eye analyzer

Manual

Version 2.3

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Overview

EYE Analyzer is a PC software package used for collecting data from one or more Eltex Yarn Expert (EYE) yarn break detection systems. The data is assembled into various statistics displayed in graphs.

A complete **EYE Analyzer** system consists of:
- EYE Analyzer PC software from Eltex of Sweden AB.
- One or more EYE Control Units 11701. Part of the EYE yarn break detection systems. Manufactured by Eltex of Sweden AB.
- A PC with Windows operating system.
- A standard Ethernet network with TCP/IP.

The **EYE Analyzer** PC software has the following functions:
- Periodically read data from one or more EYE Control Units and store in database.
- Calculate statistics and show in charts.
- Print charts to PDF or printer.
- Export statistics to file that can be imported to Excel.
- View raw data from EYE Control Units

Installation

System requirements for the computer

Hardware

	Minimum	*Recommended*
Processor	Intel Pentium or compatible. Minimum 500 MHz clock frequency.	Minimum 1 GHz clock frequency.
Memory	Minimum 256 MB RAM	Minimum 512 MB RAM
Hard disk	Minimum 500 MB free space.	
Device	CD-ROM or DVD device.	
Screen	Screen and graphics card with SVGA (800 × 600) or better resolution.	

Operating system
- Windows 7
- Windows Vista
- Windows XP SP3

Installation of the software

1. The user installing must be administrator on the computer.
2. Enter the CD-ROM labeled "EYE Analyzer" and wait for the installation menu to display.
3. If the installation does not start automatically, go to START menu and select My Computer. Select drive containing EYE Analyzer CD-ROM and double click program **AutoRun**.
4. Select "Install EYE Analyzer" and follow the instructions.

When the installation is finished, the free Microsoft SQL Server Express 2005 will be installed together with the database and applications EYE Analyzer and EYE importer.

The above procedure will result in a standalone installation of the EYE Analyzer system.
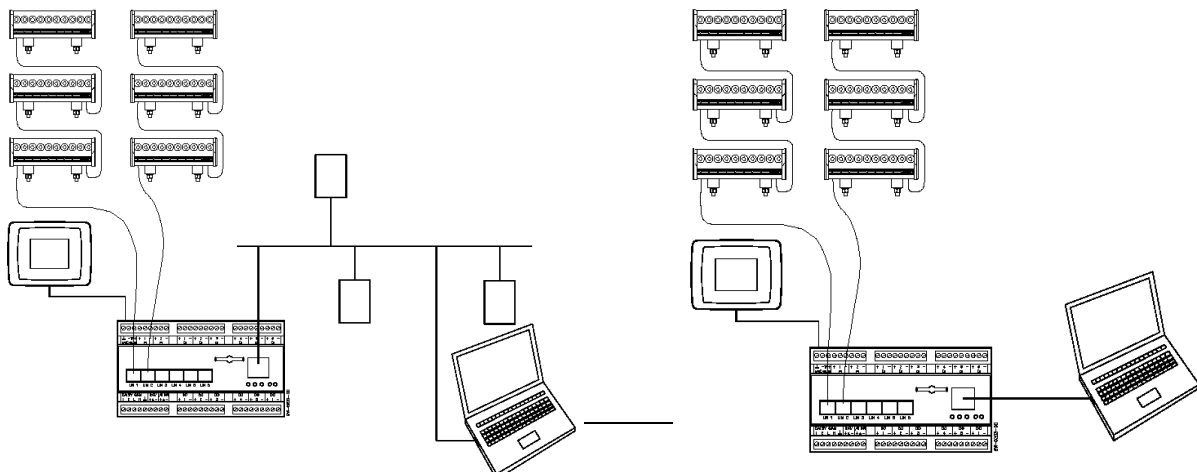See document **Client-server installation of EYE Analyzer.pdf** in the Doc folder on the CD-ROM for a description how to make a client/server installation.

Hardware configuration

Connecting PC to EYE control units

A standard Ethernet network is used to connect the PC to the EYE control units. Both a multipoint network and a point to point network with a crossed cable can be used.
The network protocol is TCP/IP v4.

License administration

The EYE Analyzer Software consists of two applications, EYE Analyzer and EYE Importer.
Only EYE Importer needs a license.

License types

There are two types of licenses:

Permanent   The license never expires. This is the normal type.

Time limited   For demo purposes a time limited license can be issued. The time can be set from one
                       day and up.
                       NOTE! The time starts counting when the license key is created and not when the key
                       is first used.

The license also determines maximum number of EYE control units that can be handled by EYE Importer.
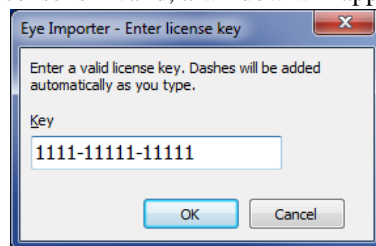
See section 'Check license' for a description of finding out the information of the current license.

Activate license

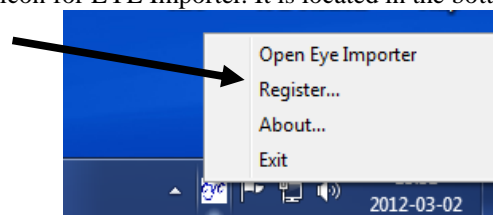For the EYE Importer to work, a valid license key must be entered.
This can be done in two ways:

⚔   When EYE Importer is started. This is done automatically after the installation is finished and as soon as
     the computer starts up. If the license is invalid, a window will appear requesting you to enter a key.

     Enter a key supplied to you either by e-mail or in delivery. Press 'Ok' and the main window will appear.
     Note! Pressing 'Cancel' also causes the main window to appear but the EYE Importer will not work
     until a valid license key has been entered.

⚔   Right click on the EYE icon for EYE Importer. It is located in the bottom right side of the desktop.

     Select 'Register' from the menu and enter key as in previous section.
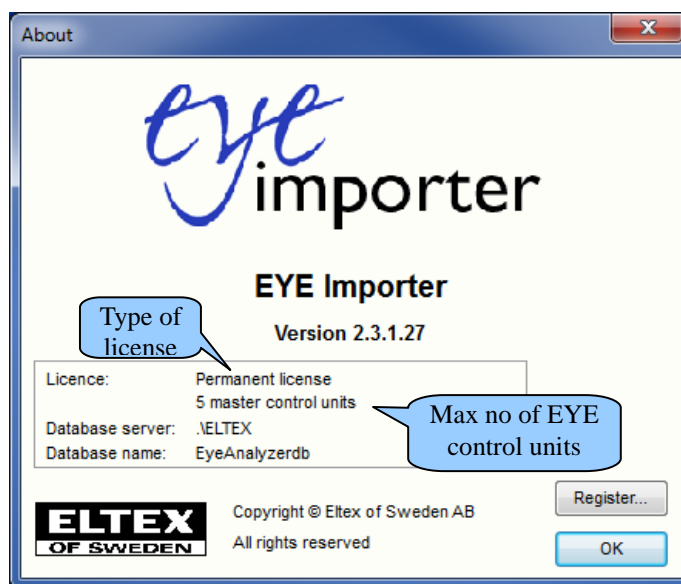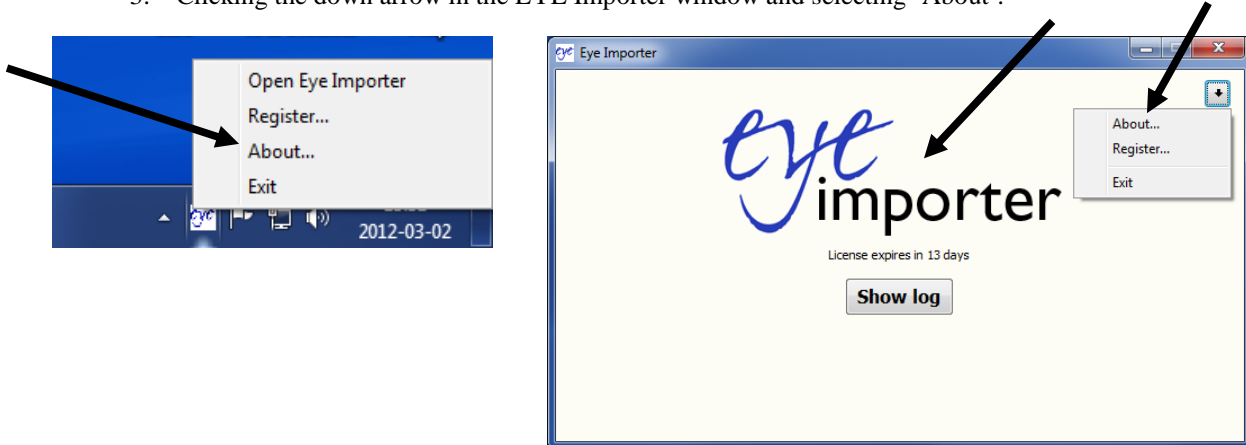
Check license

A license can either be invalid, time limited or permanent. It also contains max number of EYE Control Units that can be handled by EYE Importer.

About window

Open About window by
  1. Right clicking on the EYE icon in the bottom right side of the desktop and selecting 'About' from the menu.
  2. Clicking on the EYE Importer logo in the EYE Importer window.
  3. Clicking the down arrow in the EYE Importer window and selecting 'About'.

Type of license and max number of EYE control units are written in the bottom half of the window.

Main window

Type of license is also shown below the logo in the EYE Importer main window if the type is time limited or invalid.

EYE Importer

Description

The EYE Importer application is responsible for collecting information from EYE Control units and storing it in a database.

Main window

The layout of the main window of EYE Importer is shown below.

Show log	Opens a window showing the EYE control units that have been detected.
Down arrow	Menu with the following items: About Open the About window Register Open the dialog to enter license key Exit Exit EYE Importer
Eye Importer logo	Clicking this opens the About window.

Show log button

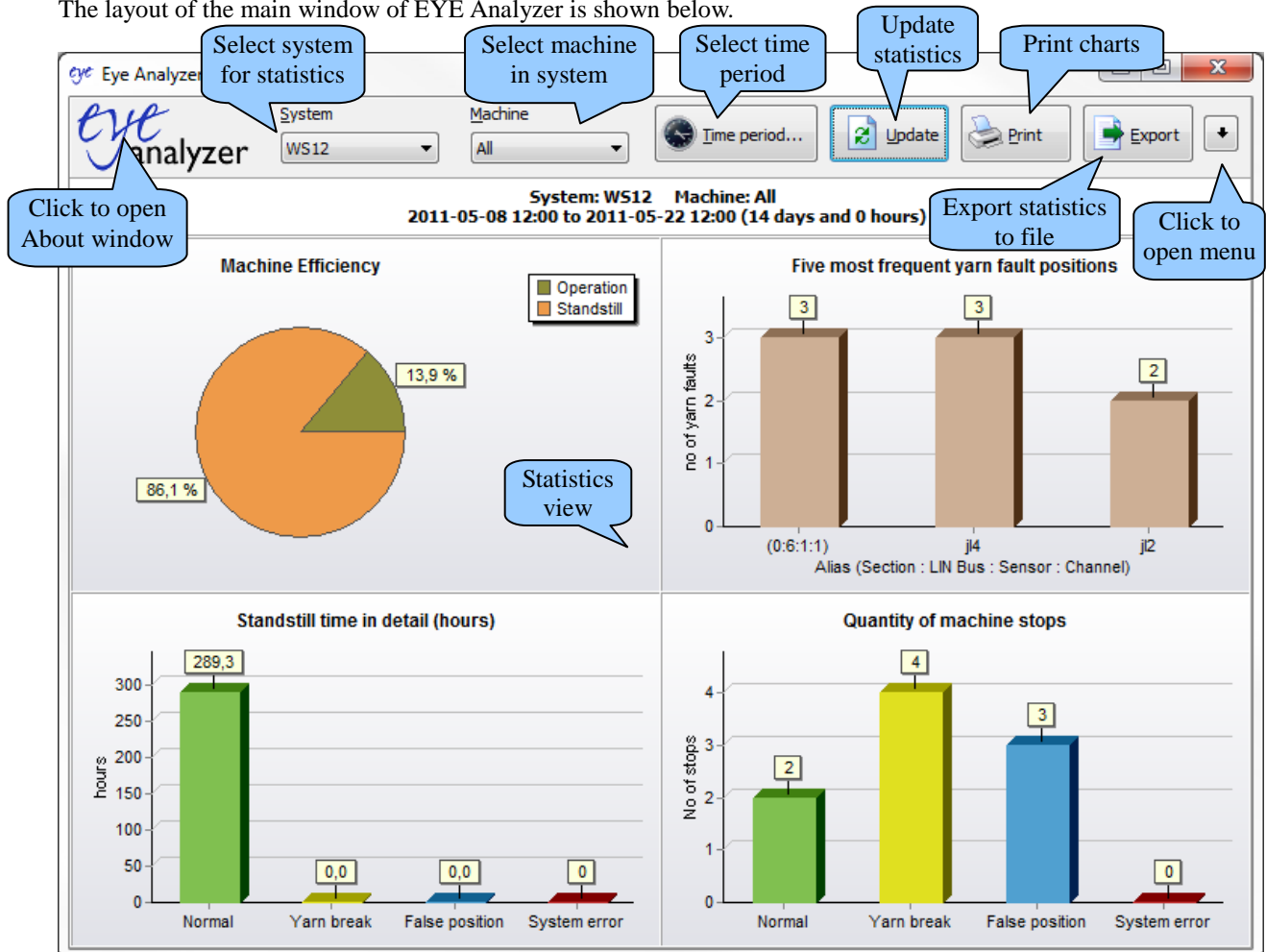Clicking Show log button opens a window showing all EYE control units that have been detected.

EYE Analyzer

Description

The EYE Analyzer application takes the information stored in the database by EYE Importer and calculates various statistics.

Main window

The layout of the main window of EYE Analyzer is shown below.

System dropdown list	Select the system for the statistics calculation or All for all systems. Each EYE control unit assigned to EYE Analyzer is defined as a system.
Machine dropdown list	An EYE control unit can handle more than one machine. Select the machine for the statistics calculation or All for all machines.
Time period	Select start and end time for the statistics calculation.
Update button	Updates statistics using current settings and latest database data.
Print button	Prints the statistics view to printer or to PDF file.
Export button	Exports the statistics to a file that can be easily imported to a spreadsheet such as Excel.

Down arrow	Menu with the following items:	
	Configure	Add (assign) new EYE control units and some other settings.
	Event view	Changes the statistics view to show all events for selected time period. Selecting it again returns to statistics view.
	About	Open the About window
	Exit	Exit EYE Analyzer
Eye Analyzer logo	Clicking this opens the About window.	

Statistics view

The statistics is displayed in four different charts.

Machine Efficiency	The time in % of the selected time range that the selected machine (or machines) has been running and stopped
Standstill time in detail	The hours the machine (or machines) has been standing still because of yarn break, false position stop, normal stop and stop because of a system error.
Five most frequent yarn fault positions	The five yarn positions for selected machine (or machines) that have stopped the most in the selected time range. Both yarn breaks and false position stops are included in this value. The yarn position alias is used if set in the EYE control unit, otherwise the actual physical position with section, LIN bus, sensor and channel is displayed.
Quantity of machine stops	Number of stops for selected machine (or machines) and within selected time range. Divided into four groups, normal stops, stops because of yarn break, stops because of false position and stops because of a system error.

Event view

Selecting event view in menu (down arrow) changes statistics view to event view.

By selecting system and time period and pressing Update button, all the events stored in the database that corresponds with the selections will be displayed.

By using Event codes dropdown list, an Event code search mask can be created. Only the evens listed in the search mask will be displayed. To clear search mask, select All in Event codes.

Many types of events are recorded by the EYE control units but it is not within scope of this manual to explain them. This view is mainly used for service purposes.
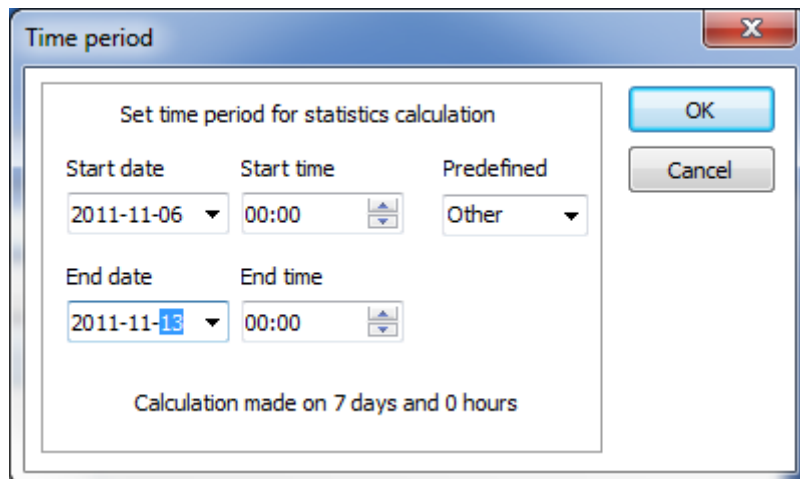
Normal use

Quick start guide

This guide assumes that the EYE Analyzer software has already been installed and that EYE Importer is up and running and configured to fetch data from one or more EYE control units.

1. Start EYE Analyzer from the Windows Start menu.
2. Select specific system (EYE control unit) from dropdown list or 'All' for all systems.
3. Select machine from dropdown list or 'All' for all machines.
4. Click button 'Time period' and select start and end time separately or use predefined ranges with dropdown list.
5. Press the 'Update' button to calculate statistics with new selections.
6. Press the 'Print' button to open preview window. Print to printer or PDF-file.
7. Press the 'Export' button to export statistics to a file. Import file to Excel or other programs.

Useful hints

Selecting time period

With the 'Predefined' dropdown list, different time periods can be selected quickly.
It is also possible to select time period manually.
Date and time can be changed by selecting part of it and writing the new value or using the up and down arrows on the keyboard. Date can also be selected by clicking to the right of the date and selecting in a calendar.
Setting end date earlier than start date will cause start date to automatically be changed to the same date. This can be used to quickly set a time range a while back in time. Use the 'End date' to first set start date and then end date. The same technique can be used to go forward in time but use 'Start date' instead.

Length of selected time period

In the bottom of the 'Time period' dialog the length of the period is written in days and hours. This is also written above the statistics view in the main window.

Selections changed

As soon as the system, machine or time period selections have been changed, a red text 'Selections changed' will be displayed to indicate that the displayed statistics has not yet been updated. The 'Print' button will also be disabled. Pressing the 'Update' button removes the text and enables the 'Print' button again.

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