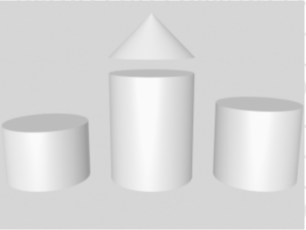

ODABA^{NG}

Object Commander

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Content

1 Introduction

ODABA^{NG}

ODABA^{NG} is an object-oriented database system that allows storing objects and methods as well as causalities. As an object-oriented database, ODABA^{NG} supports complex objects (user-defined data types), which are built on application relevant concepts.

ODABA^{NG} applications are characterised by a high flexibility that is achieved by supporting in addition to object (concept) hierarchy, multifarious relations between objects (master and detail relations, relations between independent objects and others). This way conditions and behaviour of objects in the real world can be represented considerably better than in relational systems.

ODABA^{NG} applications cannot only be drawn up as event-driven applications within the field of the graphical surface but also at the database level. This is one more way in which the application design is very close to the problem.

This makes ODABA^{NG} applications a favourite possibility to solve highly complex jobs as come up in administrative and knowledge areas.

Platforms

ODABA^{NG} supports windows platforms (Windows95/98/Me, Windows NT and Windows 2000) as well as UNIX platforms (Linux, Solaris).

You can build local applications or client server applications with a network of servers and clients.

Interfaces

ODABA^{NG} supports several technical interfaces:

- C++, COM as application program interface (this allows e.g. using ODABA^{NG} in VB scripts and applications)
- ODBC (for data exchange with relational databases)
- XML (as document interface as well as for data exchange)

User Interfaces

ODABA^{NG} provides special COM-Controls that easily allow building applications in Visual Basic. On the other hand ODABA^{NG} provides a special ODABA^{NG} GUI builder.

2 Object Commander

The Object Commander is mainly a database browsing tool. It allows navigating through a database, following the object links and browse/edit object attributes.

Moreover, the object commander allows running several OShell commands (see “Database Utilities – OShell). It also supports enhanced copy features.

You may also use the Object commander to run several database service utilities.

Running Object Commander

For running the object commander, you simply call it from a command line or by defining a link.

…/ObjectCommander ini_file

Ini-file

The ini-file contains the definitions for the data sources for the object commander. The ini-file for the object commander contains three sections.

[SYSTEM]

The system section refers to database system information. The minimum required is the DICTIONARY reference to the system dictionary. When running the application with a system dictionary stored on the server, server name and a port number have to be defined as well.

DICTIONARY

The path for the system dictionary usually refers to the ODE.SYS database in the installation path. When you receive strange error messages the reason can be an invalid path for the system database.

DICTIONARY=C:\ODABA\ADK.SYS

When running the system dictionary from the server the variable refers to a symbolic database on the server:

DICTIONARY=%SYSTEM_BASE%

In a client server environment you can run the system dictionary also on your local machine. In this case you need to define the DICTIONARY variable, only.

ODABA_SERVER

This variable is only necessary when running in a client server environment. In this case it should refer to the ODABA server name or its TCP/IP address.

ODABA_SERVER=//DBServer

ODABA_ SERVER_PORT

This variable is only necessary when running in a client server environment. In this case the port number must be identical with the port number passed to the server when starting it. The default port number is 6123,

This variable is only required in connection with the ODABA_SERVER variable.

ODABA_SERVER_PORT=6123

TRACE

Here the location for the error log can be defined. Usually this value is set in the system environment. It is, however, also possible to define the location in the ini-file.

TRACE=C:/temp

At the location defined in the TRACE variable an error.lst file is created that contains a detailed error log. This file should be checked in case of errors on the server side.

Default: Value for TRACE environment variable.

[ODE90]

The section for the application engine ODE90.exe contains information about the resources referenced by the object commander.

SYSDB

Location for the system resource database, which contains the system schema definitions. This is usually the same as the dictionary in the system section.

SYSDB=C:/ODABA/ADK.SYS

RESDB

Location for the application resource database, which contains the resource definitions for the object commander (forms, functiond data model etc.).

RESDB=C:/ODABA/OTools/OTools.dev

DATDB

Location for the application database, which is the data catalogue for the object commander.

RESDB=C:/ODABA/OTools/OTools.dat

In contrast to SYSDB and RESDB the data catalogue is not an installation resource, and you may define any location for it.

PROJECT

Name of the project to be executed. The project name is case sensitive.

PROJECT_DLL=ObjectCommander

PROJECT_PATH

This variable refers to the project path where application specific libraries are located.

PROJECT_PATH=C:/ODABA/otools/exe/

PROJECT_DLL

Name of the library containing the application rules.

PROJECT_DLL=OTools

CTXI_DLL

Name of the library containing the business rules (context class library).

CTXI_DLL=OTCtxi

NET

This option is required when running the database in a **file server** environment for using the database with more than one user (multi-user access). This option should be set to YES.

NET=YES

ONLINE_VERSION

This value enables online-versioning feature for the data source, which allows automatic upgrades to higher database model versions.

ONLINE_VERSION=YES

When this variable is not set or set to NO the application will not run with newer dictionary versions.

DESIGNER_RES

This location provides additional resources for design objects, mainly images. When you do not see images on your buttons, this path point probably to a wrong location.

DESIGNER_RES=C:/ODABA/res

[Data-Catalogue]

The data catalogue defines the location for the data catalogue database. For the object commander, this database is identical with the Object Commander database defined in the application section (ODE90).

DICTIONARY

Location for the catalogue resource database, which contains the resource definitions for defining the database catalogue (data model).

DICTIONARY=C:/ODABA/OTools/OTools.dev

DATABASE

Location for the catalogue database, which contains the data source definitions for any number of databases.

DATABASE=C:/ODABA/OTools/OTools.dat

In contrast to SYSDB and RESDB the data catalogue is not an installation resource, and you may define any location for it.

ODABA_SERVER (optional)

In case of running Object Commander in Client Server mode, the server name refers to the ODABA server name or its TCP/IP address.

ODABA_SERVER=DBServer

ODABA_SERVER_PORT (optional)

The port number must be identical with the port number passed to the server when starting it. The default port number is 6123. This variable is only required in connection with the ODABA_SERVER variable.

ODABA_SERVER_PORT=6123

NET

This option is required when running the database in a **file server** environment for using the database with more than one user (multi-user access). It should be set to YES.

NET=YES

ONLINE_VERSION

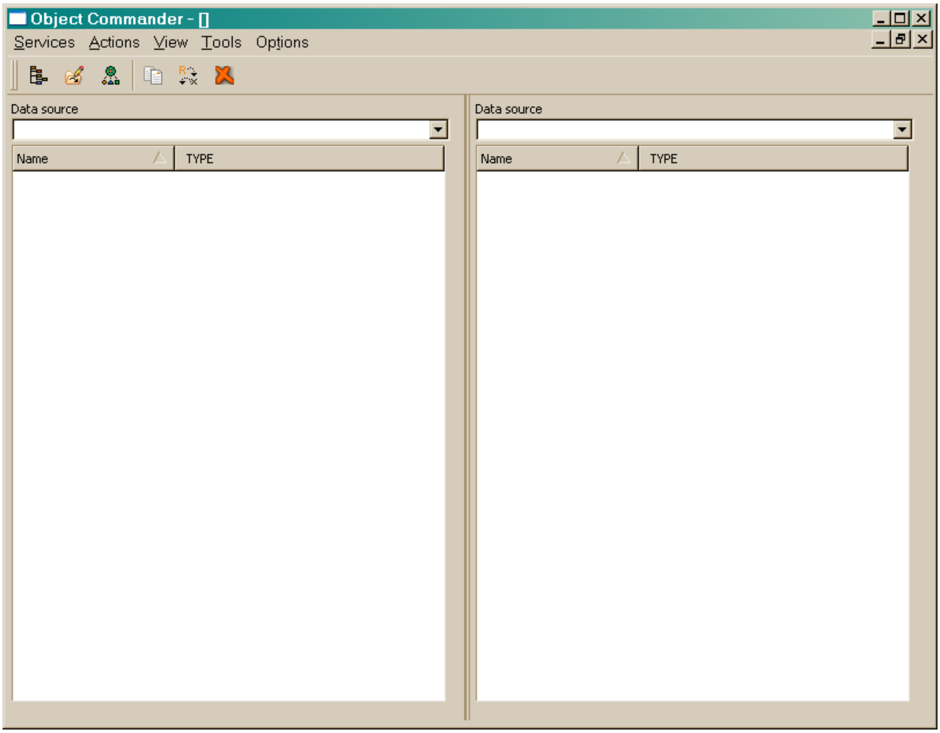
This value enables online-versioning feature for the data source, which allows automatic upgrades to higher database model versions.

ONLINE_VERSION=YES

When this variable is not set or set to NO the application will not run with newer database versions.

3 Using the Object Commander

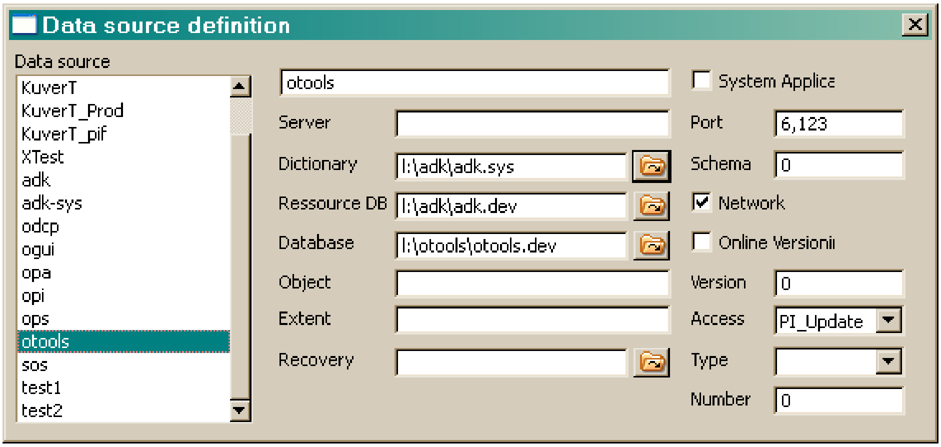
After opening the object commander, you will get an empty form with two panels for displaying data for different data sources.



Defining data sources

Selecting **Options/Edit Data sources** opend a form where you may define data sources. Data sources defined in the data catalogue can be referenced in most applications later on without defining all the details for the data source in the ini-file of the application.

Thus, the Object Commander provides also a tool, which simply allows defining data sources.



Data source definition

Data source

- KuverT
- KuverT_Prod
- KuverT_pif
- XTest
- adk
- adk-sys
- odcp
- ogui
- opa
- opi
- ops
- otools
- sos
- test1
- test2

otools

Server:

Dictionary: I:\adk\adk.sys

Ressource DB: I:\adk\adk.dev

Database: I:\otools\otools.dev

Object:

Extent:

Recovery:

□ System Applice

Port: 6,123

Schema: 0

☑ Network

□ Online Versionii

Version: 0

Access: PI_Update

Type:

Number: 0

You can create a new data source clicking with the right button on the list on the left side and selecting **Insert** from the context menu.

After entering a name for the new data source you can enter the database locations for daictionary and database in the property form right of the list. At least Dictionary and database must be filled.

Selecting a data source

Among the defined data sources you may select a data source from the left or right Data source drop list in the main form. After selecting a data source, all extents available in the dictionary are displayed.

Extents

Extents are displayed on the top level in the tree in blue color. Allocated extents are displayed with bold face letters. Extents, which are defined but not yet allocated, are displayed with normal face letters.

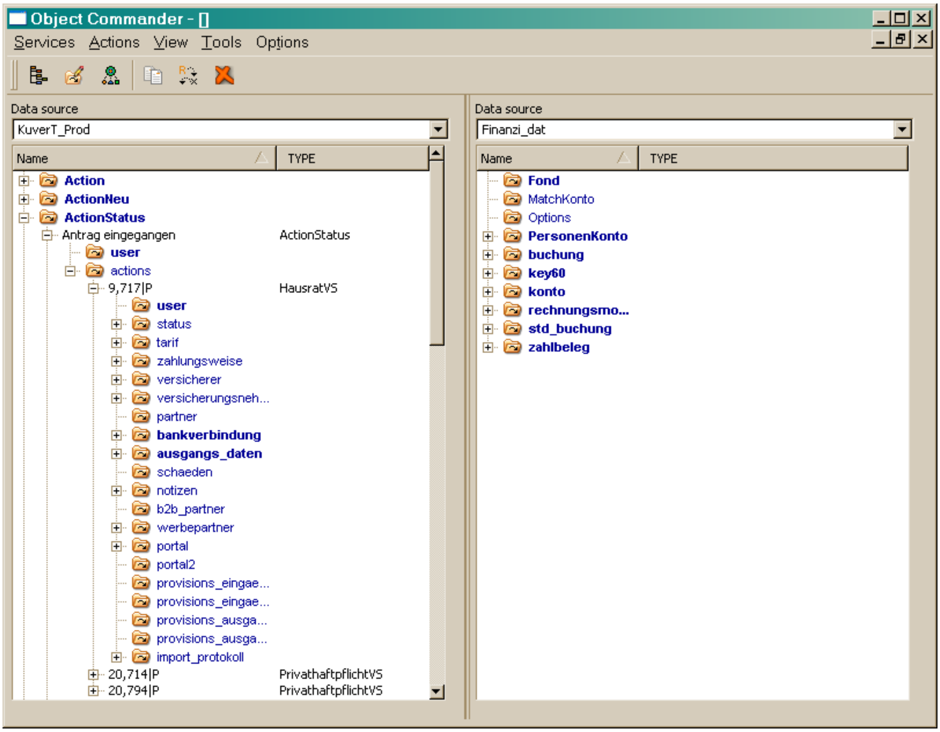
Instances

After expanding an extent, the instances contained in the extent become visible. Instances are displayed with black letters. Instances, which have relationships with or references to other objects can be expanded again.

The type of the instance is shown in the second column of the tree. When the collection is weak-typed, the instance type may change.

Links

All defined links (relationships and references) are displayed after expanding an instance. Expanding a link, will display the referenced instance(s).



Data source: KuverT_Prod

Name	TYPE
Action	
ActionNeu	
ActionStatus	
Antrag eingegangen	ActionStatus
user	
actions	
9,717|P	HausratVS
user	
status	
tarif	
zahlungsweise	
versicherer	
versicherungsneh...	
partner	
bankverbindung	
ausgangs_daten	
schaeden	
notizen	
b2b_partner	
werbepartner	
portal	
portal2	
provisions_eingae...	
provisions_eingae...	
provisions_ausga...	
provisions_ausga...	
import_protokoll	
20,714|P	PrivathaftpflichtVS
20,794|P	PrivathaftpflichtVS

Data source: Finanzi_dat

Name	TYPE
Fond	
MatchKonto	
Options	
PersonenKonto	
buchung	
key60	
konto	
rechnungsmo...	
std_buchung	
zahlbeleg	

Updating

You may update any collection in the tree (extent or link) by right clicking on the list and selecting the proper action from the context menu.

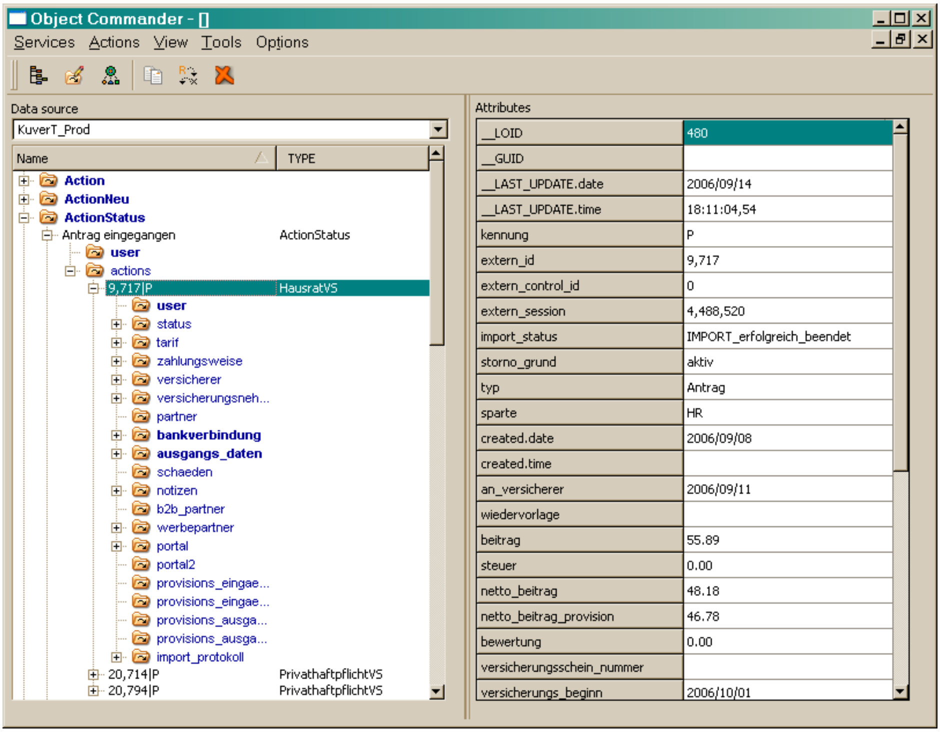
Note, that the copy function in the copy menu creates a copy of the item in the currently selected collection. Copying an instance or collection to the data source (collection) selected on the inactive panel can be done by selecting **copy instance** or **copy set** from the **Actions** menu.

Attribute View

Instance Attributes will be displayed, when using the Attribute mode for the inactive panel (**View/Attributes**).

The inactive panel changes to the attribute view and displays all instances for the object instance including all attributed in base structures and complex attributes.

You may edit attribute values by double-clicking the cell in the table.



Data source

KuverT_Prod

```
Name                                  TYPE
+ Action
+ ActionNeu
- ActionStatus
  - Antrag eingegangen                ActionStatus
      user
    - actions
      - 9,717|P                       HausratVS
          user
        + status
        + tarif
        + zahlungsweise
        + versicherer
        + versicherungsneh...
          partner
        + bankverbindung
        + ausgangs_daten
          schaeden
        + notizen
          b2b_partner
        + werbepartner
        + portal
          portal2
          provisions_eingae...
          provisions_eingae...
          provisions_ausga...
          provisions_ausga...
        + import_protokoll
      + 20,714|P                      PrivathaftpflichtVS
      + 20,794|P                      PrivathaftpflichtVS
```

Attributes

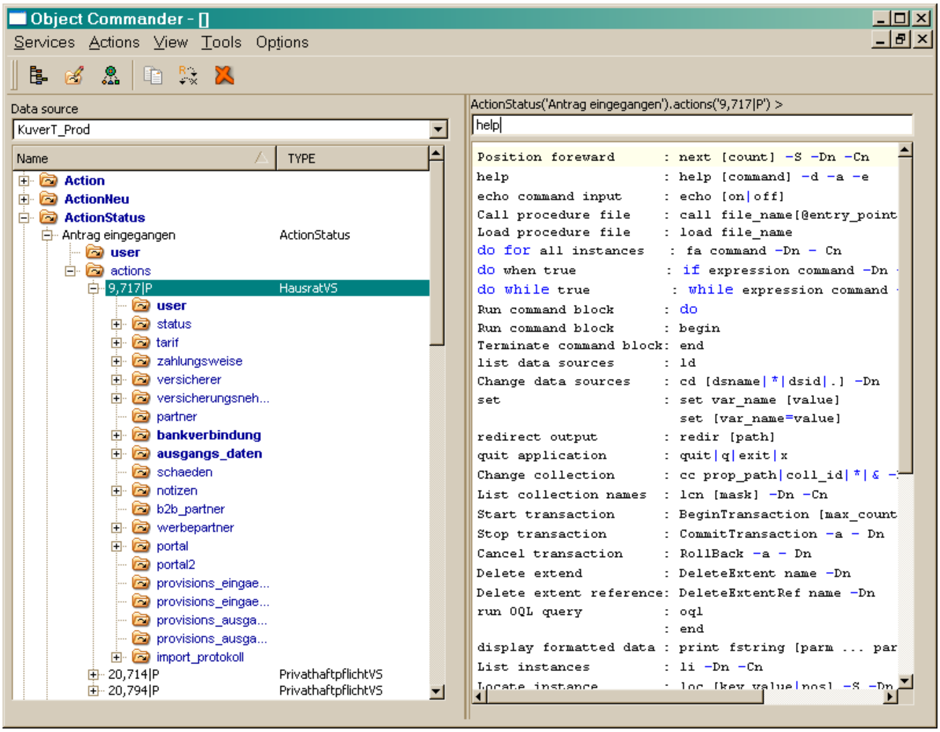
__LOID	480
__GUID	
__LAST_UPDATE.date	2006/09/14
__LAST_UPDATE.time	18:11:04,54
kennung	P
extern_id	9,717
extern_control_id	0
extern_session	4,488,520
import_status	IMPORT_erfolgreich_beendet
storno_grund	aktiv
typ	Antrag
sparte	HR
created.date	2006/09/08
created.time	
an_versicherer	2006/09/11
wiedervorlage	
beitrag	55.89
steuer	0.00
netto_beitrag	48.18
netto_beitrag_provision	46.78
bewertung	0.00
versicherungsschein_nummer	
versicherungs_beginn	2006/10/01

When selecting an instance, the attribute view updates data automatically. When selecting an object instance of another type, the attribute view updates the attribute list.

Command View

The command view allows submitting most of the OShell commands described in “Database Utility – OShell”. You can change to the command view in the inactive panel by selecting **View/Command Line** from the main menu.

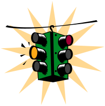
The **help** command will list the available commands. **Help command_name** provides a detailed description for a specific command.



```
Name                                  TYPE
+ Action
+ ActionNeu
- ActionStatus
   - Antrag eingegangen               ActionStatus
        user
      - actions
         - 9,717|P                    HausratVS
              user
            + status
            + tarif
            + zahlungsweise
            + versicherer
            + versicherungsneh...
              partner
            + bankverbindung
            + ausgangs_daten
              schaeden
            + notizen
              b2b_partner
            + werbepartner
            + portal
              portal2
              provisions_eingae...
              provisions_eingae...
              provisions_ausga...
              provisions_ausga...
            + import_protokoll
         + 20,714|P                   PrivathaftpflichtVS
         + 20,794|P                   PrivathaftpflichtVS
```

```
ActionStatus('Antrag eingegangen').actions('9,717|P') >
help
```

```
Position foreward        : next [count] -S -Dn -Cn
help                     : help [command] -d -a -e
echo command input       : echo [on|off]
Call procedure file      : call file_name[@entry_point
Load procedure file      : load file_name
do for all instances      : fa command -Dn - Cn
do when true              : if expression command -Dn
do while true              : while expression command
Run command block        : do
Run command block        : begin
Terminate command block: end
list data sources        : ld
Change data sources      : cd [dsname|*|dsid|.] -Dn
set                      : set var_name [value]
                           set [var_name=value]
redirect output          : redir [path]
quit application         : quit|q|exit|x
Change collection        : cc prop_path|coll_id|*|& -
List collection names    : lcn [mask] -Dn -Cn
Start transaction        : BeginTransaction [max_count
Stop transaction         : CommitTransaction -a - Dn
Cancel transaction       : RollBack -a - Dn
Delete extend            : DeleteExtent name -Dn
Delete extent reference: DeleteExtentRef name -Dn
run OQL query            : oql
                         : end
display formatted data : print fstring [parm ... par
List instances           : li -Dn -Cn
Locate instance          : loc [key_value|pos] -S -Dn
```



Note, that all navigation commands, which will change a collection or the selected instance, will not have any effect. Navigation is done by selecting the instance or collection in the tree of the active panel.

You may, however, call macros (or procedures), which might temporary change the data collection or selected instance. But this is not reflected in the tree of the active panel.

Database tools

Database tools can be called from the **Tools** menu.

This is, however, not supported in the current version.