



What is New in asix v. 4.02.001

Asix v. 4.02.001 offers solutions that enrich its functionality and increase efficiency of users' design. Many of new features and improvements are ASKOM reply to direct suggestions and requirements of experienced SCADA software designers, who use **asix** for creating visualization and computer monitoring systems for many demanding industrial branches. At present, options and tools added to the new version of **asix** do not only simplify and shorten the design process of SCADA applications but also give new possibilities for obtaining visualization effects on technological masks (windows), e.g. animation and new possibilities of application security management. Keeping abreast with dynamically developing technology of Internet access to industrial process information, **Asix4Internet** of **asix** version 4.02.001 allows access to process data displayed in the form of reports in an Internet browser window thus extending display of process variable database, current process values, current and historical alarms and data trends, either in tables or graphic charts, present already in **asix** version 4.00.007.

The **As2WWW** converter, a program for automatic conversion of an **asix** application into IE 6 browser visualization, has been equipped with **Msk2Html** - a new tool that makes creation of html sites from ready application screens considerably easy and fast. Significant modifications also include a strong support for SQL based applications – designed and managed by means of the interactive **AsBase** module. **Asix v. 4.02.001** allows creation of connections between **asix** applications and **AsBase** enabling display of AsBase database on process masks.

The real turning point for **asix** pricing is also a **change in the method of counting variables** for the licensing.

Details of new features and improvements available in asix v. 4.02.001 are described below.

LANGUAGE VERSIONS OF ASIX OPERATION

Asix v. 4.02.001 operates in one of the following language versions: Polish, English and Russian (independently from the operating system language).

CHANGE IN THE METHOD OF COUNTING VARIABLES FOR ASIX LICENSING

The number of variables allowed within **asix** licenses is determined now according to the following rules:

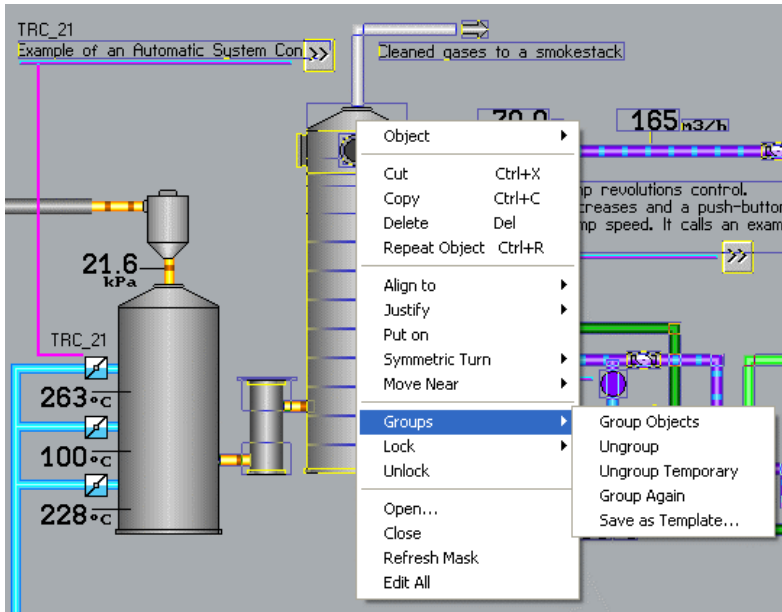
1. variables in logical channels – are calculated within a license as the number of items in a variable;
2. variables from the NONE channel, archived - are calculated within a license ALWAYS as one variable (independently of the number of variable items);
3. variables from the NONE channel, not archived - do not apply to the license limit (**NEW**).
4. variables in network channels - do not apply to the license limit (with the exception of the GATEWAY station for which variables are calculated within a license).

APPLICATION DESIGN

In **asix v. 4.02.001**, there have been added improvements thanks to which process of designing SCADA applications has become considerably more simple and easy as well as time needed for application realization has shortened. The improvements of application design include:

GROUPING OBJECTS:

- possibility of grouping objects (placed on a technological screen) and storing each set of objects as a pattern; this new functionality allows to group selected objects and replace all variables used in these objects at the same time by means of only one dialog box; it is also possible to change names of the variables (from original to descriptive ones);



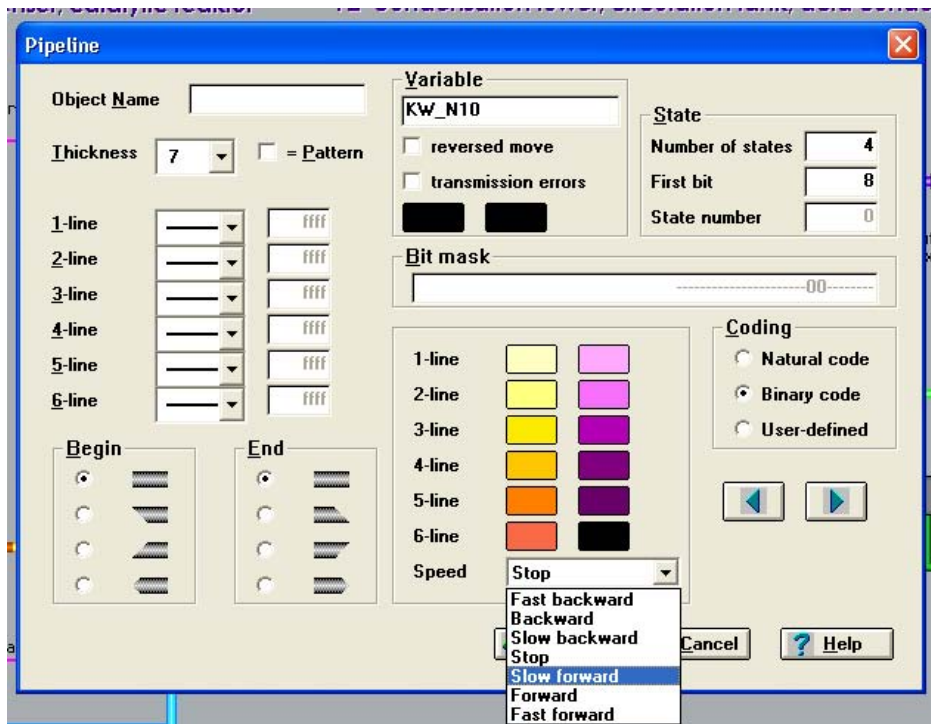
- substitution of process variables during mask opening – it allows to use a single technological mask file for opening many mask variants which differ in process variables used by objects on the mask;

EASIER ACCESS TO EDITION FUNCTIONS:

- new context-sensitive menu for mask edition;
- new context-sensitive menu for quick access to functions of the **asix's** bitmap editor;

MODIFICATIONS IN OBJECTS:

- TEXT object: the window for TEXT definition allows on-line selection of the value of any attribute stored in VariableBase (**asix's** database of process variables);
- EXPRESSION and NUMBER objects: the new T time format for numbers;
- PIPELINE object: the object has become a dynamic object; it is possible to create animation effect;



- PICTURES: there is possibility to obtain a blinking effect for a single bitmap;
- SWITCH SET object: currently, the object handles 32 states; it has been added an option 'read first' to allow changing only a part of variable bits;

OTHERS:

- object size and position are scaled automatically when the mask size is changed (in the application execution mode);
- the range of handled graphic files has been extended; besides the BMP format, it is possible to use the following formats: GIF, PNG, JPG, etc.; in the current version, it is also possible to use graphic files with a transparent attribute as well as animated files;

ADDITIONAL SUPPORT FOR SQL BASED APPLICATIONS

Asix v. 4.02.001 significantly extends support for applications oriented on production tracing & tracking and definition / selection of recipes. Receipte data and event based process data, stored in an SQL database of the **AsBase** module, currently can be viewed on technological masks of **asix** applications (also as a view of many interconnected archive tables) - thanks to the new ASBASE object and new variants of the ASBASE action.

The ASBASE object provides connection between **asix** applications and AsBase database, while the ASBASE action allows to browse database tables, to print, add, remove and update records of the tables. It is also possible to use data filtering to browse only the records that fulfill determined criteria.

NEW FUNCTIONALITY FOR VISUALIZATION AND CONTROL VIA INTERNET

Report date	Report name	File size [B]	File date	Type	
7/1/2005	WYTWORNI KWASU - raport miesieczny	5520	7/27/2005 10:55:24 AM	Month	Select
6/1/2006	WYTWORNI KWASU - raport miesieczny	5401	6/6/2006 1:03:04 PM	Month	Select
3/1/2006	WYTWORNI KWASU - raport miesieczny	5520	3/27/2006 9:40:00 AM	Month	Select
12/1/2005	WYTWORNI KWASU - raport miesieczny	5520	12/13/2005 10:02:04 AM	Month	Select
11/1/2005	WYTWORNI KWASU - raport miesieczny	5401	11/23/2005 11:33:44 AM	Month	Select
1/1/2006	WYTWORNI KWASU - raport miesieczny	5520	1/18/2006 1:23:28 PM	Month	Select

TEMPERATURY [°C]						
RODZAJ	Temperatura spalin	Temperatura kwasu	Temperatura wody	Temperatura H2S	Temperatura oparów	
	iprzed odlegl.	siarkowego	cieploty	iprzed piecem	iprzed piecem	
1	100.0	100.0	50.0	44.6	30.1	
2	100.0	100.0	50.0	44.4	29.2	
3	100.0	100.0	50.0	44.6	30.1	
4	100.0	100.0	50.0	44.4	29.2	
5	100.0	100.0	50.0	44.5	30.1	
6	100.2	100.2	50.1	44.6	30.1	
7	100.0	100.0	50.0	44.5	30.1	
8	100.0	100.0	50.0	44.6	29.2	

The **AsPortal** tool, available from **asix v. 4.00.007**, has been enriched with a new functionality that allows to view **asix** application reports on Internet.

As2WWW – a module for conversion of **asix** applications into web applications displayed in an Internet browser window, has been equipped with the **Msk2Html** tool, thanks to which conversion of **asix** technological masks into www sites has become much easier.

NEW ITEMS AND UPDATES OF COMMUNICATION DRIVERS

NEW ITEMS

The following new communication drivers have been added to operate with **asix**:

- **CtSi400** – extends **asix** use for visualization of alarm systems based on the Sintony Si 400 alarm switchboard of SIEMENS;
- **NetLink** - used for communication with SIMATIC S7 PLC's via MPI/PROFIBUS link; a significant advantage of the driver is that it uses cheap and easy for configuration NetLink Lite module - an Ethernet gateway for MPI and PROFIBUS networks of S7 PLC's; this is an attractive alternative in relation to solutions based on SOFTNET software and SIEMENS CP5611/CP5613 cards;
- **CtEcoMuz** – a driver used for data exchange between with Microprocessor Protecting ecoMUZ Devices made by JM Tronik;

DRIVERS UPDATES

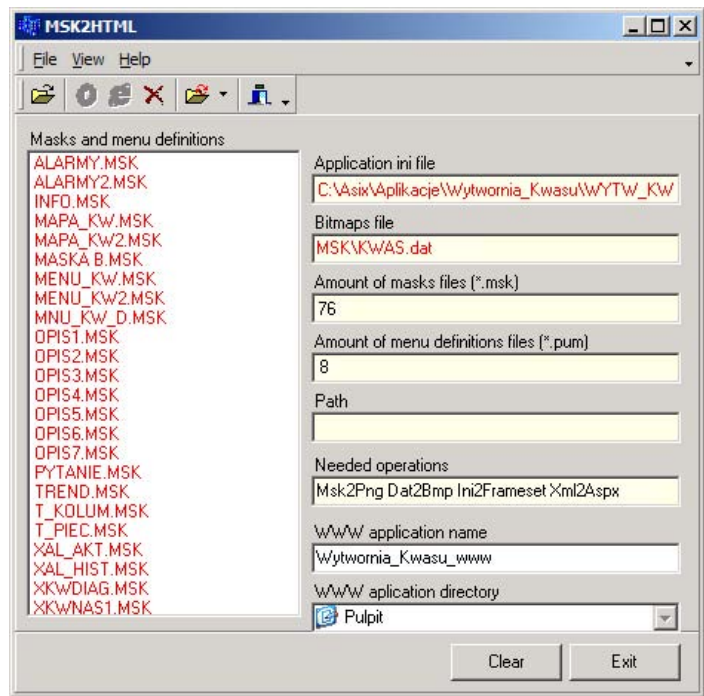
Several changes have been introduced in existing drivers of the **asix**, among others:

- **MODBUSSLV**: the following new functions of MODBUS protocol have been implemented: Read Coil Status, Force Single Coil and Force Multiple Coils; it has been added the possibility of setting an operation mode in which values of registers and coils are read individually (the function of block data reading is not used); the option of value scaling refers to all types of variables (so far, scaling referred to variables of REAL type);
- **CtZxD400**: it has been added the possibility of declaring a history scope of profiles and events for each counter separately;
- **CtTwinCAT**: there are two versions of the driver available in the current **asix** package: CtTwinCat.dll – that uses the TcAdsDll library delivered by Beckhoff, and CtTwinCatTcPip.dll – that uses ADS/AMS over TCP/IP interfaces (without Beckhoff libraries); therefore also the way of declaring the transmission channel for CtTwinCAT has changed;
- **SAPIS7**: modifications of the way of declaring the transmission channel;
- the drivers: **TALAS**, **DMS500**, **DMS285**, **MACMAT**, **MEVAS**, **MUZ** have been added to **asix** package as standard modules (since now available at no additional charge).

SOFTWARE SECURITY

The following functionality has been added for **asix** software security management: new mechanism of system protections, the option 'default user' and extended interpretation of the password validity time.

System protection functions allow protection of access to potentially danger operating system functions, which used by an operator in incompetent and irresponsible way may lead to the system damage (both an operating system and the SCADA system). When protection mechanisms are used, a SCADA application can run under the account of a Windows user with high authorizations assigned - it makes maintenance and management of an operating system easy and minimizes the possibility of damages caused by an incompetent SCADA application operator. These protections are for example: blocking elements on a desktop, blocking a task bar and disabling **Ctrl+Alt+Del** keys.



Protections are divided into 2 groups:

- *dynamic* – integrated with **asix**; they are switched on or switched off dynamically depending on the authorization level of an operator being logged on at a given time;
- *static* – set one time and being active for all the system operation time.

See detailed information in *asix.hlp*, 9.7. *System Protections*.

When the logon system is used, it is possible to define a default user that is automatically logged on when running an **asix** application.

Moreover, **asix4** allows to determine the time of logon operation validity, after which the user is logged out or switched over to the *default user* mode.

ALARMS – CHANGES FOR OPC ALARM STRATEGIES

There have been added new modes of receiving alarms for the strategy of recognizing alarms sent from *OPC Alarm and Event Server* to **asix** system. Currently, there are 6 methods of translating OPC events into **asix** alarms:

1. alarm – an alarm in **asix** will be started after activation of a related sub-condition or higher priority sub-condition (e.g.: HI_HI alarm activation will activate HI alarm automatically);
2. alarm/switch – an alarm in **asix** will be started after activation of a related sub-condition;
3. alarm/attribute/bool – an alarm in **asix** will be started after activation of a related sub-condition or when the event for an active sub-condition occurs, and the value transmitted by an attribute with a given ID is different from 0;
4. alarm/attribute/trip/start;
5. alarm/attribute/trip/impulse;
6. alarm/attribute/trip/durable – an alarm in **asix** will be started after activation of a related sub-condition or when the event for an active sub-condition occurs.

See detailed information in *asix.hlp*, 12.1.5. *Strategies of Alarm Detection*.

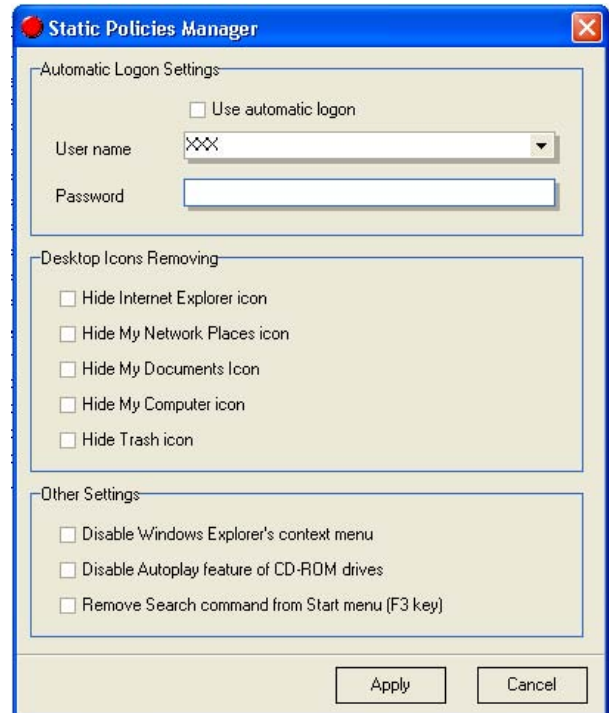
PROCESS DATA ARCHIVING

The data archive - ASPAD configuration has been enriched with new entries that allow to archive the variables with a status different from GOOD (so far, only GOOD values were archived). Using the proper entries, it is possible to archive the values with OPC=UNCERTAIN or BAD statuses, as well as the ones the status of which indicates communication problems with a PLC.

It has been also added a new operator action - SYNCHRONIZE_ARCHIVE, which forces execution of synchronizing SQL archives (declared in the action syntax).

ASALERT

In the case when **AsAlert** (a tool for remote notification about important events) is interfaced with the **asix**'s alarm system, **asix v. 4.02.001** allows alerts to be sent out only when the station is active (it prevents duplication of alerts when using redundant alarm servers).



OTHER CHANGES

- **AsixConnect4** - a process data server is extended by a new item - the server of **asix** system reports for .NET platform.
- The new **EnableRASLana** program enables the ASLINK network module to establish a connection in Windows XP and Windows 2003 using Remote Access Service (RAS), TCPIP protocol and NETBIOS interface.
- It has changed the way of parameterizing session connections of ASLINK.