

CONTROL

PROMOTING EXCELLENCE IN PROCESS AUTOMATION • CONTROLGLOBAL.COM

16th Annual READERS' CHOICE AWARDS

What Vendors Should Know about Customer Service
Retirement Planning for Control Systems
The New Shape of Industrial Computers

Web Exclusive:
Control Challenges at
Semiconductor Fab



JANUARY ■ 2008

 PutmanMedia



16th Annual READERS' CHOICE AWARDS

USERS CHOOSE

The picks are in! Users choose the best products and finest service for the 16th time.

For 16 years, *Control* magazine has produced the only unaided product poll in the process automation market. Yet again, we present the selections our readers have made.

When we say, “unaided,” we mean that there is no drop-down box with company names in it; there is only an empty text box, in which we ask the respondents to type the name of their selection. Next to it is a set of choice buttons for the service score, ranging from “Poor” to “Outstanding” on a 1 to 5 point scale.

The poll is web-based, with the invitation sent privately via email to a selected number of *Control* subscribers, carefully screened to eliminate vendors. A premium awarded in a random drawing from the first 100 respondents (this year’s was an iPod Nano—won by Tim Doud of Alcoa) is offered. A reminder email is sent a few days after each mailing.

Because differences of less than 3% are statistically insignificant, they are treated as tie scores.

This year, there were over 1,000 respondents providing our sample. The demographics of the sample are as follows:

Industry:

Chemicals	22%
Food & beverage	15%
Electric/gas/water/sanitary utilities	9%
Pulp & paper	8%
Petroleum refining	8%
Primary metals	8%
Rubber & plastics	8%
Stone/clay/glass/concrete	3%
Textile	1%
Tobacco	<1%
Engineering & integration firms	16%

Job function:

Engineering	55%
Plant operations	17%
Research & development	8%
Administration	5%
Other	15%



VENDORS OFFERING EXCEPTIONAL SERVICE

In addition to selecting the best technology providers, survey respondents were asked to evaluate the customer service performance of their favored technology providers on a scale of 1 to 5, poor to outstanding.

<p style="text-align: center;">4.5</p> <p>Emerson Process Management – Input/Output System Meriam – Portable Calibrator Siemens – Analyzer, Stack Gas/Emissions</p>	<p>ABB – Weighing System, Inline Acromag – Signal Conditioner AutomationDirect – Panel Displays Beck – Valve Actuator, Electric Emerson Process Management – Analyzer, Humidity/Moisture Emerson Process Management – Flowmeter, Open Channel Emerson Process Management – Flowmeter, Turbine Emerson Process Management – Level Switch, Point Emerson Process Management – Software, Advanced Process Control Emerson Process Management – Software, Loop Tuning Emerson Process Management – Software, Process Control Emerson Process Management – Software, SCADA Endress + Hauser – Flowmeter, Magnetic Endress + Hauser – Flowmeter, Vortex Shedding Endress + Hauser – Level Gauge, Electrical Property-Based Endress + Hauser – Level Gauge, Non-Contact Radar Federal Signal – Annunciator GE Fanuc – Software, Batch Control Honeywell – Safety/Emergency Shutdown System Magnetrol – Level Gauge, Electrical Property-Based Metso Automation – Valve Actuator, Pneumatic Ohmart Vega – Level Gauge, Nuclear Phoenix Contact – Power Supply Rice Lake – Weighing System, Inline Rockwell Automation – Software, Calibration Management Ronan Engineering – Annunciator Siemens – Power Supply Siemens – Weighing System, Inline Swagelok – Instrumentation Fitting Yokogawa – Analyzer, Process Spectrometer Yokogawa – Flowmeter, Variable Area</p>
<p style="text-align: center;">4.4</p> <p>Emerson Process Management – Remote Terminal Unit</p>	
<p style="text-align: center;">4.3</p> <p>AutomationDirect – Software, PLC Programming AutomationDirect – Terminal Block Emerson Process Management – Analyzer, Process Spectrometer Emerson Process Management – Level Gauge, Electrical Property-Based Jerguson – Level Indicator, Visual</p>	
<p style="text-align: center;">4.2</p> <p>Emerson Process Management – Level Gauge, Float/Displacer Type Emerson Process Management – Software, Design/Documentation Magnetrol – Level Switch, Point Yokogawa – Pressure Transmitter</p>	
<p style="text-align: center;">4.1</p> <p>Emerson Process Management – Process Control/Automation System Emerson Process Management - Safety/Emergency Shutdown System Emerson Process Management – Software, Alarm Management Emerson Process Management – Software, Human-Machine Interface FLIR – Thermal Imaging/Thermography</p>	
<p style="text-align: center;">4.0</p> <p>ABB – Analyzer, Process Spectrometer ABB – Recorder ABB – Variable Speed Drive</p>	

Analyzer, Ambient Gas Detector



- 1) MSA 28%
- 2) Draeger Safety 7%
- Air Instruments & Measurements 5%
- Scott Instruments 5%

MSA Ultima X3 Gas Monitor

Analyzer, Density/Concentration



- 1) Emerson Process Management 32%
- 2) ABB 7%
- Hach 7%
- Thermo Scientific 7%
- Endress + Hauser 6%

Micro Motion Coriolis Flow and Density Meter

Analyzer, Humidity/Moisture



- 1) Vaisala 17%
- 2) GE Sensing 8%
- Ametek 7%
- 4) Cosa 5%
- Emerson Process Management 5%
- Meeco 5%

Vaisala HMT 330

Control Valve

- 1) Emerson Process Management 58%
- 2) Flowserve 6%



Emerson Fisher Digital Valve

Analyzer, pH/ORP/Conductivity



- 1) Emerson Process Management 31%
- 2) Yokogawa 15%
- 3) Hach 10%
- 4) Invensys Foxboro 7%
- ABB 6%
- Endress + Hauser 6%
- Mettler-Toledo 5%

Emerson PERpH-X pH Sensor

Data Acquisition System

- 1) Rockwell Automation 18%
- 2) Invensys Wonderware 11%
- Emerson Process Management 9%
- GE Fanuc 9%
- National Instruments 9%
- 6) OSIsoft 6%

FactoryTalk View Software from Rockwell Automation



Analyzer, Process Chromatograph



- 1) Emerson Process Management 23%
- 2) Siemens 20%
- 3) ABB 10%

Model 700 Process Gas Chromatograph

Enclosures

- 1) Hoffman Engineering 67%
- 2) Rittal 12%

Hoffman Stainless Steel Cable Tray



Analyzer, Process Spectrometer



- 1(tie) ABB 12%
- Emerson Process Management 12%
- 3) Hach 8%
- Yokogawa 8%

ABB Multiwave Series Process Infrared Photometer
Emerson X-STREAM Process Gas Analyzer

Flowmeter, Coriolis Mass

- 1) Emerson Process Management 78%
- 2) Endress + Hauser 8%

Emerson's Micro Motion Coriolis Mass and Density Flowmeters



Analyzer, Stack Gas/Emissions



- 1) Emerson Process Management 24%
- 2) Ametek Thermox 12%
- 3) ABB 7%
- Horiba Instruments 5%
- Siemens 5%
- Teledyne Analytical 5%

Emerson X-STREAM In Situ Oxygen Analyzer

Flowmeter, Magnetic

- 1) Emerson Process Management 42%
- 2) Invensys Foxboro 13%
- Endress + Hauser 12%
- 4) Yokogawa 7%
- ABB 6%

Emerson's Rosemount 8700 Series



Annunciator



- 1) Ametek Panalarm 37%
- 2) Ronan Engineering 17%
- 3) Federal Signal 8%
- Rockwell Automation 8%

Ametek Series 90A Annunciator

Flowmeter, Open Channel

- 1) Siemens Milltronics 19%
- 2) Emerson Process Management 16%
- 3) ABB 10%
- ISCO 10%

Siemens OCMIII



Flowmeter, Positive Displacement



- 1) Emerson Process Management 40%
- 2) Badger Meter 11%
- Max Machinery 9%

Brooks BM Series Oval, Model BM10

Industrial Computer

- 1) Dell 38%
- 2) Rockwell Automation 17%
- 3) IBM (Lenovo) 8%
- HP 6%

Dell PowerEdge 1955 Blade System



Flowmeter, Thermal Mass



- 1) FCI 36%
- 2) Emerson Process Management 17%
- 3) Kurz Instruments 10%
- Sierra Instruments 10%
- 5) Invensys Foxboro 7%

FCI ST98 and ST75V Flowmeter

Input/Output System

- 1) Rockwell Automation 51%
- 2) Emerson Process Management 9%
- 3) Siemens 6%
- ABB 5%

Allen-Bradley FLEX I/O from Rockwell Automation



Flowmeter, Turbine



- 1) Emerson Process Management 16%
- 2) Hoffer Flow Controls 13%

Daniel Series 1500 Liquid Turbine Meter

Instrumentation Fitting

- 1) Swagelok 63%
- 2) Parker Hannifin 27%

Swagelok Modular Platform Components System



Flowmeter, Variable Area



- 1) Emerson Process Management 44%
- 2) ABB 12%
- 3) Yokogawa 8%

Emerson Brooks Ar-Mite Model 3750C

Intrinsic Safety Barrier

- 1) Pepperl + Fuchs 29%
- 2) MTL 25%
- 3) R. Stahl 12%
- 4) Phoenix Contact 6%

P + F KC Modules for Intrinsically Safe Applications



Flowmeter, Vortex Shedding



- 1) Emerson Process Management 40%
- 2) Yokogawa 20%
- 3) Invensys Foxboro 15%
- Endress + Hauser 9%
- 5) ABB 5%

Emerson's Rosemount Reducer Vortex

Level Gauge, Electrical Property-Based

- 1(tie) Ametek Drexelbrook 14%
- Endress + Hauser 14%
- 3) K-Tek 9%
- Magnetrol 9%
- Emerson Process Management 7%
- Siemens 7%
- 7) IFM Efector 5%

Ametek Universal RF Admittance True Level
E + H Prosonic & Micropilot



Flow Switch



- 1) FCI 22%
- 2) IFM efector 13%
- 3) GEMS Sensors 8%
- Dwyer Instrument 7%
- 5) SOR 5%

FCI FLT93 and FS2000L Flow Switches

Level Gauge, Float/Displacer Type

- 1(tie) Emerson Process Management 16%
- Magnetrol 16%
- 3) K-Tek 6%
- Masonilan 6%
- GEMS Sensors 5%
- Kobold 5%
- MTS 5%
- Siemens 5%

Emerson's Fisher Type DL3
Magnetrol EZ Modulelevel Displacer



Level Gauge, Contacting Radar



- 1) Emerson Process Management 27%
- 2) Endress + Hauser 19%
- 3) Ohmart/VEGA 15%
- Magnetrol 13%
- 5) Siemens 8%

Emerson's Rosemount 3300 Series

Level Indicator, Visual



- 1) K-Tek 27%
- 2) Jerguson 18%
- 3) Ernst 14%
- 4) GEMS Sensors 9%
- Magnetrol 9%
- Penberthy 9%

K-Tek KM26 Magnetic Level Gauge

Level Gauge, Non-Contact Radar



- 1) Emerson Process Management 38%
- 2) Ohmart/VEGA 23%
- 3) Siemens 14%
- 4) Endress + Hauser 11%

Emerson's Rosemount 5400 Series

Level Switch, Point



- 1) Endress + Hauser 30%
- 2) Ametek 11%
- Siemens 11%
- Magnetrol 9%
- 5) Bindicator 8%
- Emerson Process Management 6%

E + H Soliphant & Liquiphant

Level Gauge, Inventory Grade



- 1) Emerson Process Management 59%
- 2) Siemens 12%

Emerson's Rosemount TankRadar Rex

Operator Interface Terminal



- 1) Rockwell Automation 49%
- 2) Dell 7%

Allen-Bradley PanelView Plus Operator Interface Terminals from Rockwell Automation

Level Gauge, Laser



- 1) K-Tek 29%
- 2) Keyence 21%

K-Tek LM200 Laser Level Transmitter

Panel Displays



- 1) Rockwell Automation 52%
- 2) AutomationDirect 6%
- Red Lion 5%

Allen-Bradley InView Message Displays from Rockwell Automation

Level Gauge, Nuclear



- 1) Ohmart/VEGA 39%
- 2) Thermo Scientific 25%
- 3) Ronan Engineering 11%
- 4) Berthold 7%

Ohmart/VEGA Fiber Flex-B

Portable Calibrator



- 1) Fluke 54%
- 2) Altek/Transmaton 11%
- 3) GE Druck 6%
- Beamex 5%
- Meriam 5%

Fluke 744 Documenting Process Calibrator

Level Gauge, Ultrasonic



- 1) Siemens Milltronics 38%
- 2) Endress + Hauser 18%
- 3) Ohmart/VEGA 11%
- Emerson Process Management 9%
- 5) Banner 5%
- Hyde Park 5%

Siemens SITRANS Probe LU

Power Supply



- 1) Sola Hevi-Duty 30%
- 2) Acopian 13%
- 3) Phoenix Contact 10%
- 4) Rockwell Automation 6%
- Lambda 5%
- Siemens 5%

Sola Hevi-Duty SDN-C Power Supplies



Pressure Transmitter



- 1) Emerson Process Management 59%
- 2) Yokogawa 6%
- 3) ABB 5%
- Invensys Foxboro 5%

Emerson's Rosemount 3051S Wireless

Recorder



- 1) Yokogawa 41%
- 2) Honeywell 22%
- 3) Invensys Eurotherm/Chessell 11%
- 4) ABB 8%

Yokogawa DAQStation DX Advanced Series Paperless Videographic Recorder

Process Control/Automation System



- 1) Rockwell Automation 33%
- 2) Emerson Process Management 27%
- 3) Honeywell 8%
- ABB 7%
- 5) Invensys Foxboro 5%

Allen-Bradley ControlLogix Automation Control System from Rockwell Automation

Resistance Temperature Detector



- 1) Emerson Process Management 32%
- 2) Omega Engineering 13%
- 3) Pyromation 9%
- Burns Engineering 7%
- 5) JMS 6%

Emerson's Rosemount RTDs

Process Loop Controller



- 1(tie) Honeywell 16%
- Siemens 16%
- 3) Invensys Foxboro/Eurotherm 13%
- 4) Emerson Process Management 9%
- Yokogawa 9%

Honeywell UDC3500 Universal Digital Controller
Siemens 353 Process Automation Controller

Safety/Emergency Shutdown System



- 1) Rockwell Automation 28%
- 2) Invensys Triconex 21%
- 3) Emerson Process Management 11%
- 4) Siemens 6%
- Honeywell 5%

Allen-Bradley ControlLogix Programmable Automation Controller with SIL 2 Rating from Rockwell Automation

Programmable Logic Controller



- 1) Rockwell Automation 74%
- 2) Schneider Electric 6%
- GE Fanuc 5%

Allen-Bradley ControlLogix Programmable Automation Controller from Rockwell Automation

Signal Conditioner



- 1) Moore Industries 28%
- 2) Phoenix Contact 16%
- Invensys Eurotherm/Action 15%
- 4) Acromag 7%

Moore Industries SPA2 Universal Signal Interface

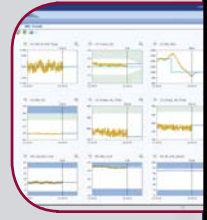
Purge System



- 1) Pepperl + Fuchs/Bebco 78%

P + F Universal Purge/Pressurization System for Type X & Ex Areas

Software, Advanced Process Control



- 1) Pavilion/Rockwell Automation 25%
- 2) Emerson Process Management 22%
- 3) GE Fanuc 8%
- AspenTech 7%
- Invensys Wonderware 7%

Pavilion Technologies
(a Rockwell Automation company)

Remote Terminal Unit



- 1) Rockwell Automation 45%
- 2) Emerson Process Management 12%
- 3) Control Microsystems 5%

Allen-Bradley MicroLogix 1100 Programmable Controller from Rockwell Automation

Software, Alarm Management

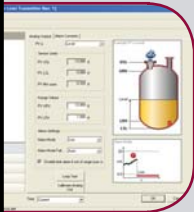


- 1) Rockwell Automation 24%
- 2) Emerson Process Management 18%
- 3) Siemens 8%
- TiPS 8%
- GE Fanuc 7%
- Invensys Wonderware 7%
- 7) Honeywell 5%
- Iconics 5%
- Matrikon 5%

FactoryTalk Alarms and Events from Rockwell Automation



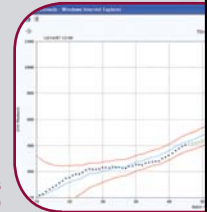
Software, Asset Management



- 1) Emerson Process Management 39%
- 2) Rockwell Automation 12%
- 3) IBM/Maximo 7%
- Infor 6%

Emerson's AMS Suite: Intelligent Device Manager

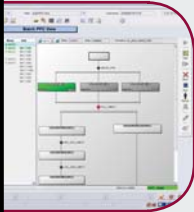
Software, Neural Network



- 1) Pavilion/Rockwell Automation 44%
- 2) Emerson Process Management 33%

Pavilion Technologies
(a Rockwell Automation company)

Software, Batch Control



- 1) Emerson Process Management 33%
- 2) Rockwell Automation 25%
- 3) Invensys Wonderware 15%
- 4) GE Fanuc 7%
- Honeywell 7%

Emerson's DeltaV Batch

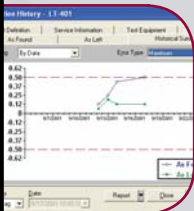
Software, PLC Programming



- 1) Rockwell Automation 75%
- 2) AutomationDirect 5%
- GE Fanuc 5%
- Schneider Electric 5%

RSLogix 5000 Programming Software
from Rockwell Automation

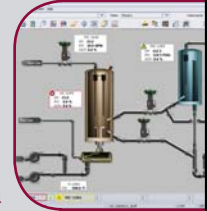
Software, Calibration Management



- 1) Emerson Process Management 22%
- 2) Fluke 15%
- Rockwell Automation 15%
- 4) Beamex 9%
- Honeywell 7%

Emerson's AMS Suite: Calibration Assistant

Software, Process Control



- 1) Emerson Process Management 35%
- 2) Rockwell Automation 28%
- 3) Honeywell 9%
- 4) ABB 5%

Emerson's DeltaV Process Control

Software, Design/Documentation



- 1) Autodesk 29%
- 2) Rockwell Automation 21%
- 3) Emerson Process Management 9%
- Microsoft/Visio 9%
- 5) Integraph 5%

Autodesk AutoCAD Electrical

Software, SCADA



- 1) Invensys Wonderware 27%
- 2) Rockwell Automation 24%
- GE Fanuc 23%
- 4) Emerson Process Management 5%
- Siemens 5%

Invensys Wonderware SCADA Software

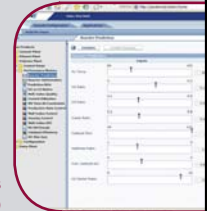
Software, Human-Machine Interface



- 1) Rockwell Automation 31%
- 2) Invensys Wonderware 25%
- 3) GE Fanuc 16%
- 4) Emerson Process Management 8%

FactoryTalk View Software from Rockwell Automation

Software, Simulation



- 1) Rockwell Automation/Pavilion 30%
- 2) Mynah Technologies 15%
- 3) AspenTech 7%
- National Instruments 5%

Pavilion Technologies
(a Rockwell Automation company)

Software, Loop Tuning



- 1) Rockwell Automation 27%
- 2) Emerson Process Management 22%
- 3) Expertune 17%
- 4) ControlSoft 8%
- 5) Honeywell 5%

RSLogix 5000 Programming Software from
Rockwell Automation

Temperature Sensor, Infrared



- 1) Fluke Raytek 27%
- 2) Iacon 23%
- 3) Mikron 10%
- 4) Omega Engineering 7%

Fluke Raytek XR

Temperature Transmitter



- 1) Emerson Process Management 63%

Emerson's Rosemount 3144P

Variable Speed Drive

- 1) Rockwell Automation 52%
- 2) ABB 10%
- 3) Baldor/Reliance 6%
- Siemens 6%
- Eaton Cutler-Hammer 5%

Allen-Bradley PowerFlex 700 AC Drive from Rockwell Automation



Terminal Block



- 1) Phoenix Contact 30%
- 2) Rockwell Automation 23%
- 3) Weidmuller 11%
- Wago 9%
- 5) AutomationDirect 7%
- ABB 5%
- Schneider Electric 5%

Phoenix Contact CLIPLINE complete system

Vibration Instrumentation

- 1) GE Energy 49%

GE Energy Vibration Monitoring System



Thermal Imaging/Thermography



- 1) FLIR 55%
- 2) Fluke Raytek 24%
- 3) Mikron 10%

FLIR ThermoVision A320

Weighing System, Load Cell

- 1) Mettler-Toledo 49%
- 2) Hardy Instruments 10%
- Rice Lake 10%
- 4) Vishay BLH 6%
- Fairbanks 5%

Mettler Toledo IND780 Weighing Terminal



Thermocouple



- 1) Omega Engineering 30%
- 2) Emerson Process Management 16%
- 3) Pyromation 9%
- 4) JMS 6%
- Watlow 5%

Omega Probes

Weighing System, Inline

- 1) Mettler-Toledo 27%
- 2) Siemens 14%
- 3) ABB 9%
- Rice Lake 9%

Mettler Toledo HI-SPEED XS3 Checkweigher



Valve Actuator, Electric



- 1) Flowserve 23%
- 2) Emerson/ASCO 15%
- Rotork 14%
- 4) Beck 9%
- 5) EIM 6%
- Metso Automation 6%

Flowserve's Limitorque MX actuator

Wire & Cable

- 1) Belden 68%
- 2) Anixter 7%

Belden DataTuff Industrial Ethernet Connectivity and Cordsets Products



Valve Actuator, Pneumatic



- 1) Emerson Process Management 53%
- 2) Flowserve 11%
- 3) Metso Automation 5%

Emerson's Fisher Type 657 Actuator

Editor's note:

Because differences in the results of less than $\pm 3\%$ are statistically insignificant, they are being treated as ties in the numerical rankings.