

SIEMENS

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Nuremberg/Erlangen

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- Check against delivery -

The Siemens A&D Group – Broadening market leadership with innovative products and comprehensive solutions

Ladies and Gentlemen,

Let me also welcome you cordially to the third joint press conference of the Groups Industrial Solutions and Services and Automation and Drives. This joint press conference has now become a tradition, which, looking around me here today has proven, once again, to be a popular initiative. I am confident that this response is not only attributable to the third new line up here but also to the fact that we keep supplying you with useful new information. And this is also our aim for today.

Continuing successful growth in 2000/2001

Before we discuss our joint theme “Increasing customer benefit”, I would like to make a few comments about our business in the last fiscal year, 2000/2001, and the first quarter of current fiscal 2001/2002.

A&D is active in four areas: factory automation, process automation, motion control and drives, as well as low voltage control and installation technology. In 2000/2001, we were able to increase year-on-year growth in these four areas with respect to new orders, sales, and earnings. New orders increased 11 per cent to roughly EUR 9.1bn, sales rose 13 per cent to EUR 8.9bn. EBITA increased 13 per cent to EUR 981m, corresponding to an EBITA margin of 11.0 per cent.

The five per cent decrease in new orders, which marked the last quarter of fiscal 2001 became a more discernible trend in the first quarter of the current fiscal year. Compared to the first quarter of fiscal 2001, new orders went down by about one per cent to approximately EUR 2.4bn and sales dropped six per cent to roughly EUR 2bn. With an EBITA of EUR 173m, however, we were able to achieve a very respectable result, in view of the general economic situation; our EBITA margin is 8.8 per cent.

Maintaining our leading position

We believe we will be able to stabilize our figures and our EBITA margin in particular at the first quarter level. In the final analysis this means striving to gain a greater market share whilst remaining profitable, even though we expect the economic situation to recover only towards the end of the year. With its range of products, systems, and solutions, A&D enjoys an unparalleled broad line position. We are the only automation manufacturer to work from a single platform in both factory and process automation. We work in the most diverse industries and deal with the most varied clientele groups. Our business operations are more internationally based than almost any other company,

although substantial business opportunities still await us in North America and in Asia/Pacific.

E-business has also contributed to our profitability. A&D has been on the Internet since early 1996, and over 80,000 A&D products and systems are available online. Orders may be placed with our A&D Mall from 16 countries in Europe, Asia and Australia. As early as December 2001 more than one third of all orders were received in electronic format in 2003 this number is expected to rise to 60 per cent of all orders.

At the same time we are checking our internal processes for their potential e-business capability and have started to transform them wherever this is possible and makes sense. This project will be completed at A&D by the end of 2003, and we are currently right on schedule. A&D expects this project to reduce processing costs by an average 10 per cent, with an additional 3 per cent cut in the cost of materials as a result of e-procurement.

Innovation to increase customer benefit

In the future, as now, the inspiration for our work and the basis for our success will come from the systematic translation of our customers' requirements into innovations, leading to an increase in profitability. Halting innovation merely to save costs is like stopping the clock to save time. We are confident that our philosophy makes us the most preferred partner for automation clients.

For many years we have been working closely with our customers on new developments. Every new technical advance opens up new opportunities to optimize production. This, in turn, creates new technical requirements, which, once applied to new products, open up yet more opportunities. Thus, we have come a long way with our customers – from horizontal integration at the field and control level, to vertical integration of individual data islands from the control to the planning level, and the creation of horizontally and vertically integrated automation landscapes.

Today, based on Totally Integrated Automation, Siemens is able to provide comprehensive support at all levels, from goods inwards to goods outwards, from the field to the ERP level, combined with smartpower management for facility infrastructures based on Totally Integrated Power. This is because TIA and TIP are also converging more and more. Automation – both factory and process automation – is becoming increasingly intertwined with electrical power supply. And this involves clear cost advantages: At one German car manufacturer, for instance, we were able to use TIP to cut the cost of energy required to produce one vehicle by 10 per cent. This very successful example is no doubt one reason why "Totally Integrated Power" has been so eagerly adopted by other European and Asian countries, such as France or China.

Our initial projects, which have included factories, football stadiums, and supermarkets, all indicate our customers' wish for integrated solutions for electrical infrastructures. Equally important to our customers, however, is that the latest standards, rules and regulations always be applied. This we achieve with Totally Integrated Power, but over and above that we also provide everything from a single source –something, which nobody else as yet has been able to do.

At the Hanover Fair and at the Light & Building fair, which opens a day earlier here in Frankfurt, we will be showing some new functions of the Simaris software family, which lies at the heart of TIP. A new Simaris design tool, for example, can now be used to plan and dimension everything from medium voltage to low voltage within one program.

Implementing new requirements

It goes without saying that we endeavor to work as profitably as possible. We believe, however, that our recipe for success lies in our aim to increase our customers' profitability. We have made good progress with our platforms, the product and system innovations based on them, as well as our ongoing efforts in the field of standardization and modularization. Increased productivity, quality

and availability, improved asset management, shorter engineering times and lower capital expenditure have allowed our customers to save up to 25 per cent of the automation and energy costs of a single plant.

The Siemens Account Management System uses a tried and tested method to turn our leading products, systems, solutions and services into industry-specific business. Direct contacts between our Corporate Account Managers and our key accounts don't, however, just help us to generate sales. Our CAMs are the people who best know the requirements of our customers, their needs and expectations and/or the problems they may encounter.

In order to develop the potential for profit, it is becoming increasingly important to provide more comprehensive, yet increasingly specific, solutions based on horizontal and vertical IT integration. Today's challenge is to integrate communication and data management across several locations. The greatest potential for creating additional benefits lies in securing, interlinking and compressing data in order to increase plant and/or operations control efficiency. Our TIA and TIP platforms remain a unique basis for such specific industry offers. Unlike other manufacturers, we are able to put together comprehensive packages, which contain everything from field devices to connections to the ERP level, from contactors to medium-voltage switchgear, including life cycle services for various industries. We call these packages Industry Suites.

The most important requirements in the automotive industry include shorter time-to-market, greater flexibility for a larger number of smaller batch sizes, high-level efficiency and productivity, low warehousing costs and just-in-time production. With our Automotive Industry Suite we meet these requirements.

In Graz, Austria, a car manufacturing plant was modernized in less than four months. The project costs, including a complete TIA solution, were 25 per cent lower than the cost of a new plant. The capacity of the plant was more than doubled to reach 74,000 units p.a. in two shifts and 100,000 in three shifts. For this project, our sister group I&S was responsible for engineering, implementation and commissioning.

The overarching solution provided includes the coordination of 32 mainline and 44 offline stations via Simatic and Profibus. 5000 inputs and 2000 outputs were connected with the peripherals. Each of the five main lines has its own S7 400 communicating via Profibus DP network, which also incorporates the HMI-systems. Light barriers, limit switches in protective flaps and guards, indicator lights, position switches, and contactors were linked to Profibus DP via ET 200. All data required to control and monitor welding robots, cap mills and tool changers were also made available via Profibus. Based on the integrated Simatic automation world we connected the manufacturing with the ERP level.

The same applies to the pharmaceutical industry where our suite also meets their requirements. This industry has to face similar challenges to those in other industries. However, the pharmaceutical industry attributes greater importance to complete process transparency and to guaranteed and monitored quality. There is also particular importance accorded to the specific requirement for process validation. Here, it is not market requirements that need to be fulfilled but statutory and regulatory requirements. The process expertise we have gained from Axiva is of particular benefit in the fine chemicals and polymer chemistry industry. In pharmaceutical plants and, more generally, in the process industry, we are able to play our trump card of a joint technological platform to great effect. In production plants there are normally both batch and/or continuous processes as well as the individual stages of traditional factory automation such as filling and/or packaging.

Janssen Pharmaceutica have also had their pharmaceutical plant modernized, safeguarding the original investment in 1983: In Geel, Belgium, Janssen Pharmaceutica produces about 80 per cent of its active ingredients. Plant 3, which produces about 40 per cent of the total output of this site, has been a great challenge for both Janssen and Siemens. The aim was not only to maintain the enormous flexibility of the plant but also to upgrade a plant with 3,000 PLT jobs within a matter of only three weeks. In addition, a complete vertical integration was to be achieved from SAP down to the field level.

The result of the conversion is process automation, which sets new standards in terms of flexibility and openness. The systems architecture was changed to Profibus and Industrial Ethernet, existing AS 230 and AS 235 were replaced by the new AS 488/TM Automation Stations, and the Simatic S5 controllers replaced by high-performance Simatic S7 controllers. The somewhat outdated VAX computer used for administering data and formulations was replaced by a modern server. The special highlight of this new automation is its seamless integration into the plant- and company-wide information flow. With the conversion, Plant 3 has now become part of a single Plant Reporting System (PR3), which is of particular importance for validation purposes. Moreover, requirements from SAP may be fed directly into the system and processed there. Management receives an up-to-date account of actual consumption levels under real batch run times.

Greater profitability through Siemens Industry Suites

The win-win factors for our customers and us are standardization and modularization. Here, we not only rely on the modular design of Siemens Industry Suites but also on using as few flexible standard components as possible for as many different industries as feasible. Depending on the demands of the industry concerned, Industry Suites can be adjusted at varying cost to meet the specific needs of a particular plant. These adjustments, however, are simple to implement because we are working from the basis of our open platform. Naturally, we at Siemens cannot do everything ourselves and so, wherever possible or necessary, we work together with systems integrators. These include, in particular, our sister group, Industrial Solutions and Services, but also over 300 Siemens Automation Solution Providers, six of whom will also make presentations at the Hanover Fair.

At the capital expenditure phase the Industry Suites mean that the planning, erection and commissioning of a plant is made simpler, quicker and thus more cost effective. The openness of our systems ensures that there is no problem with integrating products from different manufacturers. This means our

customers' investment is protected, which is an essential aspect of our business.

Time and money can be saved as early as in the investment phase. Added savings can be made thanks to greater productivity, quality and availability, as well as optimized asset management of plants or entire production networks. Throughout the plant's entire service life, therefore, the plant operator will generally see a substantial improvement of his business' profitability.

Step by step we will launch specific Siemens Industry Suites for all the industries, which are an established part of our account base as well as the ones we plan to tackle. We are well on the way in glass making and in controlling chip factories where our technical expertise has made us a recognized partner. Other industries will follow, also in collaboration with I&S.

We are convinced that these packages will make life easier for our account managers and create an added benefit for our customers. However, this does not mean that we will ease up on our innovation efforts; quite the contrary.

We will push ahead with the Simatic IT Framework, opening the expansion of Totally Integrated Automation towards the MES level. Here again we rely on standard modules, which are to largely replace stand-alone MES solutions.

We will also continue to develop new technical ideas, such as the Simotion control system launched in October 2001.

Other themes and innovations for the Hanover Fair

This year's Hanover Fair will see the joint appearance of A&D, I&S, and PTD in a 2,800 sq.m. exhibition area in Hall 9, stand A72, where Siemens, as competent global supplier, will be showcasing its range of components, systems, and industry solutions based on our TIA and TIP platforms. Moreover, A&D will be part of the joint stands of AS Interface, OPC and PNO at the Hanover Fair.

The Siemens Dematic Group, who also uses our platform for all its solutions; will be exhibiting in Hall 25, stand B15, and presenting themselves at the traditional Siemens press conference, on the evening of the first day of the fair. Let me now briefly describe the innovations we will be launching at this year's Hanover Fair.

In Human-Machine Interface, we have added a mobile device for operating and monitoring to the Windows CE-based panel range. The robust handheld Simatic Mobile Panel 170 has been designed to high safety class specifications for use in a rough industrial environment. This plug&play device features high impact resistance and will easily withstand a 1.5 meter fall. It can be connected flexibly in all kinds of operating environments and gives the machine operator an optimal view of the workpiece, the process, and the display. Complex machines or complete plants can be operated and monitored from various sides.

With the Simatic WinAC MP multi-panel under Windows CE a single platform can be used for the first time to implement control and visualization tasks on a software basis. The WinAC MP soft-PLC can be run on the Simatic MP 370 multi-functional platform and is particularly suitable for data-intensive tasks. MP 370 operates without hard disks and fans and is real time capable and deterministic. It thus combines the flexibility of the PC world with the robustness of hardware.

Simatic MP 270B and MP 370, the Windows CE-based multi-functional platforms can be used as terminal clients now, which means that these sturdy devices are able to operate and monitor all the applications that run on a Windows 2000 terminal server. They may include industrial Scada applications – e.g. the Simatic WinCC process visualization system, maintenance management und quality assurance systems – or straightforward PC applications.

There are also innovations in microcontrollers: With our new “Micro Automation Sets” we offer our clients functionally designed and pre-tested combinations of automation components. With these, the user is able to resolve his automation tasks considerably faster than in the past – for example, tasks such as temperature-dependent switching, speed changing and positioning or wireless communication and switching by means of the SMS. The purpose-oriented sets for specific tasks in the areas of operator control and monitoring, communication, telecontrol, drive engineering, instrumentation and sensor applications save time – from planning and ordering right through to technological implementation.

The new EM 241 modem module handles such Simatic S7-200 jobs as remote communications in telecontrol, remote diagnostics, or telecommutation. The built-in analog modem supports a large number of different national telephone standards. In messaging mode, the modem module sends out messages to pagers or SMS to mobile phones. In teleservice mode, status information may be retrieved from a S7 200 controller or variables and programs edited.

The trend towards distributed field systems continues unabated. We will be launching some new products in this field at the Hanover Fair: For example the distributed block peripheral in protection class IP67 for automation tasks, which do not involve switching cabinets. The distributed Simatic ET 200eco block peripheral in protection class IP67 completes our Simatic ET 200 family of distributed peripherals. The new devices communicate via Profibus dP and have been specially designed for use outside a switching cabinet, i.e. locally, where the process takes place. They come in a sturdy casing, are compact in design and are very easy to handle. Four modules are available, with up to sixteen digital inputs or up to eight digital in-/outputs. These new devices are very easy to connect using the standardized Ecofast connecting system.

The new Simatic ET 200R distributed peripheral allows Profibus DP to be guided, for the first time, along the robot and up to the electrode holder. Hitherto the Profibus DP could only be guided up to the robot base or the penultimate axis, from where it had to be wired in the conventional, but costly way. The new

application was made possible as a result of the sturdy design of these devices as well as the built-in repeater function, which helps to implement tool change systems.

Our Safety Integrated program has been extended to include the Simatic S7-300F failsafe control and failsafe signal modules for the distributed Simatic ET 200S peripheral. The user will find it easy to create his own specific safety solution using ready-made programs. These programs come with a library, for instance, which contains safety-related, TÜV-approved and certified programming examples enabling rapid and simple inspection and approval of the plant concerned. All safety-related data is transmitted via standard Profibus in accordance with the Profisafe profile, providing a particular advantage over conventional systems, which require additional specific buses for transmission.

Our new Failsafe Motorstarter has been fitted with both a contactor-power switch combination and a failsafe electronic evaluating circuit for fault detection. In the event of a welded contactor failure the evaluation logic detects the fault and switches off the power switch inside the motor starter.

Extending industrial communications - The future role of fieldbuses and Ethernet

We are also making big strides in industrial communications. There are three aspects of the current debate on the future of Ethernet that almost all experts agree on. Firstly, field bus systems will continue to be required in the future. Secondly, Ethernet, while currently used at the control level, will move further towards the field level and will also be used, for instance, in smart field devices. And, thirdly, there is a continued distribution of automated functions, which is leading to a greater shift and distribution of intelligence towards sensors and actuators. Fewer and fewer automation functions are centrally controlled. This means that market opportunities will only exist for solutions that utilize the advantages of the Ethernet but also integrate fieldbus systems fully. This time last year, I presented to you the first component-based automation products for

Profinet. Their object-oriented programming allows further savings in the engineering field. Last autumn, we announced our participation in OPC DX, which enables communications across fieldbuses.

Since 1985, i.e. a long time before the first fieldbuses became commercially available, and as one of the first companies to manufacture them, we have been successfully installing Ethernet in the automation world. We use them, for example, to network our Simatic automation systems. Over 400,000 Ethernet connections speak for themselves. For many years we have viewed industrial communications as one of our key technologies and we continue to be one of the decisive trendsetters at all levels.

We are actively engaged in the trend to open up applications for Ethernet at the field level. The Simatic S7-200 microcontroller will be the first device at this year's Hanover Fair to be connected from the lower field level to the Ethernet. The connection is via the CP 243-1 Industrial Ethernet communication processor. Up to eight TCP/IP connections can be set up with other Ethernet partners – for more complex applications with the Simatic S7-300 and S7-400 programmable logic controllers, for example, or a PC. PC applications use Ethernet and OPC protocol to access S7-200 data in order to archive process data or to process such data.

Industrial Ethernet solutions will be advanced initially by the fascinating possibilities that web technologies have to offer. Various products in our current product range use web technologies, including our tried and tested IT communication processors. These have been on the market for four years and have been selling very well during that time. They are integrated into the IT structures of corporate networks and open up amazing possibilities ranging from a simple status display on a standard web browser to remote maintenance solutions or the optimization of plants.

In the near future we will have products like web-based management, which will be integrated into our switch product range for Industrial Ethernet. We are expanding our family of Simatic Net network components for Industrial Ethernet

to include the new 10/100 megabit switches. The OSM TP22 Optical Switch Modules and the ESM TP40 Electrical Switch Modules make for cost-effective building of switched networks with 100 Mbit/s at low connector density in the control level area where high availability and convenient diagnostics are of the essence. In the field level area where the cost factor is even more important, the ELS TP40, ELS TP40M and ELS TP80 Industrial Ethernet electrical lean switches complement the product range.

Web technology will also open the way for mobile data communication in automation. One example is our mobile web pad or industrial communicator called Mobic. It is connected to IT structures via WirelessLan and supplies the user with all necessary information at any point, thus enabling quick and effective service mandates.

Finally, web technologies will also be used in automation components such as PLC systems in the form of web servers. They will allow the user to have the same familiar 'look and feel' everywhere. In other words, the familiar tools from home or office applications will also be found in the automation environment.

Ethernet for the field level

There is one aspect concerning the use of Ethernet in the field level, which has not so far been resolved: that is the real-time capability and deterministics for Ethernet. The demands on real-time capability vary widely from integrating simple I/Os to motion control applications, which involve clocked drive controls. What constitutes real time, however, is a moot point. Is real time equivalent to one microsecond, one millisecond, or even one second?

Our long-term experience with automation has shown that in the majority of applications the required refresh and/or response times must be in the range of 10 milliseconds. The refresh rate is the time it takes for one variable to be formed in an application in device A, to be sent on line to a device B and made available to the application there. The implementation of real-time

communication is allowed to cause only a very slight additional load on the processor because the processor's prime task is to continue to run the application rather than communicate with a partner device.

Another challenge in real-time communication is the continued possibility of working with the Ethernet standard, since users wish to keep their existing Ethernet infrastructure to protect their investment.

We are working on solutions for this tasks: We are making the first step in real-time Ethernet on the basis of a software solution. This is currently being worked on together with the Profinet core team of the Profibus user organization. We are getting comparable performance data to those of Profibus systems and expect performance upgrades for the future, which will enable high-performance motion control applications via Ethernet.

Outlook

With our focus on innovation, we will remain the leading supplier of innovative products and systems. And with our Siemens Industry Suites increasing profitability, we will become the preferred partners of our customers – even in industries where we are not yet that strong. It is true to say that we, too, are feeling the effects of the weak economic cycle. However, I am confident that A&D with its broad range of products and systems, combined with the promising potential of new industries and regions, will be able to come through this economic slump comparatively unscathed, and with a greater market share.