic for the version number. According to the use case, the user can define the format and semantic.

It is possible to create a new model version, if during the creation of a new model (see chap. 2.4.1, p. 102) the same model name with a different version number is entered.

Note: In model-related versioning you can only give version numbers for models, not for attribute profiles .

7.1.2 Time-related versioning

In time-related versioning, a **date of validity** will be assign during the creation of each model and each attribute profile. This indicates the date from which the attribute profile version becomes valid. The validity of a version ends with the start of validity of its next version. The relevant youngest version of a model is the last valid one.

Dates of validity are of significance especially for the use of inter-model references and attribute profile references. References can only be created on models or on attribute profiles, which are valid at the same date as the start model.

The format of the version number can consist of the elements "Day", "Month" and "Year".

Example:

If you do not want to create a version with a day level, the format of the version number can consist for instance only month and year (see fig. 50, p. 67).

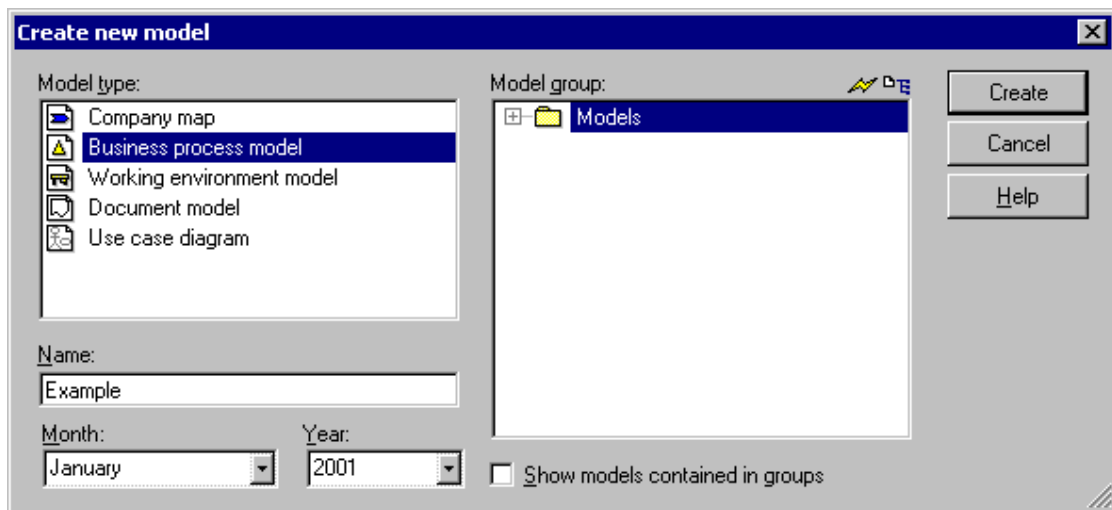


Figure 50: Example for time-related versioning when creating models

7.2 Effects

The versioning of models and attribute profiles has effects on the following functions:

- **ADONIS Business Process Management toolkit:**

- Create new model (see chap. 2.4.1, p. 102)
- Create new version of an already existing model (only for time-related versioning)
- Rename models
- Save model with a new name (see chap. 2.4.5, p. 105)
- Define application models (only for time-related versioning)
- Create and follow inter-model references (only for time-related versioning)

The order of inter-model references concerns all functions, for which models or attribute profiles have been selected for further editing (e.g. Analysis, Simulation, Evaluation, Import, Export).

- Create attribute profile references (only for time-related versioning)
- Edit attribute profiles (only for time-related versioning)

- **ADONIS Administration toolkit:**

- Edit attribute profiles (only for time-related versioning)
- Import models/Attribute profiles
- Export models/Attribute profiles export (only for time-related versioning)

Part IV

Components of the Business Process Management toolkit

The **ADONIS Business Process Management toolkit** is the main component of ADONIS. By using the Business Process Management toolkit you can model (see chap. 2., p. 70) your business processes as well as your working environment (organisational structures).

The Business Process Management toolkit offers you extensive functionality which allows you to acquire (see chap. 1., p. 69), analyze (see chap. 3., p. 111), simulate (see chap. 4., p. 112) and evaluate (see chap. 5., p. 114) your business processes and working environments in a cost-effective way.

Note: All examples and descriptions in this part of the user manual refer exclusively to the ADONIS standard application library. Text and numeric entries in the pictures may differ from those on your screen.

1. Information acquisition

The "Acquisition" component of the ADONIS Business Process Management toolkit supports you during the acquisition of data, which can later be imported into an ADONIS Business Process Model.

This component uses HOMER acquisition tables, in which you can gather data on product families and products, on activities and their attributes, on organisational units and roles.

The availability of the "Acquisition" component (and the "Acquisition tables" module) within this component depends on the actual configuration of the Business Process Management toolkit. (see chap. 3., p. 125)

Clicking on the appropriate smart icon  in the components bar activates the "Acquisition" component.

It is also possible to activate this component by clicking with the right mouse button beside the component icons and then selecting the menu item "Acquisition" from the popup menu, which appears. This popup menu can also be activated through the function key <F9> and the Acquisition component can be selected by pressing the (shortcut) key <a>.

Once the Acquisition component is selected, Quick Access Bar with following Smart icons is displayed:

-  HOMER-Acquisition tables
-  "Models in the database" (see chap. 4.1, p. 39)
-  "Opened model windows" (see chap. 4.2, p. 40)
-  "Previous model window" (see chap. 2.3.1, p. 100)
-  "Next model window" (see chap. 2.3.1, p. 100)

2. Modelling

2.1 Introduction

The modelling of business processes and working environments plays a central role within ADONIS. **Modelling is the basis for further work** on your Business Processes and Working Environments.

Activation of modelling component:

There are 3 possibilities to start the "modelling" component:

- By clicking on the smart icon  in the component bar
- By clicking with the right mouse button on or beside the component list and then selecting the menu item "modelling" from the popup menu, which appears
- By pressing the function key <F11> followed by the button <m>.

Once the modelling component has been activated, the following icons are displayed in the quick-access bar:

Model Administration:

-  "Create new model" (see chap. 2.4.1, p. 102)
-  "Open an existing model" (see chap. 2.4.2, p. 103)
-  "Save model" (see chap. 2.4.4, p. 104)
-  "Print model" (see chap. 2.4.6, p. 107)

Model Navigation:

-  "Models in the database" (see chap. 4.1, p. 39)
-  "Opened model windows" (see chap. 4.2, p. 40)
-  "Previous model window" (see chap. 2.3.1, p. 100)
-  "Next model window" (see chap. 2.3.1, p. 100)

Model Editing:

-  "Undo" (see chap. 2.2.7.1, p. 81)
-  "Cut" (see chap. 2.2.7.16, p. 96)
-  "Copy" (see chap. 2.2.7.15, p. 95)
-  "Paste" (see chap. 2.2.7.17, p. 97)
-  "Find" (see chap. 2.2.7.19, p. 99)
-  "Global change"
-  "Drawing area"
-  "Generate graphics"

Model View:

-  "Graphical model view" (see chap. 2.2, p. 71)
-  "Tabular model view"
-  "Zoom"
-  "Scale 1:1"
-  "Show all"
-  "Snap grid - active/inactive"
-  "Snap grid - visible/invisible"

Model Valuation:

-  "Time and Costs"

Note: The appearance of the smart icons in the quick-access list depends on the particular configuration (see chap. 4., p. 38) of the quick-access bar and the configuration (see chap. 3., p. 125) of the Business Process Management toolkit. Selecting menu item "Quick Access bar..." within the "Extras" menu can change the configuration of the Quick Access bar..

Note: For any additional information and explanation in the chapter please refer to use **ADONIS Standard Application Library**.

2.2 Model editor

The model editor is used to create and work on ADONIS models. Each ADONIS model is displayed in a Model window (see chap. 2.2.3, p. 74) and contains objects and connectors.

The model Editor is a graphical Editor. It is necessary to use the mouse to work with the model Editor. To facilitate the input of data a Tabular Model View is also available.

2.2.1 The Working area of the model editor

The Working area (see chap. 2.5, p. 25) of the model editor is that part of the ADONIS window "ADONIS: Business Process Management toolkit (<Username>)" (see fig. 51, p. 72), which is below the Component bar (see chap. 2.3, p. 24) and when the BPM toolkit is first started is shown as a grey area.

When a new model is created or an existing model opened, it is displayed in a model window on the working area.

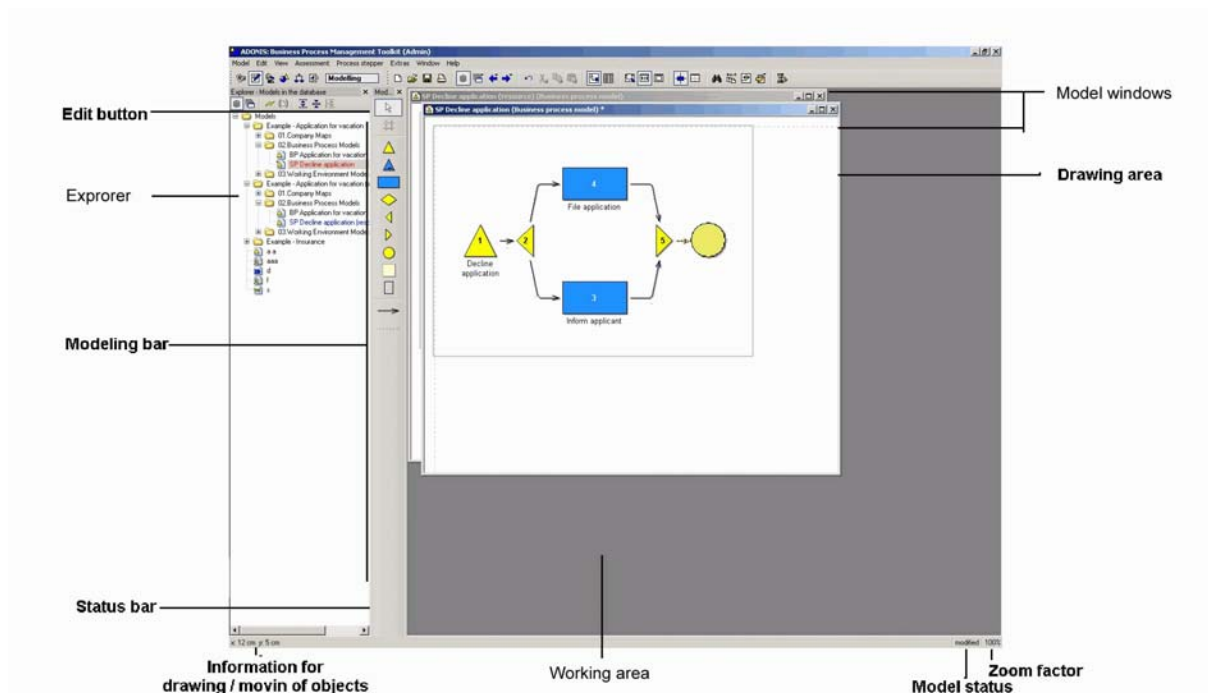


Figure 51: Working area of the model editor

Once a model is open, the Class panel (see chap. 2.2.2, p. 72) is displayed on the left hand side of the working area.

The **Class panel** contains the objects and relations, available for modelling. The content of the class panel depends on the application library used as well as the model type which you are currently working on. By selecting a different view on the model through the option Mode in the "View" menu, the objects available in the class panel can be increased or reduced.

The **Status row** displays in each activated model window information such as the coordinates during the drawing and the moving of objects, the view mode or the model state (e.g. the model has been altered since the last storage) . The co-ordinates show the distance from the left (x-value) top (y-value) corner of the Drawing area. On the right side of the status row, there are three status fields. The left field shows the scale of the current model. The field in the middle shows whether the model has been altered since it was last saved. If it has been altered, the word "modified", is shown in this field, otherwise it is empty. The field on the right (expression monitor) shows how many attributes of the type "expression" still have to be updated.

2.2.2 Class panel

The modelling bar is located on the left side of the working area. This contains the following icons: the "empty space tool", the class list (see chap. 2.2.2.1, p. 72) and the Relation list (see chap. 2.2.2.2, p. 73). The "Edit" icon  is always visible, however depending on the space available (e.g. if the ADONIS window is not at its maximum size) only part of the class and relation panels may be visible. When this occurs, the arrow icons  and  can be used to display the additional objects. By clicking on one of the two arrow icons.

2.2.2.1 Class panel

The **Class panel** contains all the classes available for modelling.

Note: The objects displayed in the class panel depend on the Mode currently selected.

The picture below shows the class panel of the **ADONIS Standard Application Library** for all model types

(see fig. 52, p. 73).

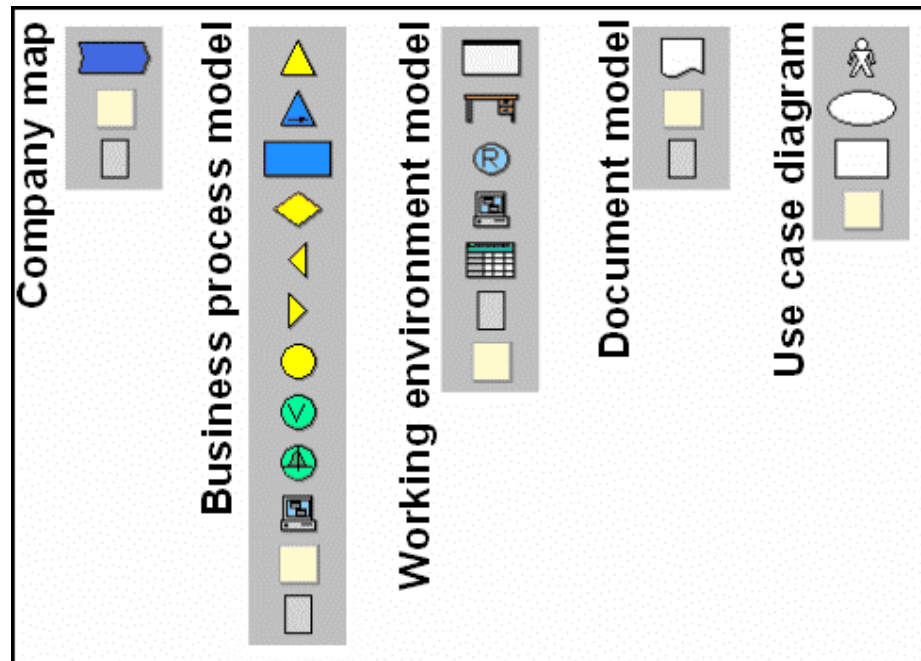


Figure 52: Class panel of the ADONIS Standard Application Library

2.2.2.2 Relation panel

The **Relation panel** contains all the relations, available for modelling.

Note: The relations displayed in the relation list depend on the current Mode selected.

The picture below shows the relation panel for the **ADONIS Standard Application Library** for all model types (see fig. 53, p. 73).

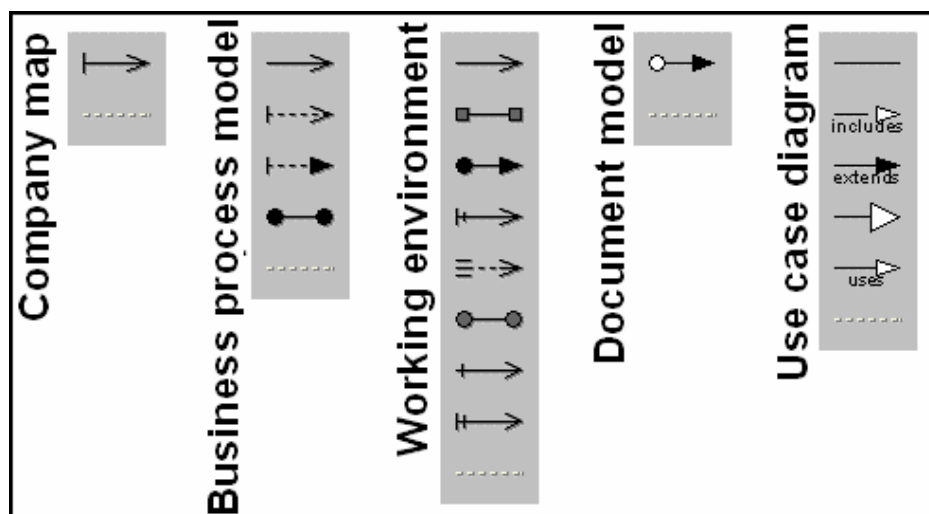


Figure 53: Relation panel of the ADONIS Standard Application Library

2.2.3 Model window

A model window (see fig. 54, p. 74) consists of a window bar and a drawing area.

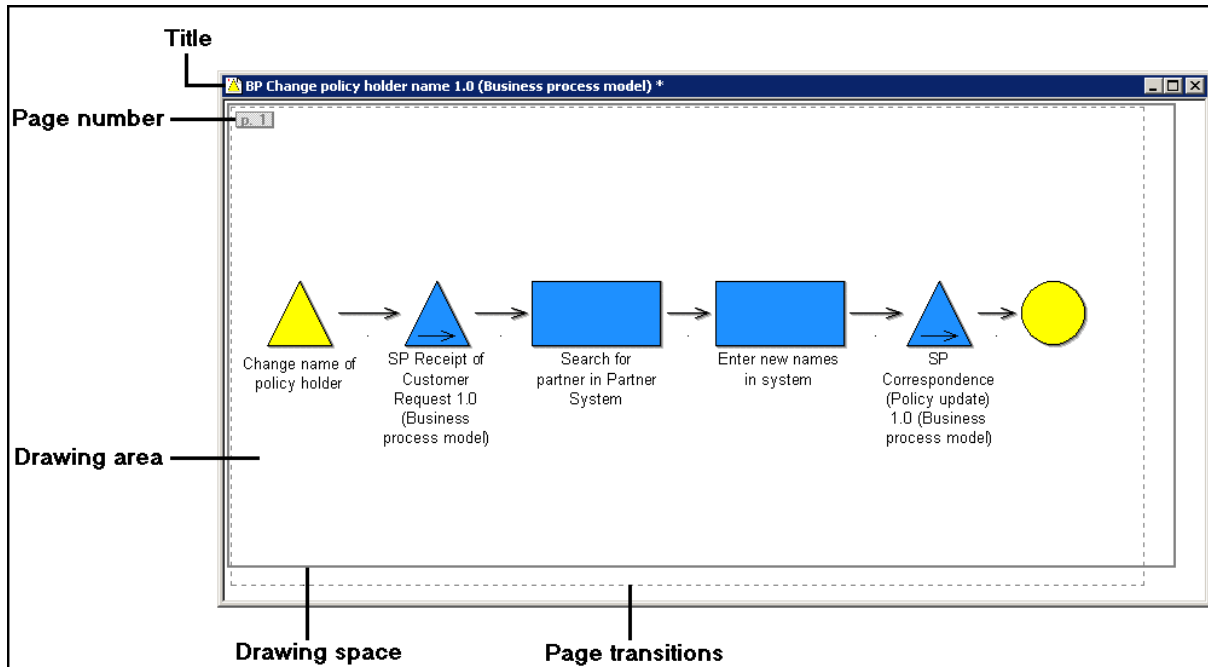


Figure 54: Model window

The **Window bar** of each model window contains the exit icon, the name and type of the model as well as the buttons to minimize, maximize and close the window.

The appearance of the exit icon depends on the model type. For example for a business process model it looks like this  and for a working environment model like this .

When you change a model the exit icon is highlighted with a red star  until the changes have been saved in the model. Similarly an asterisk "*" is added to the title bar of the model window.

The **Drawing area** is used to create and work on your models.

A grey rectangular border shows you the size of the actual **Drawing area**. The drawing area is at least 10cm×10cm in size and will grow in size to include all the objects and relations and to print the entire model on a graphical printer. Placing an object below or to the right of the current drawing area can increase the size of the drawing area. You can also pull the rectangular borderline with the mouse in order to increase/decrease the size of the drawing area.

The **Page borderlines** (dashed lines) on the drawing area show the actual page layout which will be produced when printing (see chap. 2.4.6, p. 107) or generating graphics. Additionally the page border line also shows the paper orientation as well as the paper size defined in the printer settings.

The **Page number** numbers all pages continuously by the line starting from the top left.

Note: It is possible to switch on/off the display of the page border line and of the page number in the "Page layout" window.

It is possible to open more than one model (of the same or different model types) at a time. The status row and the title bar of the model window refer to the model window which is currently active.

The open modelling windows can be ordered and activated using the options available in "Window" menu, its corresponding quick access icon or ADONIS-Explorer (see chap. 4., p. 38).

2.2.4 Modelling modes of the model editor

The following two modelling modes are available within the model Editor:

- Editing mode (see chap. 2.2.4.1, p. 75)
- Drawing mode (see chap. 2.2.4.2, p. 75).

Note: The model Editor's modelling modes differ from the modes available in the menu View, which refer to the modelling objects available for the user.

2.2.4.1 Editing mode

Editing mode allows you to select objects and connectors already placed on the drawing area, move them and Edit their attributes for example through the ADONIS notebook. When you are in Editing mode, the mouse pointer is shaped like an arrow  when in the drawing area and the Edit button  is highlighted in the Class panel (see chap. 2.2.2, p. 72).

2.2.4.2 Drawing mode

Drawing mode allows you to place new objects and connectors on the drawing area. This mode is activated by clicking on a class or a relation in the Class panel (see chap. 2.2.2, p. 72). When in drawing mode, the mouse pointer is shaped like a pen  and the selected object in the Class panel (see chap. 2.2.2.1, p. 72) or Relation panel (see chap. 2.2.2.2, p. 73) is highlighted. An icon from the modelling panel (see chap. 2.2.2, p. 72) can also be selected through a popup menu, which is activated by right-clicking on the modelling panel.

To change from drawing mode to editing mode, click on the drawing area with the **right** mouse button or else click on the Edit icon  in the modelling panel.

2.2.5 Drawing objects

Objects are placed according to the "point and click" principle. This means that you first select an object from the Class panel (see chap. 2.2.2.1, p. 72) by clicking on it. This causes the object to be highlighted and changes the model Editor into Drawing mode (see chap. 2.2.4.2, p. 75).

Now move the mouse pointer to the location within the drawing area at which you would like to place the object. You will notice that the appearance of the mouse pointer is now a pen. By clicking with the left mouse button the object is placed on the drawing area. You can draw any number of objects of the selected class in this way.

When you keep the left mouse button pressed when positioning a new object you can see a magenta colour outline around the object. By releasing the left mouse button the object will be drawn in its normal colour in the current position. (Note: by moving the mouse when this outline is shown, the object can be positioned elsewhere in the drawing area.) If you wish to abort the drawing of this object, press the left and right mouse button simultaneously. In this way the drawing mode is not deactivated. To deactivate drawing mode, press once with the right mouse button on the drawing area (or select the Edit icon from the class panel with the left mouse button). When the magenta outline of an object is displayed on the drawing area the corresponding co-ordinates of the location are displayed in the status area.

When you wish to place a different object within your model, select it by clicking in the class panel and then continue as described above.

Note: If the object is not placed exactly as you wish on the drawing area, check that the Snap grid is activated.

2.2.6 Drawing connectors

Connectors are drawn in a similar way to objects. Click on the required relation in the Relation panel (see chap. 2.2.2.2, p. 73).

Place the mouse pointer (Drawing mode (see chap. 2.2.4.2, p. 75)) on the object from which the new connector should begin.

Note: The Focus (see chap. 2.2.7.3, p. 82) will be put on the start object, if it is an allowed start object (according to the definition in the application library) for the selected relation class.

Click on that object and then place the mouse pointer on the object, which should be joined to the first object by the connector.

Note: The Focus (see chap. 2.2.7.3, p. 82) will be put on the target object, if it is an allowed end object according to the definition in the application library) for the selected relation class.

The connector is now shown in a magenta colour. This indicates that the connector has not yet been created. The connector will only be created when you left click on the target object. As a result the connector will be shown in the defined colour.

You can also draw a connector by moving the mouse pointer Drawing mode (see chap. 2.2.4.2, p. 75) onto the start object, left clicking and then keeping the left mouse button pressed, move the mouse pointer to the target object where you release the button.

It is also possible to create a connector between two objects, which are not visible in the window at the same time. After you have clicked on the start object, move the mouse pointer to the appropriate position. The window will scroll automatically.

You can cancel the drawing of a connector by clicking on the right mouse button before clicking on the target object. In this way drawing mode is not deactivated. To change back to Editing mode click once on the drawing area with the right mouse button or select the "Edit" icon.

By following the method described above, connectors will be drawn in a straight line from the start to the target object.

It is also possible to create **bendpoints** (see chap. 2.2.6.1, p. 77) within a connector.

Note: If you attempt to create a connector between two classes for which this connector is invalid or for which a connector of the same type already exists, an appropriate error message will be displayed. If other connectors are possible between the objects you wish to connect, you can click on the button "other..." in the error message and then select a valid connector (see chap. 2.2.6.3, p. 78).

Connectors are usually created using the "point and click" method described above. However it is also possible to create relations using the **Object context sensitive menu** of the object where the connector shall start or end.

For the objects, which ADONIS notebook contains the chapter "relations" (it depends on the definition of their application library) you can additionally **administrate connectors from the ADONIS notebook** (see chap. 2.2.7.11, p. 92).

Grouping objects, i.e. objects that are used to hold other objects inside themselves, e.g. aggregations, swimlanes, create automatically the **relation "is inside"** (see chap. 2.2.6.4, p. 79) for the objects they contain.

2.2.6.1 BEndpoints

It is also possible to create **BEndpoints** within a connector. These are points at which the connectors bend (see fig. 55, p. 77). BEndpoints are inserted by clicking anywhere within the drawing area between the selection of the start and the target object.

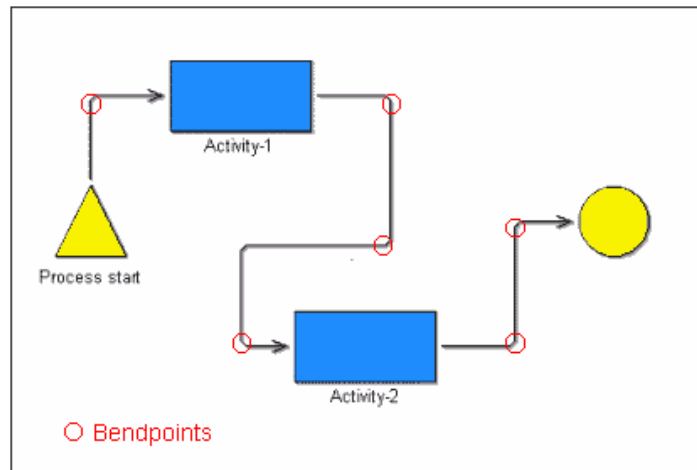


Figure 55: BEndpoints

Note: The bEndpoints of a connector are always positioned on one of the intersections of the snap grid.

2.2.6.2 Adding new relations via the context sensitive menu

Adding a relation outgoing or incoming to an object with the context sensitive menu is possible if you click on the context sensitive menu of an object (right button of the mouse), then on the menu item "new relation" and then select the expected relation in the appearing submenu.

Then the " new relation - <Type of relation>" window appears (see fig. 56, p. 78), in which you can select the start object or the target object, according to the type of relation needed.

Note: To create a relation between the current object and the source or target object is only possible if such a relation is valid between the two classes and such a relation does not already exist between the two objects.

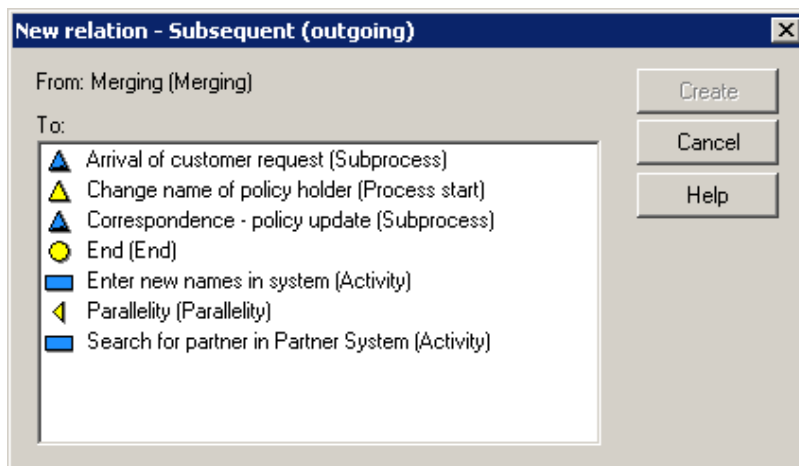


Figure 56: new relation

By clicking on the **button "create"** the relation will be made and the connector will be drawn on the model.

2.2.6.3 Adding new relations

If you attempt to create a connector between two classes for which this connector is invalid or for which a connector of the same type already exists, an appropriate error message ([amodraw-05]) will be displayed.

If other connectors are possible between the objects you wish to connect, you can click on the button "other..." in the error message and create a new relation.

After you have clicked the button "other..." the error message will close, both objects you wish to connect will be selected and the "new relation" window (see fig. 57, p. 78) where the valid relations will be displayed.

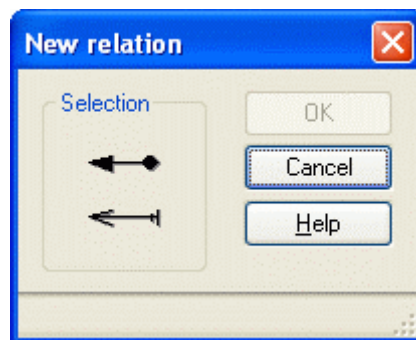


Figure 57: New relation

Select in the **field "select"** the corresponding connector and click afterwards on the OK button.

Note: The orientation of the connector in the field "select" is related to the originally selected start object, i.e. a connector (directed) **from the left to the right creates an outgoing relation**, a connector (directed) **from the right to the left creates an incoming orientation**.

2.2.6.4 Relation "is inside"

The relation "is inside" will be automatically made between grouping (aggregated) objects and the objects created within these objects.

The relation "is inside" can be evaluated for instance with queries in the Analysis component, i.e. you can define queries, which results are all objects that are inside a specific domain (e.g. swimlane, aggregation).

The determination of an object, which is located inside a specific domain happens - depending on the definition of the application library- either on the position or on the size of this object. An object is inside a domain, when:

1. The position of this object is inside this domain
2. The object is completely on the area of this domain or
3. The object touches on the area of the domain.

Note: The position of an object can be displayed and changed (see chap. 2.2.7.6, p. 85) using the context sensitive menu of this object (right button of the mouse).

Example from the ADONIS Standard Application Library:

The picture below (see fig. 58, p. 79) shows a part from a Business Process Model with a grouping object of the class "Aggregation" and three objects of the class "Activity".

In addition to the coordinates, the position (defined as object centre) of the objects of the class "Activity", in the object of the class "Aggregation" the position (which is defined as from the left or from the top) and the size (width "w" and height "h") will be shown.

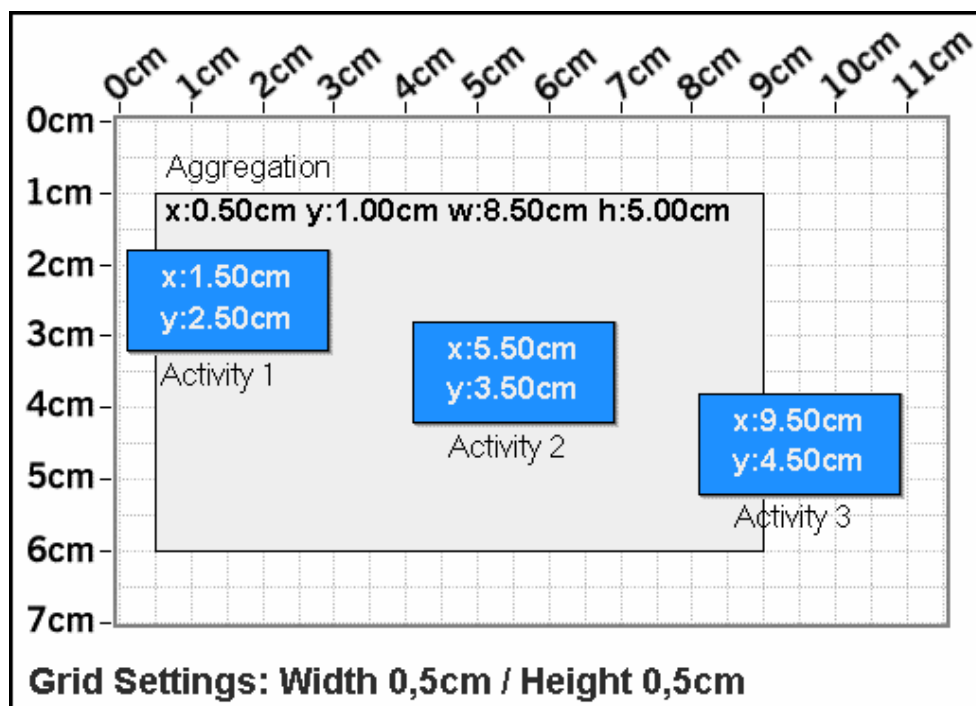


Figure 58: Example for the definition of the relation "is inside"

The following area of the aggregation is the result of these data: $x1:0,5cm/y1:1.0cm$ to $x2:9.0cm/y2:6.0cm$.

In the **definition of the relation according to the position** (1.) all objects, which position is on this area - in the example the objects "activity 1" and "activity 2" (see fig. 58, p. 79) - will be automatically connected to the aggregated object according to the relation "is inside".

In the **definition of the relation according to the complete placing** (2.) all objects which are completely on the area - in the proposed example, the object "activity 2" (see fig. 58, p. 79) - will be automatically connected to the aggregated object according to the relation "is inside".

In the **definition of the relation according to the partial placing** (3.) all objects, which are touching on this area - in the proposed example, the object "activity 1", "activity 2" and "activity 3" (see fig. 58, p. 79) - will be automatically connected to the aggregated object according to the relation "is inside".

Note: The connector of the relation "is inside" will not be shown in the model graphic.

2.2.7 Editing objects and connectors

After drawing objects and connectors it is possible to edit them. If the drawing mode is still active, you must first change into the Editing mode (click once with the right mouse button on the drawing area or select the Edit icon). The following functions are available when editing objects and connectors:

- **Undo** (see chap. 2.2.7.1, p. 81)
- **Select** (see chap. 2.2.7.2, p. 81)
- **Focus** (see chap. 2.2.7.3, p. 82)
- **Move** (see chap. 2.2.7.4, p. 83)
- **Change object size** (see chap. 2.2.7.5, p. 84)
- **Define size and position of objects** (see chap. 2.2.7.6, p. 85)
- **Change appearance of connector** (see chap. 2.2.7.7, p. 87)
- **Re-linking connectors** (see chap. 2.2.7.8, p. 88)
- **Administrative connectors in ADONIS notebooks** (see chap. 2.2.7.11, p. 92)
- **Edit attributes in the ADONIS notebooks** (see chap. 2.2.7.12, p. 92)
- **Change visualised attribute values** (see chap. 2.2.7.13, p. 94)
- **Moving the connector edge midpoint** (see chap. 2.2.7.14, p. 94)
- **Copy** (see chap. 2.2.7.15, p. 95)
- **Cut** (see chap. 2.2.7.16, p. 96)
- **Paste** (see chap. 2.2.7.17, p. 97)
- **Delete** (see chap. 2.2.7.18, p. 98)
- **Find** (see chap. 2.2.7.19, p. 99)
- **Global change**
- **Generate object names**
- **Change object/connector attributes values**
- **Number objects**
- **Edit drawing area**
- **Generate graphics**

- **Alignment** (see chap. 2.2.7.20, p. 100)
- **Arrange**
- **Check Cardinalities**

2.2.7.1 Undo

Many Editing actions can be Undone. This is only possible immediately after the particular Editing action has been carried out. In order to undo an action select the "Edit" menu and within this the "Undo" menu item, press the key combination <Ctrl>+<Z> or select the smart-icon .

Note: The action to be Undone is displayed in the option "Undo" within the "Edit" menu. When the function "Undo" is not available, this is shown by the text "Not possible" beside the menu item "Undo" in the menu "Edit".

2.2.7.2 Select objects and connectors

Any object or connector can be selected simply by clicking on it. Selected objects (see fig. 59, p. 81) and connectors (see fig. 60, p. 81) are coloured red.

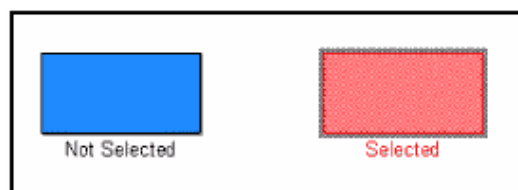


Figure 59: Not selected/selected object

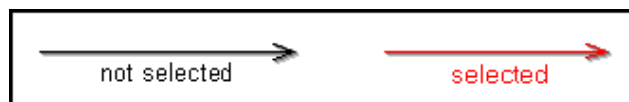


Figure 60: Not selected/selected connectors

You can select **several objects and connectors** following these methods:

- Keep the <Shift> key or the <Ctrl> key **pressed** while clicking one by one on the objects and connectors that should be selected
- Select an area (with the form of a rectangle), which contains the objects and connectors that should be selected, by:
 - Placing the mouse pointer on one corner of the area
 - Pressing the left mouse button and, keeping it pressed
 - Dragging the mouse pointer until the region (limited by a red broken line) is big enough to enclose all the objects and connectors you wish to select.

All objects, which are completely inside this area will be selected. If the mouse pointer is moved over the edge of the window during the selection, i.e. while the left mouse button is being pressed, then the window content will be moved, however the start point of the area being selected will of course stay the same.

Note: During the selection of all objects and connectors by area selection, a connector which is inside the area will only be selected if both starting and target objects are selected.

- Select all objects and connectors in a model by:

Part IV

- Selecting in the context sensitive menu of the drawing area (right mouse button) the menu item "select all"
- Selecting in the menu Edit the menu item "select all" or
- Pressing the key combination <Ctrl>+<A>.

Once you have selected a number of objects you can still make changes to this selection by keeping the (<Shift> key) or the <Ctrl> key pressed and clicking on any objects or connectors you wish to select or deselect. Moreover you can also select several areas one by one by keeping the (<Shift>key) or the <Ctrl>key **pressed**

Concerning **objects and connectors lying on top of each other** you can bring the object/connector lying above in the background by selecting in the context sensitive menu of the object/connector (right mouse button) the menu item "layer" and then the submenu "to background". This way it is possible to select and edit the objects/connectors lying under.

Note: Aggregated objects will generally - depending on the definition in the application library - be placed on the lower layer, i.e. if some within objects in these aggregated objects are placed to the background, they will still be (visible) on the aggregated object.

To completely deselect, click on an empty point of the drawing area, or select "deselect" in the menu "Edit".

2.2.7.3 Focus

This shows which single object or which single connector currently has the focus within the model window. In a model window, either no object or exactly one object can have the focus at any time.

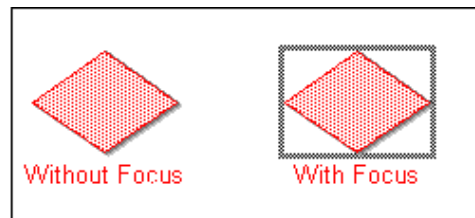


Figure 61: Focused object

A focused object has an outline drawn around it (see fig. 61, p. 82). A focused connector is shown with both endpoints (●, with its middle point (◆) as well as all Bendpoints (see chap. 2.2.6.1, p. 77)(□) highlighted (see fig. 62, p. 82).

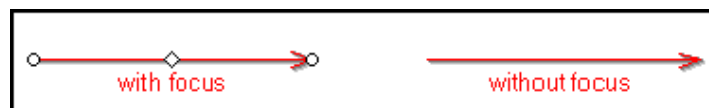


Figure 62: Focused connector

Focus is necessary in order to use the editing functionality "Change object size" (see chap. 2.2.7.5, p. 84), "Change the appearance of connector" (see chap. 2.2.7.14, p. 94) and "Align" (see chap. 2.2.7.20, p. 100). You set the focus by clicking on an object or connector. To remove the focus from all objects, click on some empty space in the drawing area.

2.2.7.4 Moving objects

Moving objects within a modelling window supports "drag and drop" feature. To move a specific object click on it with the left mouse button (the object is now selected and has focus) and then move the mouse (dragging the object) while keeping the left mouse button pressed.

While moving an object you can see that its outline is coloured blue and dashed. When you release the left mouse button the object will be moved to the specified place in the drawing area. If you would like to move more than one object at a time you should select (see chap. 2.2.7.2, p. 81) them first. Then all selected objects can then be moved together as described above. While moving a single object, the other selected objects will also be moved.

You can also move single objects with the context sensitive menu (right mouse button) selecting the menu item "position/size" and then defining the new position (see chap. 2.2.7.6, p. 85).

Selected objects can also be moved using the cursor key on the keyboard. With deactivated snap grid each time you press a cursor key the object will be moved by a step size of one millimetre, with activated snap grid the step size corresponds to the snap height or the snap width.

Note: To move aggregated objects and all objects they contain, press the <Shift> key before starting the moving and keep it pressed while moving the aggregated object.

Effects on related connectors:

- **Start and target objects of a connector are selected:**
The connector will be moved unchanged with its object.
- **Starting or target object of a connector is selected:**
 - Case 1: The part of the connector of the object you wish to move and the bendpoint laying beneath this object goes horizontally or vertically.
The object and the next bendpoint in a horizontal (vertical) direction will by horizontal movement create a new position for both.

Example from the ADONIS Standard Application Library:

In the model detailed below (see fig. 63, p. 83) the object "request authorised?" (of the class "Decision") in horizontal position will be moved to the right. The bendpoint in the related connector will also be automatically moved to the right.

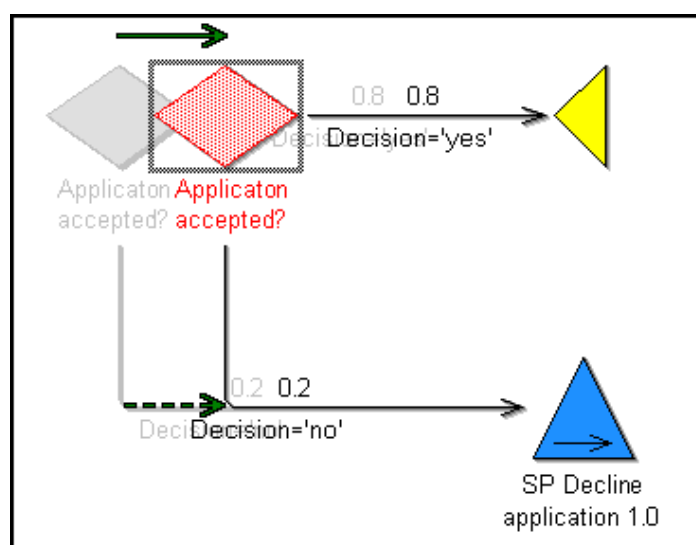


Figure 63: Example for the moving of an object and of its related bendpoints

- Case 2: The part of the connector between the object you wish to move and the bendpoint laying next to this object does not run horizontally or vertically.
Only the object will have a new position

Example from the ADONIS Standard Application Library:

In the model detail below (see fig. 64, p. 84) the object "request authorised?" (of the class "Decision") in horizontal position will be moved to the right. The position of the direct neighbouring bendpoints in the related connector (from the decision "request authorised?" to the sub process "rejection3.81") stays the same.

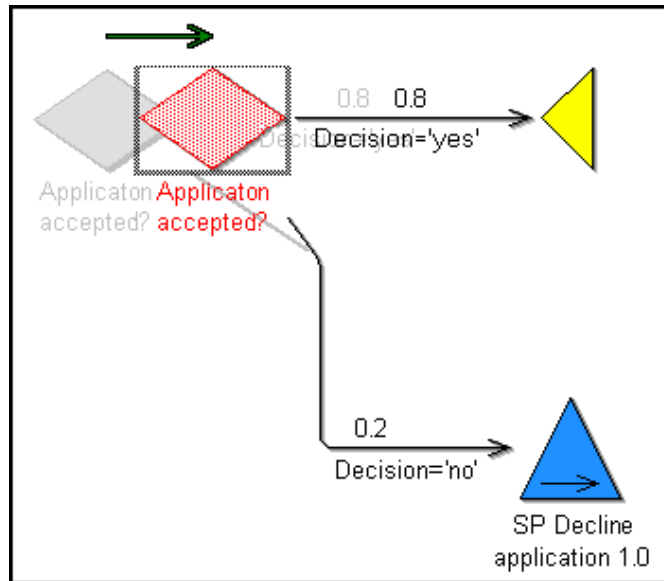


Figure 64: Example for the moving of an object

You can move back the objects to their original position using the function "Undo" (see chap. 2.2.7.1, p. 81).

2.2.7.5 Change object size

For certain modelling classes, the size of the objects within the drawing area can be adjusted. In the **ADONIS Standard Application Library** this applies to the classes "Aggregation" and "Note".

To adjust the size of an object, click on it to focus it (see chap. 2.2.7.3, p. 82). If the size of the selected object can be adjusted, you will see eight points highlighted  on the outline which can be used to increase/decrease its size (see fig. 65, p. 84).

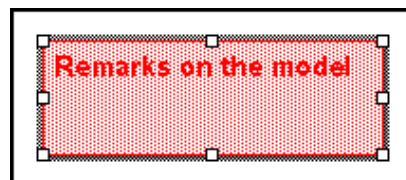


Figure 65: Change object size

Change the size of an object by moving one of its highlighted points. For this, move the mouse pointer on one of the highlighted points. Then the mouse pointer changes into the double arrow which symbolizes the moving direction of the marked points of the object (   ). Press the left mouse button and at the same time move the mouse pointer. As you move the mouse you

will see a blue new outline of the object. When you release the left mouse button, the object will take its new size and will correspondingly be represented on the drawing area.

Additionally you can change the size of an object using its context sensitive menu (right mouse button) by selecting the menu item "position/size" define (see chap. 2.2.7.6, p. 85).

This change to an object size can be undone using the function "Undo" (see chap. 2.2.7.1, p. 81).

Note: If the snap grid is activated, the change in size will be carried out in steps corresponding to the grid. Therefore it is easy to scale and align different objects to identical dimensions and alignment. If you do not want this, deactivate the snap grid or hold the <Ctrl> key while drawing.

2.2.7.6 Define object size and position

The size and position of objects can be defined by inputting the exact values (in cm) .

Note: The change of size is only possible for objects of a specially defined class (=objects changeable in size), like for instance the objects of the class "aggregation" and "notice" from the **ADONIS Standard Application Library**.

The position of an object is defined with the values "**x (horizontally from the left)**" and "**y (vertically from the top)**", and its size with the values "**width**" and "**height**" (see fig. 66, p. 86).

The reference point for the position depends on the definition of the graphical representation of each class. The reference point of objects changeable in size is generally on the upper left corner of the object and for objects with fixed size it is generally at the centre point of the object.

Example from the ADONIS Standard Application Library:

The picture below (see fig. 66, p. 86) represents an object changeable in size of the class "notice" (left) and an object of the class "Activity" (right) from the ADONIS Standard Application Library, the reference point for the notice is in the left upper corner of the object and for the Activity it is the middle point of the object.

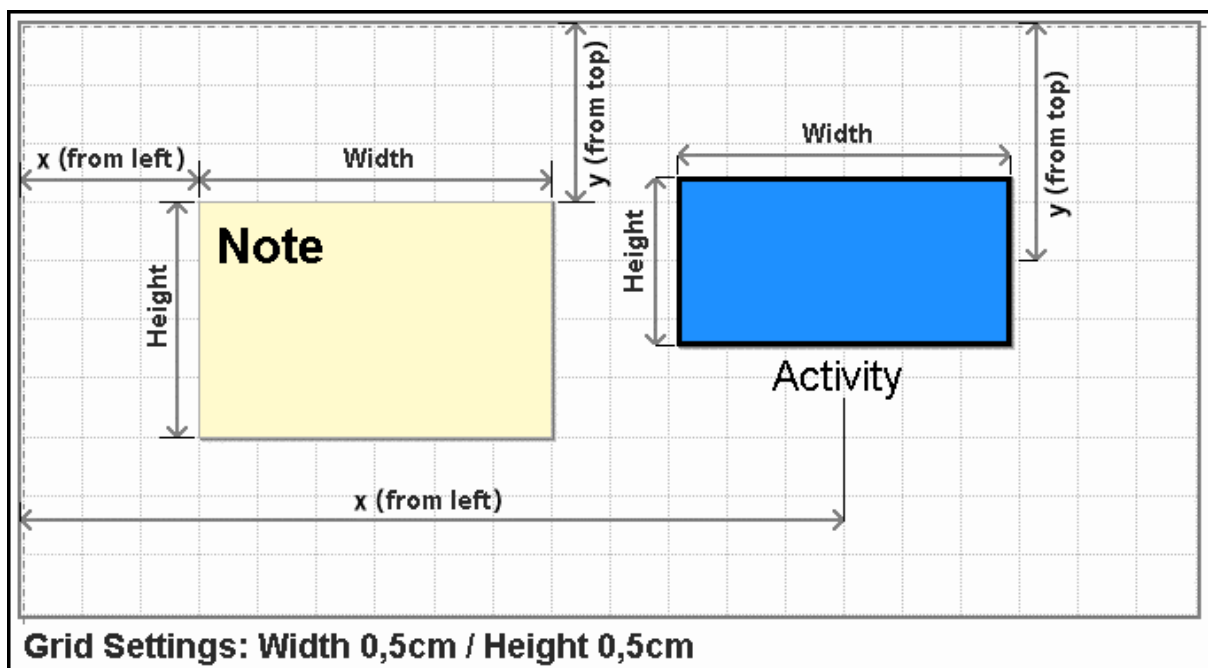


Figure 66: Reference point for the object position and size

The definition of the position and/or the size of an object is possible by selecting the menu item "position/size" in the context sensitive menu (right mouse button) of the object.

For **objects changeable in size**, the window "position/size" (see fig. 67, p. 86) with changed settings for the values "**x (horizontally from the left)**", "**y (vertically from the top)**", "**width**" and "**height**" will be shown.

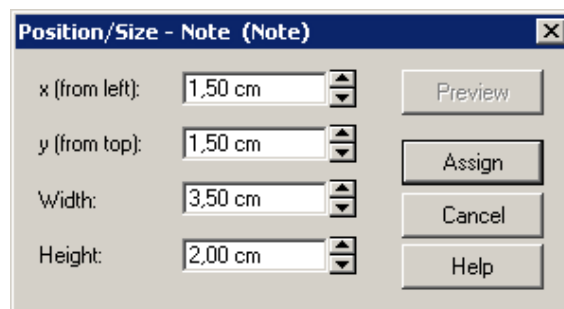


Figure 67: Define size and position (for objects changeable in size)

For **objects with fixed size**, the window "position/size" (see fig. 68, p. 87) with changed settings for the values "**x (horizontally from the left)**", "**y (from top)**" as well as the fixed values "**width**" and "**height**" will be shown.

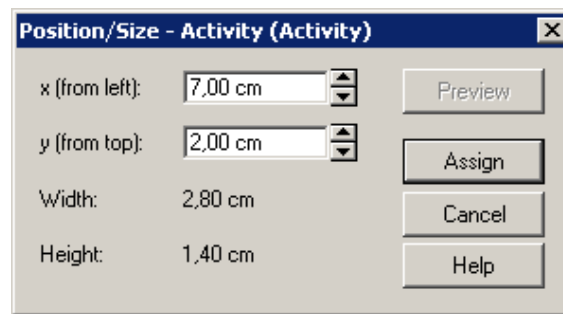


Figure 68: Define position (for objects with fixed size)

For **swimlanes**, the window "position/size" (see fig. 68, p. 87) with changed settings for the value **"height"** as well as the fixed value **"y (vertically from the top)"** (for horizontal swimlane) or the changed value **"width"** as well as the fixed value **"x (horizontally from the left)"** (for vertical swimlanes) will be shown.

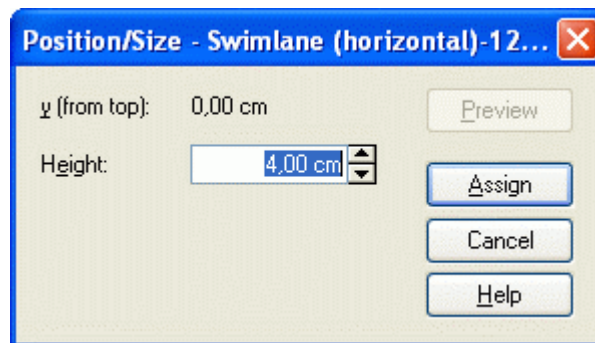


Figure 69: Define height (for swimlanes)

Change the values by direct input in the field or by clicking the buttons  by steps of 0,1 cm.

By clicking on the button "preview" you will have a look at the effects of the values changed, clicking on the button "assign" confirms the new position of the object.

2.2.7.7 Changing the appearance of a connector

The appearance of a connector can be changed by :

- Adding new bendpoints (see chap. 2.2.6.1, p. 77), or
- By moving existing bendpoints, or
- By removing existing bendpoints.
- By moving parallel connector edges

To create a new bendpoint, select the connector you wish to change with the left mouse button, and (keeping the left mouse button pressed) drag the mouse pointer to the position of the new bendpoint. The section of the connector you are moving will be shown as a blue line. Once you release the left mouse button the connector will be drawn in its new position (.

Moving bendpoints works in the same way as moving objects: Place the mouse pointer over the bendpoint you wish to move  and click with the left mouse button. Move the mouse to the target position and then release the left mouse button. Again, a blue dashed line will indicate the new bendpoint being created.

To remove a breakpoint, you must move it into such a position that a straight line is created.

To remove all breakpoints of a connector select in the context sensitive menu of a connector (right mouse button) the item menu "delete all breakpoints".

This editing action can be undone using the function "Undo" (see chap. 2.2.7.1, p. 81) as described above.

Moving connector edges parallel:

Horizontal and vertical connector edges can also be moved in parallel. For that purpose a "handle"(grey bar) is provided along the edge. To move the connector in a parallel motion, take the following steps:

- Select a connector (by clicking on it)
- Point the mouse pointer on the "handle" (the mouse pointer will change into $\updownarrow$ or $\leftrightarrow$) and
- Holding the mouse button, move the connector into the desired position.

After releasing the mouse button, the connector will be set in the new position.

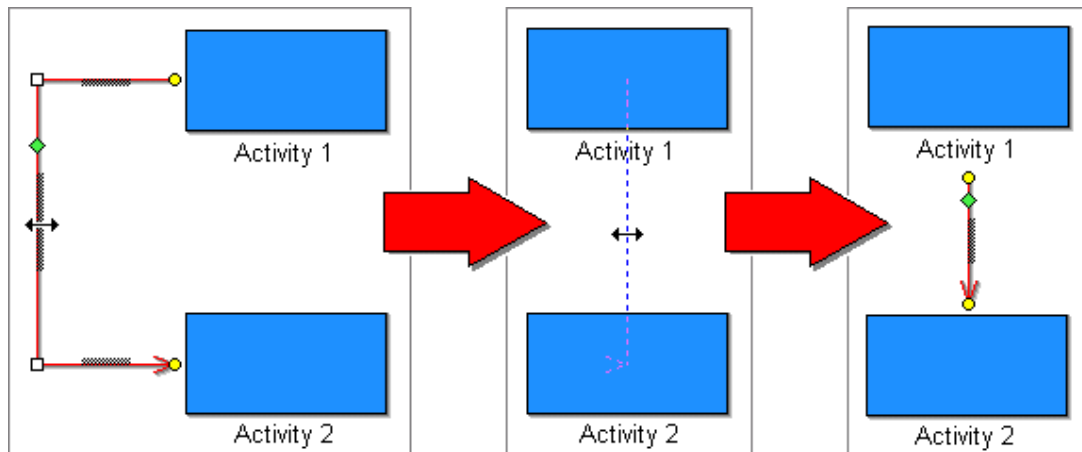


Figure 70: Connector edges moved in parallel

To undo a connector change, click on the icon "Undo" (see chap. 2.2.7.1, p. 81) ().

2.2.7.8 Re-linking connectors

Re-linking connectors means that either the start or target object of an existing connector is changed. To re-link a connector first focus (see chap. 2.2.7.3, p. 82), click on the start or endpoint () of this connector (with the left mouse button) and move it to the new starting or target object you wish, while keeping the left mouse button pressed (see fig. 71, p. 89).

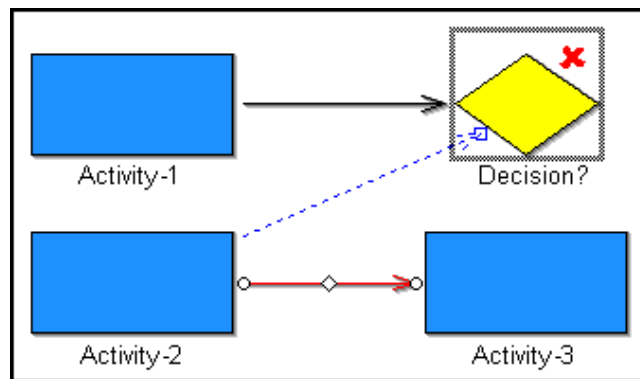


Figure 71: Example for the re-linking of a connector

Note: Only authorised start or target objects will be focused (see chap. 2.2.7.3, p. 82), (accordingly to the definition in the application library) for the selected relation class.

Re-linking connectors is only possible where the relation is permitted between the start and target objects or where a connector of the same type does not already exist between the two objects. If you attempt to re-link a connector in the invalid manner an appropriate error message will be displayed and the connector will remain the same.

The re-linking of connectors can be undone using the function "Undo" (see chap. 2.2.7.1, p. 81).

2.2.7.9 Rename connector marks

The value of a connector mark displayed in a model can be edited by double clicking on the connector mark. Within the window "Rename connector mark" (see fig. 72, p. 89) the current value is shown in the field "New name".

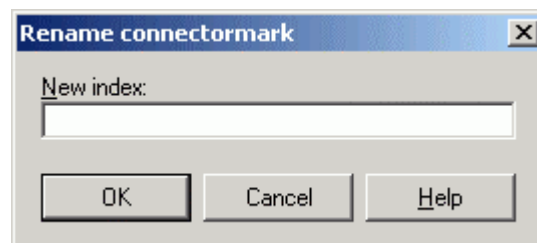


Figure 72: Rename connector mark

Enter a new value and click on the OK button to assign the new value.

Note: The new value has to be either numeric or alphabetical, depending on the definition and has to be unique within the connector marks of one model.

Note: When performing an automatic generation of connector marks previously assigned values may be overwritten.

2.2.7.10 Changing the representation of connectors

In principle, representation of connectors is made through the customising. However it is also possible for a user, to make personal adjustments, that will be stored in the particular model:

Bend points: It is up to user to represent connectors by either square or round bends.

Part IV

Bridges: If connectors cross, crossing points can be represented with small bridges or without them.

To make above changes, select the **"Connector edges"** from the **"View"** menu. The following dialogue appears:

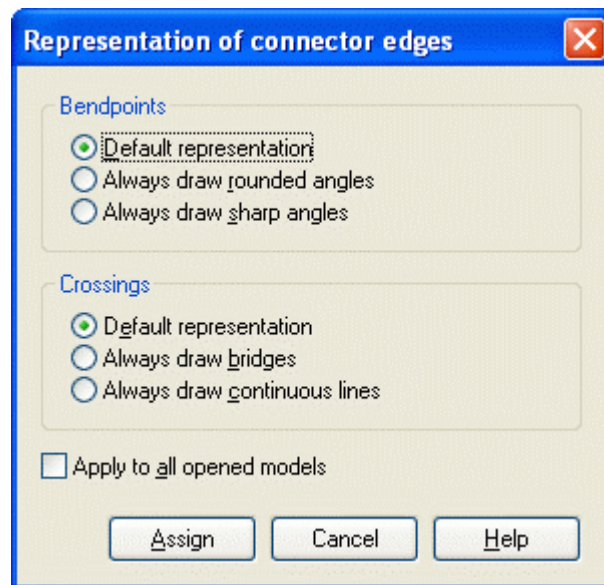


Figure 73: Connectors representation

Bend points:

There are three possibilities to represent bend points:

Standard settings:

The bendpoints will be displayed with respect to ADONIS Administrator settings.

Always display round bends:

All bendpoints will be rounded, regardless of Administrator settings.

Always display sharp bends:

All bendpoints will be sharp.

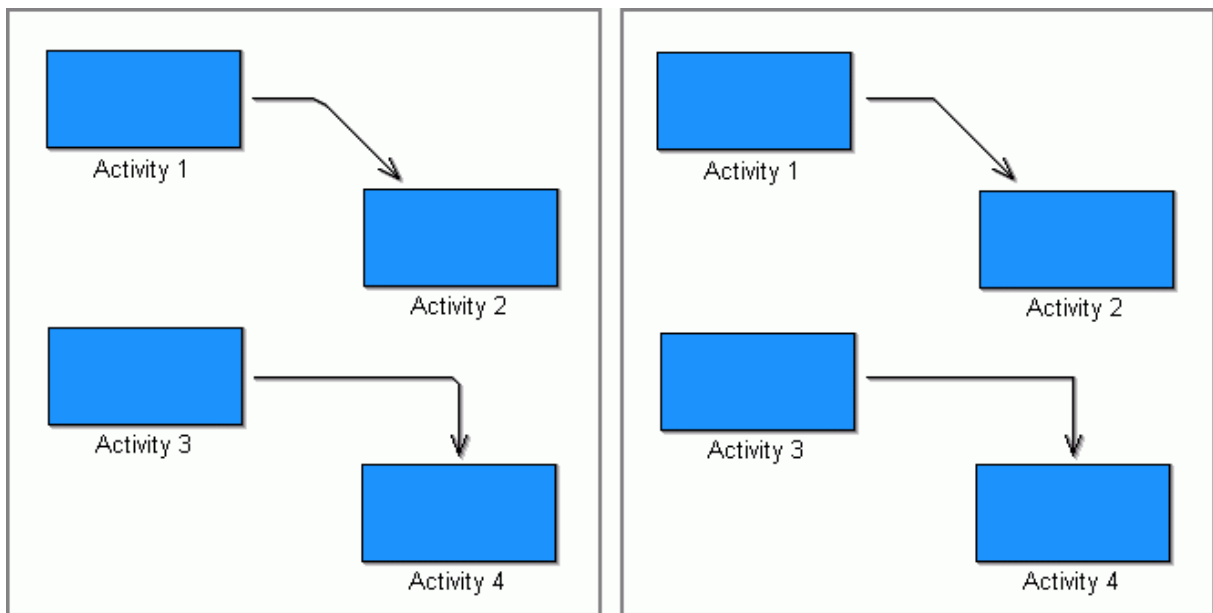


Figure 74: Representation of round/sharp bend points

Junctions:

There are also three possibilities to display crossing connectors:

Standard:

Junctions will be displayed with respect to ADONIS Administrator settings.

Always display bridges:

There will be a bridge in the crossing points, regardless of Administrator settings.

Always display crossing lines:

Junctions are represented only by crossing lines.

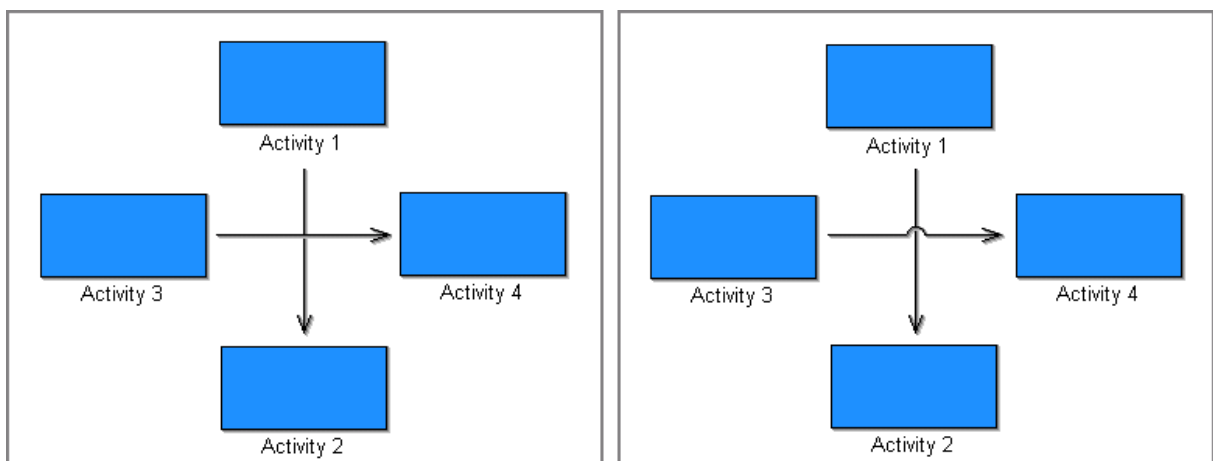


Figure 75: Representation of crossing points - with or without bridges

Use on all opened models:

If this option is activated (☒) , these settings will be saved not only in active model but in **all** opened models.

Note: ADONIS Administrators have an option to set the appearance of bendpoints and junctions for **each** type of connector. Those settings concern **all** connectors in a given model

2.2.7.11 Managing connectors in ADONIS notebooks

Accordingly to the definition in your application library, connectors can be administrated in the chapter "Relations" of object's notebook.

Relations leading to or leading from an object are different. For each possible relation leading to or leading from an object there is an entry with a list of all corresponding existing connectors.

The lists will be automatically updated when any changes to the model concerning the connectors are made.

On the right above each list there are three buttons for the editing of the connectors:

 "Add relation" (see chap. 3.2.7, p. 33)

 "Delete relation" (see chap. 3.2.8, p. 33)

 "Display notebook" (see chap. 3.2.11, p. 34)

Note: To delete connectors via ADONIS notebook, select either in the menu "Editing" the menu item "Undo", click the key combination <Ctrl>+<Z> or click on the smart icon .

2.2.7.12 Editing attributes in the ADONIS notebooks

Double-clicking on an object or connector causes its ADONIS notebook (see fig. 76, p. 93) to be opened. Within an ADONIS notebook, you can edit the attributes of an object or of a connector.

Note: The ADONIS notebook will only be opened, if it is defined in the application library of the relevant object or connector. Otherwise an appropriate indication will be shown.

Figure 76: ADONIS-Notebook of the object of the class "Activity" (from the ADONIS Standard Application Library)

The ADONIS notebooks are structured like office files with a register tabs. The register tabs (chapters) are on the right-hand side of the ADONIS notebook. By clicking on the tabs, the first page of the selected chapter is displayed. If a chapter contains more than one page, then you will see in the right lower corner of the displayed page the number of the page and the total amount of pages in this chapter (e.g. 1/3).

Click the buttons and in the right lower corner of the ADONIS notebooks or stroke the keys <Alt>+<-> or <Alt>+<+> to leaf page by page through the ADONIS notebooks.

Note: The paging within a chapter of an ADONIS notebook depends on the screen resolution and on the font size and can be different from the pictures in this chapter.

The content of an ADONIS notebook can be saved in a datum (Button) or printed out (Button).

To edit the attributes of an object, enter the expected values in the fields of the attribute. The values you have entered will be immediately taken over when you leave the corresponding editing field. Close the ADONIS notebook after the entry by clicking on the close button. To fetch back the original value of the last edited input field of a page, click on the button "put back". If you want to undo changes in several notebook pages, use the function "Undo" (see chap. 2.2.7.1, p. 81).

The ADONIS notebooks contain use elements (see chap. 3.2, p. 31), which can support you to input attributes values.

Note: The ADONIS notebook of an object can also be opened using the context sensitive menu of this object (right mouse button) by selecting the menu item "notebook".

Note: In the **ADONIS Standard Application Library** ADONIS notebooks defined for each class and for the relation 'subsequent' are to be found in the **ADONIS Standard Application Library**

2.2.7.13 Change visualised attribute values

By displaying of attribute values (visualised) in the model graphic, you can represent the information you want to (e.g. object name) in the drawing area.

Note: The visualised attribute values are defined in the application library.

When you wish to change an attribute value, first select the object and then click on the attribute value. An input window will be opened, (see fig. 77, p. 94), in which the current attribute value will be displayed.

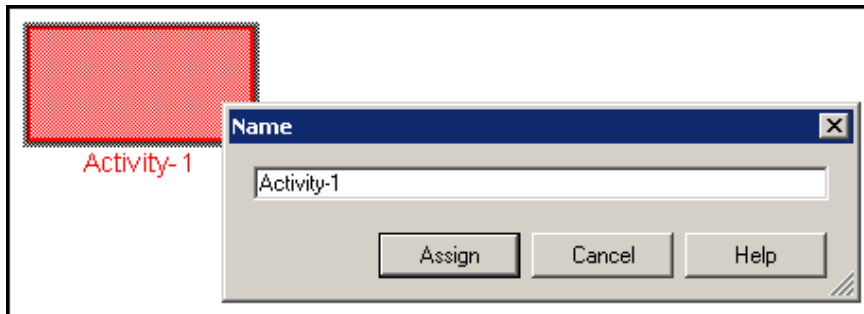


Figure 77: Change visualised attribute value

Note: Depending on the type of visualised attribute, another input window - e.g. input support field - may be displayed.

Change the attribute value and confirm by clicking on the button "assign". The change will be taken over and the attribute value will be visualised on the drawing area.

You can also call the input window using the context sensitive menu of the object (right mouse button). If only an attribute value is visualised, then its name is entered as menu item in the context sensitive menu. If they are several, the menu item "visualised attribute values" will be shown with a sub menu item for each attribute.

2.2.7.14 Move connectors edge middle point

As well as the start point (●), endpoint (●) and bendpoints (□) a focused connector also shows the edge middle point (◆) (see fig. 78, p. 95).

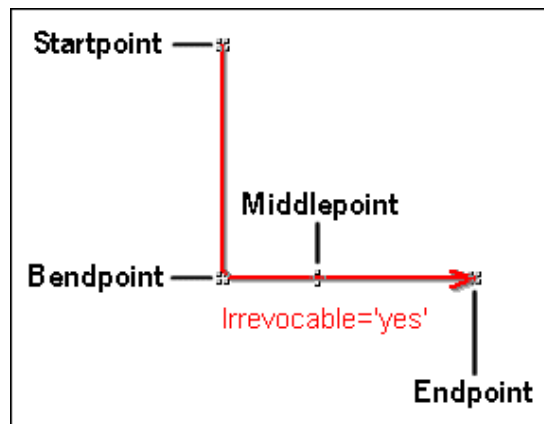


Figure 78: Edge middle point

In the **ADONIS Standard Application Library** visualised connectors attributes of the relation "subsequent" will be aligned. As you can move the edge middle point, it is also possible to adjust the label position of the connector.

Note: If you are using a customised application library, the connector labels can also be displayed at the start or the endpoint of the connector. It is also possible to assign a graphical symbol to the edge middle point (such as the arrows at the start or end point).

If the edge middle point of a connector has not yet been moved, then ADONIS will place the midpoint in the geometric centre of the connector. If on the other hand it has already been moved, then ADONIS will try to maintain a position. The chosen position follows any object or bendpoint movements.

To move an edge middle point first select the corresponding connector in order to give it focus (see chap. 2.2.7.3, p. 82). Then click on the edge middle point mark  with the left mouse pointer and pull it along the connector to the position it should have. By releasing the left mouse button, the connector will be assigned the new position of the edge middle point and the connector will be drawn with the related moved elements (connector label).

If the edge middle point of a connector has been moved and you would like to replace it in the geometric centre, then right click on the connector and select the menu item "edge middle point" from the context sensitive menu and then the submenu "auto". The edge middle point will be calculated according to the changed position and the connector will be drawn with the related moved elements.

The last movement of the "Edge middle point" can be undone by using the "Undo" (see chap. 2.2.7.1, p. 81) function.

2.2.7.15 Copy

You can Copy objects and connectors by selecting (see chap. 2.2.7.2, p. 81) them and then using the "Copy" function. This function can be called in a number of ways:

- Select the menu item "Copy" from the "Edit" menu.
- Use the key combination <Ctrl>+<c>.
- Select the menu item "Copy" from the context sensitive menu of a selected object". If you only wish to Copy one object, it is not necessary to select it beforehand.
- Click on the smart-icon  in the quick-access bar.

Object and connectors copied remain in the clipboard until other objects or connectors are copied or cut or until you exit ADONIS. Objects and connectors can be copied into any model of the same type, i.e. which has the same classes and relations.

Note: A connector will only be copied if it is selected with the two objects it connects.

Note: When you copy and then paste referenced objects (see p. 97) you can choose to take over the references into the pasted object or leave them in the original object.

IMPORTANT: The options "Copy", "Cut" (see chap. 2.2.7.16, p. 96) and "Paste" (see chap. 2.2.7.17, p. 97) can only be applied within ADONIS. If you wish to Copy the graphic model representation into any other applications, you must use the function "Generate graphics".

2.2.7.16 Cut

You can cut objects and connectors by selecting (see chap. 2.2.7.2, p. 81) them and then calling the "Cut" function. This function can be called in a number of ways:

- Select the menu item "Cut" from the "Edit" menu.
- Press the key combination <Ctrl>+<x>.
- Select the menu item "Cut" from the context sensitive menu of a selected object". If you are cutting only one object, marking is not necessary.
- Click on the "Cut" smart-icon  in the quick-access bar.

Objects and connectors that were cut remain active in the clipboard until other objects or connectors are copied or cut until you exit ADONIS. Objects and connectors cut can be copied into any model of the same type, i.e. which has the same classes and relations. The function "Cut" is a combination of the functions "Copy" (see chap. 2.2.7.15, p. 95) and, afterwards, "Delete" (see chap. 2.2.7.18, p. 98).

Once the "Cut" function has been used, it is possible to undo it using the "Undo" (see chap. 2.2.7.1, p. 81) function.

Note: A connector can only be cut when it and the two objects it connects are selected.

Note: When you cut referenced objects (see p. 96) the references to this object will be invalid.

IMPORTANT: The options "Cut", "Copy" (see chap. 2.2.7.16, p. 96) and "Paste" (see chap. 2.2.7.17, p. 97) can only be applied within ADONIS. If you wish to copy the graphic model representation into any other applications, you must use the function "Generate graphics".

Cut referenced object

When you cut an object, which is referenced by an other object, an appropriate indication appears before deleting this object (see fig. 79, p. 97), since the references of the referenced object become invalid after it has been cut.

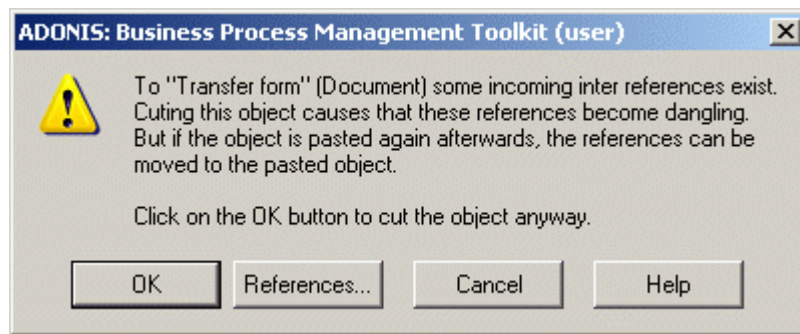


Figure 79: Indication before cutting a referenced object

Note: When you paste a referenced object (see p. 97), you can take over the references to this object, i.e. the references remain valid.

Click on the button "references", to get the list of all objects, which reference the object you wish to delete.

Clicking on the button OK will cut.

2.2.7.17 Paste

You can insert copied (see chap. 2.2.7.15, p. 95) or cut (see chap. 2.2.7.16, p. 96) objects and connectors into models of the same type, i.e. with the same defined classes and relations, by calling the "Paste" function. This function can be called in a number of different ways:

- Select the menu item "Paste" from the "Edit" menu.
- Press the key combination <Ctrl>+<v>.
- Select the menu item "Paste" from the context sensitive menu(Key <F12> followed by <p>).
- Click on the appropriate smart icon  in the quick-access bar.

Once the "Paste" function has been called, place the mouse on the position within the drawing area at which you would like the object(s) and connector(s) saved to be inserted. The object(s) and connectors(s) to be inserted will be outlined in magenta until they are set in their final position. If you move the mouse pointer over the edge of the window or the drawing area it will automatically scroll.

Click on the location at which you would like the objects to be pasted. The pasted objects and connectors are now shown on the model. Instead of confirming the position, you can cancel the paste process by clicking with the right mouse button.

Note: Copied or cut objects and connectors can only be pasted into models of the same type, i.e. in which the classes and relations for the object or connector to be pasted are defined!

Note: When you paste referenced objects (see p. 97) you can choose to take over references to the pasted object or leave them to the original object.

Paste referenced objects

If you want to paste an object, which is referenced by another object, (see fig. 80, p. 98).

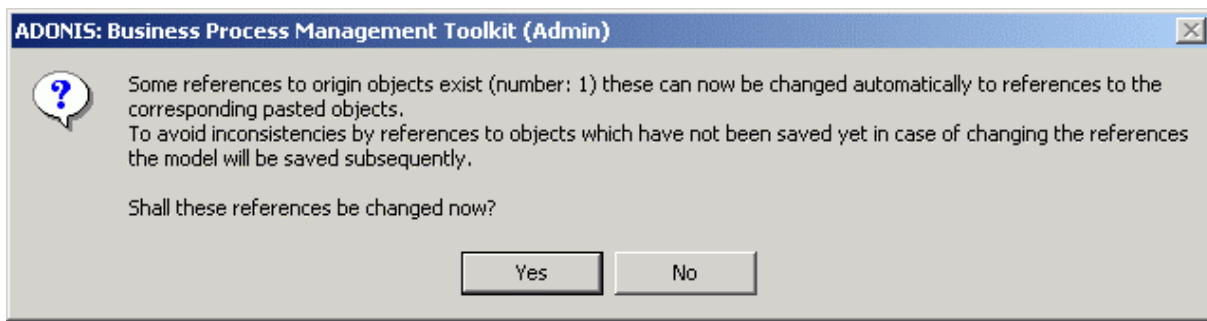


Figure 80: Query before pasting a referenced object

Click on the **yes-button**, to apply changes, i.e. the **references** on the copied or cut original object will be deleted and **set in the pasted object**.

Click on the **no button**, to cancel changes, i.e. the **references on the copied or cut original object will remain the same** and the pasted object will not be referenced by another object.

2.2.7.18 Delete

First selecting (see chap. 2.2.7.2, p. 81) the required object(s) and then calling the "Delete" function can delete objects and connectors. This function can be called in a number of ways:

- Select the menu item "Delete" from the "Edit" menu.
- Press the button .
- Select the menu item "Delete" from the context sensitive menu of a previously selected object.

Objects and connectors, which were deleted can be restored by using the "Undo" (see chap. 2.2.7.1, p. 81) function.

Note: When you delete referenced objects (see p. 98) the references to this object will become invalid .

Delete referenced object

When you delete an object, which is referenced by another object, an appropriate indication appears before deleting this object (see fig. 81, p. 98), since this reference is not valid after you have deleted this referenced object.

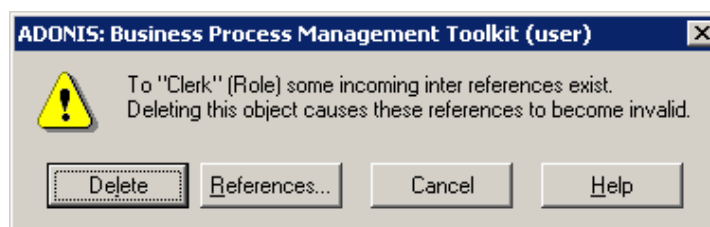


Figure 81: indication before deleting a referenced object

Click on the button "reference", to get a list of all objects, which are referenced to the object you wish to delete.

By clicking on the button "delete" you will delete the object and all the references to this object will be invalid.

2.2.7.19 Find

Using the function "find", it is possible to search within a model for all labels -i.e. in visualised attribute values (see chap. 2.2.7.13, p. 94).

The function "Find" can be called in a number of ways:

- Select the menu item "Find" from within the "Edit" menu.
- Press the key combination <ctrl>+<f>.
- Click on the appropriate smart icon  in the quick-access bar.

Once the function "Find" has been called, the window "Find visualised attributes" (see fig. 82, p. 99) is displayed. In this window you can enter the text or the subtext, which should be searched for.

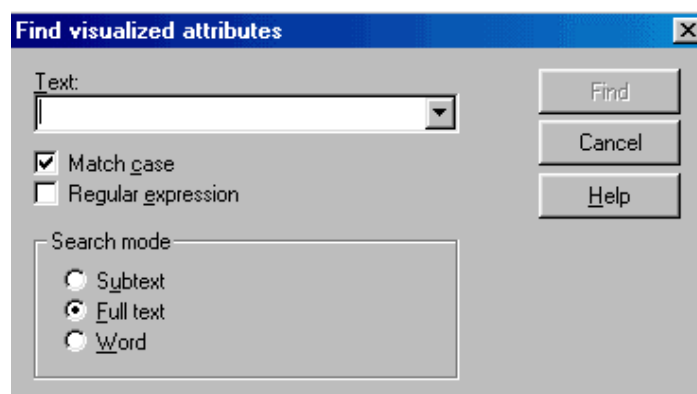


Figure 82: Search for visualised attributes

If you wish to distinguish between capital and small letters and want the search to only return exact matches, then activate the option **"Match case"**.

If the option **"Regular expression"** is activated, then the content of the field "Text" will be interpreted as a regular expression.

When the option "Regular expression" is deactivated, there are three types of search to choose between:

- **Sub text:** the search query will be met when the text being searched for exists as part of a larger piece of text.
- **Full text:** the search query is fulfilled when an entire label matches the text being searched for.
- **Word:** the text for which you are searching must exist as an individual word (may be bounded by spaces or full stops) within one or more labels in order to be successfully located.

Wildcards can be used when the option "Regular expression" is deactivated. "?" is for one character exactly, "*" for any number of characters. (For regular expressions this is expressed by "." or ".*".)

Once the button "Find" is pressed, the current window (see fig. 82, p. 99) is closed and the search is started. Any objects or connectors, which match the search query are highlighted.

If no matches are found, then an information window is shown explaining that the particular expression being searched for was not found.

2.2.7.20 Align

Aligning implies that all selected objects (see chap. 2.2.7.2, p. 81) should be placed along the same x-coordinate or y-coordinate. **"Focus"** (see chap. 2.2.7.3, p. 82) is very important here.

Align objects by selecting them and focus (see chap. 2.2.7.3, p. 82) the referenced object to which they should be aligned.

Then select in the "Edit" menu the "Align" menu item as well as the "Horizontally" submenu or the "Vertically" submenu, you can also click on the smart icon  (for horizontal alignment) or  (for vertical alignment) in the quick-access bar.

The alignment of objects can be undone using the "Undo" (see chap. 2.2.7.1, p. 81) function.

2.3 Model navigation

The model navigation provides support while working on several models, possibly connected by references.

2.3.1 Navigating through open models

This function enables you to navigate through several model windows. The model windows opened are ordered according to the sequence in which they were opened. The navigation function enables you to bring the previous or next model window to the foreground of the working area.

There are various ways to navigate through the model windows:

- Select the option **"Back"** in the menu "Window", to display the model window that was **prior** to the actual one or choose the options **"Previous"** or **"Next"** to display the previous or next model window respectively in the foreground. These options are available under the Windows menu.
- Press the key combination <Alt>+<Left arrow key> to display the **previous** model window or the combination <Alt>+<Right arrow key> to display the **next** model window.
- Click on the smart icon  or  in the quick-access bar.

The function "Activate sub model" (see chap. 2.3.3, p. 101) allows you to open sub models referenced in a model (or to bring them to the foreground if already open). Calling a sub model causes the models to be re-ordered in such a way that the model called will be placed immediately behind the model, which is referencing it.

The models are also re-ordered when a model is opened (see chap. 2.4.2, p. 103) or brought to the foreground via the ADONIS explorer (see chap. 4., p. 38). The model opened or brought to the foreground is placed immediately behind the model previously active.

2.3.2 Activate model window

If you activate a model window, this window will be displayed in the foreground on the working area.

To activate a model window:

- Select in the "window" menu the menu item with the model name of the window you wish to activate.
- Click on the smart icons ,  or  and keep the mouse button pressed, until a pop-up menu with the name of the opened model is displayed and then select from this menu the model name of the window you wish to activate.
- Select the model in the ADONIS Explorer.

Note: There is a special method to activate model windows known as activating a referenced model (see chap. 2.3.3, p. 101) from a (main) model.

2.3.3 Activate submodel

The activation of sub models allows you to open referenced models quickly (or activate their model windows).

To activate a sub model

- **click** on the **visualised object reference** (e.g. name of the sub model or referenced object), which is displayed as a hyperlink (see fig. 83, p. 101),

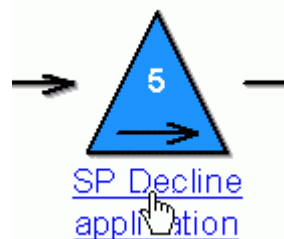


Figure 83: Hyperlink display (Example "subprocess")

- **Double click, while keeping the control key (<Ctrl>) pressed on the object**, from which the reference is starting, in the drawing area (Function "Ctrl+double click").
- **Select in the context sensitive menu of the object the "activate submodel" menu item.**
- **Select the registered reference in the ADONIS notebook and click on the icon .**

Note: The hyperlink function (see fig. 83, p. 101) is only possible for non selected objects.

Note: The "Activate sub model" menu item in the context sensitive menu of an object as well as the function "Ctrl + double click" is only available, if a "model pointer" as been defined for the class of this object in the application library.

If the sub model is already opened, only the corresponding model window will be activated, i.e. displayed in the foreground.

If you "Ctrl + double-click" on an object holding no reference, an appropriate message will be displayed and a window will open up, in which you can create an inter-model reference.

When activating a sub model, the models opened will also be re-ordered within the navigation function (see chap. 2.3.1, p. 100): The sub model will be placed immediately behind the model, which is referring it.

2.4 Model management

Model management refers to the administration and control of the models on which you are working.

The model management functionality can be found under the Model menu within the modelling component.

2.4.1 Create new model

If you wish to create a new model, select the menu item "New..." from the "Model" menu. Alternatively you can use the key combination <ctrl>+<n> or the appropriate smart icon  in the quick-access bar.

The window "Create new model" (see fig. 84, p. 102), in which you can select the model type, the model group, the model name and (optionally) the version number of the model to be created, will be displayed.

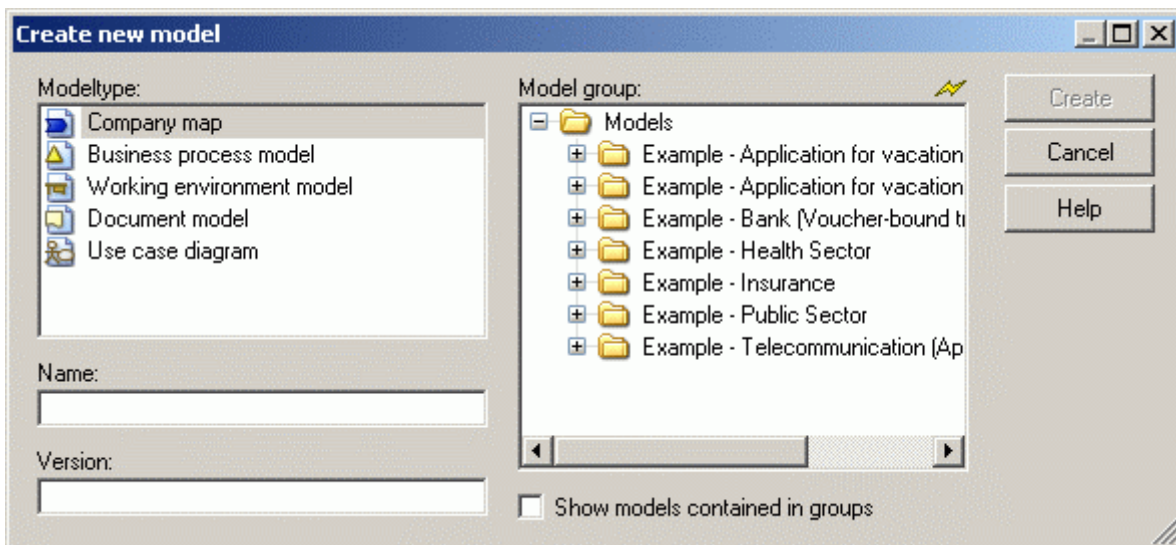


Figure 84: Create new model

Select in the **"Model type"** field the type of the new model and in **"Model group"** field the model group, in which you wish to create the new model.

Then enter the name of the new model in **"Name"** field and if necessary, for model-related versioning, a version number in the **"Version"** field.

Note: The model name must contain at most 220 characters. The version number for the model-related versioning (see chap. 7.1.1, p. 66) must contain at most 20 characters.

Note: As in the "Create a new model" dialogue window, you can expand or collapse models in the model groups, by clicking on the appropriate check box.

In time-related versioning, fields for the validity period of the model will be displayed instead of the "Version" field (e.g. "Month" and "Year").

Note: There must be no model of the same name, type and version number already existing within the ADONIS database. If such a model already exists an appropriate error message will be displayed when you try to create an identically named model.

In the model group list, you can have a look at the models contained in the model groups, for this, activate the **"Show models contained in groups" option**.

Confirm your entries by pressing the button "Create" which will cause the current window to be closed and the new empty model to be displayed. If the button "Create" is faded out in grey, this means that at least one of the three necessary entries "Model type", "Model group" or "Name" has not been selected.

2.4.2 Open existing models

If you wish to open a model, which was previously saved within the ADONIS database, then select the menu item "Open..." from within the "Model" menu. Alternatively, use the key combination <ctrl>+<o> or the smart icon  from the quick-access bar.

This causes the "Model open" (see fig. 85, p. 103) window, which contains a model selection list to be opened. Within the model group hierarchy all models which have been saved and to which you have access are displayed.

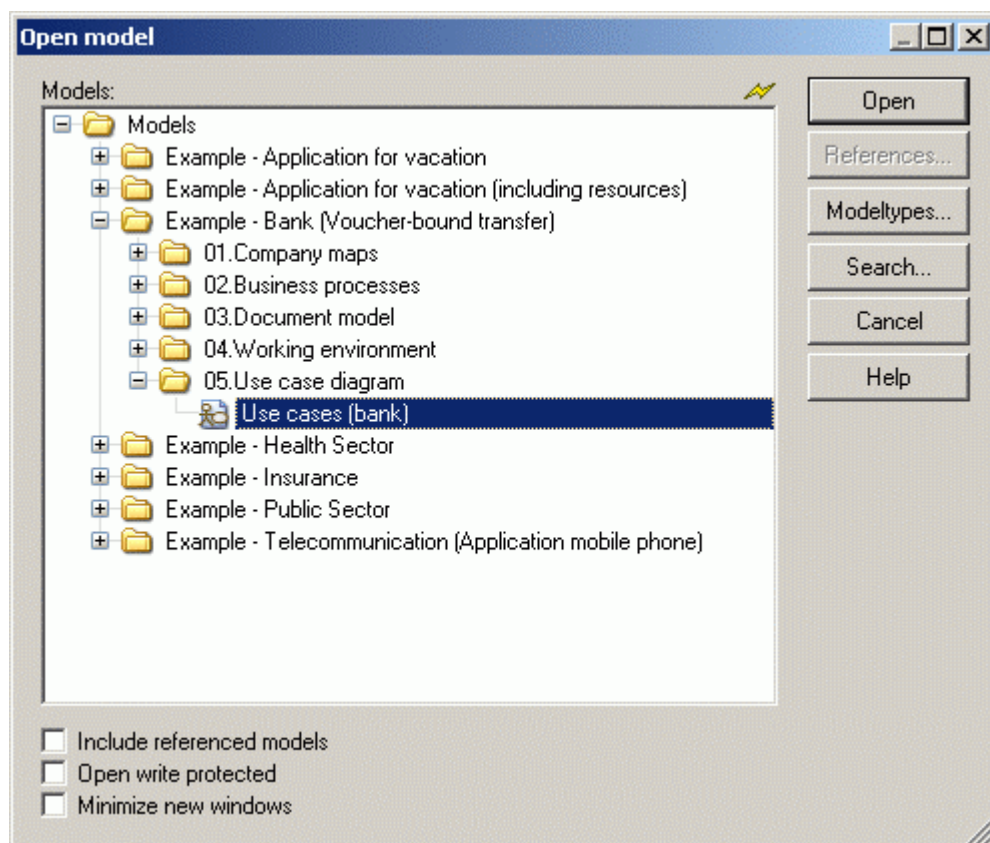


Figure 85: Open models

Select one or more models to be opened and click on the button **"Open"**.

By clicking the **"References"** button, you can fix the References - settings to open models by activating the **option "Include referenced models"**.

By clicking on the button **"Model types..."** you can restrict the display of models in the model selection list to certain model types (see chap. 3.1.1, p. 26).

By selecting the button **"Search..."** you can search (see chap. 3.1.3, p. 27) the model list for specific models. All models, which match the search are displayed in the "Found entries"

window. Selecting one or more of these will then cause them to be highlighted within the "Open model" (see fig. 85, p. 103) window. Clicking on the "Open" button can then open them.

Clicking on the **"Refresh"** button causes the model selection list to be refreshed.

The following options can also be set within the "Open model" (see fig. 85, p. 103) window:

- **"Inclusive sub processes"**: the subprocesses of each model selected will also be opened. This works recursively.
- **"Open write protected"**: the selected models are only opened for reading purposes, i.e. any changes you make to these models will not be saved.
- **"Minimize new windows"**: the model window will be minimized in the working area.

Note: If you attempt to open a model which has already been locked by another ADONIS user, a window will be shown asking you if you wish to open this model with read-only access.

Note: Models with read-only access will be displayed with a padlock (e.g. ) represented in the model type icon.

2.4.3 Close model

If you wish to close a model, activate the corresponding model window or the icon corresponding to this model window and select from the "Model" menu the menu item "Close". You can also close the model window (see chap. 2.2.3, p. 74) by clicking on the exit button () by opening the window menu (by a single click on the exit button) and then selecting the option "Close" or by the key combination <Ctrl>+<F4>.

If there are unsaved changes in the model, the exit button of the model window will be marked with a red star  and a "*" will be appended to the window name. This will be displayed in the model window by a "Change" in the status line. If you close a changed model, without saving it, an appropriate indication window will be displayed.

Now you now have the possibility either to save and close the model (click the "Yes" button), close the model without saving the changes (click the "No" button) or to cancel the previously selected close action (click the "Cancel" button).

Note: By selecting the menu item "Close all" in the "Window" menu all model windows will be closed.

Note: If you close a **new empty Model, which has not been saved**, an appropriate indication window will be displayed and you will have the possibility to delete this model or to store the empty model within your ADONIS database.

2.4.4 Save models

If the contents of a model have changed and these changes have not yet been saved, the exit-button of the model window is marked with a red star  and a star is added to the name of the window. The text "modified" also appears in the status row referring to the active model.

In order to save these changes in the ADONIS database, you can select the option "Save" from the "Model" menu. Alternatively use the key combination <ctrl>+<s> or the smart icon  from the quick-access bar.

If you wish to save all changed models within the ADONIS database select the menu item "Save all" from the "Model" menu. It is also possible to save models from within the "ADONIS-Explorer" (see chap. 4., p. 38) window.

Models are saved automatically (see chap. 2.4.4.1, p. 105) after a specified number of changes (standard:20) have been made. It is possible to turn this option on or off and to change the number after which an automatic save should be carried out by using the menu item "Auto save..." in the "Extras" menu.

Note: If you would like to save the models to a floppy disk, then you must use the "Import/Export" (see chap. 6., p. 115) component and export the models to an ADL file.

Note: If you change only view parameters (e.g. zoom value, view mode), the model will not be considered as "changed", however you can save this new view in the ADONIS database.

2.4.4.1 Auto save

Using the **Auto save** function, the changes will be automatically and individually saved by the program.

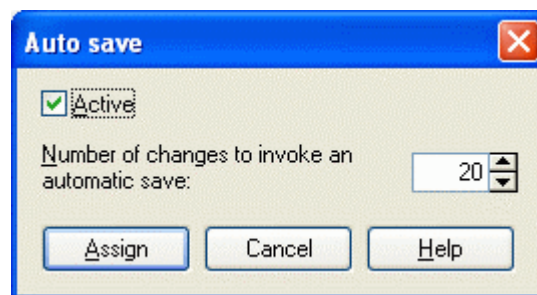


Figure 86: Auto save

You can switch this function on by activating the "Active" option within the "Auto save" window (see fig. 86, p. 105), i.e. the auto save comes after the entered number of changes. By entering a value you will fix the number of actions, which must be carried out before saving automatically.

If you deactivate the option "active", there will be no auto save.

Once you have entered the value, click on the "Assign" button to save this setting.

Note: These settings will be stored in your user profile and will remain valid only for the current ADONIS user.

2.4.5 Save model with a different name

If - by **model-related versioning** (see chap. 7.1.1, p. 66) - you wish to save an open model with a different name or with a different version number, without having to overwrite the current model, select in the "Model" menu the "save as" menu item.

By **time-related versioning** (see chap. 7.1.2, p. 66) select in the "model" menu the "save as" menu item and the submenu "new model", to save the open model with a different name. To save the open model with a different version number, select the submenu "New Version".

Note: Whether the model will be versioned model-related or time-related depends on the configuration of your application library.

Once you have selected the "save as" menu item in the "model" menu, the "save model as" window will appear (see fig. 87, p. 106), in which the current name and the current version number of the model will be entered. Furthermore you may also select a model group for the new model. As in the dialogue window "create new model" you can also fade in/out the models contained within this model group with the appropriate check box.

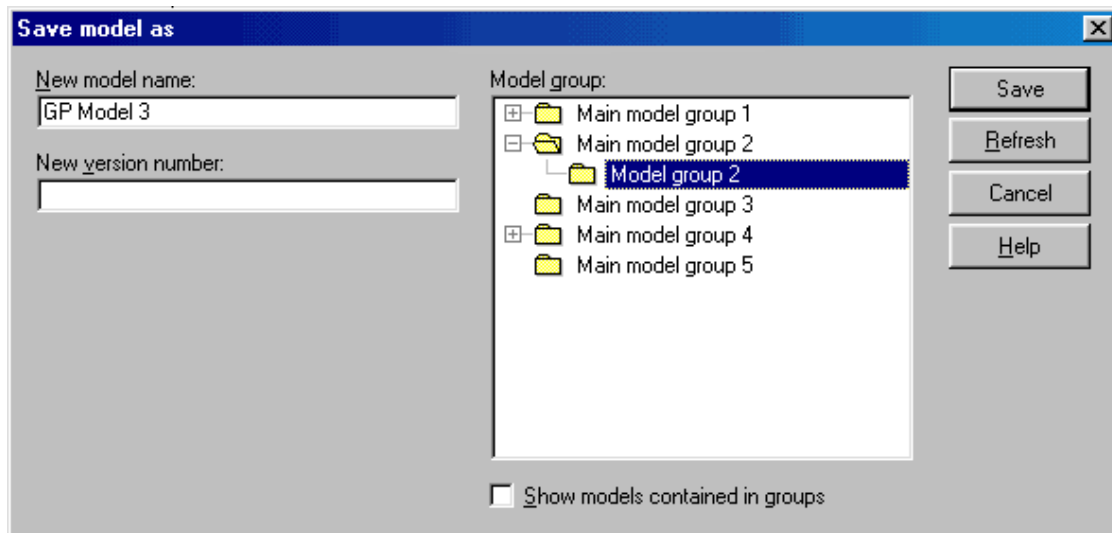


Figure 87: Save model with a new name

You can save the model with a new name or with a different version number in the ADONIS database.

Note: The model name must contain at most 220 characters. The version number for the model-related versioning (see chap. 7.1.1, p. 66) must contain at most 20 characters.

Note: As in the "Create a new model" dialogue window, you can expand or collapse models in the model groups, by clicking on the appropriate check box.

By **time-related versioning** (see chap. 7.1.2, p. 66), fields for the validity period of the model (e.g. "Month" and "Year") will be displayed instead of the "version" field.

Note: There must be no model of the same name, type and version number already existing within the ADONIS database.

Note: The old model is no longer open - it still exists in the ADONIS database and can be re-opened as normal.

Note: After saving a read-only model under another name, the new model is opened with read-write access NOT as read-only.

For referred on the model references, additional dialogue appears, that might look like:

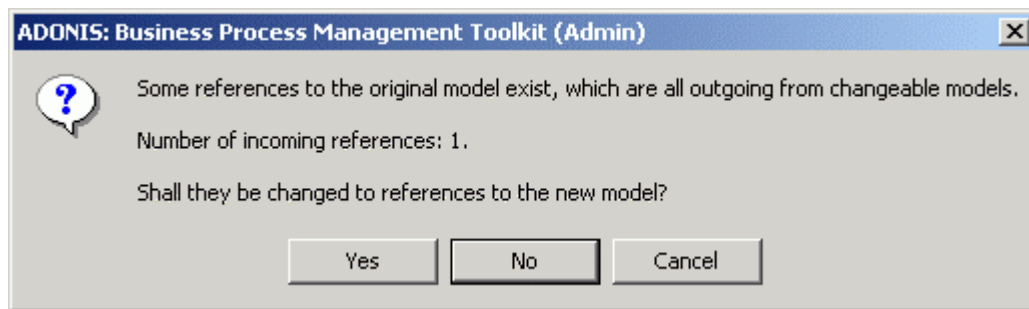


Figure 88: Saving model under the new name

It is checked whether the user has write access to any models referencing the active model, and also verified whether the number of references that lead to the model is displayed. After the verification, the program asks if the references should be re-routed to the new model.

After the user decision and the origin of references, the following options are available:

- The user clicks "no": All references still refer to the original model.
- All references come from models with write access and the decision is "yes": The references will be moved. All the references refer now to the new model.
- The references come partly from alterable, partly from write protected models and the decision is "yes": All the alterable references refer to the new model. References from write protected models, as before refer to the original one.
- All outgoing references come from the models, that are not write protected: It is not possible to make any selection.. All references refer to the original model.

Note: It is possible, to limit above possibilities, in case of client specific configuration in the ADONIS.

2.4.6 Printing models

Starting printing:

There are three different ways to start printing:

- By clicking on the **Smart-Icon**
- By selecting the **"Print..."** option from the **"Model"** menu.
- By pressing the key combination **<Ctrl>+<p>**

The ADONIS print dialogue is displayed (see fig. 89, p. 108).

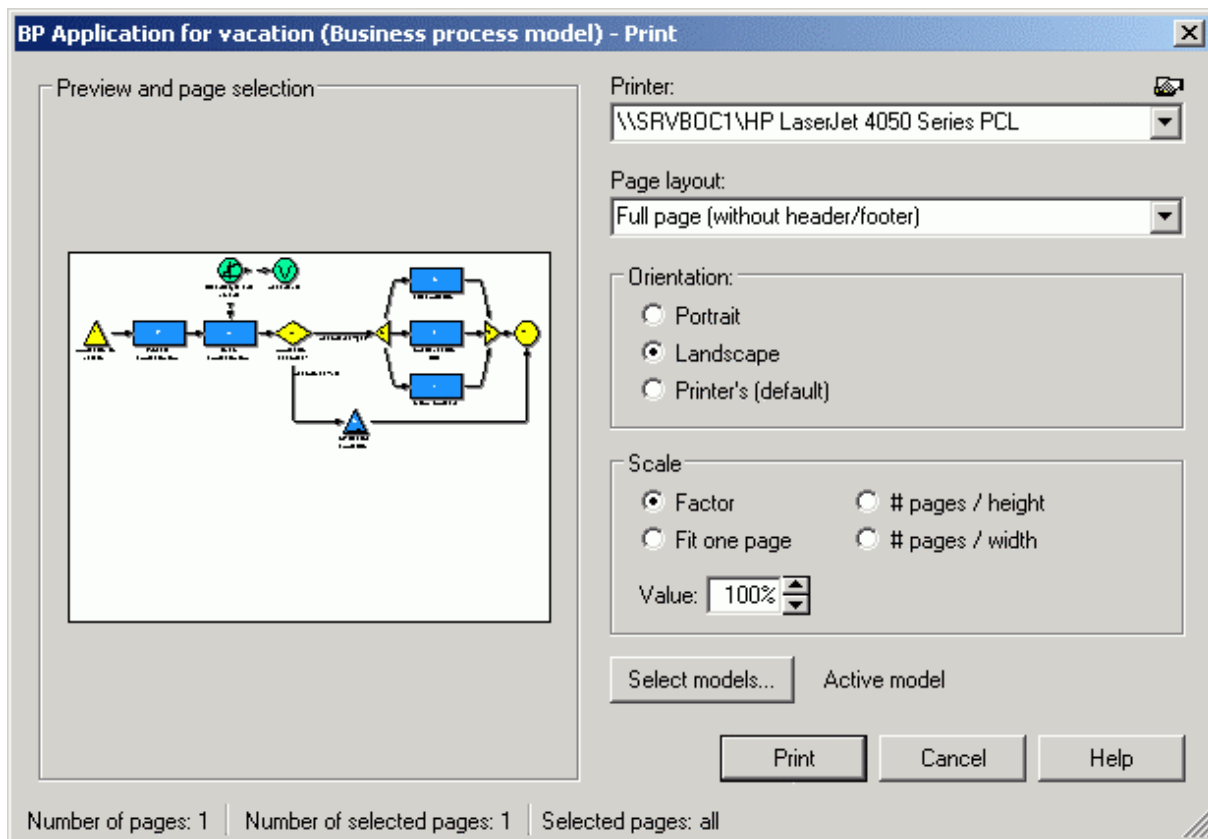


Figure 89: Printing model

Printing:

The field **"Print"** contains a list of all available printers. Select a printer from the list (default printer is pre-selected). The printer settings may be displayed and if necessary changed by clicking on the smart icon . If any problem with printers occur contact your system administrator.

Select your settings for **"Page layout"**, **"Layout parameters"** and **"Scale"**. Check the **"Layout parameters"** chapter for details.

By default, the active model will be printed. By pressing button **"Select model"** you can select an open model for printing. A small dialogue with all opened models will be displayed, where you can choose the desired model:

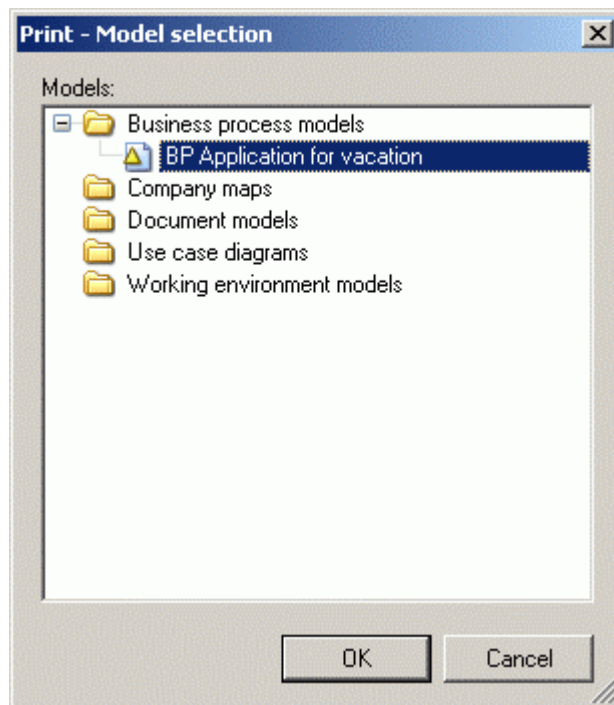


Figure 90: Page layout

If more than one model is selected, the printing dialogue will change:

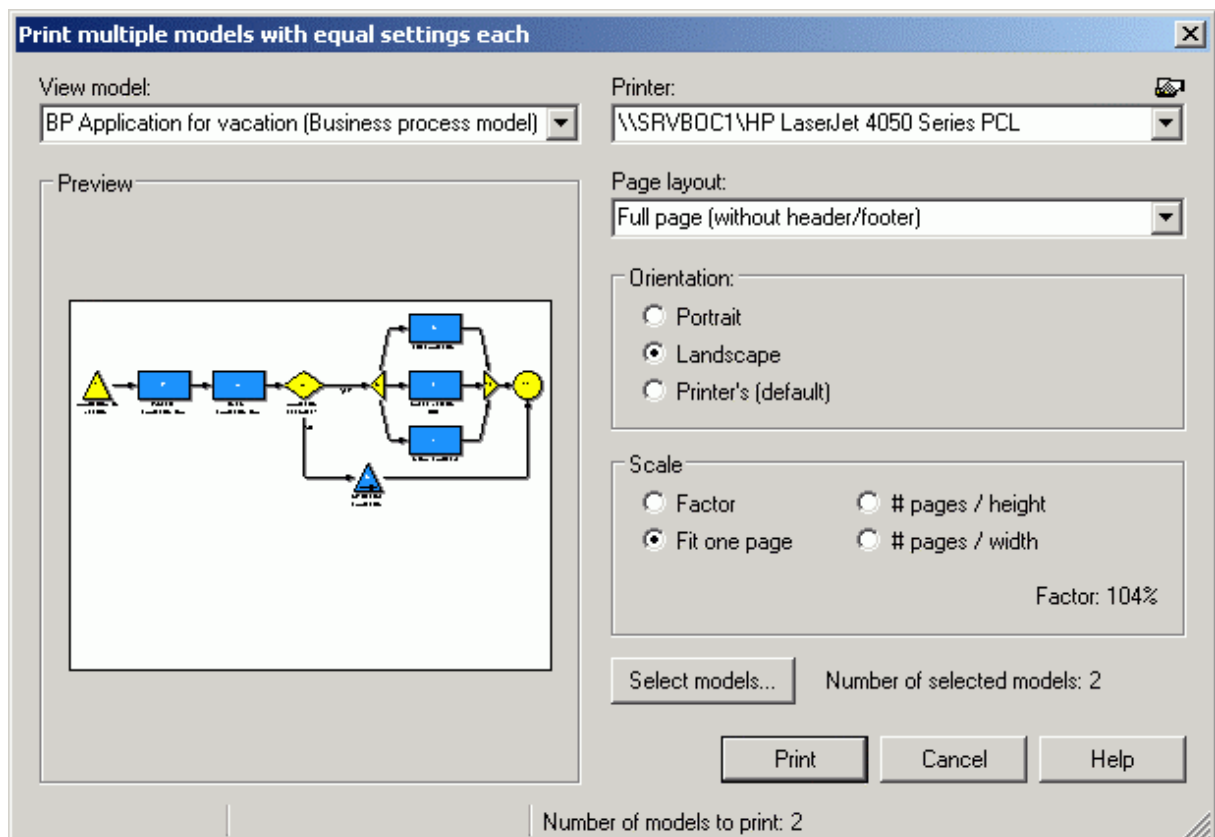


Figure 91: Page layout

In the additional **"Model view"** field, you can switch between all selected models.

The window **"Preview and page selection"** is updated with each change. This print preview helps to choose pages for the printout (see chap. 2.4.6.1, p. 110).

In the status line, you will find information about the printout of several pages depending on the current layout and scale (total number of pages, number of selected pages, numbering of selected pages).

Note: The numbering of pages is done by the line from the left to the right.

To start printing click on the **"Print"** button. In the status window, you will find information about current printing status. By clicking on the "Cancel" button, the printing process will be cancelled immediately.

Note: Depending on your system configuration, the information window may appear after the starting printing operation.

2.4.6.1 Select pages

If a print out needs several pages, you can determine which pages actually shall be printed (by default: all).

To omit particular pages during printing, click on them in the **"Preview and page selection"**. They will be highlighted with grey and omitted during printing. You can un-mark pages by clicking on them again:

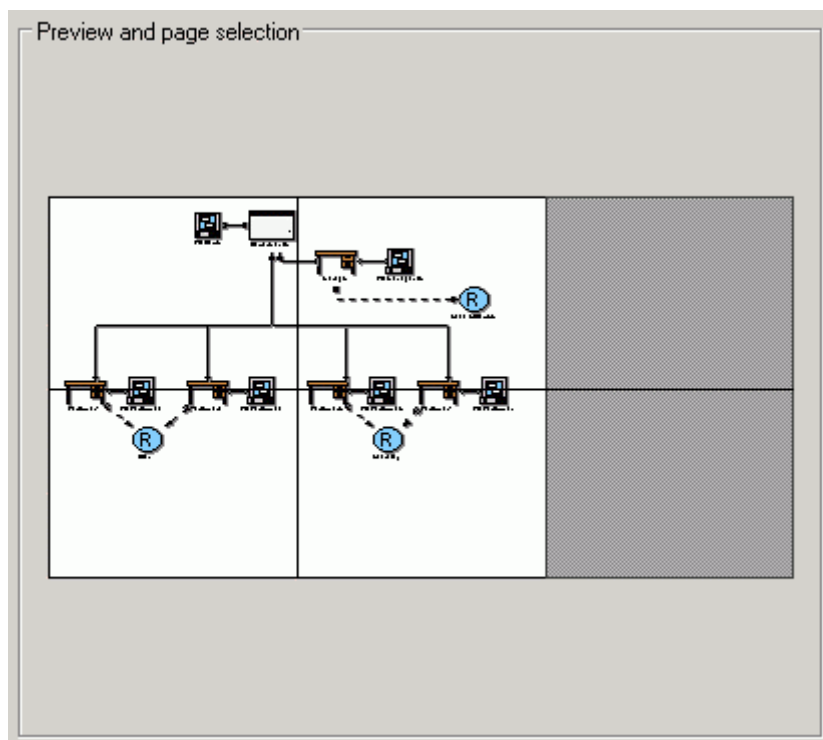


Figure 92: Preview and page selection

Note: With substantial models the overview is displayed as default.

3. Analysis

The Analysis component allows you to carry out static evaluation on your ADONIS models (the Simulation component (see chap. 4., p. 112) allows the possibility of dynamic evaluation).

In "Queries / Reports" you can analyse the contents of your models (objects, connectors and their attributes), which contain specific defined criteria. The results of these queries can be displayed either in graphical or tabular form, can be saved in different formats (including TXT (see chap. 5.15, p. 129), CSV, RTF (see chap. 5.13, p. 129) HTML (see chap. 5.9, p. 128) or ACR (see chap. 5.2, p. 127)) and can be printed.

Additionally - depending on the application library you are using - it is possible to execute "predefined queries" and create "Relation tables". The relation tables display the relations between two classes of a particular model type. The results of the "Predefined queries" and "Relation tables" can also be saved in various formats and printed to a connected printer.

The availability of the "Analysis" component and of the options "Queries/Reports", "Predefined queries", "Relation tables" and "Analytic Evaluation" depend on the current configuration (see chap. 3., p. 125) of the Business Process Management toolkit.

Activate the "Analysis" component by clicking on the smart icon  in the component list.

You can also activate the Analysis component, by clicking with the right mouse button in the component list (beside the component smart icons) and then selecting the menu item "Analysis" from the popup menu which is displayed. This popup menu can also be displayed by using the function key <F9> and the Analysis component can be selected by pressing the key <a>.

Once the Analysis component has been activated, the quick access bar contains the following smart icons:

-  "Queries/Reports"
-  "Predefined queries"
-  "Relation tables"
-  Analytical Evaluation
-  "Models in the database" (see chap. 4.1, p. 39)
-  "Opened model windows" (see chap. 4.2, p. 40)
-  "Previous model window" (see chap. 2.3.1, p. 100)
-  "Next model window" (see chap. 2.3.1, p. 100)

Note: The appearance of the smart icons in the quick access bar depends on the particular configuration of the quick access bar (see chap. 4., p. 38) and the current configuration (see chap. 3., p. 125) of the Business Process Management toolkit.

4. Simulation

The availability of the "Simulation" component and the modules "Path analysis", "Capacity analysis", "Workload analysis (steady state)", "Workload analysis (fixed time period)" and Agents depends on the current configuration (see chap. 3., p. 125) of the Business Process Management toolkit.

Activate the "Simulation" component by clicking on the smart icon  in the component list.

You can also activate the "Simulation" component by clicking with the right mouse button in the component list (near the component smart icons) and then selecting the menu item "Simulation" from the popup menu which is displayed. Alternatively, you can open the popup menu using the function key <F11> and then press the <s> key to activate the simulation component.

After activating the Simulation component, the following smart icons are available in the Quick-access bar:

-  "Path analysis"
-  "Capacity analysis"
-  "Workload analysis (steady state)"
-  "Workload analysis (fixed time period)"
-  "Agents"
-  "Offline animation"
-  "Delete simulation results"
-  "Free simulation cache"
-  "Models in the database" (see chap. 4.1, p. 39)
-  "Opened model windows" (see chap. 4.2, p. 40)
-  "Previous model window" (see chap. 2.3.1, p. 100)
-  "Next model window" (see chap. 2.3.1, p. 100)
-  "Open model" (see chap. 2.4.2, p. 103)
-  "Print" (see chap. 2.4.6, p. 107)
-  "Generate graphics"

The appearance of the smart icons in the Quick-access bar depends on the particular configuration of the Quick-access bar as well as the current configuration (see chap. 3., p. 125) of the Business Process Management toolkit. You can change the configuration of the Quick-access bar by selecting the menu item "Quick-access bar..." within the "Extras" menu.

4.1 Introduction

4.1.1 Overview of the simulation algorithms

By simulating your Business Process Models you can try out potential restructuring measures and examine the effects of such measures from different views.

ADONIS provides you with the following simulation algorithms:

- Path analysis
- Capacity analysis
- Workload analysis (steady state) (with animation)
- Workload analysis (fixed time period) (with animation)

Path analysis allows you to evaluate your Business Process Models without taking the Working Environment (organisational structure) into account, whereas in **capacity analysis** and **workload analysis** there are assignments of performers to the activities. Workload analysis can be run either for a "steady state" or for a "fixed time period".

Note: The offline animation allows you to re-run simulations which have been saved in protocol (history) files (*.apf).

The difference between **capacity and workload analysis** can be characterized as follows:

"Capacity analysis" determines **how many resources** (performers and machines) are **necessary** for the execution of certain business process models based on how often these business process models are executed in a given period of time.

"Workload analysis" determines the **waiting and cycle times** of business process models and activities based on a given quantity of resources (performers and machines) and their availability as well as the stochastic start rate of the business process models.

The difference **between steady state and fixed time period in the workload analysis** can be characterised as follows:

When executing a **steady state** analysis, a **specific number of process runs** are simulated independent of the time period covered by the execution of the business process models. The results are calculated once a "steady state" has been reached (i.e. once an "average" process run has been completed)."

"When executing a **fixed time period** analysis, a **previously determined time period** is simulated independent of how many business process models are executed within this period. The results will relate to the previously defined "Calculation phase".

5. Evaluation

The availability of the "Evaluation" component and its modules "Flowmark audit trail", "Comparison of results" and "Evaluation queries" depends on the current configuration (see chap. 3., p. 125) of the Business process management toolkit.

The availability of additional components such as the "Process cost analysis (Cost-cutting component)" with its modules "Actual analysis" and "Plan analysis" as well as "Human resource management" depends on the acquisition of an additional license.

The **"Evaluation" component** can be activated by clicking on the appropriate smart icon  in the component list.

Alternatively, it can be activated by clicking with the right mouse button on the component list (beside the component smart icons) and then selecting the menu item "Evaluation" from the popup menu which is displayed. The popup menu can also be displayed using the function key <F9> and then by pressing the key <v> the Evaluation component is activated.

Once the Evaluation component has been activated the following icons should be displayed in the Quick-access bar:



"Flowmark audit trail evaluation"



"Comparison of results"



"Predefined queries"



"Models in the database" (see chap. 4.1, p. 39)



"Opened model windows" (see chap. 4.2, p. 40)



"Previous model window" (see chap. 2.3.1, p. 100)



"Next model window" (see chap. 2.3.1, p. 100)

If the Cost-cutting component is included in your configuration then the following extra smart icons will also be displayed in the Quick-access bar:



"Actual-process cost analysis"



"Plan-process cost analysis"

The additional component "Human resource management" is to be called from the "Evaluation" menu.

Note: The appearance of the icons in the Quick-access bar depends on the configuration of the Quick-access bar (see chap. 4., p. 38) and the current configuration (see chap. 3., p. 125) of the Business Process Management toolkit.

6. Import/Export

The availability of the "Import/Export" component and its modules "ADL Import", "ADL Export", "XML Import", "XML Export" and "documentation" (see chap. 6.1, p. 115) depends on the current configuration (see chap. 3., p. 125) of the Business Process Management toolkit.

The "Import/Export" component enables you to export to ADL (see chap. 5.3, p. 128) or XML files the models and the model groups, the attribute profiles and the attribute profile groups as well as the application models, that are saved in the ADONIS' database. Also you can copy these files onto a floppy disk as an additional back up of your data or to transport your models to another computer (e.g. in a place, which is not connected to a network).

Via the "documentation" (see chap. 6.1, p. 115) you can generate from models saved in the ADONIS' database HTML or RTF files .

The **"Import/Export" component** can be activated by clicking on the appropriate smart icon  within the Quick-access bar.

It can also be activated by clicking with the right mouse button on the component list (near the component smart icons) and then selecting the menu item "Import/Export" from the popup menu shown. The popup menu can also be displayed by pressing the function key <F9> and then the Import/Export component can be selected by pressing the key <i>.

Once the Import/Export component has been activated the following smart icons should be displayed in the Quick-access bar:

-  ADL Import
-  ADL Export
-  HTML Generation (see chap. 6.1.1, p. 116)
-  RTF Generation (see chap. 6.1.1, p. 116)
-  Options - documentation
-  "Models in the database" (see chap. 4.1, p. 39)
-  "Opened model windows" (see chap. 4.2, p. 40)
-  "Previous model window" (see chap. 2.3.1, p. 100)
-  "Next model window" (see chap. 2.3.1, p. 100)

Note: The appearance of the smart icons in the Quick-access bar depend on the particular Configuration of the Quick-access bar/panel (see chap. 4., p. 38) and the current configuration (see chap. 3., p. 125) of the Business Process Management toolkit. The configuration of the Quick-access bar can be changed by selecting the menu item "Quick-access bar..." within the "Extras" menu.

6.1 Documentation

Using the documentation component, you can transform ADONIS models to files (e.g. HTML, RTF, XML). This way it is possible to integrate the model contents including graphical

representation into documents (via the word processing program) or to distribute them on intranet.

Note: The menu items described below refer to the ADONIS Standard Application Library and can vary according to your ADONIS' configuration.

Start the generation of documentation (see chap. 6.1.1, p. 116) via the appropriate menu item in the "Documentation" menu.

The documentation will be created using the current valid **settings**. In the settings for the documentation you will define among other things which model contents (model graphics, objects, attributes) will be taken over in the document you are generating.

To define the settings, follow these two steps:

1. **Options:**

Selecting the appropriate menu item (in the "Documentation" menu) or by clicking on the smart icon  will enable you to display and change the basic settings.

In the basic settings you will define whether and how the model graphics as well as which classe and attribute information - using predefined modes- will be taken over in the documentation.

2. **Attribute and class filter:**

You can show and change the settings of the attribute and class filter by selecting the "attribute and class filter" menu item ("Documentation" menu) .

In the attribute and class filter, starting from the predefined modes, you can individually shrink or expand classes and relations as well as their attributes , i.e. include or exclude them in the documentation to be generated.

These settings (basic settings and settings of the attribute and class filter) will be saved user-specific .

6.1.1 Generate documentation

To start the generation of documentation files, select the appropriate menu item (e.g. "**HTML generation**") in the "**Documentation**" menu.

Once you have clicked on the menu item, the model window (see fig. 93, p. 117), which contains all the models stored in the ADONIS database, will appear.

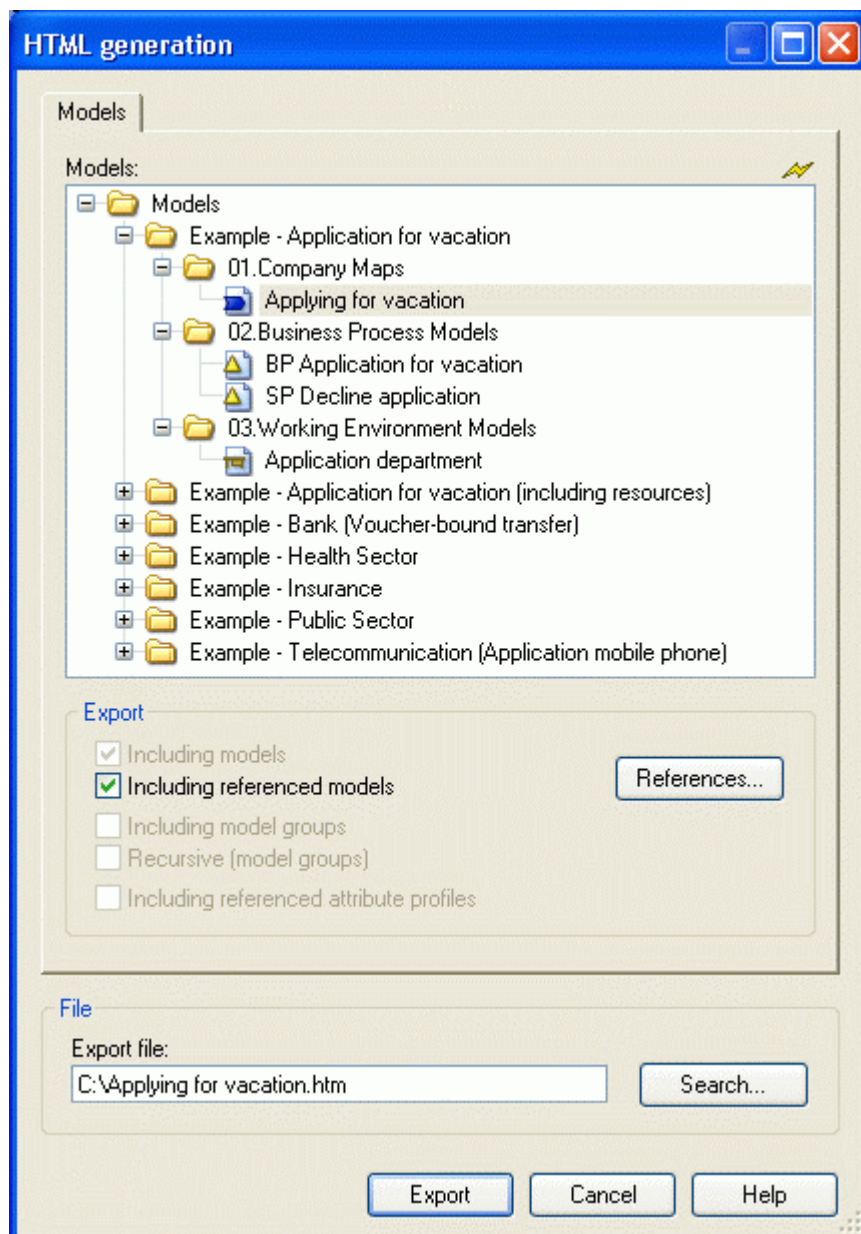


Figure 93: Model selection for documentation (example HTML generation))

Select the models you want to include in the output documentation.

Activate the option **"Including referenced models"**, if all selected models and the models connected to these models are to be generated in the documentation. Clicking on the "References" will enable you to change the settings.

Enter in the **"Export file"** field the path and the name of the file to which the selected models shall be generated and click on the OK button to start the documentation process with the current settings or the settings in the attribute and class filter .

IMPORTANT: Note that most of the time not only one file will be created, but several files and/or graphic files. The file names (e.g. of the graphic files) will be created by appending a suffix to the file names you have selected.

Note: If you want to ensure that all files will meet the "8+3" name convention, choose basic names which do not contain more than two characters (e.g. "dd.htm").

Part IV

Once your documentation has been successfully generated a corresponding message window is displayed.

Part V

Appendix

1. Starting ADONIS

The login to ADONIS depends on the settings of the ADONIS database:

- exclusively as ADONIS user (see chap. 1.1, p. 119) or
- alternatively as ADONIS user or as a system user with Single-Sign-on functionality (see chap. 1.2, p. 121).

1.1 Start ADONIS

Start the Business Process Management toolkit by clicking on the program icon on your desktop or by selecting the program from the "Start" menu.

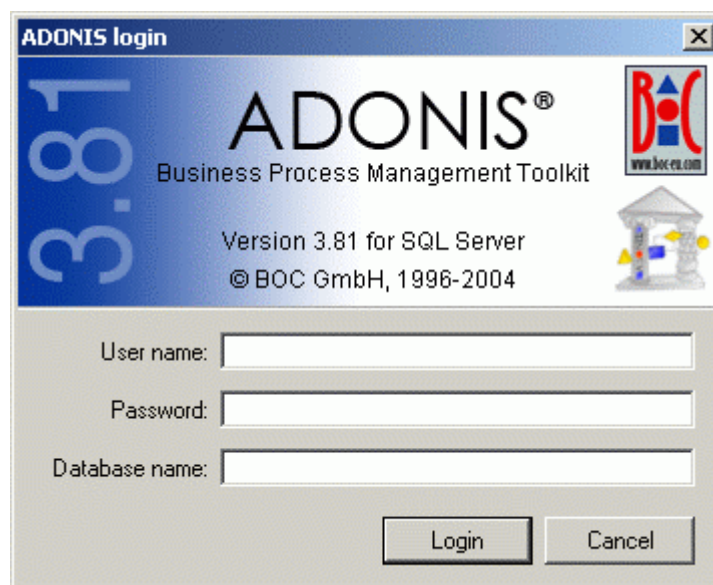


Figure 94: ADONIS login

Enter your user name, your password, the name of the ADONIS database with which you intend to work and click on the button "Login".

Note: Depending on the settings of your ADONIS installation it might be possible to select the name of the database from a list of possible values in a drop-down list. The availability of such a list is indicated by the symbol  at the end of the input field.

After a successful login the Business Process Management toolkit will be started.

Part V

Additionally the ADONIS application can be started from a **command line window** . Therefore change to the directory where ADONIS has been installed to.

By entering "areena" for the ADONIS Business Process Management toolkit the ADONIS application will be started.

The following parameters can be used:

- u<User name>** replace <User name> with the name of the ADONIS/system user.
- p<Password>** replace <Password> with the password of the ADONIS/system user.
- d<DB-Name>** replace <DB name> with the name of the ADONIS database.
- f** replace with the name of the font to be used in ADONIS.
The default font for Windows is "MS Sans Serif".
- h** replace with a number between 4 and 48 for the size of the font in ADONIS.
The default for the font size is 12pt.
- x** causes that the ADONIS login screen to be shown despite the fact that parameters for the user name (**-u**), the password (**-p**) and the database name (**-d**) are shown.
- winlogin** determines the login as a system user.
Note: To use the parameter -winlogin the Single-Sign-on functionality must be installed.
- no_login_screen** determines that in the case of an unsuccessful login the login screen will not be displayed after the error message has been shown.
Note: An unsuccessful login means that the parameter for the user name (**-u**), the password (**-p**) and the database name (**-d**) have been stated but at least one of the parameters was incorrect.
- no_printer_warning** causes that the error message "No default printer installed" will not be displayed in the case of no default printer being installed.

Note: If you pass on the user name (-u), the password (-p) and the database name (-d) correctly as parameters the ADONIS login screen will not be shown.

IMPORTANT: Should the user name, password, database name, or font type names contain spaces the entire parameter has to be put within quotation marks (e.g. "-uUser 1" for the user "User 1").

IMPORTANT: The user name and password are case-sensitive!

Examples:

```
-uAdmin -ppassword -dadonisdb
```

logs in the user "Admin" with the password "password" to the ADONIS database "adonisdb".

```
-uAdmin -ppassword -dadonisdb -x
```

shows the ADONIS login screen (see fig. 94, p. 119) where the field "User name" contains the value "Admin", the field "Password" the encrypted string "password" and the field "Database name" the value "adonisdb".

```
"-uUser 1" "-pUser 1" -ddatabase -h14
```

logs in the user "User 1" with the password "User 1" to the ADONIS database "database" using a font size of 14 pt in the ADONIS application.

1.2 Start ADONIS (Single-Sign-on)

Note: The functionality for Single-Sign-on, i.e. the login to ADONIS as a system user without providing your username and password is only possible with Windows XP/2000/NT 4.0 and has to be enabled for the respective ADONIS database. For further information please contact your ADONIS consultant.

Start the Business Process Management toolkit by clicking on the program icon on your desktop or by selecting the program from the "Start" menu.

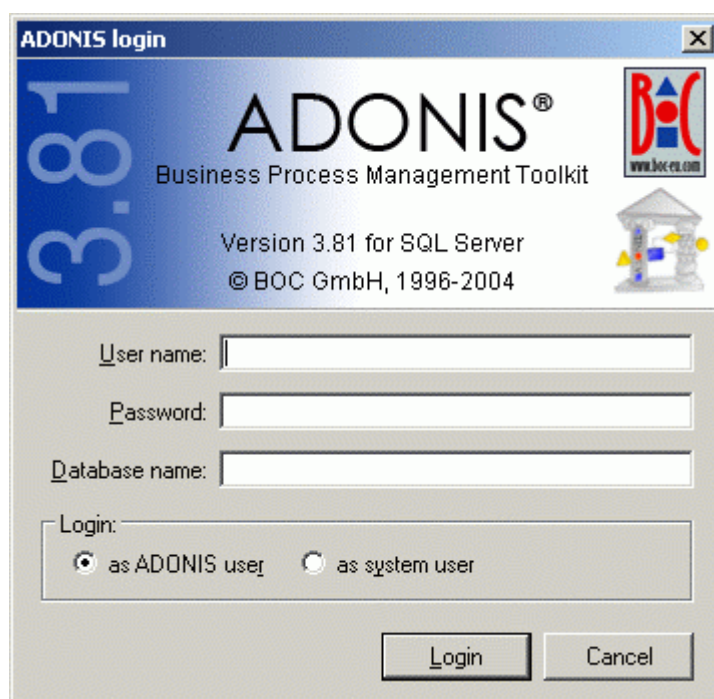


Figure 95: ADONIS login (Single-Sign-on)

To log into ADONIS you can choose from the following options:

1. as the **current system user**,
2. as a **different system user** or,
3. as a **ADONIS user**.

As a **current system user** enter the name of the ADONIS database you want to work with and select the option "as system user" and click on the button "Login" (it is not necessary to provide a user name or password).

As a **different system user** enter your system user name, your system password and the name of the ADONIS database you want to work with. Then select the option "as system user" and click on the button "Login".

Note: The log-in as a different system user is only possible within the current domain.

Note: To log-in as a system user you will have to arrange for your system user information to be imported into the ADONIS user management. Please contact your ADONIS administrator if necessary.

Part V

As **ADONIS user** enter your ADONIS user name, your ADONIS password and the name of the ADONIS database you want to work with and select the options "as ADONIS user" and click on the button "Login".

After a successful login the Business Process Management toolkit will be started.

Additionally the ADONIS application can be started from a **command line window** . Therefore change to the directory where ADONIS has been installed to.

By entering "arena" for the ADONIS Business Process Management toolkit the ADONIS application will be started.

The following parameters can be used:

- u<User name>** replace <User name> with the name of the ADONIS/system user.
- p<Password>** replace <Password> with the password of the ADONIS/system user.
- d<DB-Name>** replace <DB name> with the name of the ADONIS database.
- f** replace with the name of the font to be used in ADONIS.
The default font for Windows is "MS Sans Serif".
- h** replace with a number between 4 and 48 for the size of the font in ADONIS.
The default for the font size is 12pt.
- x** causes the ADONIS login screen to be shown despite the fact that parameters for the user name (**-u**), the password (**-p**) and the database name (**-d**) are shown.
- winlogin** determines the login with as a system user.
Note: To use the parameter -winlogin the Single-Sign-on functionality must be installed.
- no_login_screen** determines that in the case of an unsuccessful login the login screen will not be displayed after the error message has been shown.
Note: An unsuccessful login means that the parameter for the user name (**-u**), the password (**-p**) and the database name (**-d**) have been stated but at least one of the parameters was incorrect.
- no_printer_warning** causes that the error message "No default printer installed" will not be displayed in the case of no default printer being installed.

Note: If you pass on the user name (-u), the password (-p) and the database name (-d) correctly as parameters the ADONIS login screen will not be shown.

IMPORTANT: Should the user name, password, database name, or font type names contain spaces the entire parameter has to be put within quotation marks (e.g. "-uUser 1" for the user "User 1").

IMPORTANT: The user name and password are case-sensitive!

Examples:

```
-dadonisdb -winlogin
```

logs in the current system user to the ADONIS database "adonisdb".

```
-uAdministrator -ppassword -dadonisdb -winlogin
```


logs in a different system user "Administrator" with the system password "password" to the ADONISdatabase "adonisdb".

```
-uAdmin -ppassword -dadonisdb
```

logs in the user "Admin" with the password "password" to the ADONIS database "adonisdb".

```
-uAdmin -ppassword -dadonisdb -x
```

shows the ADONIS login screen (see fig. 94, p. 119) where the field "User name" contains the value "Admin", the field "Password" the encrypted string "password" and the field "Database name" the value "adonisdb".

```
"-uUser 1" "-pUser 1" -ddatabase -h14
```

logs in the user "User 1" with the password "User 1" to the ADONIS database "database" using a font size of 14 pt in the ADONIS application.

2. Closing ADONIS

To close the Business Process Management toolkit, double click on the exit button (to the left on the window bar) or click on the .

Within each component of the ADONIS Business Process Management toolkit, it is also possible to close ADONIS by selecting the menu item "Quit ADONIS" from the menu list on the left.

The Business Process Management toolkit checks if there are still opened models and if they contain unsaved changes. If all changes have been saved already, the safety questions appears:

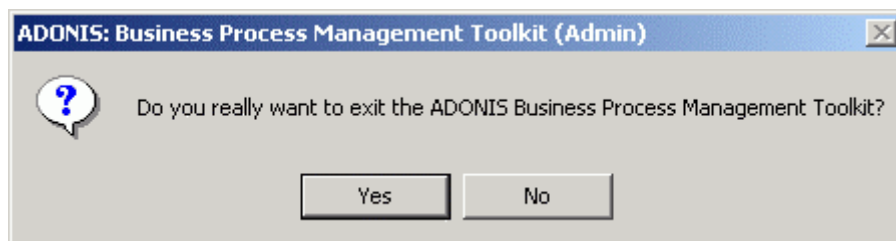


Figure 96: ADONIS Closing: A safety question

Click on **"Yes"** to finish ADONIS while selecting **"No"**, you will come back to the working area.

If one of the models contain unsaved changes, the following safety questions appears:

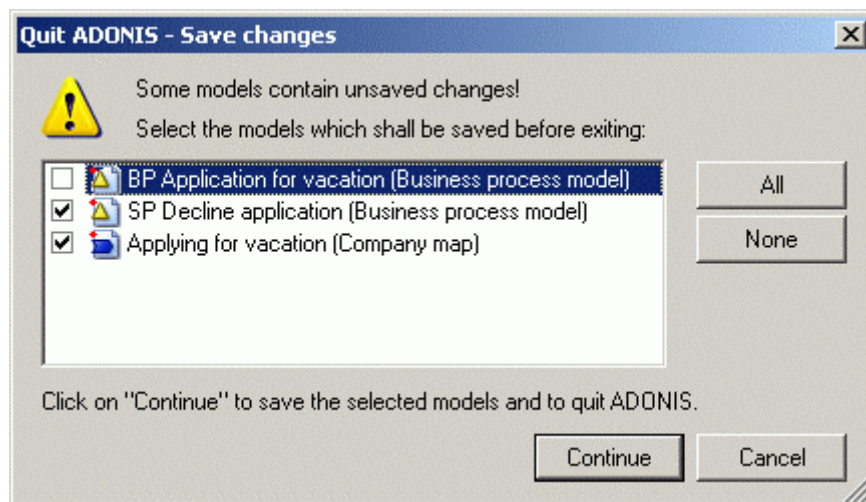


Figure 97: ADONIS Closing with unsaved changes

Remove "checks" from models, that should not be saved, simply by clicking on them. **"None"** will remove all "checks". **"All"** will check all models. Afterwards click on "Continue". The selected models will be saved and ADONIS will be closed.

3. Current configuration

Select the option "Configuration..." in the "Extras" menu to show the available components of the ADONIS Business Process Management toolkit (current configuration).

After selecting the menu item, the window "<name of database>: Current configuration" (see fig. 98, p. 125) is displayed.

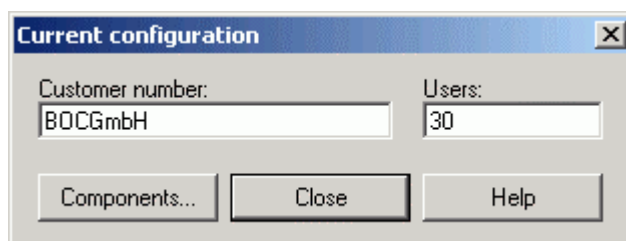


Figure 98: Current configuration of ADONIS

In addition to the customer number and the maximum number of simultaneous ADONIS users, you can view the current configuration of the ADONIS Business Process Management toolkit by clicking on the "Components..." button.

The current configuration of the ADONIS Business Process Management toolkit is shown in an ADONIS notebook. Every chapter represents a component.

The available components of the ADONIS Business Process Management toolkit are marked by a tick.

4. Service information

If you have problems or questions concerning ADONIS, select the option "Service..." from the "Help" menu to view contact addresses. The window "Service" appears (see fig. 99, p. 126).

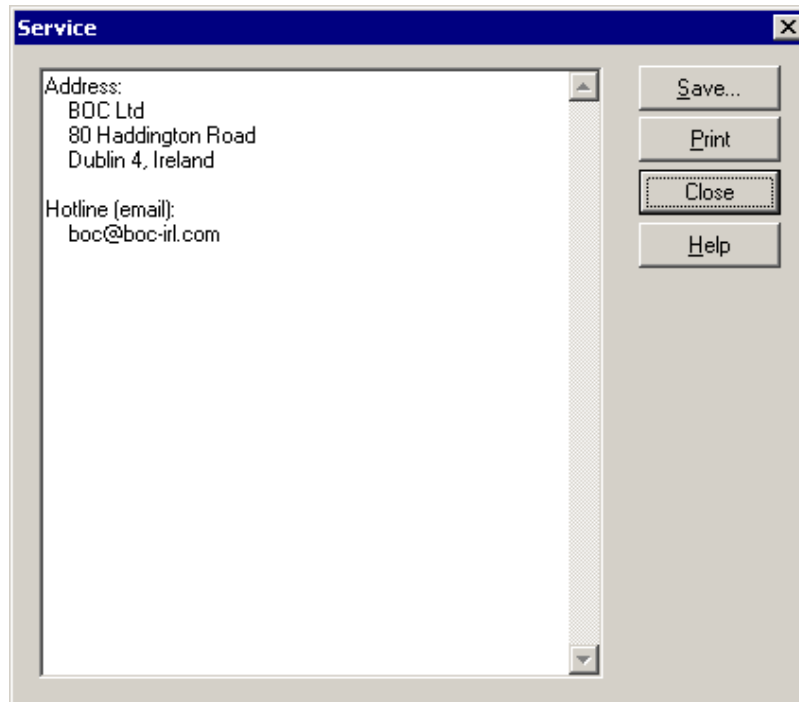


Figure 99: ADONIS service information

You can save this information to a file or print it out.

5. File formats in ADONIS

The following file formats can be generated and are supported within ADONIS:

- ADONIS Binary Language (ABL) (see chap. 5.1, p. 127)
- ADONIS Comparable Representation (ACR) (see chap. 5.2, p. 127)
- ADONIS Definition Language (ADL) (see chap. 5.3, p. 128)
- ADONIS Protocol Format (APF) (see chap. 5.4, p. 128)
- Windows Bitmap (BMP) (see chap. 5.5, p. 128)
- Comma Separated Value (CSV) (see chap. 5.6, p. 128)
- Windows Enhanced Metafiles (EMF) (see chap. 5.7, p. 128)
- FlowMark Definition Language (FDL) (see chap. 5.8, p. 128)
- HyperText Markup Language (HTML) (see chap. 5.9, p. 128)
- JPEG File Interchange-Format (JPG) (see chap. 5.10, p. 129)
- Soft Paintbrush (PCX) (see chap. 5.11, p. 129)
- Portable Network Graphics (PNG) (see chap. 5.12, p. 129)
- Rich Text Format (RTF) (see chap. 5.13, p. 129)
- ASCII-Text (TXT) (see chap. 5.15, p. 129)
- User Definition Language (UDL) (see chap. 5.16, p. 130)
- Extensible Markup Language (XML) (see chap. 5.16, p. 130)

Note: The extensions listed below are suggested by the program. They are optional i.e. other extensions may be used instead. Note however that when searching for files, the filters are preset in order to search for the appropriate extension as listed below. Also using the preset extension makes it easier to see which type of file you are dealing with.

5.1 ADONIS Binary Language (ABL)

ABL files are generated when exporting application libraries from within the Administration toolkit.

An application library which has been exported into an ABL file may be imported into the ADONIS Administration toolkit on another computer.

5.2 ADONIS Comparable Representation (ACR)

ACR files are also generated when saving simulation (see chap. 4., p. 112) and query results to be later used in the "Comparing of results" option within the evaluation (see chap. 5., p. 114) component.

5.3 ADONIS Definition Language (ADL)

ADL files are generated when exporting models (and/or model groups). ADL files can then be imported and edited within the ADONIS business process management toolkit.

5.4 ADONIS Protocol Format (APF)

APF files can be created while running the "Capacity analysis" or "Workload analysis" simulation algorithms.

They can then be read by the Offline animation function which allows you to play through the simulation again observing the times and optionally adding breakpoints at certain times.

5.5 Windows-Bitmap (BMP)

BMPs can be created when generating graphics of models, model sections or the graphical representation of the ADONIS browser (see chap. 5., p. 44) results.

BMP files may be opened or inserted into graphics programs and may be edited further there or integrated into other applications such as word processor applications.

5.6 Comma Separated Value (CSV)

CSV files will be created when saving the contents of the ADONIS browser (see chap. 5., p. 44).

CSV files can be further edited in spreadsheet calculation programs (without loss).

5.7 Windows Enhanced Metafiles (EMF)

EMF files will be created when generating graphics from models or model parts and when copying the graphic result display of the ADONIS browser (see chap. 5., p. 44).

EMF files can be inserted into graphic programs and be further edited there or connected to any applications (e.g. spreadsheet calculation programs).

5.8 Flow Definition Language (FDL)

FDL files are created when ADONIS models are transformed within the Import/Export component. FDL files can be imported into the Workflow Management system MQSeries Workflow (or Flowmark) from IBM.

5.9 HyperText Markup Language (HTML)

HTML files can be created when saving the contents of the ADONIS browser (see chap. 5., p. 44) and also when generating the HTML documentation from model contents within the "Documentation component" (see chap. 6.1, p. 115).

HTML files can be viewed in a Web Browser.

5.10 JPEG File Interchange-Format (JPG)

JPG files can be created by generating graphics from models, model sections or the graphical representation of the ADONIS browser (see chap. 5., p. 44) results.

JPG files may be opened or inserted into graphics programs and may be edited further there or integrated into other applications such as word processor applications.

5.11 ZSoft Paintbrush Graphic (PCX)

PCX files will be created by generating graphics from models, model sections or the graphical representation of the ADONIS browser (see chap. 5., p. 44) results.

PCX files may be opened or inserted into graphics programs and may be edited further there or integrated into other applications such as word processor applications.

5.12 Portable Network Graphics (PNG)

PNG files will be created when generating graphics from models or model parts and when copying the graphic result display of the ADONIS browser (see chap. 5., p. 44).

PNG files can be inserted to graphic programs and then further edited or be connected to any application (e.g. spreadsheet programs) .

5.13 Rich Text Format (RTF)

RTF files can be created when saving the contents of the ADONIS browser (see chap. 5., p. 44) and also when using the HTML generation within the "Documentation component" (see chap. 6.1, p. 115).

RTF files can be further edited in spreadsheet calculation programs.

5.14 Scalable Vector Graphics (SVG)

SVG files are used when generating graphics from models or model parts and when copying the graphical result representation of the ADONIS browser (see chap. 5., p. 44).

SVG files can be used and pasted into graphic programs and be further changed there or pasted into any other application (e.g. text software).

5.15 ASCII-Text (TXT)

TXT files are generated when saving simulation (see chap. 4., p. 112) and analysis (see chap. 3., p. 111) as well as the contents of an ADONIS notebook (see chap. 3.2, p. 31). TXT files can be inserted in other applications and edited further.

5.16 User Definition Language (UDL)

UDL files are created by exporting users (and/or user groups) in the User administration component of the Administration toolkit. UDL files can then be imported into the Administration toolkit on a different computer. (This can be useful for example where the database system is changing).

5.17 Extensible Markup Language (XML)

XML files will be created when exporting models. The models which have been exported to XML files, can for instance be imported to other computers, where they can be edited.

6. Index

A

ABL files, 127
 ACR file, 127
 Activate submodel, 101
 ADL-file, 128
 ADONIS, 7
 component bar, 24
 Explorer, 25
 menu bar, 24
 New features in version 3.81, 1
 Product palette, 7
 quick-access bar, 24
 Quick-Access bar, 24
 user interface, 23
 window bar, 23
 Working area, 25
 ADONIS, 17
 ADONIS browser, 44
 adjust column width, 54
 Adjust row height, 55
 Align attribute values, 58
 Classification, 44
 Copy to clipboard, 63
 editable, 48
 Enter column width, 53
 Enter row height, 54
 Expand branches, 55
 formats (save, 62
 hierarchical, 49
 Print, 64
 Representation of attribute values, 49
 save, 60
 search, 59
 Select attributes, 56
 Select columns, 56
 settings (save), 61
 Show (attribute) values, 59
 Shrink branches, 55
 sort, 57
 sort using attribute columns, 57
 Structure, 46
 ADONIS notebook, 31
 ADONIS-Explorer, 38
 Delete a model, 42
 Expand all branches, 41
 Finding entries, 42
 Hide (shrink) all branches, 41
 Model group management, 42
 Models in the database, 39
 Open models, 42
 Opened models, 40
 Rename a model, 42
 Saving tree structure, 43

Set up visible model types, 41
 This branch is fully expanded, 41
 Update the view, 41

Align objects, 100
 Analysis, 111
 APF-file, 128
 Auto save models, 105

B

Bend points (connectors), 89
 Endpoints, 77
 Endpoints in connectors, 77
 BMP-file, 128
 Bridges (connectors), 89
 Business Process Management toolkit, 69
 close, 124
 file formats, 127
 start, 119
 start (Single-Sign-on), 121

C

Change appearance of connector, 87
 Change object size, 84
 Change visualised attribute values (Quick Edit), 94
 Class panel, 72
 Class panel, 72
 Relation panel, 73
 Close model, 104
 closing ADONIS, 124
 components, 69
 Connector edges, 89
 Copy objects/connectors (ADONIS clipboard), 95
 Create a new model, 102
 CSV file, 128
 current configuration, 125
 Cut objects/connectors (ADONIS clipboard), 96
 Referenced objects, 96

D

Define object size/position, 85
 Definition of object size and position, 85
 Delete objects/connectors, 98
 Referenced object, 98
 Documentation, 115
 Generate, 116
 Drawing connectors, 76
 Drawing mode, 75
 Drawing objects, 75

E

Edges (connectors), 89
Editing connectors, 80
 Align, 100
 Bend points, 89
 Bridges, 89
 Change, 87
 Change visualised attribute values, 94
 Connector edges, 89
 Copy, 95
 Cut, 96
 Define size and position, 85
 Delete, 98
 Drawing connectors, 76
 Editing attributes, 92
 Find, 99
 Managing in ADONIS notebooks, 92
 Move connectors edge middle point, 94
 Paste, 97
 Relinking, 88
 Rename marks, 89
 Select, 81
Editing attributes in ADONIS notebooks, 92
Editing mode, 75
Editing objects, 80
 Align, 100
 Change size, 84
 Change visualised attribute values, 94
 Copy, 95
 Cut, 96
 Cut referenced objects, 96
 Delete, 98
 Delete referenced object, 98
 Drawing objects, 75
 Editing attributes, 92
 Find, 99
 Moving, 83
 Paste, 97
 Paste referenced objects, 97
 Select, 81
EMF-file, 128
Entry search, 27
 Display search results, 28
Evaluation, 114
Example models, 17
Explorer, 38

F

FDL file, 128
file formats, 127
 ABL, 127
 ACR, 127
 ADL, 128
 APF, 128
 BMP, 128
 CSV, 128
 EMF, 128
 FDL, 128
 HTML, 128
 JPG, 129
 PCX, 129

PNG, 129
RTF, 129
SVG, 129
TXT, 129
UDL, 130
XML, 130
Focus, 82

G

general context, 19
General information about the Business Process
 Management toolkit, 19
Generate documentation, 116

H

HOMER, 69
HTML files, 128
Hyperlink display (submodel), 101

I

Import/Export, 115
Information acquisition, 69
Input dialogue for expressions, 35
Input dialogue for text, 34
Input window, 34
 For expressions, 35
 for texts, 34
 Print text field, 35
is inside (relation), 79

J

JPG files, 129

M

Managing connectors in ADONIS notebooks, 92
Model, 100, 102
 activate model window, 100
 Activate submodel, 101
 Close, 104
 Create, 102
 Model types view, 26
 Navigating through open models function,
 100
 Open, 103
 Printing models, 107
 Save, 104
 Save with a different name, 105
Model documentation, 115
 Generate, 116
Model editor, 71
 Class panel, 72
 Model window, 74
 Working area, 71
Model types view, 26
Model window, 74
 activate, 100
 View all open model windows, 100
Modelling, 70

- Model editor, 71
- Model management, 102
- Model navigation, 100
- Modelling component, 70
- Modelling modes, 75
 - Drawing mode, 75
 - Editing mode, 75
- Model-related versioning, 66
- Move connectors edge middle point, 94
- Moving objects, 83

N

- Navigating through open models, 100
- Next model window, 100

O

- Open existing models, 103
- operation elements, 26
 - "Add" icon, 33
 - "Delete" icon, 33
 - "Dialogue" icon, 33
 - "Execute/Follow" icon, 33
 - "Expression Dialogue" icon, 33
 - "Info" icon, 32
 - "Large text field" icon, 33
 - "Print" icon, 32
 - "Save" icon, 32
- by selection, 26
- Entry search, 27
- Expand all branches, 29
- Expand selected levels, 29
- Expand selected levels and corresponding sublevels, 29
- Expand/Shrink, 29
- Expand/shrink version threads, 30
- Icon "File dialogue", 34
- Icon "Notebook", 34
- in ADONIS notebooks, 31
- Model types, 26
- Refresh, 27
- Save as, 28
- Show all selected items, 30
- Show selected items, 30
- Shrink all branches, 29
- Shrink selected levels, 29

P

- Paste objects/connectors (ADONIS clipboard), 97
 - Referenced objects, 97
- PCX files, 129
- PNG-file, 129

- Previous model window, 100
- Print text field, 35
- Printing models, 107
 - Select pages, 110

R

- Relation panel, 73
- Relinking connectors, 88
- RTF files, 129

S

- Save model with a different name, 105
- save models, 104
- Search for visualised attribute values, 99
- Select objects/connectors, 81
- service information, 126
- Short introduction to modelling, 13
- Simulation, 112
 - algorithms (overview), 113
 - introduction, 113
- simulation algorithms (overview), 113
- Start ADONIS, 119
- Start ADONIS (Single-Sign-on), 121
- SVG-file, 129
- Swimlanes, 65
- Swimmlanes, 65

T

- Terms, 19
- Text input field, 35
- Time-related versioning, 66
- TXT files, 129

U

- UDL files, 130
- Undo, 81

V

- Versioning, 66
 - Basic elements, 66
 - Effects, 67
 - Model-related, 66
 - Time-related, 66
- View window, 34
 - for texts, 34
 - Print text field, 35

X

- XML-file, 130

