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CONTROL / ARC  
TOP 50**

DECEMBER / 2006



# CONTROL & ARC PRESENT FIFTY COMPANIES WORTH WATCHING

## *ARC and Control Count Off the Top Fifty Automation Companies.*

**By Walt Boyes, Editor in Chief, and Larry O'Brien, Research Director Process Automation, ARC Advisory Group**

It has been getting harder and harder to produce a Process Automation Top Fifty for North America. In the first place, the lines are blurring between process, batch and discrete automation, and in the second place, the automation business, along with all manufacturing, has become increasingly global in scope.

For this edition of the Top Fifty, we've rewritten the rules. Here's what we are including in our definition of the fifty largest companies:

- North American revenues, broken out from global revenues,
- Process automation systems and related hardware software and services,
- PLC business, as well as related hardware, software, services, I/O and bundled HMI,
- Other control hardware components, such as third party I/O, signal conditioners, intrinsic safety barriers, networking hardware, unit controllers and single and multiloop controllers,
- Process safety systems,

Rank	Company Name	2005 North America \$ millions	2005 Worldwide \$ millions	Comments
1	Emerson Process Management	2,487.5	4,693.4	almost all process
2	Rockwell Automation	1,776.6	3,026.6	mostly discrete; approx. 20% process
3	ABB	1,534.0	6,669.6	includes discrete; less than 50% process
4	Honeywell Process Solutions/Sensing & Control	1,400.4	2,700.0	mostly process
5	Siemens	895.4	8,804.1	includes discrete; less than 50% process
6	Invensys	842.0	2,215.8	almost all process
7	Schneider Electric	728.0	3,770.0	mostly discrete
8	GE	628.3	1,453.8	includes discrete; less than 40% process
9	Ametek EIG	444.7	808.5	mostly process
10	ThermoElectron Measurement & Control	403.7	672.9	process and lab
11	Flowserve Flow Control Division	357.7	894.3	mostly process
12	Roper Industries Industrial Technology	331.1	430.0	mostly process

Rank	Company Name	2005 North America \$ millions	2005 Worldwide \$ millions	Comments
13	Spectris	323.8	1,252.2	mostly process
14	MKS Instruments	320.8	509.3	mostly discrete
15	Danaher Industrial Technologies	320.0	400.0	includes discrete
16	National Instruments	275.5	571.8	includes discrete
17	Phoenix Contact	240.0	960.0	includes discrete
18	Omron	215.2	2,310.0	mostly discrete; Omron "does not pursue" process business in North America
19	Metso Automation	208.8	745.8	mostly process
20	Yokogawa Electric	185.3	2,003.8	includes discrete
21	Endress+Hauser	169.5	1,130.1	almost all process
22	Turck	109.0	330.2	mostly discrete
23	Aspen Technology	107.0	269.6	almost all process
24	Yamatake	85.2	796.6	almost all process
25	Teledyne Instruments	84.0	158.0	includes process and lab
26	Weidmuller	78.2	391.2	includes discrete
27	OSIsoft	67.8	113.0	almost all process
28	Pepperl+Fuchs	67.7	356.2	includes discrete
29	MTL Instruments Group, plc	62.7	141.0	almost all process
30	Dresser Industrial	61.8	357.0	almost all process
31	Badger Meter	55.5	64.8	almost all process
32	Bristol Babcock (Emerson)	52.0	80.0	will be shown w/Emerson in 2006
33	MSA	50.0	80.0	includes all manufacturing
34	Microwave Data Systems	48.0	60.0	mostly manufacturing
35	MTS	47.0	93.0	mostly discrete
36	CCI (Control Components Inc.)	45.6	110.2	almost all process
37	IFM Efector	45.0	300.0	mostly discrete
38	Parker Industrial	42.0	93.4	includes discrete
39	Mettler-Toledo	37.0	105.0	mostly process
40	Magnetrol	35.0	70.0	almost all process
41	Ohmart-Vega	34.0	74.0	almost all process
42	Tyco Flow Control	32.5	100.0	almost all process
43	Matrikon	32.4	60.0	includes all manufacturing
44	SPX Valves & Controls	28.6	51.5	almost all process
45	Iconics	26.3	32.0	almost all process
46	Horiba	26.0	260.0	includes process and lab
47	Prime Measurement Products (Barton)	26.0	53.0	almost all process
48	Burkert	25.9	287.3	almost all process
49	Cashco	25.0	30.0	almost all process
50	FMC	24.0	40.0	mostly process
<b>Total</b>		<b>15,549.5</b>	<b>50,949.0</b>	

#### HONORABLE MENTION

Honorable Mention should be given to Krohne, Pyromation, ICS-Triplex, Pavilion Technologies, Racine Federated, Opto 22 and Controlotron (now part of Siemens) who are 51st through 57th, respectively.



- SCADA systems for oil and gas, water and wastewater, and power distribution,
- AC drives,
- General motion control systems (GMC),
- Computer numerical control (CNC) systems,
- Process field instrumentation, such as temperature and pressure transmitters, flowmeters, level transmitters and associated switches,
- Analytical equipment, including process electrochem, all types of IR technology, gas chromatographs for industrial manufacturing and related products,
- Control valves, actuators and positioners,
- Discrete sensors and actuators,
- All kinds of automation-related software, from advanced process control, simulation and optimization to third-party HMI, plant asset management, production management (MES), ERP integration packages from the major automation suppliers and similar software,
- All other automation-related services provided by the automation suppliers,
- Condition-monitoring equipment and systems,
- Ancillary systems, such as burner management systems, QCSs for pulp and paper, etc.

What we're not including are

- Pumps and motors,
- Robotics,
- Material-handling systems,
- Supply chain management software,
- Building automation systems,
- Fire and security systems,
- Processing equipment such as mixers, vessels, heaters, etc., as well as process design licenses from suppliers that have engineering divisions,
- Electrical equipment such as low-voltage switchgear, etc.

We've found it nearly impossible to achieve a hard number for "process automation" only, so we're reporting all automation, and where we have a good

idea of what the ratio between process and discrete is, we'll show that. The data is for 2005, as 2006 numbers are not yet available for many companies.

### **The Merger Urge Is Still With Us**

Merger activity is still alive and well. Emerson acquired Bristol Babcock in early 2006; Siemens bought Controlotron; and recently, Baldor acquired the Dodge and Reliance businesses from Rockwell.

Of course, this activity brings with it the seeds of new company development. Spinoffs and startups after an acquisition or divestiture are a rich tradition in the automation business, and we expect the trend to continue.

While large fish are gobbling up smaller fish, there won't be many, if any, large fish going after other large fish. All the leading automation companies are reporting 2006 quarterly numbers in advance of sales for 2005, and many are reporting double-digit growth in both sales and profit dollars, yen or euros—meaning end users won't have to decide their automation strategies based on a best guess about who might be still in business two to three years hence.

### **Would You Like Fries With That?**

Automation services are now becoming a mainstay for the automation suppliers in the face of declining hardware revenues. Users have realized that even in-house services have a cost—sometimes a premium one—so they are outsourcing more of these service functions to automation suppliers.

Service is the fastest growing segment of the automation market today. The vast pools of engineering expertise that used to exist at major user companies have shrunk to critically low levels. Many automation services required throughout the life cycle of a plant or factory can no longer be performed in-house, providing a boon to service suppliers. Furthermore, those pools of engineering expertise have shrunk in general. So many of the supplier companies who've been aggressively pursu-

ing outsourced services business are finding qualified personnel scarce. Salaries are going up fast as companies bid for the smaller numbers.

### **It's All a Blur Anyway**

The lines between process and discrete automation continue to blur. Rockwell Automation and Siemens, for example, are aggressively targeting the process industries. It is no longer a DCS/PLC game. The value proposition of a completely integrated manufacturing plant is one that has eluded many users in the batch and hybrid industries, particularly among second-tier manufacturers, where process and discrete operations tend to be separate. This has allowed end users to have two or more strategic automation suppliers. Companies whose focus has been traditionally on either process or discrete automation are moving toward the other automation areas as fast as they can. Honeywell, added another 10 years to its agreement with Rockwell to provide discrete products to its customers in 2005. In turn, Rockwell has bought companies such as Datasweep and made alliances with software companies such as OSIsoft to enable it to be a vertical player in the process industries. Groupe Schneider has acquired ProSoft, Citect and others for the same reason.

### **Managing Up**

True operational excellence and maximum plant performance cannot be realized without the integration of all aspects of the manufacturing process. Add to this the need to maximize the use of human and capital resources, and you can see why every major automation company and some second-tier players have announced an integrated architecture to get from the plant floor to the executive suite and the boardroom. These schemas offer a complete view of the entire plant with a single, unified platform for engineering and configuration, visualization, control and asset management. Even companies that do not produce hardware,



such as Matrikon and Iconics, are developing integrated architectures, hoping to find a niche between the ERP and the MES/plant-floor spaces.

### **The Cloudy Crystal Ball**

Demand-side conditions are still strong and growing, although there are some signs of softening growth in North America. The main thing that suppliers must address in North America is the considerable installed base. That's why we're seeing such an emphasis on competitive migration programs right now in the DCS market. All the suppliers are trying to convert the installed base to their platform, and the easier they make that conversion, the greater their chances of success.

Rockwell, Siemens, Schneider and the other PLC-like DCS platform vendors believe they can provide detailed, defined migration paths from traditional DCS to their platforms. Emerson, Honeywell, Yokogawa, ABB and Invensys, the traditional DCS companies, all have developed detailed migration paths to their systems because they are aware of the huge installed base in both North America and Western Europe. End users are understandably reluctant to "rip and replace" control systems to change suppliers or upgrade, and suppliers who insist on "R&R" are finding less-than-warm welcomes.

Tough times on the automotive side are having an impact on the discrete suppliers, who are trying to reduce their dependence on it, pushing the move toward batch and process automation, since the process industries are countercyclical with the automotive industries.

After an absence of several years, suppliers are refocusing on the water, wastewater and utilities spaces. Companies all over North America are replacing, upgrading and repairing infrastructure that was built in the 1970s and 1980s and migrating to new control systems, data historians and entire existing systems.

### **They'll Come Back!**

High energy prices will continue to bolster the oil-and-gas sector and refining. Three-dollar-per-gallon gasoline is certain to return in the coming months because demand globally and in North America continues to outstrip supply. Biofuels and alternative energy will provide additional revenue for automation suppliers and jobs for automation professionals. And wonder of wonders, the nuclear power generation industry has gotten off its deathbed. Several new projects are either in the planning or permitting stage in North America for the first time in nearly thirty years.

The big cloud on the horizon is the consistent prediction by many financial analysts of a recession, possibly a deep one, beginning in 2008. Some analysts are predicting that this may last two to three years, depending on the geopolitical situation, among other factors. The current economic rising tide has lifted all the automation suppliers, but a prolonged recession may show us whose boats are leaky and whose are not.

### **You Mean We Have to Justify This?**

Manufacturing automation systems gradually have been integrated into business systems for some time now. Automation purchase criteria are increasingly driven by business value propositions and the projected impact on bottom-line growth. Touting expected automatic productivity or growth gains to justify new or upgraded systems is not enough. Now the suits want to see how automation plans mesh with overall corporate goals.

We are seeing a fundamental change in the theory of tuning systems and plants.

From the earliest days of automation, control loops and machine cycles have been continuously optimized—the goal is to get each loop or each machine cycle to perform to at its best. Unfortunately, at the ERP and MES layers, it may be necessary to de-tune a plant or a process train or manufacturing line to bring the output in line with the overarching goals of the enterprise. This has taken some

automation professionals and even some supplier companies by surprise. The idea that downtuning may be a desirable goal is still taking some time to sink in.

### **The Wireless Cloud: Standards Sorta**

With asset availability overtaking loop performance as one of the most important issues in automation, it has not escaped anybody's notice that there are already over 20 million devices installed with HART communications onboard. This is why more than 20 companies displayed prototype HART wireless devices, including wireless upgrade kits for existing HART transmitters, while those same companies and others are in a knife fight over ISA's attempt to create a single industrial wireless standard, SPI00. Depending on which side of that battle you're on, you either see the existing HART installed base as "low-hanging fruit" or a real opportunity to open up the number of sensors and the amount of data from existing sensors that plant operators can access and use to make decisions on how best to run their plants.

Whether the rest of the wireless cloud—plant security, wireless workers, RFID, geolocation—will be integrated seamlessly into the plant control systems is still in doubt. In fact, some senior end-user engineers have privately expressed doubt that it will happen or that it is even necessary.

### **And It Just Keeps Going...**

The comeback of North American manufacturing after predictions of its demise shows the underlying strength of the NA market. Analysts estimate it will continue to be the largest in the world for at least another 15 years, while China and India take over places two and three, respectively. This means that, now that the offshoring and outsourcing trends have burned out over the twin issues of supply-chain unreliability and increasing cost, we can expect a robust North American manufacturing scene for the next few years and, correspondingly, a healthy and growing automation industry. 