

Meet OSCAR . . .

OSCAR is a PC-based software solution designed to provide users with the ability to capture real-time production data and produce reports for process analysis and control . . . and/or for making immediate adjustments to restore processes to within acceptable limits. OSCAR statistically analyzes data gathered from a range of control equipment to provide off-line graphical and tabular displays. These displays are designed to assist the user to analyze process performance and take timely corrective actions if needed.

OSCAR software serves a wide spectrum of production personnel, ranging from hands-on operators to process engineers. Remember the name of your best reporting/control software tool:

Online System for Control Analysis and Reporting

OSCAR . . . Customized Turnkey Solutions

For all types of manufacturing, including assembly and test . . . from small cells and systems to larger-scale systems

For chemical and batch processing . . . from stand-alone or clusters of processes to larger-scale systems

Interface with special analysis software utilities such as **qs-STAT** and other **ODBC-compliant third-party packages**

Interface with **Storage, Back-Up, and Recovery Systems, using devices such as single tape drives, autoloaders, jukeboxes, hard drives, etc.**

Data Archiving . . . for Reports, Field Returns, and Warranty Claims

Data Back-Up . . . of Raw Data

System Back-Up . . . for Disaster Recovery of System

Data Source
PLC

Data Source
PC

Data Source
Bar Code Scanner

Data Source
RFID

Data Source
OPC™ Data Access Server

Data Source
CAPAC

Data Source
ATW's Test Executive

Data Source
Other Device(s)

ERP
Supervisory Systems



Quick real-time data for immediate process control

In-process verification and part traceability

Standard & custom reports for process verification and part traceability

OSCAR Add-On Software Modules

Quality Assurance System (QAS)

Expert Repair Module

Process Limit Analysis Module

LEGEND

OSCAR Product/System

Compatible Interfacing Components and Systems

OSCAR Values & Benefits

- OSCAR is delivered as a solution, not a box of software. We analyze the requirements, design and implement a solution, train your staff, and provide ongoing support.
- OSCAR can be configured as a "passive" system that only collects and reports data to help engineers make process improvements . . . or as a "supervisory" system that makes decisions based on predefined rules and process limits. Either way, in addition to the many standard and automated reports, new reports and displays can be easily configured by your staff, reducing your costs and dependence on outside support.
- OSCAR retrieves data from a wide range of devices and keys the information to the production process, providing complete traceability from the beginning to the end of the process. Optional archiving systems can store this data, making it available by serial number, production time and date, production area, and the like for field returns, warranty claims, and other such requirements.
- Simple displays allow analysis to be easily performed in real-time by production personnel, significantly reducing reaction time to problems.
- OSCAR provides an integrated set of tools and add-on modules, immediately or later, to perform all desired tasks while standardizing the look and feel of reports to eliminate confusion and improve efficiency. Your OSCAR system can grow incrementally with your operations.

How does OSCAR work?

Data Acquisition . . . Data from control systems can be acquired using specially united data gateways to provide data in a format that can be used by OSCAR. The gateways currently available for OSCAR are Allen-Bradley DH+, Allen-Bradley TCP/IP (Ethernet PLCs), Modbus +, CAPAC, and ATW's Test Executive control software. ATW will be pleased to quote for gateways to other user protocols if required.

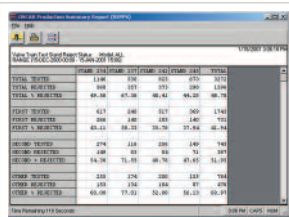
Database . . . OSCAR is an open architecture, client/server system. Data is filed in the OSCAR Relational Database (RDB) from the control system using the Open Database Connectivity (ODBC) standard. OSCAR's data is not in a proprietary format. Data can be shared with other applications such as Microsoft Excel and any other third party software package that supports ODBC.

Reports . . . Users can access data and generate reports from the OSCAR RDB by using the standard OSCAR reporting system or employ Structured Query Language (SQL) to process this data and easily customize reports. Files are stored on a PC-based fileserver. Typical database standards used are MS SQL Server or ORACLE. OSCAR runs under MS Windows 2000/2003 Server. For reporting, OSCAR uses Windows 2000/XP Professional. OSCAR uses industry standard TCP/IP for standard network communications.

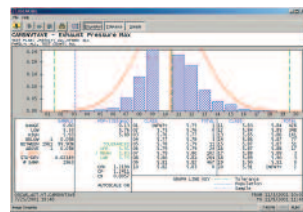
Back-Up . . . In addition to statistical data analysis, OSCAR can provide a server backup option, allowing users to backup data either manually or automatically from the server. The Server's normal backup medium is to an optional tape drive. The normal backup medium for archived data is a writeable CD-ROM/DVD. A separate client PC is commonly required for automatic data backup.

The Whole Package . . . The real strength of OSCAR is primarily two-fold. One is its exceptional ability to quickly acquire and make real-time process data available . . . for immediate process control and reports. The other major strength comes from behind-the-scenes work associated with managing large quantities of data. The complex processes associated with collecting, matching, sequencing, and archiving critical production data reliably is not a task to be delegated to "out-of-the-box, do-it-yourself, bolt-together software." Solutions must be engineered and tailored to align with each customer's specific and unique requirements. ATW's OSCAR applications engineers are highly experienced and savvy professionals when it comes to configuring tailored solutions that are designed for reliable performance and high uptime.

OSCAR Sample Screens and Reports



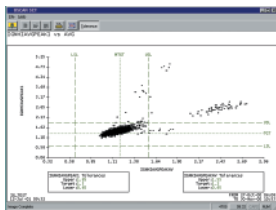
Production Summary Report . . . contains information that production supervisors and quality engineers check frequently throughout the day. In one report, the total number of units tested and their first time through capability statistics are available upon demand.



BEL Histograms . . . displays a histogram of the parameter's data with a superimposed normalized or standard bell curve. Pertinent statistical information is also displayed, including Cpk.

Scatter Utility (SCT)

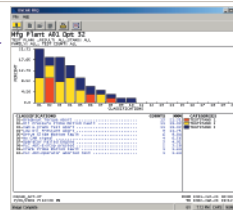
. . . displays either one or two parameters on a scatter plot. When one parameter is requested, SCT plots the parameter's data point against the date and time it was collected or its data point number. It can plot parameter tolerances and a regression line with regression stats. When two parameters are requested, SCT plots one parameter's data point against the other parameter's data point.



Frequency Utility (FRQ)

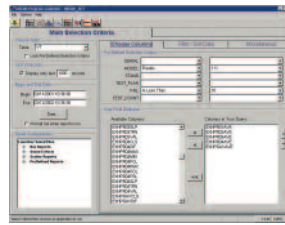
. . . displays a chart based on frequency of occurrence of a unique parameter value. Classifications are displayed as bars representing the parameter value as a percentage of all data falling within the scope of a query. Drilling into supporting data is

achieved with a "right click" on any bar. The chart displays values as they are distributed in different classifications using color graphics. FRQ can be configured to divide each classification into categories, each with its own height. FRQ is used to generate Pareto Analysis reports.

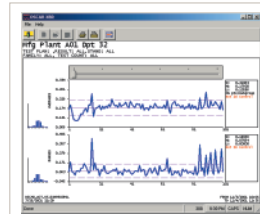


Program Launcher

. . . designed as an easy starting point for users to access OSCAR reports. It provides access to configure report specifications and then pick the report(s) to run.



Program Launcher allows users to store their selections for future use – or as a "favorite" list of reports. The database and tables available are displayed, along with the fields. These can be used to create selection criteria. Report icons allow the user to run a report.

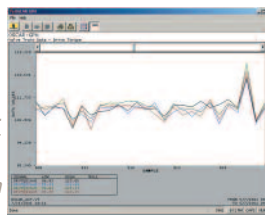


XBR (mean or x bar and range) Charts . . . displays the mean and range for subgroups of data values based on a predefined subgroup size. This display can also be configured to show XMR-X and

moving range, XBS-X bar and standard deviation, and MXMR moving X and moving range.

Generalized Graphing Utility (GPH)

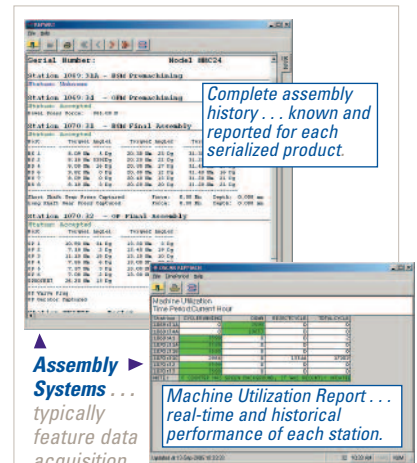
. . . displays results of up to eight parameters as they vary with time. The value of any point on the graph can be displayed in text when it is selected by the cursor.



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Complete assembly history . . . known and reported for each serialized product.

Assembly Systems

. . . typically feature data acquisition from PLC-controlled assembly and test machines/stations; data analysis for Statistical Process Control (SPC) and Statistical Quality Control (SQC) reporting; and data summaries for reporting and reviewing assembly station performance, production counts, pass/fail status monitoring, etc.

Machine Utilization Report . . . real-time and historical performance of each station.

OSCAR Optional Add-On Modules

+ Quality Assurance System (QAS) . . . automatically checks incoming production data against predefined criteria meant to detect trends and problems. QAS can notify clients of QA messages via the OSCAR Message System, generate and save log files, produce reports daily or immediately upon demand, display graphics of "Special Causes" tests on Shewhart-type charts to check for trends and patterns, and check data tables at programmed intervals to determine if any data alarms have been tripped so immediate corrective action can be taken.

+ OSCAR Expert Repair System (OERS) . . . based upon mining historical data and performing effectiveness studies, it suggests a series of the most successful repair codes. As time unfolds, the large historical database, which updates itself constantly, provides helpful insight by sharing repair knowledge between work shifts and plants. It also helps less experienced workers rapidly become more effective.

+ OSCAR Limit Assistant (LMTASST) . . . allows users to try "what-if" scenarios with a time period of data against their own suggested limit ranges. Limit Assistant reveals the percentage of data that would have "passed" within the new "suggested

range." As a reference point, it shows the percentage of data that passed within the current limit range. Users can re-set data tolerance limits to any new range. The new suggested limit range can be specified a number of ways: as exact values, as sigma multipliers, as offsets from the current values, and as percentages from the current values. Additionally, users can "on-the-fly" explore and select new suggested limit ranges.

+ Other ATW Software/Modules . . . including OSCAR Version Control System (OVCS), Test Executive, and other modules described within ATW's complementary OSCAR Product Manual.

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