



SPEED

The **VIPA** *Journal*

Company Newspaper of VIPA GmbH No. 3 | November 2011

VIPA International
more than 65
branches
worldwide

*The Behaim globe
in Nuremberg*

First well-known presentation of a globe, the so-called „earth apple“, only three continents are existing: Asia, Europe, Africa; America, Australia and the Pacific Ocean are missing. The circumference of the earth is far too small. The time of origin was between 1492 and 1494.

*In the 15th century the globe
looked a bit different...*

*... today a precise knowledge of the
world is a part of global customer
proximity!*



2

VIPA worldwide –
Customer proximity in the focus



8

Kleemann –
Extraction technology updated
with VIPA

CONTENT

- 2** Worldwide customer proximity in the focus
 - Service & support
 - VIPA in China and India
 - Competence centre Malaysia
- 8** Modern logistics – with VIPA solutions
- 10** PROFINET – new standard in the PLC?
- 14** VIPA supports the society „People for Children“
- 15** VIPA Sporting
- 16** VIPA gastronomic - international

FOREWORD

We proudly present the 3rd edition of the VIPA journal, this time with the focus on „VIPA international - China, India and Southeast Asia“.

For more than 20 years we have been present worldwide with our own subsidiaries or distributors. Here you can read more about the different aspects of our international business. We want to demonstrate, that our proximity to customers also worldwide is an important issue of VIPA.

On page 8 we report about a successful connection between PLC system and a super ordinate control system at our customer Kleemann. Cooperation between VIPA and a system partner brought a successful solution, which enabled our customer to operate his plant control more reliable and with more safety.

The product-related part this time is about integration of PROFINET into the automation world and what solution VIPA can offer. This focus is on components for PROFINET IO networking. The report gives you an overview about existing Ethernet-based real-time systems, explains significant terms and looks ahead.

Reports about VIPAs donation to the charity „People for children“ as well as VIPAs participation at the triathlon „Challenge Roth“ show, that VIPA is enthusiastically active outside the automation world.

Instead of the usual recipes presented in the previous editions now we would like to introduce some „culinary experiences“ of a VIPA colleague. He had discovered these at a backpack tour through Southeast Asia. Thematically it brings us back to the beginning.

Enjoy reading the
VIPA journal!

Your



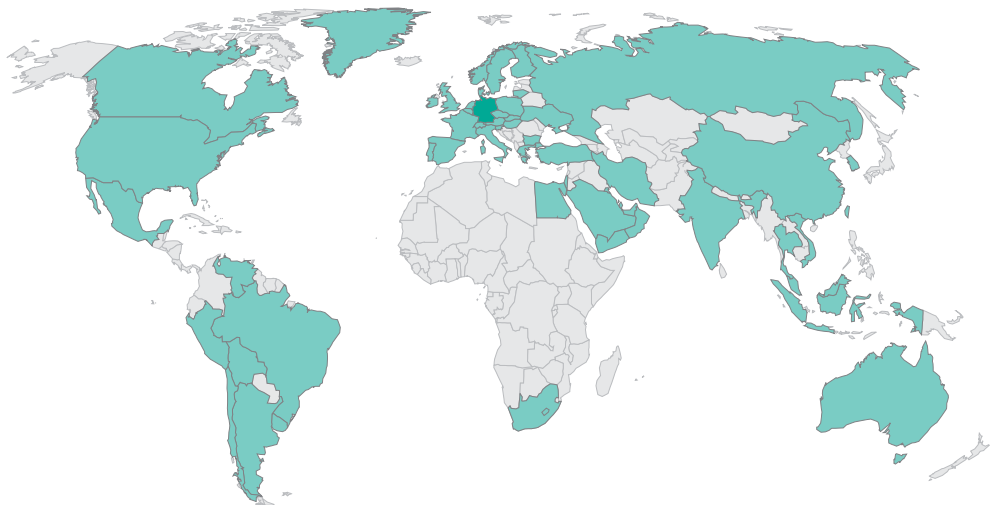
Wolfgang Seel



VIPA International

Availability, service & support ... in more than 65 countries

For more than 20 years VIPA mbH has been present in all automation markets worldwide. With 12 branches and over 50 distributors VIPA not only offers global services & support, but also extensive technical training modules. Top priority of all VIPA branches and partners is maximum customer proximity and individual customer service and support, including product availability offered in all continents.



Asian market and with 12 companies VIPA is active nationwide in North and South America.

The sales share of our exports is more than 45% and is increasing continually. This result confirms our sales strategy. As our German customers deliver approximately 60% of their products abroad, it can be said, that approx. 70% of all VIPA products are in operation worldwide. This is of course places special demands on global spare parts supply and international support.

**VIPA service & support ...
close to you!**

With our international presence we accommodate the high requirements of our prestigious customers to guarantee the availability at any time in the original equipment and spare part business of international operating machine and plant construction firms. Besides the international extensive availability of VIPA products, we are committed to an individual and solution oriented service & support strategy. For this reason all our sales companies and partners are trained regularly and extensively.

Over 14 years ago VIPA GmbH started with the strategic internationalisation of sales and appropriate services in all product areas. First the focus was completely on the European market. After the successful, widespread market development in Europe VIPA started to expand outside of Europe.

VIPA is represented in 32 European countries. 13 VIPA subsidiaries and distributors cover the

Global service & support has been a determining decision criterion for long term and successful customer relationships – in every sector for many years.

We fulfil this with our DirectTech and service support. We have deliberately relinquished cumbersome and time intensive call centre organisations. Instead of this our customers have direct access to our service technicians. Problems are solved directly and individually, solutions are created online and if necessary complete customer applications are set up and simulated until all requirements are realized trouble free.

VIPA has become a worldwide supplier in the automation business and is evolving continuously. We create this dynamic process actively and focus on market and customer oriented advancement of our worldwide service and support responsibilities combined with capacity adjustments. This is shown clearly with the

current establishing of the Asian-Pacific service & support centres in our office in Kuala Lumpur. German top manpower manages the establishment locally. Service & support staff are hired and trained locally and continue their training at the VIPA headquarters in Herzogenaurach and become experts in specific areas.

VIPA products are deployed worldwide in countless applications, which are encountered



daily in industry, communication and network technology, this means everywhere, where PLC automatization is required. Our recognition in the market can easily be demonstrated by the approximately 200,000 VIPA PLCs which are used worldwide. For us this is an incentive and an obligation to continue this path.

Further articles on this subject:

- Always one step ahead – training and advanced training at VIPA (page 3)
- Examples of our branches worldwide:
 - VIPA in China (page 4)
 - VIPA in India (page 5)
- Inauguration VIPA Malaysia (page 6)
- Who is behind it:
 - VIPA departments introduce themselves (page 7) ■

Writer: Jürgen Moll, Area Sales Manager

As is also true for our worldwide sales activities:

With VIPA you are in good hands, we guarantee it!



From left to right: Erich Heumann, Technical support manager, Navinkumar K. Danabal, support engineer VIPA Malaysia, Fritz Dotzer, responsible for training in the area support

Keeping a step ahead

International training at VIPA

Quick and competent customer response is one of our most important features which distinguish us from our competitors. With the marketing emphasis on short response time with global contact partners, VIPA HQ is taking the initiative to secure an international knowledge standard by training its own employees and inviting partners for training at VIPA HQ.

With the current expansion of our support task force in South East Asia, Mr. Navinkumar K. Danabal, VIPA Malaysia spent several weeks with VIPA Support in Germany to learn the system features and work processes.

Besides this, VIPA HQ offers a number of training courses on specific topics. These courses are designed for engineers and sales

people who would like to expand their knowledge in automation and thereby increase their reputation in the market.

We look forward to welcoming you to our technical courses!

You can find the information about dates, subjects and charges of the individual seminars via your contact partner in sales:

- Domestic sales: Mrs. Claudia Kennerknecht (claudia.kennerknecht@vipa.de)
- Overseas sales: Mrs. Susanne Küfner (susanne.kuefner@vipa.de) ■

中国

VIPA in China

VIPA is always close to you – you are our main focus

Qualified consulting, efficient logistics and reliable contact persons are the essential factors of success in our international cooperation. With more than 65 branches and distributors worldwide VIPA created a network where you as our customer are always in the focus of our services.

Here we would like to introduce in every future issue one of our international teams and give “a face” to our sales structure.

Our teams combine manifold expertise; sales representatives and technical support staff all of whom work very closely together. So even at the first contact we are able to perform a needs analysis and submit suitable solutions for your applications. Module tests, technical support via hotline or directly in the field are also part of our service. On the commercial side qualified employees ensure efficient organisation and trouble-free order processing.

Our representative offices in China

We have been represented in China for more than 10 years. In 2008 we founded our own representative office where the above described tasks are carried out. Our colleagues are highly motivated as these images shows.

Additionally VIPA China cooperates with 11 other distributors and system partners and is thus able to fully cover the market. ■

Writer: Susanne Küfner



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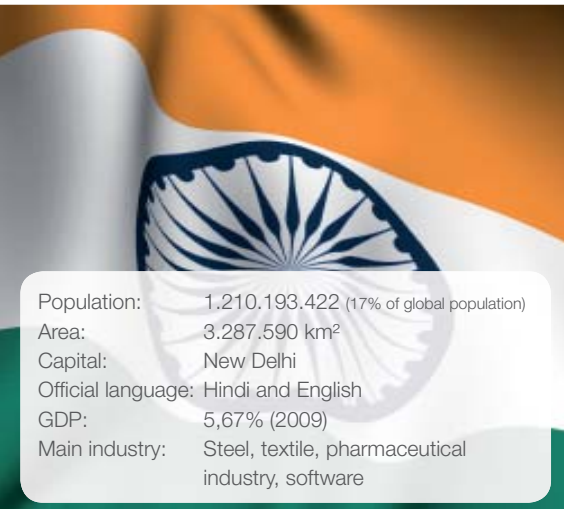


Shanghai



VIPA India

Expansion in the Indian subcontinent



Population: 1.210.193.422 (17% of global population)
 Area: 3.287.590 km²
 Capital: New Delhi
 Official language: Hindi and English
 GDP: 5,67% (2009)
 Main industry: Steel, textile, pharmaceutical industry, software



VIPA sales director Bob Linkenbach with the VIPA INDIA

The economic rise of India

already began in 1991. Since 2004 India has become one of the 10 most important national economies of the world. At the beginning of this boom the GDP constantly grew by about +6% per year, since 2005 the growth has been about +5,5%. Beside China, India is one of the fastest growing economies in the world.

India will grow considerably in the coming years. According to McKinsey India will become the fifth largest consumer nation by 2025. A growth driver of the past 10 years was clearly the service sector, which has contributed significantly to the income increase and the creation of a middle class which is keen to consume; in comparison to this the GDP of the European Union in 2009 was -4% (source: indication of the IMF for 2009)

VIPA GmbH realized the potential for growth early on and has been active in the Indian subcontinent since 1998. Besides the usual problems like corruption, bureaucracy and lack of infrastructure etc., the particular challenges are the employee turnover and

accompanying loss of know-how for each company.

Over the years the initially small structure with 5 employees and the concentration on selected boom regions around the metropolitan areas of Bangalore and Mumbai expanded and advanced continuously. Meanwhile 22 VIPA employees in the headquarters in Bangalore and further branch offices in Ahmedabad, Chennai and Delhi provide extensive sales and comprehensive customer service and support.

„Not only are we proud to have the best engineers, but also our engineers are proud to be part of VIPA INDIA.“, says CEO O.F.Chorian, when he was asked how he will

ensure the long-term success in India in the future.

The processes will be optimized and adjusted to customer requirements regularly by technical training courses, because the customers in India are no longer only local companies. Nearly all European engineering companies, in particular German companies, have Indian customers, who expect a high spare part availability and problem-solving competence in the market. ■

Writers: Jürgen Moll | Sascha Isinger



Bob Linkenbach presents the new sales concept



The service and support team



VIPA Automation India Pvt. Ltd CEO Mr. O.F. Chorian



The Call centre support



Friendly colleague on the reception desk in Bangalore HQ

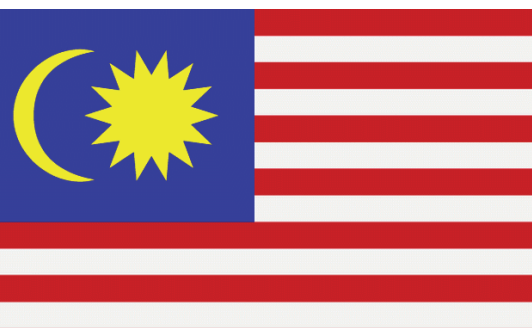


VIPA Automation India Pvt. Ltd, Bangalore



Automation 2011 Mumbai





VIPA Malaysia

VIPA increases in Malaysia

On 30 July 2010, a date which was calculated by Feng-Shui master according to Chinese tradition, the new VIPA office Southeast Asia was officially established in Puchong (Kuala Lumpur), Malaysia.



As the office which was used for many years became too small, now there is - with more than 500 square meters - sufficient space, to support the colleagues form sales, service & support in the rapidly growing field of engineering and technical consulting in Southeast Asia. The competence centre in Southeast Asia will be managed by Peter Jacobi, who has managed the VIPA application department in Germany for many years. The combination of experiences in

the field of application for many years with the idea of "German Engineering" and its realisation with selected local system integrators have increased the market acceptance of VIPA products within a very short time.

Due to the conversion of Siemens S5 controls to S7, the VIPA competence centre in Malaysia has become for many key customers in the area an important contact. The conversion strategy

was also an important subject at the inauguration where VIPA system partners from Malaysia, Singapore, Thailand and Indonesia actively exchanges technical information. Meanwhile over 20 successful conversions in the past one and a half year in Southeast Asia offered a welcome opportunity to highlight the importance of the competence centre again. ■





Bob Linkenbach
Sales director



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Team leader Export dept.



Jürgen Moll
Area Sales Manager



Luc Heynickx
Area Sales Manager



Susanne Kufner
Export dept. Inside Sales



Barbara Druschke
Export dept. Inside Sales

How is behind it

The Export dept. and the order processing department

The international business put special requirements

to our colleagues in the Export department. They are contact persons for our foreign distributors and partners, partially through locally common customer visits abroad, partially in the VIPA headquarter. Of course the support of our partners does not only require the ability to express themselves in multiple languages, but also the knowledge of the geographic and cultural characteristics of the assisted countries.

One of the locally tasks of the sales representatives in the single countries is to organize trade fair shows and to acquire new customers in cooperation with the distributors. Automation Days and Trainings conducted at the distributors or the customers are also part of the activities, as well as the contacts to universities and research establishments. We already had reported about this in the last issue. The export office staff on the other hand acts as a contact for the order logistics, handles

customer complaints and complements the activities of the area sales managers through a variety of tasks, e. g. through the preparation of the sales figures or through the organisation of marketing activities.

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The order processing dept. Export

Hand in hand the Export dept. is working together with the order processing department. All members of these departments have a high special knowledge for settling the foreign transactions. Besides the completion of all customs formalities, the exact knowledge of each country-specific export guidelines is necessary.

First stock levels have to be checked and adjusted to the desired delivery dates. Unlike in the domestic business the abroad shipment follows to a structured schedule to organize the shipment of the goods as economically as possible. Additionally to delivery notes and

invoices further documents like way bill, customs documents, EUR1, A.TR. or certificates of origin have to be issued. Again and again country-specific requirements have to be applied to BAFA or relevant requests have to be made. ■

Word definition

- EUR1:** Movement certificate in the international commerce
- A.TR.:** specific export document for Turkey
- BAFA:** Federal Office of Economics and Export Control



Transparency and efficiency

Successful connection between PLC and ERP

The Kleemann Company used the necessary conversion from S5 to S7 to combine the production control with the existing ERP system. Due to that there was a tight time frame therefore they looked for the support of experts and found a perfect solution at VIPA.



Nearly everybody has bought products from the Kleemann Company in the past: from small party kegs to vegetables or paints. For many years all these products have been securely and hygienically packed in metal containers and sold. Julius Kleemann GmbH & Co. KG, located in Karlstein am Main, is the supplier for these metal containers.

The family company founded in 1875 has a long success story. To always remain competitive Kleemann focuses on advanced technology in the production. Adherence to schedules is one of the most important values of the medium-sized company, as the food industry is a very important industry for Kleemann. The products, beer as well as sausages, have to be packed into cans immediately. There is no time for intermediate storage and delayed delivery is not tolerated by their customers. Smooth processes in the production are essential.

„The control system of the conveyor belts for the pallets is our logistic nerve centre“, says Herbert Sittinger. He has been working for 30 years at Kleemann and is responsible for the entire electrical engineering. „If it fails, products cannot be commissioned, packed and stored, and they cannot be delivered to the customer.“

S5 conversion and the request for added value

For this reason it was even more urgent to bring the existing S5 control system from the nineties to the current state of the art technology. It has worked perfectly so far, but it is becoming more and more difficult to find spare parts. And they didn't want to risk a failure under any circumstances. So they decided to manage the conversion of the control system during the two weeks company holiday and to put the new control system into operation. This system had to include the familiar structures, but Kleemann wanted to use the opportunity to implement the

connection between the control system and the existing ERP system. „In the past pallets had been scanned manually before they left the production and were stored in the warehouse. This step had to be automated to exclude possible error sources“, says Herbert Sittinger.

Due to the tight time frame he consulted Alwin Faber from the VIPA Company. „I only wanted to have a single contact for all matters. The entire hardware was provided by VIPA and there was only one person responsible, so there could be no coordination problems between several suppliers, which might have been a risk for the time schedule“, says Herbert Sittinger.“

The **High Speed SPS-System „SPEED7“** was selected as the new control system, a VIPA development in cooperation with the subsidiary profichip. As very first provider, the company integrated the interface Ethernet RJ45 for PG/OP communication as standard. Furthermore VIPA relies on extremely effective components which provide the fastest processing and cycle times. The performance significantly exceeds that of the competitors. Additionally a high speed bus is available, which can be complemented by several protocols. The same applies for interfaces and storage management; here the standard equipment can be upgraded by additional modules or interfaces.

Decentralized structures for more overview and reduced costs

„It was important for us, to have reserves for covering prospective capacity extensions. Therefore we applied a very



1. The SLIO modules were placed decentralized and are the interfaces to Profibus. So more space saving in the control cubicle was possible.
2. The I/O modules from VIPA are combinable individually. For more clarity, each channel is inscribable. LEDs can be used for status and diagnosis purposes.
3. Herbert Sittinger operates the panel – all data to access the system are also available in his office.





f.l.t.r.: Herbert Sittinger, Volker Haas, Alwin Faber



Touch Panels in the production



pallets packed in foil



pallet transportation into the warehouse

powerful PLC“, Herbert Sittinger explained. The new SPEED7 CPU needs less space, but has more technical features. Where in the past multiple distribution boxes had been filled, all necessary components are now installed in one single box. The bus topology is the reason for this. „Previously we had to run all cables starlike along the 80m distance of the plant to the control cabinet. Now we need only a single bus cable for the transmission of all information“, said Herbert Sittinger. Plant construction has been changed considerably and is much more open. Fault diagnosis has become easier.

There are different entry points along the pallet conveyor-belt, where digital data is accumulated. Information, for example, which production line the pallet comes from and in which packaging line the finished product has to run. Moreover pallets have to be brought into line and the height has to be measured for appropriate controlling of the final packing process. All this data is now recorded decentralized from several nodes and sent via SLIO modules through the bus. These compact interface modules by VIPA are available in different variations and for each installation the required modules can be combined.

For data access and system operation two 12“ touch panels from VIPA are applied. Here the total track is mapped and separate plant areas can be zoomed in by the tap of a finger and all originated data can be read or manually controlled. All currently running pallets in the track can be seen. The aluminium die-cast case of the panels allows the trouble free usage in a harsh environment. All data is additionally available in Herbert Sittings office via the integrated password-protected web server, to which he has access by means of the internet browser.

Connection to Enterprise resource planning system (ERP)

Finally the connection between the pallet conveyor-belt (SPS/HMI) and ERP has to be managed: the existing ERP system „Navision“ has to be connected to the control area. For this integration Volker Haas, who is a system partner of VIPA and a specialist for such problems, was also consulted. His plant information system, called „AIS“ for short, was installed and this successfully combined the IT world of Navision with the PLC of VIPA. He created specifications together with the customer to elaborate requirements from the perspective of IT as well as of control engineering. As a result Volker Haas created an individual plant information system. The software was installed redundantly on both touch panels, which runs on the very stable Windows CE operating system; no additional PC or server is required. Logging of finished pallets is carried out fully automatically as required. Additionally the sales department can oversee the place of the products in the production at any time and so schedule the loading time better. ■

Writer: Sonja Pfaff, pfaff-media

Links:

www.kleemann.de
www.haas-automation.de



BEFORE



schematic picture



AFTER

CONCLUSION from the customers perspective

The main advantage of this solution for Herbert Sittinger is the possibility to operate the plant as usual and to manage changes by himself.

The new control system with the integrated SPEED7 CPU from VIPA is programmable with the well-known Step7 software from Siemens; the total construction of the plant remained unchanged and he can manage all conversions including programming and start-up procedure by himself.

Neither an IT specialist for the ERP connection is required for the future nor additional devices and special maintenance. „The new solution gives me the ability to manage the new plant, the control system with all its possibilities and the ERP connection myself and I am not dependent on customer service anymore.

„We wanted to have exactly this security and reliability“, said Herbert Sittinger and is happy about the cooperation with VIPA and Haas Automation.



© Kleemann

New PLC communication

VIPA enters PROFINET networking



PROFINET – Various current market researches and studies found out, that in the automation technology communication, up to now mainly via PROFIBUS, will be increasingly replaced by PROFINET. There were enough reasons for VIPA to be concerned with this matter and to respond to the market requirements with new products. The following report will give you a summary of development and technology of PROFINET and will describe why VIPA is promoting developments based on the PROFINET concept and what has been implemented up to now.

Development from the field bus technology to PROFINET

The first generation of field bus technology, for example PROFIBUS, Interbus-S and CANopen, has replaced the parallel wiring of binary and analogue signals, usual at beginning of the eighties, by digital transmission technology, creating a consistency from the management plain to the field plain. That means vertical integration was only possible with high input. The greatest challenge was not the various protocols, which exist in real-time Ethernet, but the non-standardized technology. Simple systems were strived for, which are not idle or open for faults through multiple implementations and which required a high level of service activities. Various requirements had to be covered by a single system. .

For a long time the standard Ethernet was a rather strong and uniform communication system, which was able to achieve these requirements. There were more and more suppliers of automation systems, who wanted to use additional options of this technology for example remote access, central data storage, connection to databases, strict network

administration and integration of the most various systems. For simultaneous transmission of real-time data and „office communication“ there had to be a standardization of the Ethernet real time systems. Such a standard is PROFINET. Announced at a press conference of the PNO in 2000, PROFINET is contained in the international standard IEC 61158 as type 10. The PROFINET specification release version V2.2 was integrated into the IEC 61158 standard, which was determined in October 2007. This release was partially incompatible to the release 2.1, but the release 2.3, determined by the PNO on October 2010, is considered to be stable.

PROFINET IO carries out the communication between decentralized located devices and a superior control system. Therefore automation solutions can be implemented, which are already known from PROFIBUS. A seamless transition strategy was therefore taken into account and thus the currently installed PROFIBUS periphery can be used without changes. Merely the bus link has to be replaced. PROFINET IO can therefore be regarded as a successor of PROFIBUS-DP with extended performance.

PROFINET compared to other Ethernet-based real-time systems

EtherCAT was originally designed for standard applications as well as for high temporal and clock-pulsed requirements and has been established in the market for some years. Compared with PROFINET there is a bigger number of suppliers at the control area (EtherCAT-Master), who operate predominantly in the IEC-61131-3 market. High performance can only be reached by a more complex integration of standard Ethernet. The technology is very open, which is the reason for the growing expansion in Asia.

The American market is dominated by **EtherNet/IP** and stimulated by Rockwell Automation Company. Even here features for engineering and diagnosis depend on the supplier. In the control area there are only a few suppliers. Performance of EtherNet/IP cannot reach PROFINET IRT or EtherCAT.

The further evolution of **ETHERNET POWERLINK**, originally developed by B&R, is to be awaited. The number of members has not grown as in other comparable organisations.

CC-Link IE Field is very new in this area – up to now common mainly in Asia as a non-Ethernet-based version. The further evolution of the Ethernet modification, IE Field, is also to be awaited.

| System | Organization | Number of members | HQ |
|------------------|--|-------------------|--------------------------|
| PROFINET | PROFIBUS & PROFINET International (PI) | ca. 1400 members | Karlsruhe, Germany |
| EtherCAT | EtherCAT Technology Group (ETG) | ca. 1700 members | Nuremberg, Germany |
| EtherNet/IP | ODVA | ca. 280 members | Ann Arbor, Michigan, USA |
| CC-Link IE Field | CC-Link Partner Association (CLPA) | ca. 1500 members | Nagoya, Japan |
| Powerlink | EPG | ca. 150 members | Berlin, Germany |

Table1: Number of members: approx. status 8/2011



PROFINET, really the upcoming standard?

Several essays of evolution or budgeting different field bus systems show that PROFINET will be the clearly favoured system. The evolution of other systems should not be ignored. Here are the detailed results:

Essay 1: 2011 Quest Techno Marketing

„Market shares of the Ethernet field bus in machinery industry until 2012“

PROFINET will be installed by 42% of machine builders. So PROFINET including the three releases is the leader. EtherCAT with 24% of the machinery builders will follow PROFINET 2012 as the mostly used real-time Ethernet protocol.

Powerlink 10%, EtherNet/IP 8%

Essay 2: 2009 IMS Research

„The World Market for Industrial Ethernet – 2009 Edition“ PROFINET 28% market share, EtherNet/IP 30%, Powerlink 11%, EtherCAT 4%

Essay 3: BPA Consulting Ltd., May 2009

„FIELDBUSES TECHNOLOGY AND MARKET TRENDS IN THE INDUSTRIAL; AUTOMOTIVE, DEFENCE AND AEROSPACE SECTORS“

Market shares 2013:

PROFINET 21%, EtherCAT 25%, EtherNet/IP 20%, CC-Link IE 5%. Powerlink 9%

Below picture shows you the quick growing of the number of installed or planned PROFINET nodes.



(Source: SPS-Magazin 08/2008)

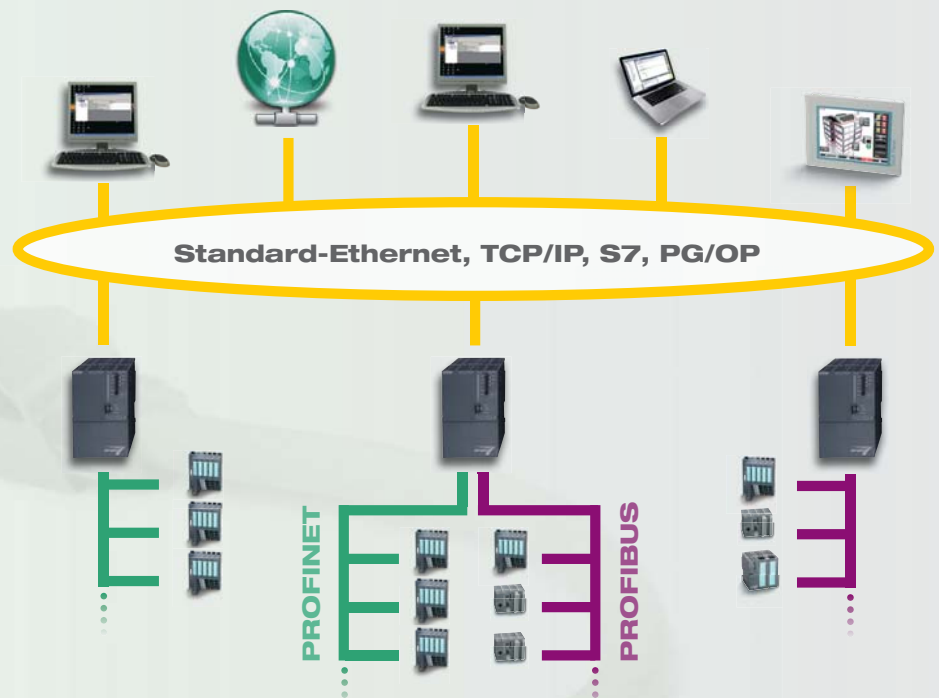
The notarial count of PROFINET nodes showed a growth rate of 500,000 devices up to 2.1Mio. That is a percentage growth of nearly 10%. Today there are 3 Mio. nodes installed.

What are the differences between PROFINET and other field bus systems??

PROFINET is distributed very broadly. There is a smooth integration in the „SIMATIC world“ and PROFINET „lives“ with it. The transition from PROFIBUS to PROFINET is normally possible without great effort. Simple configuration and very good possibilities for diagnosis make the transition easier. Meanwhile the number of 3 million nodes used or devices and a very large user organisation in the background speak for PROFINET (table 1).

In the control area there are PROFINET IO controllers for SIMATIC based automation systems available, which are produced by VIPA and Siemens. Solutions by Phoenix Contact, Hilscher and Beckhoff (planned) need their own engineering systems. In the field area there are, besides VIPA of course, a large number of suppliers for PROFINET IO Devices, but only a few, which can supply both. For high temporal and clock-pulsed requirements the more complex variation PROFINET IRT in relation to the equipment must be used.

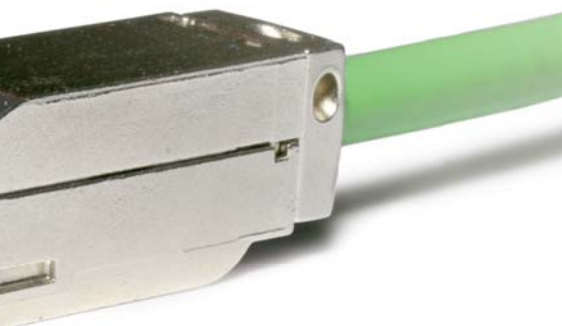
TECHNOLOGY AND NETWORK STRUCTURE



PROFINET IO

PROFINET IO is continuing the well known function model of PROFIBUS DP and is using the Ethernet technology for data transmission. The system is highly suitable for fast transmission of IO data including transmission of demand data, parameters, diagnosis, alarms and especially office Ethernet at the same time. Furthermore existing know how of

PROFIBUS DP can be used. Local field bus devices can be integrated into the engineering tool as well as in PROFIBUS-DP using a device description (GSDM-file). In PROFINET IO as well as in PROFIBUS DP devices are classified according to the typical function.



STRUCTURES OF AUTOMATIZATION WITH PROFINET

IO controller

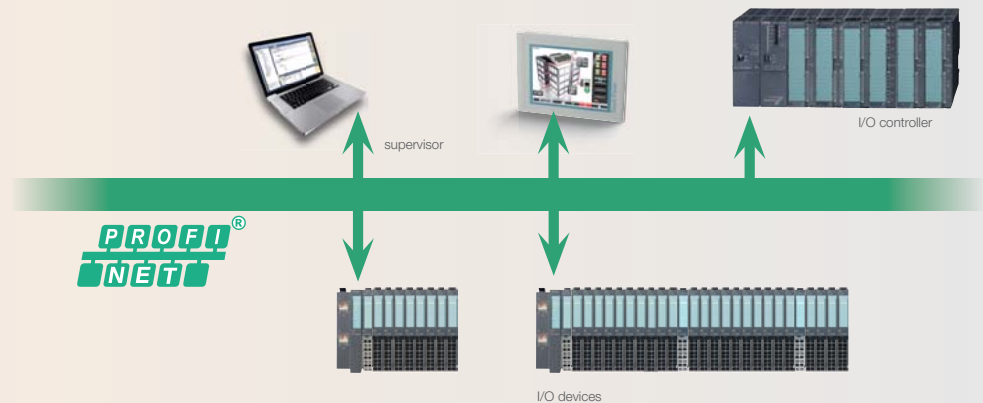
The PROFINET IO controller assumes the master function for the IO communication of the local field devices. Typically the PLC is an IO controller. This function can be compared to class 1 PROFIBUS DP master.

IO device

The local field devices like IO modules, sensors and actuators, drives, HMI terminals and valve blocks are called IO devices. IO device is a synonym for the slave in PROFIBUS.

IO supervisor

It is an engineering and diagnosis tool similar to the class 2 master in PROFIBUS DP.



Brief description of the PROFINET technology:

- ▶ Use of the Ethernet release IEEE 802.3, 100 MBit/s, full duplex, cycle time to 1 ms, (in the variation IRT to 250 µs)
- ▶ Network architecture: line, star, tree and combinations of it by use of instructure components
- ▶ Device identification based on logical names and IP addresses; number of IO devices up to 255
- ▶ Cable length of 100 m between two nodes; so you can realize a more simple construction compared to PROFIBUS. Your advantage: better adjustment to requirements of machinery and facilities

Shared devices:

Multiple control systems in one network are possible; each device is dedicated to one controller. The so called Shared Devices can be dedicated simultaneously to multiple controllers.

I-Device:

The I-Device is an „intelligent CPU used as IO device“. This function enables communication to other overlaid or central control systems as IO device. You can access via I-device the image of other control systems including subsidiary networks via the PROFINET protocol between several Controls (controller). I-Device is perfectly suitable for modular constructed machines.

PROFINET systems from VIPA

Launch of PROFINET was driven forward by Siemens with great urgency, so that many customers were made unsure by the fear that some day they will not be ready for the future. With this worry on customers' minds they were forced to switch from PROFIBUS to PROFINET. In recent months many well known solution providers have integrated PROFINET into their product portfolio.

For their own claim as solution provider VIPA promoted the integration of PROFINET into their own product portfolio. Here the focus is on the connection to existing systems. As already successfully completed in the development of

SPEED7 chip technology, which is regarded as a milestone in the automation technology, the established cooperation between VIPA and the subsidiary profichip took place. The proverbial leadership of VIPA is based on know-how transfer between the two companies and has the target to implement new software requirements into the prospective chip design. The common platform strategy includes the chip as well as the total product. Compared to our competitors we can say: "VIPA has even shorter distances than many other companies, because we take advantage of the close proximity and technical cooperation with profichip."

From now the following PROFINET components are available:

In the control area:

two SPEED7 CPUs including PROFINET controller:

| | VIPA CPU315PN | VIPA CPU317PN |
|---|-----------------------|-----------------------|
| PG/OP channels | 32 | 32 |
| Productive connections – CP (S7 and open communication) | 8 | 24 |
| PROFINET I/O devices | 256 | 256 |
| IO data | 2kB | 8kB |
| Cycle time (min.) | 1ms | 1ms |
| PROFINET I/O connections (RJ45) | 1 | 1 |
| Realtime Class | 2 (RT) | 2 (RT) |
| Transmission rate | 100MBit/s full duplex | 100MBit/s full duplex |



VIPA CPU 317-4PN12 in the SPEED-Bus setup

Both VIPA CPUs enable a solution in the control area matched to the "Siemens world", but also „VIPA specifics“ like the standard integrated Ethernet PG/OP interface or the unique SPEED bus interface for extremely fast signal communication via SPEED bus CPs or SPEED bus IOs, which are integrated into the 317SN/PN CPUs. Using these CPUs you have a universally applicable central unit, which has integrated the established SPEED7 processor technology with the additional option of PROFINET communication.

In the field area:



| SLIO PROFINET IO slave 053-1PN00 | |
|--|---|
| Field bus | PROFINET IO according to IEC 61158-6-10, IEC 61784-2 PROFINET IO for max. 64 periphery modules Max. 512Byte input and 512Byte output data 2-Port Switch integrated |
| Transmission rate | 100MBit/s full duplex |
| Cycle time (min) | 1ms |
| Realtime class | 2 (RT) |
| Integrated DC 24V power supply for electronic and performance of the periphery modules | |

SLIO, meanwhile defined worldwide as standard by many companies, shows very simply the integration of real-time based field bus systems.

This very space saving concept including a new mechanical concept is very suitable to be installed into PROFINET networks. The modular System SLIO is the interface between the process level and the higher level bus system. All control signals are transmitted via

the very fast backplane bus to the electronic modules. The modular architecture and the fine granulated construction especially in the SLIO system enables a precise adjustment to the customer requirements, but also opens the possibility, to provide extension without great effort.

Why did VIPA launch PROFINET modules now?

SLIO, 100V, 200V, 300S 500S, a broad range of terminals and accessories, are all system solutions by VIPA, which are designed exactly for customer requirements. Users can have new solutions for communication, for example PROFINET based on the usual product design, and the same look and feel for all product groups including CPUs, CPs or signal devices. The assumption that VIPA copies competitive products is definitely wrong. All our products are our own products, systems and developments and our customers appreciate that.

Of course VIPA keeps one eye on the whole competition. That includes being open to the integration of third-party solutions within our own solutions. So it's possible to connect competitors IO devices to VIPA PROFINET controllers as well as to integrate VIPA IO devices into existing PROFINET networks.

Even VIPA has successfully implemented open systems by PROFIBUS DP, Modbus TCP, EtherCAT, DeviceNet and CANopen products. If our users have to meet requirements for machines and control systems in several markets, as for example in Europe different bus systems are required than overseas, only the coupler has to be replaced and the IO area can be maintained.

Outlook

Even today PROFINET is used as a real-time Ethernet system in many areas. The flexibility of this system allows operation in automation fields, in which up to now existing system have failed. Because of the flexibility of the system is used in the automation sector, where other bus systems had their limitations.

Therefore the improvement of the performance compared to the 1st generation of field bus systems, as well as the concentration of functions to even more powerful devices, is crucial. Also crucial is the service of the whole machine or system, which is part of standard Ethernet. Diagnosis when the system fails, an update of data records, software by central authority, or even remote access for a complete machine all saves time as opposed to the necessity of having to take action directly on the device.

PROFINET will continue to be developed and there will be new requirements for automation systems. Brief essentials: ■

| New features | Performance improvement | Status VIPA development |
|-----------------|--|---|
| Safety | Communication via PROFIsafe | Already implemented SLIO modules |
| PROFInergy | Energy saving by coordinated disconnecting of different consumers in sleep mode | Is supported by the CPUs 315SN/PN and 317SN/PN |
| PROFINET IO IRT | Isochronous Real-Time, high clock accuracy, cycle times down to min. 250µsec, application primarily in machines, which included motion control | Concrete planning of continuous development of PROFINET IO device for the SLIO system |

Writers: Thomas Schüttlohr, Sascha Isinger, Norbert Schlimm

RESUME

By installing VIPA systems our customers are not caught up in the „Siemens World“.

As one of only a few suppliers VIPA supports, beside PROFIBUS and PROFINET, other protocols outside the „SIMATIC world“ like EtherCAT, CANopen, DeviceNet, and Modbus TCP. Therefore VIPA can respond very flexibly to market changes and new solutions.

For PROFINET, as mentioned above, VIPA provides the already known advantages of SPEED7 CPUs as well as SLIO, the smart decentralized system.

Links:

<http://www.profibus.com/community/regional-pi-associations/germany/>
<http://www.feldbusse.de/index.shtml>



VIPA Sponsoring

VIPA supports the society „People for Children“ with a donation



Cycling, already organized in an individual society, is since a couple of years element of the living companies culture for the proprietary cycling group in the PVA TePla Company, located in Wettengel in northern Hessen, as you can read on the company homepage. This year the PVA TePla Company also had been the main sponsor of the annual donations cycling of the society „People for Children“. The VIPA Company was very delighted with such an idea, so it was clear to support it by a donation.



Left to right: Florian Heilmann, Sales dept. VIPA GmbH, Volker Zimmerschied, MfK, Stefan Köhler, PVA TePla

When VIPA heard from this activity, the company decided to support this campaign, because there are many sporting activities in the company especially cycling. We have reported several times in this journal about the SPEED7 Racing Team, a cycling team consisting of participants from VIPA and the subsidiary profichip. For the PVA TePla Company is one of the principal customers of VIPA, there have been several contacts in sports, especially promoted by Stefan Köhler.

When there had been decided, that PVA TePla was the main sponsor of the donations cycling organised by the society People for Children dated the 3rd of September. 2011, VIPA decided spontaneously to support this event by a donation Therefore VIPA received an invitation to a press conference on eight of August 2011 in the PVA TePla Company in Wettengel. Important officials coming from policy, economy and sport, from the sponsors and the sponsored society accentuated the importance of this event.

Through the hand over of the draft 1500.00 € worth by Florian Heilmann, member of the VIPA sales team, VIPA could introduce himself as an innovative middle-class company, where promotion of the sport spirit is an essential element of the companies culture – just like in the PVA TePla company.

The society „People for Children“ – What do they do?

Established in January 1996 the society „People for Children“ have now almost 2700 members. Together they all pursue the target,



„Build up of many small stones
we build a big house“
„There is nothing good, unless you do it“
„Do good and talk about it“

to facilitate living for children auf the dark side of life – especially children ill with cancer or leukemia. ■

Links:

www.menschen-fuer-kinder.de
www.pvatepla.com



Interview

Stefan Köhler in conversation with VIPA about the social and sporting engagement of PVA TePla:

VIPA: Mr. Köhler, at first congratulation for his successful event and the great result of the donation. As you can read on www.pvatepla-sports.com there was a record result for the society People for Children. Did you expect such a result

Köhler: Here I have to express thank for our customers and suppliers, including the VIPA Company too. Without all of them it would achieve been impossible to obtain such a result. Our goal was to to achieve a 6-digit sum. The concrete result is a record donation sum of 170.000 €.

VIPA: How were achieved contacts between the society People for Children and the PVA TePla Company and what were the reasons for the decision to campaign especially this society?

Köhler: Our sports club consists of approximately 40% of non-PVA-employees. One of them had made the contact to the society. The unsalaried chairman presented his projects and the program to our board of management, and he convinced. A company like PVA TePla has of course the additional social mission towards the community, particularly weak people – children.

VIPA: The VIPA Company supports sporting activities of their employees and has a special cycle racing team to, the so called Speed7 Racing Team. Had this been the reason, that PVA TePla contacted us, to join this event?

Köhler: You have just given the answer. Just as in the PVA TePla Company sport is element of the companies culture. For each company, which cares such an employee's culture, social engagement is self-evident. Furthermore VIPA is for us a long-standing and very import business partner and system supplier for automation. We have for a couple of years a very cooperative relationship and we were sure to be heard.

VIPA: When is the 2012 donation cycling?

Köhler: At 1st September 2012.

VIPA: Many thanks for his conversation.

(Interview by Udo Richter,
international key account director, VIPA)

VIPA Sporting

**VIPA Head of Development Habermann
better than VIPA relay teams**



Almost traditionally

VIPA GmbH participates at the Challenge of Roth. Also this year we send three relay teams to the race, but they all have been beaten by the single starter and head of development Rainer Habermann. Even CEO Wolfgang Seel did not hesitate to pedal himself.



Wolfgang Seel

Jürgen Glaser

3,86 km swimming, 180 km on bicycle and 42,195 km running the ten VIPA and profichip colleagues had to cope with the traditional „Ironman“ in Roth.

Improvement of his own best time

Already in 2009 Rainer Habermann denied successfully the Challenge of Roth und he reached then total time of 9:22 hours. In this year the hardware specialist wanted to improve at any rate his old best time. Habermann has achieved this target and surpassed his old best time for scarce two minutes, even if in the meantime it seemed possible to realize a total time under nine hours.

But in the final race over the Marathon distance the 35-year-old men could not quite keep his pace and so he reached the target within a total time of 09:20:21 hours (swimming: 00:57:57, bicycling: 04:47:22, running: 03:32:00). So he achieved the 102nd rank overall and the 29th rank in his age class. With this result he beaded his colleagues, which had started in three relay teams.

Starting in three relay teams – one team had to quit

Three relay teams had started, but only two teams entered the target. The SPEED7 Racing Team 1, consisting of software developer Tobias Müller (swimming: 00:56:47), CEO Wolfgang Seel (cycling: 05:37:16) und ASIC Designer Michael Balling were well in the race, before Balling had to quit at the 23rd km of the Marathon distance. Continuing racing was excluded by problems of the foot, so this team could not reach the target. The other both teams were more successful. The SPEED7 Racing Team 2 reached the target in a total time of 11:26:17 h and was the 434th team of final standings. Daniel Westphal introduced his team with a swimming time of 01:09:11, and then Jürgen Glaser took over by cycling in a total time of 05:17:18h for the distance of 180km. Cage Roland Tobiasch finished the Marathon distance in 04:56:44 h.

The 3rd team was the SPEED7 Racing Team 3, which reached the 198th rank in the total placement. Simon Schlereth did not require even a one hour for the 3,86km water distance (00:58:05) and was followed by Roland Thamm. The cycling specialist t covered the distance in 04:54:40 h und handed over the baton to Peter Fredehorst, who reached the target in 04:27:14 h.



Roland Thamm



Roland Tobiasch



Michael Balling

SPEED7 for speed



As support engineer at VIPA France the job of Frédéric Hemard is not only to care for the speed of your application. He also participates in races and so he has achieved the 14th place in a field of 87 runners at the Cross-Country race of Tanlay (www.chateaudetanlay.fr). We congratulate for the result of 2h 00min 11sec over a distance of 23 km including a height difference of 663 meters. We wish furthermore much of "SPEED".

ทานให้อร่อยนะ 請享用

nikmati hidangan anda
Guten Appetit

Thailand

China

Malaysia

Deutschland



Text and pictures: S. Isinger und K. Welker



Asiatic food is all together: sweet, sour, sharp and mild. With special spices you can get a special impression of tastet.

„Have you eaten yet?“ This question means the same in Asia as the question in Europe: „How are you. Not surprising, because food is very significant for everyday life and is more important than clothing and living. So high-quality food and careful preparation is especially emphasized.

One main ingredient is rice, which is served in Asia at almost all meals, even for breakfast. It's sticky rice most of the time, because it's best to stick at the chopsticks. Of Course vegetables and herbs shouldn't miss.

The real trick of the Far East food however is the exotic spices. Black bean paste, fish sauce, lemongrass or tamarind are there absolute standard, however in our country they are nearly unknown. They give special taste impressions, because they combine sweet and sour, sharp and mild flavour in one food.

Food preparation is very special. For knives are taboo during dinner all bulky ingredients are crushed in bite-sized and ready for use with chopsticks, before the food is served. All dishes are served at the same time in contrast to the habit here. Usually there is served green tea, which is free in the restaurants.

Very important except colour, flavour and spice are the consistency and the harmonious impression of the meal. This always must not be harmonious for European eyes.

Our motto for this journey:

Simply to test all, no matter how it looks, smells, tastes or even moves! No American fast food, no European food. It happened right in front of our eyes and so we have become absolutely richer by much experience.

Our resume:

Asia is not only worth a trip because of the country, but also this continent culinary is playing in the first league. The enclosed pictures shall give a small impression of the culinary adventure; even if the food sometimes looks similar to the „German Chinese“, there was a very different taste!

VIPA gastronomic - International

Impressions of a VIPA colleague from Far East

