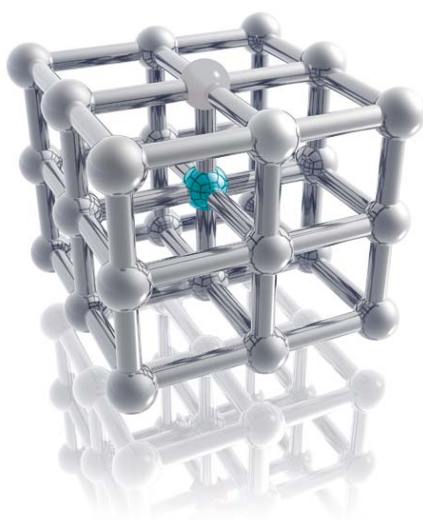


## What's new in asix version 5



### ARCHITECT - INTERACTIVE CONFIGURATION ENVIRONMENT

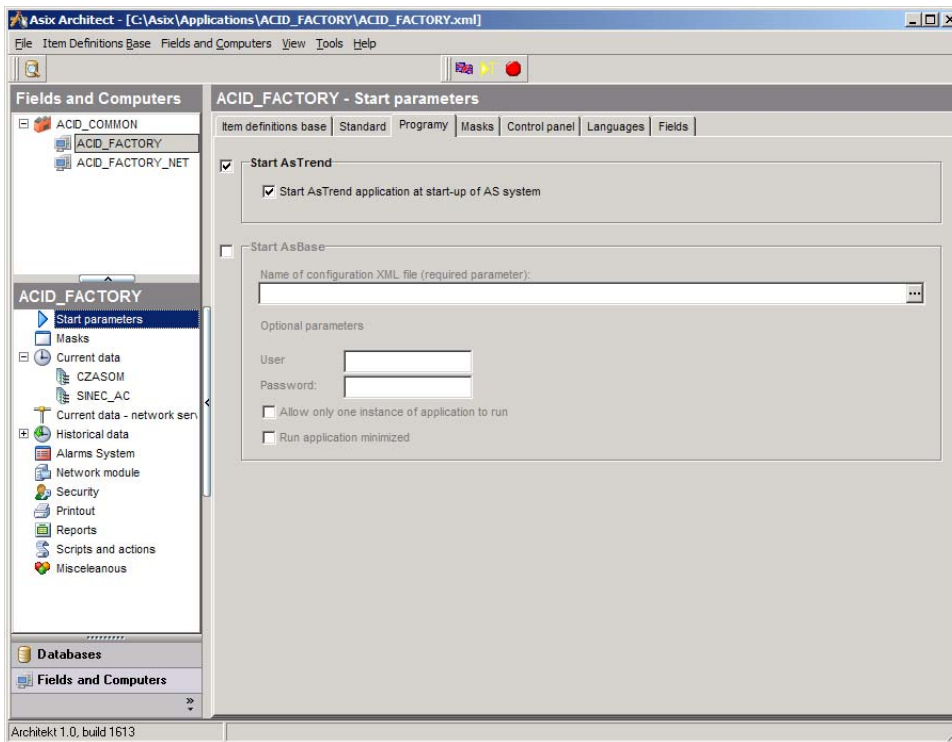
Introduction of Architect module is a true breakthrough in application development. It enables a fully visual designing, configuration and ongoing editing of **asix** system application with use of dialogue boxes with system of tabs. The tabs group all options responsible for specific functional areas of the application in an orderly and clear manner and unfailingly lead the designer through the process of correct declaration of the required parameters. Architect module, associated with **VarDef** module responsible for storage of variable definitions databases enables a fully interactive and visual handling of the definitions base, including: creation of base structure and editing its contents.

Architect module is a powerful tool integrating the configuration of all key modules responsible for operation of **asix** system. Such solution allows to shorten the time of development of advanced applications to a significant extent and facilitates the management of the entire industrial process control and supervision system.

The configuration parameters and the parameters declaring the database used by the application are saved to **one shared XML** (eXtensible Markup Language) file located in the application's root directory.

Architect program offers a user-friendly visual interface. The designer's work environment is a program window divided into two main blocks:

- left block for parameter categories for databases and application data;
- right block for configuration parameters.



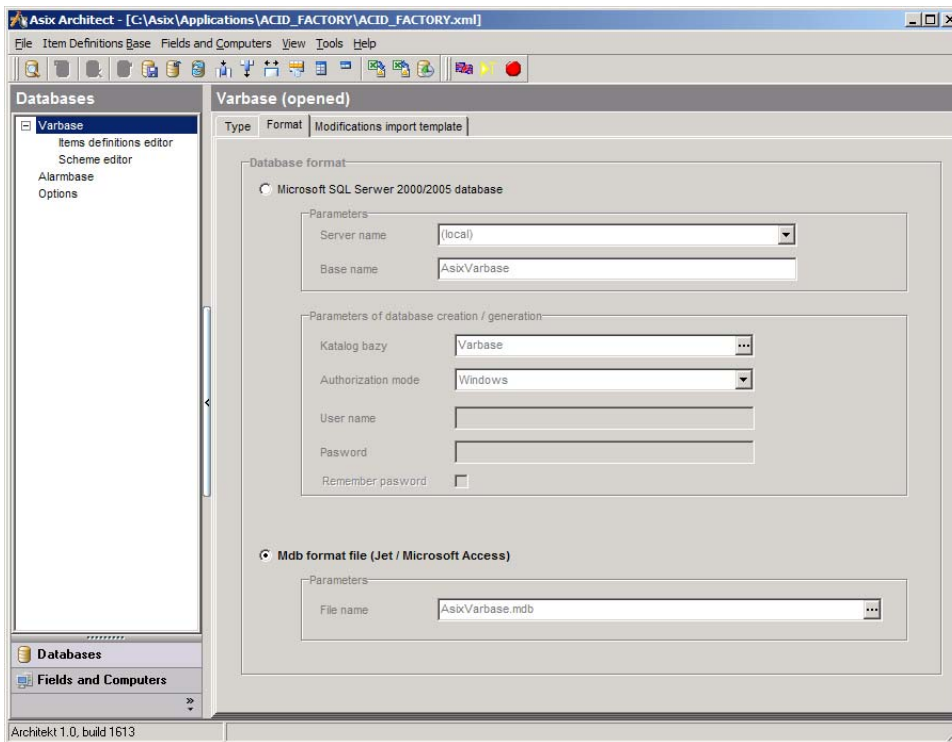
## VARDEF – VARIABLE DEFINITIONS DATABASE

**Asix5** package is fitted with a new variable definitions database module, **VarDef**, which is fully supported by Architect.

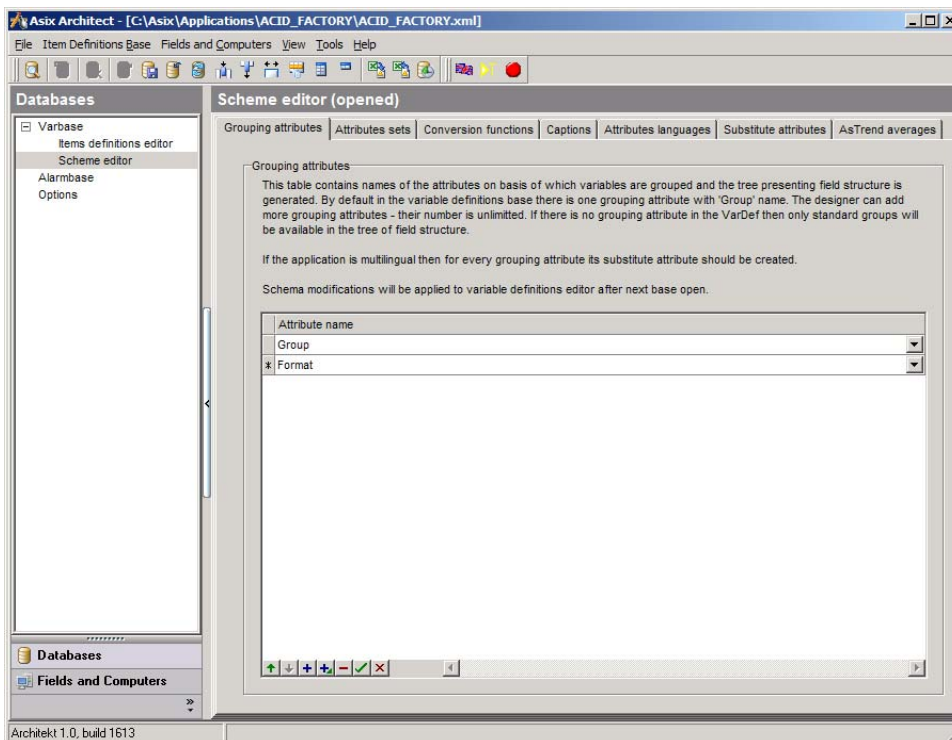
VarDef manages the databases of Microsoft SQL Server 2000/2005 and of MDB format (Jet / Microsoft Access). To enable migration of application from earlier **asix** versions, the variable definitions data may be converted from Paradox database or text files to MS SQL or Jet base format.

Architect module enables a fully interactive and visual handling of VarDef databases in Jet or MS SQL format. In this scope, it combines the functionality of two separate programs used previously for creating and editing the variable definitions database: Variable Database Manager and Variable Database Editor (used in older versions of **asix** package).

The configuration data pertaining to the variable definitions database are configured in Architect with use of *Items definitions editor* (opened with *Databases* button located in the left block of Architect window) and saved in the XML configuration file of the created application.



Apart from variable definitions, VarDef database also collects information about: grouping attributes, attribute sets, conversion functions, attribute captions, national languages used in the designed application, variable attributes, attribute aliases (for multilingual applications) and trend averages. Those additional data are available from *Varbase > Scheme editor*.



## ASAUDIT – SOLUTION FOR SYSTEMS SUBJECT TO STRICT VALIDATION PROCEDURES

**Asix5** package is also appropriate for applications, which need to meet specific validation requirements, in accordance with **GAMP4**, **FDA 21 CFR Part 11** regulations applied in pharmaceutical and food processing industry. The module extends the central user log-in and authorization control of system with registration of performed controls, operator's action and application integrity.

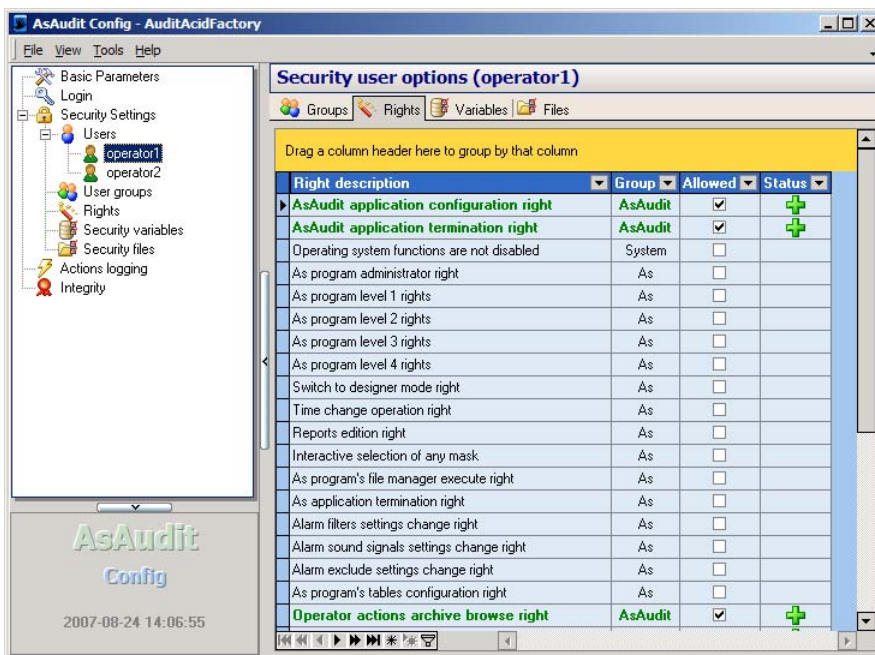
AsAudit module supports the following functions:

- User log-in and authorization control system
- Operator's notepad
- Logging control actions performed for selected variables
- Logging the operator's actions
- Application integrity control

AsAudit operation is based on application of SQL database for storing the configuration data and logging data collected during application operation.

The basic program of AsAudit module is AsAudit Console, which needs to run during the entire application operation. It is responsible for user log-in, checking the authorizations and collecting information on application operation.

Parameterization of AsAudit module is performed with use of interactive AsAudit Config program.



To view and analyze data logged by AsAudit module during application operation, an easy-to-use AsAudit Browser is provided.

Date and time	Category	Importance	Note text	User	Computer
2007-08-24 13:33:54			Configuration data written		BP
2007-08-24 13:57:07			Configuration data written		BP
2007-08-24 13:59:09			Configuration data written		BP
2007-08-24 14:01:28			Configuration data written		BP
2007-08-24 14:11:29			Configuration data written		BP
2007-08-24 14:12:48			Configuration data written		BP
2007-08-24 14:13:08			Configuration data written		BP
2007-08-24 14:33:22			Configuration data written	op1	BP
2007-08-24 14:35:21			User op1(operator1) is logged in	op1	BP

## ASTREND – GRAPHICAL PRESENTATION OF ARCHIVAL DATA

A series of changes introduced to AsTrend program is an effect of profound redesigning of the module, so as it becomes even more intuitive for the user. The additional asset is the new graphical interface.

Changes in scope of AsTrend functioning include: implementation of the new program document format (based on XML standard), new description layout function, ability to save trends together with legend directly to PDF file, ability to draw bi-status graphs on separate axes for all types of charts.

AsTrend5 enables displaying text descriptions of variable values instead of the numerical values. If the value descriptions for the given variable are defined, the numerical values are displayed as label on OY axis and as point labels on the chart. The numerical value descriptions are defined in the variable definitions database.

## APPLICATION DESIGNING AND EXECUTION

**Asix5** package also introduces a series of changes and enhanced options, aiming to simplify the design process and to create new process visualization abilities. Among others, a mechanism allowing to control object hiding, their mutual overlaying and object position animation in the process variable function is included. Many users will be probably happy to hear about such enhancements as ability to operate **asix5** on hardware platforms without an alphanumeric keyboard or the ability to create the graph of single bit value changes for the process variable.

- **OBJECT VISIBILITY STATUS CONTROL**

OBJECT CONTROLLER allows for visibility control of the technological mask objects. 'Visibility' mechanism pertains to objects of all classes. A hidden (invisible) object is not displayed and does not perform any functions. In particular, it is possible to hide BUTTON-type object or to disable CALCULATOR object.

Controlling of the object visibility status is not declared in the object itself, but is executed with use of OBJECT CONTROLLER object class, which can control the visibility of other objects on the basis of process variable state or the currently set password level (which also co-operates with the user log-in systems - the internal one and the one existing in AsAudit module).

- **SCREEN KEYBOARD MECHANISM**

Screen keyboard mechanism (active in the application runtime mode) provides a possibility to enter texts to the editing fields of the dialogue boxes and the editing fields of NUMBER and STRING objects with use of screen keyboard. This mechanism is designed to support application operating on touchscreen panels.

The keyboard is activated after clicking in the field or object area.

- **SINGLE BIT VALUE CHANGES CHART FOR THE PROCESS VARIABLE**

Two conversion functions were introduced for CHART objects:

*BIT* - allows to draw a bi-status chart from any process variable bit; the function parameter is the number of bit, which is checked and decides about the function value; BIT function returns 0, if the bit is not set, and 1 in the opposite case;

*BITV* - allows to draw a bi-status chart from any process variable bit; the function parameter is the number of bit, which is checked and decides about the function value; BITV function returns 0, if the bit is not set, and a value equal to bit number in the opposite case - this allows to display several bi-status curves on one chart (even for the same variable).

- **OBJECT MOVEMENT ANIMATION**

MOVEMENT CONTROLLER object was added, allowing to animate the movement of technological mask objects. The movement is executed in axes OX and OY and can pertain to one or many objects at the same time.

- **OBJECT DISPLAYING SYSTEM**

The object displaying system was modified, as to enable placing dynamic and interactive objects on one another – so as to guarantee the correct object overlaying.

- **PARAMETERIZATION OF TEXTS OBJECT FROM THE VARIABLE DEFINITIONS BASE**

TEXTS object was equipped with features enabling setting from the variable definitions database the list of texts and bit mask values for specific states.



- **TRANSPARENT OBJECT BACKGROUND**

Objects: MESSAGES, TEXT, DATE-TIME, STRING, NUMBER, EXPRESSION, TEXTS, BAR were enhanced with *Transparent background* option. For some of the objects listed above, this option existed previously under the name of *Clear background*.

## **CHANGES IN ASSCRIPTER MODULE**

AsScripter in version 1.7 is enhanced with several functions **allowing to load series of archival data**, and also for reading variable attributes from the variable definitions database and accessing information on current **asix** system user.

## **NEW ITEMS IN THE COMMUNICATION DRIVERS LIST**

**CtMus04** – driver allowing to exchange data between **asix** system and microprocessor-based control devices MUS-04 manufactured by ELEKTROMETAL S.A. from Cieszyn;

**MicroSmart** – driver exchanging data with MicroSmart controllers of IDEC;

**S7\_TCPIP** – driver used for data exchange with SIMATIC S7 series controllers through Ethernet connection with use of standard computer network card; the product asset is the fact that it does not require the installation of SIEMENS SIMATIC NET software on **asix** system machine, as well as the adaptation of controller software for data exchange purposes;

**CtLogo** – CtLogo protocol driver is used to exchange data between **asix** system and Logo OBA5 controller from SIEMENS with use of programmer link of the controller;

**CtNCP** – CtNCP driver is used to exchange data between **asix** system and MN-series controllers from Invensys (former Satchwell).