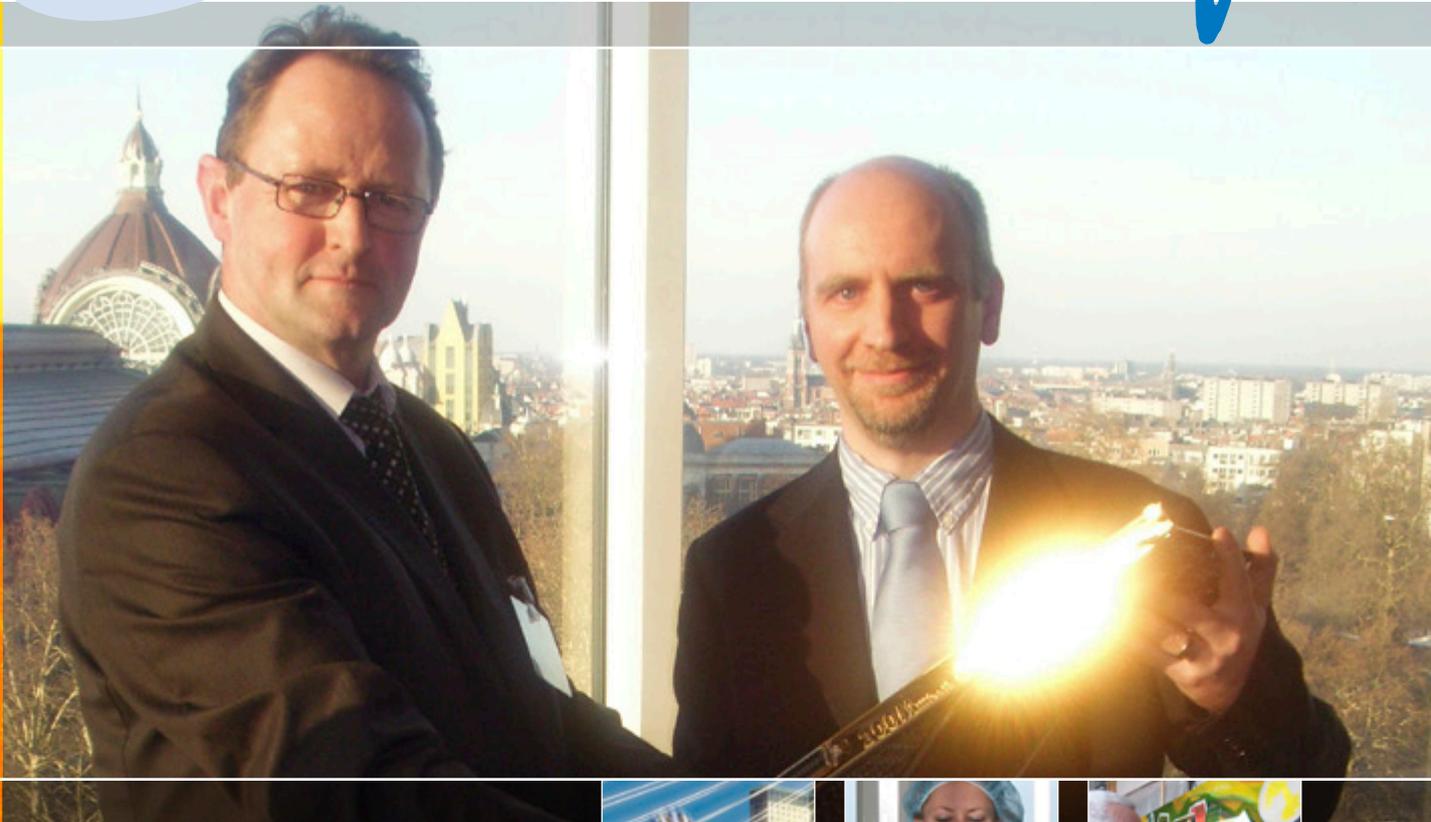




WAY
of *life*



issue
29
May 2010



2000
millionth
Alcatel-Lucent DSL-line



working together

Like the one where the one party is together and the other party gets to work. Or the one where a party or person with problems wants to collaborate so they have a "legitimate" excuse to drop all their problems in the other party's lap. Or the one where certain individuals want to collaborate, but they have nothing to offer: those are always willing to share... The popular "win-win situation" is another great example of a collaborative effort where one party is always hell-bent on winning. Luckily enough for you and us, many excellent collaborative efforts came to fruition as well.

experience is that the only good contract is the contract that fits on a single page. As far as I'm concerned, the collaborative efforts (or people) should make the rest come together naturally. Working together in your own organisation is difficult enough as it is, let alone having to do the same on the outside as well.

In the long run, the only one thing that really needs to happen is business criterion: the ultimate principal must reap part of the benefits.

Let's all work on this together!

The ever-popular EMS conference took place on Tuesday 23 March. This year's theme was "perspectives of sustainable market sectors" and the NEVAT did an excellent job of organising the event. Many noted speakers of well-known companies and institutions were on hand, and they gave interesting readings.

In the forum discussion that followed after the break, the forum was asked to respond to a number of propositions presented to them. One of those propositions dealt with the hardening of the business world and contracts regarding collaboration. Luckily enough, I can now brag about the many exceptional years I experienced in this regard. Personally, I think we have a tendency to take the term collaboration for granted. I've seen way too many collaboration agreements come and go in the years gone by (60 to be exact).

Nevertheless, the most important issue is to first layout the expectations of all parties involved. More often than not, this is where they miss the boat. Obviously, a solid foundation in combination with corresponding corporate cultures and objectives are requisites. But the key component is that both (or all) parties should benefit taking on such a collaborative agreement.

Also fascinating to know: what is the nature of the connection with respect to scope or revenue? Is it a collaborative effort between a customer and supplier, or is it one amongst friendly competitors? In scenario one, the customer-supplier relationship disappears rather quickly, and in scenario two, it's the (healthy) competitorship that gets lost. Needless to say, translating all these ingredients into a contract that requires all information and agreements to be put in writing anyway is a hard thing to do. My

Ton

This is a story about four people named Everybody, Somebody, Everyone, and No one.

An important job had to be done and Everybody was sure that Somebody would do it. Everyone could have done it, but No one did. This really upset Somebody, because after all, it was Everybody's job. But Everybody thought that Everyone would do it, so No one realised that Everybody wouldn't do it. The end of the story is that Everyone blamed Somebody, because No one did what Everyone could have done...

colophon

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Way of Life is published by tbp electronics. This newsletter is distributed amongst tbp relations. The republishing, reproduction, or copying of articles is only permitted after obtaining express permission from the editorial office. Way of Life is printed on chlorine-free bleached paper and uses eco-friendly packaging.

EN9100 certified

The flags flew high at tbp electronics in Geel following the successful completion of the EN9100 certificate audit; the quality system for the aviation and space industry. The certificate clearly states what tbp stands for: "an integrated service provider for electronic components (EMS), including design, component management, prototyping, industrialisation, volume production, configuration management, testing, post-sale logistics and services for electronics and modules for the aviation and space industries, and other highly technological applications". Just so you know.



**BUREAU
VERITAS**

tbp speaks at the 2010 Bits&Chips Hardware Conference

Are you participating in the third Bits&Chips Hardware Conference on 17 June at the Evoluon in Eindhoven? Then come have a listen to Anton Hermus, the COO of tbp electronics Belgium. He's going to bring you up to speed on the developments in the EMS market. He'll demonstrate why an intensive, honest collaboration (with or without that one page contract) between companies developing and producing electronics is becoming increasingly important. Only then does economic production become justifiable. He'll also delve into the effects of the component crisis; a problem that can't be resolved that easily. Finally, he'll make his case to partner process innovation with product innovation. "We're not going to make it by simply presenting ourselves as a country of knowledge", says Anton. The government should stimulate more production. There's a lot to be done yet...

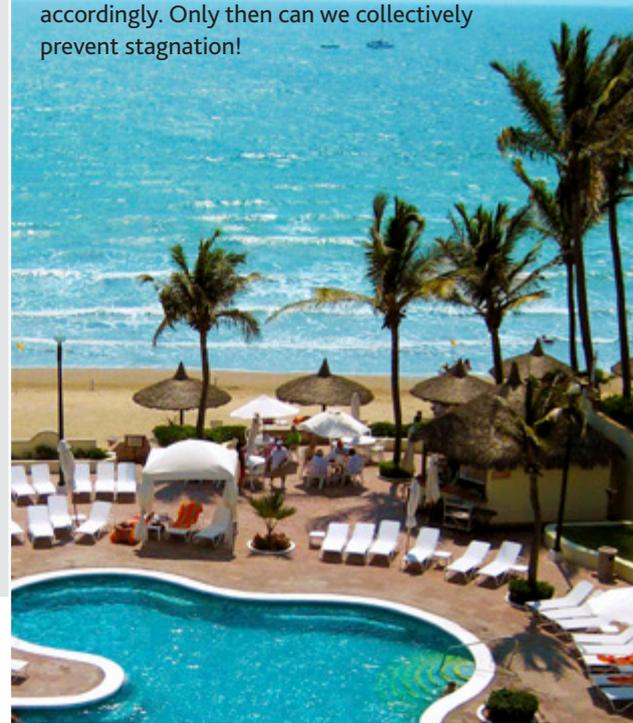
More information about this conference can be found at www.hardwareconference.nl

on holiday!

Once again, our employees will be taking holidays collectively per location this year. We did make sure that at least one factory would continue production during the holiday period. The production facility in Geel is closed during weeks 28 and 29 (Monday 12 July to Friday 23 July 2010). It's Dirksland's turn subsequently, as they will close down during weeks 30 and 31 (Monday, 26 July to Friday 6 August 2010).

Please direct all communications related to exceptional situations concerning this holiday period to Mr. Frans Geerts (business development), who can be reached at +31 650 252 708, or by email at: fgeerts@tbp.eu.

Keep these dates in mind when planning your vacation. Send in your orders and forecasts on time so we can process them accordingly. Only then can we collectively prevent stagnation!



also closed after Ascension Day

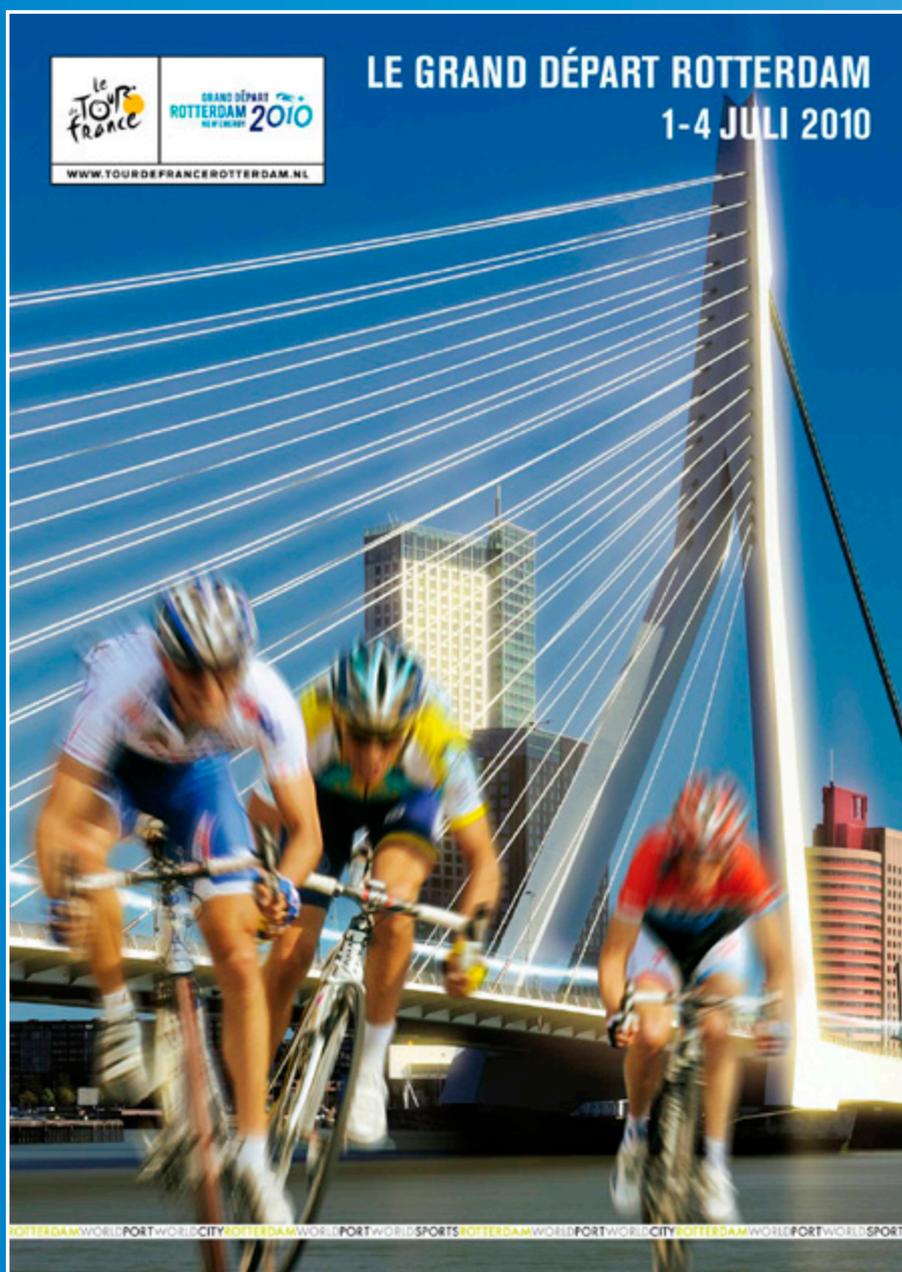
Due to the fact that many companies are closed on the Friday after Ascension day, both Geel (B) and Dirksland (NL) will be closed on Friday 14 May 2010.

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does electronics have a thing

The starting shot on Saturday 3 July in Rotterdam will initiate the most spectacular event in cycling: the Tour de France. The prologue in the 'city of the Meuse' and the following 20 stages will once again delight the many cycling fans. A total of 3.600 kilometres has to be ridden in three weeks time before the cyclists are due to arrive at the Champs Elysées in Paris. In the past, the Netherlands has regularly proven to have top contenders for this event. Who can help but remember such names as Wout Wagtmans, Jan Janssen, and Joop Zoetemelk? And how about the Belgians Eddy Merckx and Lucien Van Impe? These are front runners who have written history in the past. Who will write history this year?



along the horizon

As of July 1st, Rotterdam will convert into a cyclist's city. That's the date of the Grand Départ tour, an event in which all amateur cyclists can participate. Two days later, the 8.9 kilometre individual time-trial course will start near Ahoy on the Zuidplein, and from here, riders will cross both of the Meuse river bridges while traversing the heart of the city.

On Sunday July 4th, the Rotterdam to Brussels stage signals the start of real racing. The route runs through Spijkenisse, Hellevoetsluis, and Goedereede, in the direction of Zeeland and Antwerp. Riders might think they're racing on "vals plat" (flat terrain) until they start to feel the effects of the predominant south-westerly winds. A stiff ocean breeze could still make this a tricky stage.

According to the Goedereede, Stellendam, and Ouddorp municipalities, the Tour is as good a reason as any to party, and kicking off the festivities on Saturday night July 3rd is the musical celebration in Stellendam, followed by, amongst others, a sponsor breakfast the next morning. Watching the Tour always goes hand in hand with a snack, the beverage of choice, music, and a myriad of other activities suitable for both young and old. For more information about this happening, go to www.goereesewielerweken.nl.

Those who know where Dirksland is probably know that Goedereede is not too far away. Hence the reason why Dirksland feels somewhat connected to this sporting event, and us scoring a milestone with regard to our activities

g for cycling?

only strengthens this feeling. You see, we experience that as sports too. Let's talk about our website in particular: thanks to our software, our French-speaking customers can "ride" through the entire website in their own language. The special "behind the scenes" section where customers can "track" ongoing projects is now presented in French as well. Hence, no "breakaways" in the tbp production lines, just clear and useful information.

Want to know more about the Tour de France? Go to www.letour.fr or www.tourdefrancerotterdam.nl.

Giro d'Italia

The Tour isn't the only event vying for the attention of cycling fans, as the Giro d'Italia (www.giroaditalia2010.nl) is also getting in on the action. The third stage of this tour, which starts in Amsterdam, has riders racing through Goedereede on the 10th of May on the way to their final destination in Middelburg. The coming of the Giro will be celebrated exuberantly by Middelburg. The whole month of May is replete with musical performances, sporting activities, and culinary surprises. For more information about events during this month, go to www.giromiddelburg.nl. You can start by watching the individual time-trials on the 8th of May in Amsterdam, or follow race

from the sidelines along the Amsterdam - Utrecht route the next day. See www.rondevanitaliaeutrecht.nl.

Go the urge to get on your bike yet? Or are we just cheering everyone on from the sidelines? In any case, we're recommending our relations wanting to spend their holidays or weekends on the Schouwen-Duiveland or Goeree-Overflakkee islands to make their reservations on time because its going to be pretty busy!



tbp at exhibitions

There are two exhibitions that are of particular interest to tbp this year: HET Instrument and electronica 2010. HET Instrument runs from 28 September to 1 October at the RAI in Amsterdam. This exhibition needs no introduction. It's where the business world comes meet every year. Our Grand Café is located in booth 4C039.

The electronica 2010 exhibition at the Neue Messe in Munich (Germany) runs from 9 November to 12 November. This is "the place to be" for business professionals involved in electronic applications. All of the experts from some of the most divergent branches converge here: from the auto industry, industrial electronics, "embedded" applications, and wireless communications, to medical electronics, MEMS (Micro-Electro-Mechanical Systems, and micro-electronic & micromechanical applications). You're invited to visit our festive bar (booth number is in the works).

 **electronica** 2010
components | systems | applications
www.electronica.de

HET instrument

After years of staging the exhibition in Utrecht, HET instrument is returning to their roots: Amsterdam. On 28 September, the RAI will be opening the doors that give way to halls one through six, where roughly 450 exhibitors from the electronics, automation, and laboratory technology industries will be receiving their visitors. The main theme is like music to one's ears: "the Sound of Technology", with subdivisions such as "the Sound of Electronics", "the Sound of Automation", and "the Sound of Laboratory".

eye catchers

Aside from the standard array of booths, the exhibition will be embellished by numerous additional activities. MES (Manufacturing Execution System) will occupy a prominent spot in the exhibition programme. This link between production processes and management systems has been gaining much popularity as of late. The write-ups in the trade journals are also on the rise. Aside from MES, Vision Technology is steadily gaining ground in the field of OEM and production line applications. The exhibition floor will also house a vision-centre. This 'plaza' will allow visitors to experience the Vision Technology application possibilities and to meet the suppliers who can bring these applications to fruition. This main catering point will also be located within the plaza

(don't miss the tbp Grand Café), and a variety of presentations will take place there as well. Several exhibitions are exhibiting *mini factories* as an alternative to LivePIL. For instance, a company dedicated to the exploration and transport of crude oil and gas will be showing a demo-skid it uses for training purposes. This is a good way to demonstrate how high-tech field instrumentation and systems are being applied nowadays.

the sound gadget

Visitors at the last three Electronics & Automation and HET Instrument exhibitions have grown accustomed to being introduced to some kind of gadget developed especially for these exhibitions, and something amusing has been thought up for this year as well. Every visitor registering on time will receive the RF Sound gadget at the exhibition. This tracking device vibrates and makes a sound as soon as it nears a participating booth. The base station at the corresponding booth lights up, signalling the discovery of the right location. Once the match is made, a sound fragment (part of a tune) is transmitted onto the gadget. The tune is complete after following the path leading to the right stands. Those who achieve this will be in contention for a prize. The right path symbolises the collaboration between companies. DevLab, itself a collaborative effort of ten FHI-companies, developed the RF Sound gadget.

free public transportation for all visitors

Free public transportation to and from the Amsterdam RAI is available to all HET Instrument visitors this year. During exhibition days, you can travel second class to the RAI and back from any train station in the Netherlands. You can make use of the Amsterdam metro, tram, and/or GVB (night)bus. No traffic, no parking fees, and a significant improvement in accessibility; those are the advantages exhibitors are sharing with relations they are inviting to the exhibition. The possibility of offering free public transportation on the Dutch railway and the Amsterdam municipal transport systems was one of the benefits realised by moving HET Instrument from Utrecht to Amsterdam.

You too, no doubt, will visit HET Instrument this year. Make sure you get your admission ticket on time by registering on the tbp electronics website (www.tbp.eu). You can pre-register by clicking on the corresponding link under the "latest news" header.

The exhibition is opened:

- from Tuesday 28 September to Thursday 30 September, from 11.00 to 19.30 hours,
- on Friday 1 October from 10.30 to 16.00 hours.

HET
INSTRUMENT
2010

**THE SOUND OF
ELECTRONICS**
28 SEPT. t/m 1 OKT.
AMSTERDAM RAI
www.hetinstrument.nl



and much more

In addition to the HET Instrument and electronica 2010 exhibitions, there are several other events in which tbp is participating that might be of interest to you. Here are a few from the ample selection:

4-6 May 2010, Nuremberg, Germany

PCIM EUROPE 2010



International trade fair and conference for power electronics, intelligent motion, and power quality.
www.mesago.de

18-20 May 2010, Nuremberg, Germany

SENSOR + TEST 2010

Exhibition for measurement technology.
www.sensor-test.com

1-3 June 2010, Shanghai, China

PCIM CHINA 2010

International trade fair and conference for power electronics.
www.mesago.de

2-4 June 2010, Shanghai, China

AUTOMATION SHANGHAI

The 14th industrial automation, control, test, and measurement exhibition.
www.iacexpo.com

8-10 June 2010, Nuremberg, Germany

SMT/HYBRID/PACKAGING 2010

System integration in microelectronics. International trade show and congress.
www.mesago.de

22-23 Sept. 2010, Bochum, Germany

WIRELESS TECHNOLOGIES CONFERENCE 2010

Conference and exhibition.
www.mesago.de

19-21 Oct. 2010, Parma, Italy

SPS/IPC/DRIVES ITALIA 2010

Industrial automation, systems and component technology. Conference and exhibition.
www.mesago.de

23-25 Nov. 2010, Nuremberg, Germany

SPS/IPC/DRIVES 2010

Electrical automation, systems and components. International exhibition and conference.
www.mesago.de

Contact the Dutch representatives for any additional information you might require about these exhibitions: Kenter & Co te Goor, T+31 (0)547 275005.

Reed exhibitions is organising the following forthcoming events:

20-22 May 2010, Hanoi, Vietnam

NEPCON VIETNAM 2010

International electronic parts manufacturing technology trade exhibition.
www.vietnammanufacturingexpo.com

15-17 June 2010, Penang, Malaysia

NEPCON MALAYSIA

Electronic manufacturing exhibition.
www.nepcon.com.my

31 Aug. – 2 Sept. 2010, Shenzhen, China

NEPCON SOUTH CHINA.

SMT industry trade fair.
www.nepconchina.com

coming in 2011

You will find us at two exhibitions next year: Electronics & Automation (25 May to 27 May). You'll probably also run into us at Productronica 2011, one of the most important exhibitions in the world relating to the field of electronic manufacturing. This exhibition covers the entire spectrum of current and future production, technology, and system solutions. The 19th edition will run from 15 to 18 November 2011. Go ahead and jot down these dates.



customer & supplier days spring 2011

The so-called customer and supplier days tbp normally organises in the fall have become somewhat of a tradition. This event will now be moved up to the spring of 2011 due to our participation in several of the exhibitions during the same period. More information will follow around that time.



the west entrance of the exhibition in Munich



Hanneke van Wageningen



Ineke Vis

passion adorns jubilees

Two of our employees will be celebrating their 25th anniversary this year. Purchasing manager Hanneke van Wageningen made her March 1 1985 debut in a rather unusual manner. Production coordinator Ineke Vis followed suit three months later.

Hanneke van Wageningen

tbp took a significant step forward in 1985: a new office building was put into use on the Vroonweg in Dirksland. The move was just completed, but the company continued to expand. Director Tony Plooy placed an ad for a technical buyer. Hanneke had just brought her company's activities to a close and was looking for something else. She wanted to freelance — until she read the ad. She still had aspirations in the business world, but electronics wasn't *her thing*. Her job interview resulted in a weeklong mutual introduction within the company. "It just clicked", she said. Hanneke remembers that time as if it were yesterday: "I became the Jack-of-all-trades in the office and learned the ropes. Purchasing, stockroom, and sales procedures; I even ran the reception desk." The term logistics was still in its infancy, but with the advent of automation, it became increasingly important. Hanneke was directly involved in establishing this right from the get-go. Her contribution in selecting the ERP package and her part in the current business management policies has been indispensable. Logistics was a

new profession, and she liked that field of expertise. She took courses and grew with the company, but it wasn't enough. She felt qualified for a position in higher management. The presentation and communication courses she took came in handy when she started giving presentations about production design and end products to larger audiences. A hidden talent wouldn't you say? Ton asked her not too long ago how she would feel about taking on order processing in addition to her purchasing manager's position. So there's still more in the offing. Hanneke has a tremendous sense of responsibility towards the company and her colleagues.

Ineke Vis

Ineke Vis had an almost ideal start in 1985: she was asked to come work at tbp. This all-round catering employee with quite some experience in her field had no idea what she was getting into. She could come and work for a company producing electronics. That's a little different from hotel and restaurant work. tbp was still a young company employing about a dozen

or so people at the time, and they were looking for someone to take care of the domestic chores. A small company, I can handle that, she thought to herself. Electronics... she was intrigued by this new element in her life. She remembers well how quickly things changed. "After about six months, the production manager at the time left and I expressed an interest for certain tasks related to that position. I was especially excited about all the organisational work. Whether it meant being in the stockroom or on the work floor, I enjoyed all of it. We always came up with the perfect solution. My brother Kees, a real techie, would do the prep work and I became the production manager".

Her fascination with the technology helped her learn how to distinguish the many different components. She was perfectly capable, sans computers back in those days, of keeping track of the inventory. She was happy to leave the production work to others. The company grew and Ineke grew along with it. To this very day, Ineke still runs the production department at Dirksland. Solutions have since been found for the other work activities. That would've happened anyway: the establishment has grown considerably in comparison to 25 years ago.

Nevertheless, there is one part of her original job that still remains today. With all of her catering experience and endless energy, she still enjoys being the hostess. Just the slightest of inklings is enough to get her up and about to make sure tbp guests receive a warm welcome. You might find her cooking for employees working overtime, or you could run into her serving guests at a tbp exhibition booth. Oh yes, and the fact that she's CEO Ton Plooy's life companion, well, most readers probably already know that.



tbp electronics & Alcatel-Lucent celebrate the delivery of Alcatel Lucent's DSL line card that made it possible to connect the 200 millionth subscriber.

gold card for Alcatel-Lucent



“the board's at the cleaners”

Increasingly more customers are setting specific requirements for the cleanliness of the printed circuit board assembly's (pcba's) being delivered. Not so much out of aesthetic considerations, but because of the detrimental effect of contaminants like dust and vapours when used in certain environments. In machines containing cameras for semiconductors or medical equipment, these kinds of contaminants are enemy number one! The manufacturers of these machines require opti-

mal cleanliness from the pcba's being delivered. The quality of cleaning in the conventional production process has proven to fall short of the more stringent requirements for cleanliness. The pcba's might look clean, but in fact, too much residue is still left behind. This residue is comprised not only of dust particles, but also consists of flux residue that remains behind after the soldering process. Even the use of no-clean flux doesn't provide adequate results. This residue could

The cleaning machine in the clean room.



Geel, good for two hundred million DSL connections

There was a cause for celebration earlier this year at the Geel location: a somewhat unusual circuit board was fabricated there for Alcatel-Lucent. It was a “gold card”, the one that made the 200 millionth DSL connection possible. Jürgen Lison, the vice president of Alcatel-Lucent, received this exceptional product from the hands of Anton Hermus, COO of tbp electronics. This card was part of a shipment of DSL equipment for Telefónica, one of the largest telecommunication companies in the world.

The Digital Subscriber Line (DSL), is a frequently applied technology that provides subscribers with internet access. The Geel factory has been fabricating these types of cards for Alcatel-Lucent since 1997. Moreover, this customer has been a market leader in broadband technology for years now, and is currently supplying products in many countries throughout the world.

broadband technology

Cards were initially fabricated for ADSL use (Asymmetric Digital Subscriber Line). These cards used to provide communication services for four subscribers. This was expanded to 12, 24, 24, and 48 subscribers later on. It wasn't just about production in Geel, as the testing equipment for this modern technology was developed there as well. Their extensive experience to date is diversified amongst the many facets of broadband technology. Aside from DSL, Alcatel-Lucent has also gathered much experience with BRAS (Broadband Remote Access Server), NGN (Next Generation Networking), and internet routers.

successful relationship

Alcatel-Lucent owned the factory in Geel until just a few years ago. After the company switched owners in 2007, the EMS (Electronics Manufacturing Services) role became increasingly visible to customers. Nevertheless, Alcatel-Lucent remained on as one of the largest customers.

According to Anton Hermus, Alcatel-Lucent's ongoing commitment to innovation is inspiring to tbp. He says: “Our relationship is based on the knowledge and experience we share in the field of broadband technology. This given, together with our passion for putting the customer first,

minimises our *time-to-market* while maintaining quality. The ongoing commitment to the improvement of quality is the trump card to a successful relationship”.



On the left, Anton Hermus, COO of tbp electronics. To his right is Jürgen Lison, vice president of Alcatel-Lucent's “fixed access activities”.

produce unwanted vapours later on. That risk is even greater when these pcba's have to operate in vacuum environments.

squeaky clean

To meet the demand for cleaner pcba's, tbp purchased two additional machines that subject the pcba's to an intensive cleaning process. The machines are already up and running: one in Geel and one in Dirksland. It's not for nothing that this machine is set up in the Dirksland clean room.

The cleaning process is completely automated. The pcba's are initially mounted onto a frame which then runs through four compartments in the machine. The process starts in the first cleaning zone containing a cleaning

solution. The board is “washed” here. In the following zone and the zone thereafter, the cleaning solution and contaminants are rinsed off with distilled water. In the final stage, the pcba's wind up in a sealed compartment where the water still clinging to the board is removed by applying warm, dry air in a vacuum state.

Using a test board, the machine is calibrated periodically to make sure it continues to function properly. An external company analyses samples from the cleaning bath on a regular basis to determine if the test board meets all requirements. In addition to this, the bath is analysed daily by us for signs of contamination. These measurements are documented in a log book in the event the

results—if need be— must be verifiable for traceability purposes. It's these procedures that enable tbp to keep a grip on the quality of the production process.

increasing interest

Moreover, tbp thinks that in practice, customers are going to start requiring “clean boards” more often. This will concern applications in environments where dust and contaminants have a detrimental effect on the surrounding area. Think about applications like optical instruments, precision instruments, medical equipment, military electronics, and space technology, etc.



Art in Dirksland

Bob Kemper: I live as if I were a millionaire, without the stress

Starting mid-April, the exposition wall in the Dirksland office will display the paintings of Portugal-born Bob Kemper (22 Augustus 1936). This painter, a *professional at heart*, has built up an impressive body of work through the years, in which his imagery is characterised by an entirely personal and impressionistic style. Bob already what he wanted to be early on in life. At fourteen, he signed up for the "Saturday afternoon" session at the Willem de Kooning Academy in Rotterdam, and went on to take a night course a couple of years later. He opted out of military service because of his political convictions. He makes himself useful in several fields of politics later on. But painting is and will always be his greatest passion.

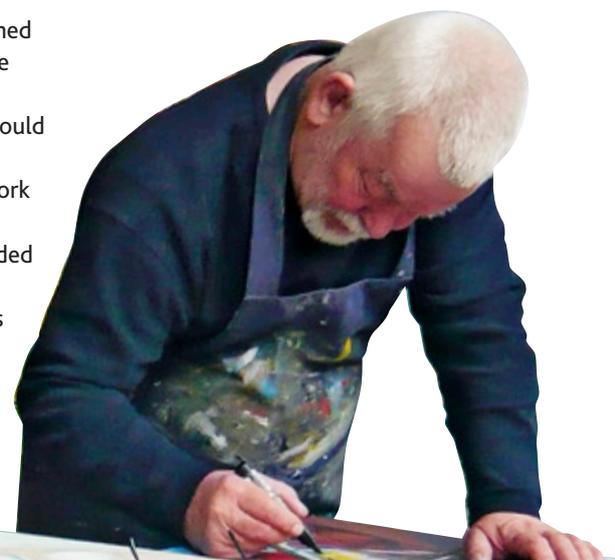
Inspiration comes to him primarily while working in his studio in Hooglyet, near Rotterdam. New ideas evolve while working amidst his own oeuvres. He remarks passionately: "I'm constantly changing my existing work because I feel like it's still not finished. I can make it better still, and that applies to most of my work. It's like I'm constantly moving about in my paintings. Strangely enough, I can let it all

go as soon as I leave the studio. I enjoy observing my surroundings, buildings, and all the eye can see, but don't convert that into images right away. So you won't find that reflected in my work. But the chaos, beauty, and the contrasts are always there." As far as Bob is concerned, learning art doesn't work. As soon as you think you can do it, you lose it. That's the secret then. Bob also thinks art is completely useless, but that just like some other things, it's part of life.

Bob Kemper is not only an accomplished painter, moreover, he must have some highly developed and indiscernible communication skills as well. How would one otherwise explain the countless times he's been invited to show his work at exhibitions, both domestically and abroad? The quality of his work is lauded everywhere, and this brings him work on a regular basis. One of the projects on his program this year is to create a five metre-tall statue, and to build with glass, brick, and marble. A pretty abstract medium if you ask me, but the inspiration he needs is one and the same

when painting. Bob will be showing some of his work at the kasteel van Rhoon (www.hetkasteelvanrhoon.nl). Bob is married to Len, a well-known culinary specialist, and the father of two girls.

Bob Kemper, contemporary artist
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3191 VJ Hooglyet
T: 010 466 86 58
E: bobkemperkunst@gmail.com



component market remains fickle

Fabricating printed circuit boards (pcba's) within the programming schedule depends entirely on the availability of all materials. Solid agreements with customers and suppliers are essential to make sure that all the required components are available at the appropriate time. After all, a missing component could have disastrous consequences...

pulling out all the stops

tbp buyers have maintained good relations with suppliers for years now to coordinate the flow of components with production requirements. But despite all efforts to remain organised, there's always that possibility of running into a snag somewhere. This has been especially true over the last couple of months, and was primarily due to the economic crisis, which lead to problems amongst the manufacturers of semiconductors. Some of the factories actually had to close down because of the reduced demand. In the beginning, the reduced demand could still be met with existing stock. The present situation is the other way round. The industry is now experiencing a ramp up, an increased demand if you will, but production is lagging behind. This means that delivery times for some components are months behind. In these situations, we fall back to the so-called crash teams. Tbp is part of a crash team including several colleague EMS companies. Delivery problems are discussed and we lend each other a hand. Despite the fact that these are competing companies, the mutual collaboration in this case is good. Another possibility is to turn to brokers, but only to those known to be reputable. Supplies coming from this niche are subjected to FAIR (First Article Inspection Report). This means that the first component supplied by a broker is tested by way of X-radiation. Comparing this "photo" with an original component reveals information about its authen-

ticity. Differences are recognised right away. Manufacturers can also determine if a particular component is theirs by checking the serial number on the packaging.

second source

A worst case scenario is where component shortages escalate to the point where an end product cannot be delivered on time. To prevent this from happening, tbp advises the customer to employ second source components whenever possible in their designs. Customers submit their MPN (Manufacturing Part Number). In doing so, they provide a preferred source and an alternative second source. Something that should be considered in the design!

At any rate, it makes sense to use the standard Class A listing of tbp components when using standard components to design electronic circuitry. This minimises the risk of running into delivery problems. We use the term "Class" for component designation. Class A refers to generic components. Many of our customers use components from this Class. Components like standard resistors, condensers, transistors, and diodes, etc. Class B components are those used uniquely by a small group of customers. Then there's Class C. These components are usually used by a specific customer. Having a second source for these components on hand is paramount.

good forecast

To ensure the timely delivery of products, it is important for customers to provide timely forecast updates at regular intervals. Good communication between the customer, supplier, and tbp the producer, is therefore essential. If the communication is good, the expectations of the customer will be met. It goes without saying that tbp does their utmost to minimise the number of potential delivery problems on the list. For instance, having options for a second source or distributor. Whatever the situation may be, it's our job cover all the angles.

audience award

Supply Chain Award 2009

Supply Chain Award
winner
Prize of the Audience
2009



From left to right: Jos Marinus (president VIB), Dirk Van der Borgh (tbp), Marc Fourny (president ABCAL), and Olivier Corluy (president PICS).

The Supply Chain Award.

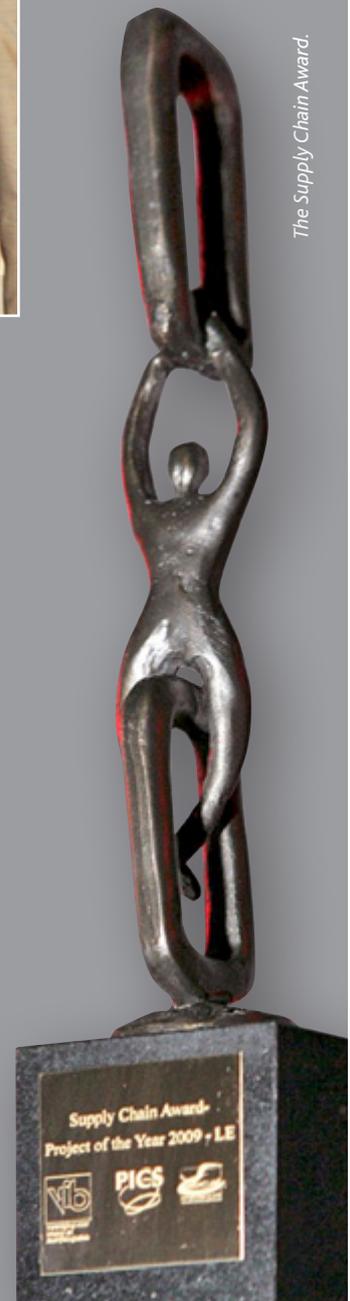
Late last year, *tbp electronics* in Geel was voted the winner of the "Supply Chain Award 2009" audience award. This Flemish prize, initiated by the organisations VIB (Vereniging voor Inkoop en Bedrijfslogistiek), PICS Belgium (Society for Integrated Supply Chains), and ABCAL (Association Belge des Cadres d'Achat et de Logistique), emanated from the apparent need to focus more attention on logistics projects within the business and government sectors. The organisation encourages businesses to invest more in projects that further improve the service level and efficiency of the entire supply chain. Businesses submit information to the juries about an innovative project they implemented within their organisation, and the best entries are awarded a prize.

Tbp sure got the attention of 460 logistics managers and experts with the "Journey to a low cost and agile supply chain" project. The evaluators came to the conclusion that the submitted project presented a classic example for the best approach in logistics.

Attributes of this approach:

- prompt adjustment of the processes to meet customer expectations
- simplicity in the processes;
- avoiding squandering (costs);
- involving the operators in the improvement processes;
- creating added-value for the customer;
- room for improvement and innovation.

Our supply chain manager Dirk Van der Borgh was on hand to receive the award during the 6th Gala Award Event at the Metropolis in Antwerp, attended by more than 460 directors and managers from supply chain business. Aside from receiving the award, *tbp* may use the "Supply Chain Award Winner" logo on all their communication material for a year, and we are certainly happy to comply.





These employees just concluded a tois project.

tois: tbp's improvement project is working

We've already informed you about tois, tbp's operations improvement system, in previous issues of Way of Life. A system that focuses on optimising operational processes with as its objectives, to improve customer performance and a further reduction of (superfluous) costs. Both the managers and the operators responsible for these processes meet on regular basis to discuss new avenues for improvement. The results experienced to date have been received enthusiastically by all parties. The improvement options discussed have already been realised successfully in several locations! Here is a small selection of "ongoing projects".

immediate storage

The old receiving department procedures usually meant relatively long waiting times before the materials actually found their way into the stockroom. Thanks to the logistical changes, employees can now process and store materials all at once. There used to be a time in Geel where it would take two to three days before a product found its way into the stockroom. Today it takes an average of four hours.

so-called Poka-Yoke techniques are being applied. This Japanese term signifying all-encompassing "mistake-proofing" comes from the auto industry. With this method, the production processes are organised in such a manner to all but eliminate the possibility of making mistakes. Every action imposes the appropriate implementation. It's like the key that will only slide into its lock when held at a specific angle.

more efficient assembly

As a result of the intensive discussions regarding the design of assembly lines as required for specific products, the lines have now been converted into U-shapes to provide the operators with more flexibility. The flow of components is no longer controlled by hand counts, but is now monitored by a so-called kanban mechanism, an efficient method used for the distribution of materials. Every process has specific instructions that can serve as a refresher course for operators who haven't worked on a particular process in a while. This further reduces the risk of errors. Lastly, the

shorter lead times

It comes as no surprise when we say there's more to board production than meets the eye. Quite a few steps take place between the time the components and bareboard are introduced and the point at which they reach final inspection. Significant progress has been already been made by improving the planning structure, the preliminary process, and the recognition interval for potential errors. Tois is being worked on incessantly. It's an ongoing process that has no end — and that keeps everyone on their toes!



This seal of approval is assigned to tois projects when completed successfully.

electronics improve safety in transportation



Every year, the so-called "blind spot" on trucks and busses claims new victims. Especially bicyclists, moped riders, and pedestrians are particularly vulnerable road users, as drivers sometimes lose sight of them as they make a (right) turn. Freek Ton, inventor by trade, was confronted with the death of Lex, the boy next door who died as a result of a similar accident in 2002. That incident became his impetus to invent a device that would prevent blind spot accidents from happening. His motivation to finding a solution was fuelled by the statistics. In 2009 alone, 77 incidents took place in which the blind spot was a critical contributing factor. Thirty one people died. Seventy seven drivers are still traumatised by their incident.

The blind spot mirror has been mandatory on trucks since 2003. The number of deaths declined initially, but in the long run, the results were disappointing. Driver-operated monitors and cameras didn't produce the desired results either. The main problem is that drivers have to focus on many different issues when changing direction. This is not limited to just the necessary driving activities, as other road users and objects require an enormous dose of alertness as well. There's less time to focus on video monitors and mirrors.

the system

The basic principle is that a detection system should signal road users and prevent dangerous situations from happening. Inventor Ton [surname, ed.] had already devised a system that became known under the name LexGuard. "There was nothing wrong with it, but unfortunately, it could not differentiate between people and things like street furniture. The result was that drivers were being given too many unnecessary alarm signals and this defeated the purpose of the system. I then set out in search of another system that would only respond when necessary." The PerLex-system he developed does not have the aforementioned drawback, as the sensors installed on the trucks only detect biomass. This feature ensures that drivers only receive warning signals when necessary. There are two different signals actually: an orange light and an acoustic signal to indicate the presence of a person near the truck, and a red light (and alarm signal) when contact is made with the strip. In practice, the risk of

being run over if the driver stops immediately at that point, has been proven to be almost nil. The sensors consist of antenna wires connected to a box. Trucks with trailers in tow can use two of these devices. The communication between the box and the display in the driver's compartment runs through the onboard system. The system is designed to enable switching between truck-trailer combinations. The electronics required for this system were developed in collaboration with the Delft University of Technology.

on the market

As the system was ready for further implementation, it was time to find a suitable manufacturer. Freek Ton turned to his relations at the Delft university and a few other companies he knew of. All recommendations pointed towards tbp electronics. "Their direct approach became evident during my initial conversations with them. It was very impressed, and had an immediate good feeling about it all. They instinctively know what I want and brainstorm with me to bring the product to perfection. We're still in the initial phase of course, but all signs indicate that it will turn out just fine".

much interest

Institutions like the SWOV (Institute for Road Safety Research), TLN (Transport Logistiek Nederland), and the Dutch Cyclists Union have given PerLex positive reviews. On 16 December 2009, a prototype was demonstrated to employees and the Ministry of Transport, Public Works, and Water Management. Once again, the response was positive and the Ministry has announced it will evaluate the system further. Driver's circles are calling for prompt implementation; the sooner the better! And this way, electronics also make a significant contribution to our safety.



The electronics and the inconspicuous strip shown by Freek Ton are what warn truck drivers against impending danger, thereby saving lives.