

Press Release

Viscom Technology Forum – Entertaining program with free workshops and concise expert knowledge

Hanover, July 2017 – The weather for this year's Viscom Technology Forum agreed completely with what is hoped for on an astronomical first day of summer. On the 21st and 22nd of June, the numerous participants experienced the newest from the world of inspection solutions for electronics production along with many other interesting topics from and beyond the branch. They were led through the event by Viscom sales engineer Michael Mügge. Company president Volker Pape delivered the welcome address. As ever, the pleasant evening get-together at the conclusion of the first day offered an exciting live presentation of current new innovations, with many opportunities to engage in mutual conversation. At the center of the evening's entertainment was a spectacular show focused on a totally unique toy – the yo-yo.

All the tricks from the yo-yo artists Ivo and Jan, known under the name inmot!on, had to fit perfectly. Synchronization was decisive for their success. The visitors to this year's Viscom Technology Forum had the pleasure of seeing this duo from Bern, Switzerland, live and were completely enthralled by their act. The two 2012 World Yo-Yo Champions and repeated European title holders transformed what at first appears to be an innocuous toy into a first-class mixture of sport, cabaret and great entertainment.

The same accuracy and reliability are also of especial importance in inspection systems for electronics production. Flawlessly coordinated processes and smooth synchronization are among the central aspects of Industry 4.0. The technical presentations, workshops, tutorials and live demonstrations at Viscom Technology Forum 2017 in Hanover, Germany, covered associated questions from several different perspectives. Like this one: Manufacturer-independent communication between machines in the SMT and THT lines could soon be managed by a new, openly accessible

protocol. The name of this specification: the Hermes Standard. As Bernhard Fritz from ASM Assembly Systems GmbH & Co. KG explained to the interested listeners, "The Hermes Standard is protocol-based and not signal-based. No special connectors are needed. Data transmission is through a completely normal Ethernet network cable." And Bernhard Fritz stressed that he was not attending the Viscom Technology Forum as a representative of ASM, but as the voice of an initiative with the goal of introducing this protocol on a widespread basis. At a founding conference last March in Munich, Germany, signatures of the participating companies affirmed their involvement in "The Hermes Standard." Viscom is also part of this initiative.

The subject of the Hermes Standard came up again during the presentation from Thomas Mückl, Zollner Elektronik AG. In this case, the primary focus was on which product information exchanged between linked production machines can come from the product itself. RFID chips with a rewritable memory handle intelligent identification. Printed circuit boards equipped with such a chip can be dependably identified with no contact. The data on the chip can be adapted to each process step; information over the entire product life cycle and beyond can be saved and recalled. Disadvantages like no access to information because of no optical connection or erroneous interpretation during readout due to contamination are eliminated. Data that are only needed after the production process – for instance, for repairs or recycling – can be also saved on the chip.

Also at this year's Viscom Technology Forum, Leo Martin proved himself a master in reading persons. Educated as criminologist, for ten years Leo Martin was occupied by a major German intelligence service where, after lengthy effort to gain their trust, he won over persons from the organized crime milieu as informants. Could he find out whether a random member of the audience had decided on a black or white ball during a demonstration of his knowledge? Leo Martin started with a thorough interpretation of black and white. From the multitude of information gained by observing facial

expression and body language of his counterpart, ultimately he proved his assumption correct. The amazed test subject was then asked to pick another ball and the interrogation expert came relatively quickly to the correct conclusion that nothing had changed regarding the decision for black.

During Leo Martin's keynote speech, the audience learned how strongly humans are directed by unconscious patterns which restrict us during everyday life, why conflicts on the relationship level emerge and how trust in other persons can be established.

Criminal machinations also played a key role in the presentation from Günter Roggensack, general manager of Cyber Investigate Deutschland. The IT expert and professional hacker detects weak points in computers and advises his customers in the growing threats from the World Wide Web they open. He explained how such gaps can be exploited to penetrate systems and pointed out how they can be closed. His message: By using Trojan horses and viruses, today anyone with the corresponding skills can penetrate other systems and access targeted information or blackmail the victim. Governmental intelligence agencies or politically motivated activists can wreak substantial damage in this way. Another angle is enticing employees of major companies to steal valuable data from their employer with large amounts of money. Günter Roggensack emphasized the importance of a good security concept at the Viscom Technology Forum and presented approaches a company can apply to protect themselves against such attacks.

How quickly the Internet has developed was demonstrated by insights from a wholly other perspective by Christian Stammel. His view concerned the world of wearables, electronic products that can be carried on or even in the body. As general manager of Wearable Technologies AG, he offers companies and other market players a platform for innovation and market development. Christian Stammel stressed that a fitness tracker, for

example, can be quickly discarded as boring if one does not discover the enjoyment in sharing the fitness data with like-minded persons on the Internet. In the other direction, modern networking can be used so a smart city can inform joggers of air pollution levels so they can adapt their speed or distance, for example. His presentation also made clear the potential wearables open for the electronics industry. According to Christian Stammel, wearables will grow strongly, especially in the health area. One of many examples are intelligent bandages that can be used, for instance, as a small monitoring laboratory to analyze sweat. And especially in the mobile health area, the speaker also sees the need for high-quality diagnosis techniques to ensure optimum safety.

Viscom presented a wide range of their own innovations during the two-day event. As well, the customer workshops and Meet the Expert talks provided many practical tips gained from first-hand experience. Among other topics, the visitors could go into greater depth about helpful AOI color gradient inspections, classification based on realistic 3D images (360View) and the various benefits of 3D measurement, such as height evaluations for each individual lead of a component. Customers were also given detailed information on how SI and vVision software can be used simultaneously on one system with the tool Viscom Pilot and on the optimal combination of orthogonal, angled and 3D inspection based on a best-mix library.

During the live presentation on Wednesday afternoon, guests at the Viscom Technology Forum received a comprehensive look at the newest solutions in the X-ray area. Dirk Nülle, head of SP product development at Viscom, presented the new AXI solution for high-end electronics production: The X7056-II system distinguishes itself with a convincing printed circuit board handling speed of under four seconds during automatic X-ray inspection. It will also be available with the vVision software and is characterized by complete versatility in the selection between orthogonal, angled and three-dimensional in-line inspections. "We developed this system with passion. We have retained the many qualities of the X7056RS and further improved

certain characteristics, such as the speed," states Nülle. As with the predecessor system, an optimal combination with automatic optical inspection (AOI) in one machine housing is a fixed component of the development.

Rolf Demitz, Vice President of NP at Viscom, used the X8068 to demonstrate the advantages of manual X-ray (MXI). This system is especially suited to larger inspection objects. Easy-to-operate analysis tools, an extremely robust manipulator and the practical automatic opening and closing of the window for handling inspection objects make the X8068 a very efficient and intelligent inspection stage for random sampling or small series. A high-performance flat panel detector (FPD) delivers geometric magnifications up to 2500x, while multifaceted image filters make analysis easier. "Because the X-ray images are delivered with a wider range of grayscale values than the human eye can perceive, very helpful colorations are possible," explained Rolf Demitz. This way, defective structures can be detected with even greater reliability and hidden quality shortcomings are made clearly visible. Immediately after Demitz's demonstration, his colleague Rainer Duhm (Applications) used the X8068 and a connector with THT connections in a realistic example of the 3D reconstruction of an inspection object with planar computed tomography and how it can be virtually separated into meaningful layers very quickly for analysis purposes. With this approach, a wide range of statements for quality assurance are gained easily and reliably.

Henning Obloch, Vice President of Viscom Service, described the well-rounded offering of after-sales services like fast replacement parts supply, conversions and modernizations, as well as the number of available Service experts who can deliver competent first aid by phone, remote access, and on site. In this context, he encouraged customers to not neglect the matter of training. The reason is immediately apparent: The more competent a company's own employees are, the more efficiently full

system performance can be used over the long term and the more quickly problems can be solved together.

Viscom's facilitation of new ideas is especially evident in the example of computer-based inspection simulation. Programming for such a tool is already well advanced at Viscom. The question driving this effort: What is the best inspection coverage for my printed circuit board? The optimum balance between orthogonal, angled and 3D methods is the prerequisite for minimizing production costs, while maintaining the highest product quality and keeping the significant influence X-ray has on overall cycle time and radiation exposure of the components as low as possible. It should be as easy as possible for those using the software to efficiently combine the different available inspection technologies. From Viscom, product developer Detlef Beer provided participants at the Technology Forum more information about the current status of this project and received their feedback. A voice from the audience: In the future, the tool should be available not only in production, but to printed circuit board designers too so already during the conceptual stages, they have an idea of the inspection effort required later during production.

The youthful exhibitors from Roboter AG of KGS Ronnenberg (Marie-Curie School) also enjoyed a warm reception at the Viscom Technology Forum. The students exhibited Lego robots they had constructed and programmed themselves to perform complex tasks and enjoyed conversation about autonomous driving with experienced guests.

Image captions:

01_The guests arrive.

02_Volker Pape greets the participants in Technology Forum 2017.

03_Sales employee Olesja Münch explains automatic X-ray inspection in a tutorial.

04_An early start: Students from KGS Ronnenberg present their robots at the event.

05_Pause under a beaming sun

06_Leo Martin amazes the participants.

07_Mirko Weißgerber presents 3D AOI and other functions in the system demonstration.

08_Live presentation: High-tech solutions for X-ray inspection

09_Great interest in the inspection technologies from Viscom

10_The grillmasters

11_Mr. Grinblat enjoys mingling with the serving staff.

12_The band the "Ellingtones" provides the musical backdrop for the evening.

13_The Swiss duo inmot!on and their amazing yo-yo show

14_Jan from inmot!on demonstrates the light effect again, with the Viscom logo.

15_Great interest in the workshops

16_Michael Mügge is the event presenter and takes time for conversations with the guests.

17_Thomas Mückl, Zollner, describes the use of RFID chips in electronics production.

18_Henning Obloch, Vice President, Service, explains the Viscom service concept.

19_Bernhard Fritz, ASM, presents the advantages of "The Hermes Standard."

About Viscom

Viscom AG develops, manufactures and sells high-quality inspection systems. The portfolio encompasses the complete bandwidth of optical and X-ray inspections. In the area of assembly inspection for electronics manufacturing, the company is among the leading suppliers worldwide. Viscom systems can be configured specifically to the customer and can be interlinked. The company headquarters and manufacturing location is in Hanover, Germany. With a wide network of branches, applications centers, service support points and representatives, Viscom is represented internationally. Founded in 1984, Viscom has been listed on the Frankfurt Stock Exchange (ISIN: DE0007846867) since 2006. For additional information, visit www.viscom.com.