

ARC VIEW

NovaTech Continues as
Trusted Partner

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NovaTech Continues as Trusted Partner

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Keywords

NovaTech, DCS, Process Automation, Batch Automation

Summary

[NovaTech](#) recently briefed ARC Advisory group on its relatively long history and the current state of the company and its offerings. We were pleased to learn that, while not an obvious market leader in the DCS space, NovaTech has a very loyal customer following. Its offering is technologically advanced and has demonstrated strong backward

The D/3 debuted 35 years ago and won the Vaaler Award for its combination of sequential and batch automation into the "first hybrid plant-wide" DCS control system.

application compatibility. This ARC View focuses on the company's process automation offering and customers.

NovaTech's process automation solution, D/3, was originally introduced in 1981 by EMC Controls, building on the D/2 System introduced back in 1975. Texas Instruments (TI) purchased the process business in 1987 and continued the development throughout ownership until 1995, when GSE Systems purchased the division from TI. In 2003, NovaTech purchased the Process Systems Business from GSE and the following year, purchased Belgium-based Newton Integrated Services to extend its services offerings to Europe.

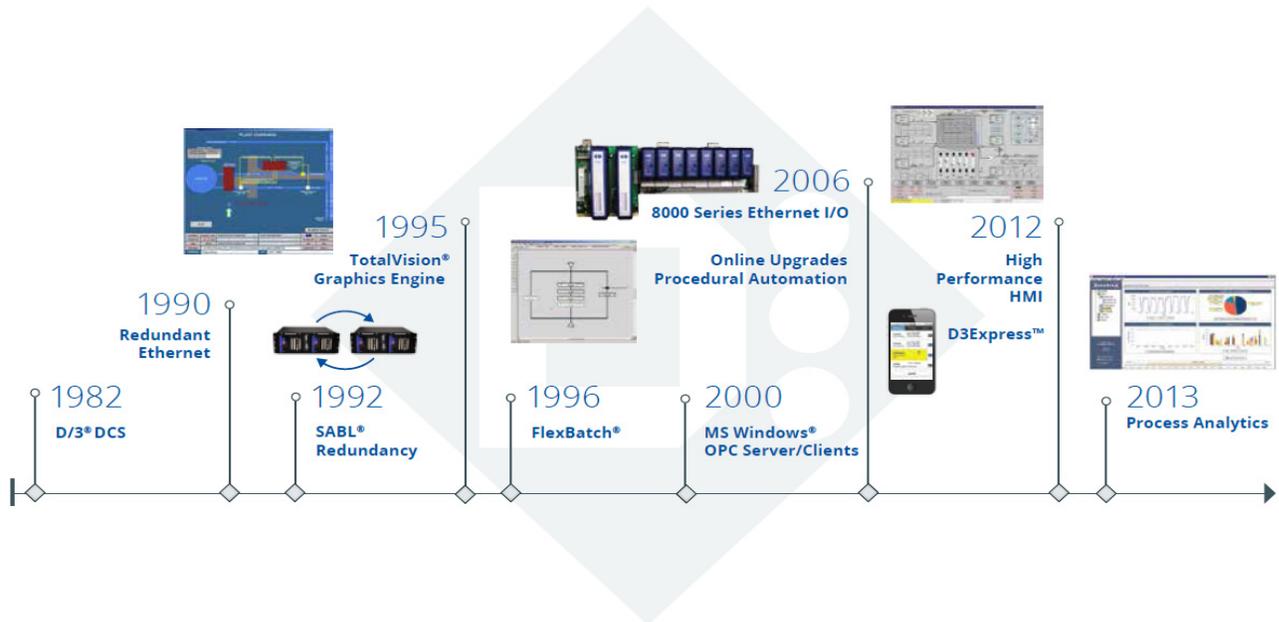
Key findings include:

- Customers view NovaTech as a long-term, viable, and trusted partner
- D/3 has continually evolved to meet the demands of a loyal user base
- D/3 maps well with ARC's vision of the Collaborative Process Automation System (CPAS)



Who Is NovaTech?

NovaTech is a medium-sized, privately held company with offices around the world. Its global customers include both process manufacturers and electric utilities. The company has two divisions covering Process and Utility Automation. Its three main product lines are the D/3 Process Automation System, Bitronics Power Meters and Event Recorders, and the Orion Substation Automation Platform.



NovaTech Timeline

NovaTech Process Solutions produces the D/3 DCS for continuous and batch process automation. When it debuted in 1981, the D/3 System won CHEMICAL PROCESSING magazine's prestigious Vaaler Award for its ability to combine sequential and batch automation into the "first hybrid plant-wide" DCS control system. The system's Sequence and Batch Language (SABL) for application development remains a strategic differentiator for the company.

Continuous Migration Path

According to company executives, the NovaTech D/3 DCS is designed to maximize the lifetime profitability of a process plant by combining reliability, application software configurability, and a continuous migration path. The company believes this represents a unique combination in the

process automation market. To achieve this, the solution offers a “secure, open, and fully redundant architecture.” The D/3 employs off-the-shelf servers and network hardware along with NovaTech’s process controllers and the 8000 Series I/O. Company-developed software supports modular and standardized programming to manage sequential, batch, and continuous processes within a single programming environment. NovaTech provides backwards compatibility for user applications while continuously incorporating new technologies and capabilities in stepwise upgrades that are designed to be easy to manage. Software upgrades can be implemented online without interrupting the process operations.

System Capabilities

The D/3 System’s combination of company-developed programming software, high-capacity controllers, Ethernet I/O, and off-the-shelf servers and network hardware – with full redundancy available across the system – provides what appears to be a compelling value proposition, particularly for owner-operators with both continuous and batch processing operations.

Integrated Continuous, Batch, and Sequential Automation

The unit-relative and object-oriented programming language offers a degree of integration, granularity, and application versatility not found in many other control languages. According to the company, users often cite the language as the most powerful and essential aspect of the D/3’s capability to handle their most complex process challenges.

Users develop automation projects with graphical, object-oriented authoring applications for both analog and digital tags. “FlexBatch” users can develop, schedule, manage, document, and centrally maintain recipes for globally distributed plants without engineering or IT personnel. NovaTech indicates that FlexBatch exceeds the ISA S88 and IEC 61512 standards for batch control.

Each optionally redundant D/3 Process Control Module (PCM) has the horsepower to control 25 or more unit operations, 2,000 tags, 4,500 I/O points, and 100 active batches.

Operator Interface

Users can create, modify, and access process data through a combination of process graphics, and web/mobile KPI dashboards. The “TotalVision” HMI facilitates high-performance graphic techniques as outlined by ISA101 Human-Machine Interface standards. Systems are designed in accordance with ANSI 18.2 Alarm Management standards. Data from any plant historian can be seamlessly integrated into displays. Users can view multiple trend displays at each operator workstation as well as embedded within process graphics. In addition, operator interfaces are multilingual capable and allow the user to easily switch languages between displays.

Reporting

The system utilizes both real-time and historical data to generate batch and shift change reports. Reports can be manually generated or automatically triggered based on plant operational status. Furthermore, reports are made available to all plant personnel through a web browser.

Data Integration

Process data is made available in standard formats like ODBC, OPC, and standard C++/.NET data access techniques, so that it can be delivered to Enterprise Resource Planning (ERP), Supply Chain Planning (SCP), equipment control and Laboratory Information Management Systems (LIMS).

I/O

NovaTech 8000 Series Ethernet I/O operates within a -40°C to +70°C temperature range and meets ISA G3 corrosion resistance. The I/O includes native capabilities for HART and can be configured in a unique and cost-effective 1-to-6 redundancy configuration. D/3 also directly supports I/O from Schneider Electric and Siemens. Available protocols include Modbus/TCP, EtherNet/IP, Profibus, and DF-1.

Global Services

NovaTech engineering and other services have helped deliver successful projects around the world for over thirty years. The company’s services offerings (available per project or as part of a support agreement) combine the latest process automation technologies with applications expertise. The

company's goal is to help its global customers achieve high levels of safety, agility, and performance.

What Customers Say

NovaTech shared testimonials from multiple customers across a variety of different industrial sectors and global regions. This feedback demonstrates that the company has emerged as a trusted partner for its customers, a

"The NovaTech system has substantially increased reliability, improved data integrity, and made my job a whole lot easier." Electrical Superintendent, ADM.

partner that is easy to work with; provides robust, technologically advanced solutions; and respects their need to upgrade automation systems without having to re-create applications or interrupt their industrial processes.

Conclusion

NovaTech's D/3 System has been used in process control applications for over three decades. During that time, it cultivated a loyal following of users in the specialty chemical, food & beverage, and other process industries who have helped the company refine and develop its offerings. The system provides functionality comparable to other well-known competitive products and the company has shown itself to be a reliable automation partner over its thirty-year history.

The emphasis on procedural/batch automation, cybersecurity, and data integration align with ARC's [Collaborative Process Automation System](#) vision.

NovaTech has demonstrated longevity in this space and the D/3 System has proven its worth to customers. The company's continued investment in technology refresh, as evidenced by the upcoming Version 15 and new PCM5 process controller, indicates the company's commitment to the product line and its customers.

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