

## Company Currents

In September we held a 20th anniversary reception to celebrate 20 years of hard work, comradery, milestones and accomplishments with employees and families, customers, vendors, and community partners.

### Highlights of Valtronic USA's 20 Year History

#### 1980's

1986 Valtronic USA Founded • Manufacturing Facility Opened, First Bare Die Circuit Board Design for Cell Phone • Namco – first manufacturing customer

#### 1990's

US Space Shuttle carries Valtronic Memory Module • First VUSA Chip on Chip • VUSA Creates Bar Code Scanner for Lottery Ticket Reader and Handheld Inventory Reader • ISO 9002:1994 Certified • VUSA in Business Week • Wins Smart Link Magazine Award • First 3D Packaging • Receive First Place Award from Mentor Graphics • Partnership with USAI/GE begins

#### 2000's

R D 100 Award Winner • VUSA First Flip Chip • VUSA's First Cochlear Implant • Featured in MD DI • First VUSA Pulse Generator • Partnership with Theken Disc featured in Medical Design Technology • Retinal Implant Project begins • Academic Relations Program Launched • ISO 13485 certified

## Industry Update

### Jim Ohneck Small Circuits Make Small Devices

The demand for miniaturized electronics continues to grow as the demand for implantable medical devices grows. Neurostimulation devices are one of the fastest growing medical device markets and their applications are bountiful. The following article features NDI Medical Inc. and Valtronic's partnership as they worked together on the Micropulse, a device designed for multiple applications. (Click on the link to access the article.)

Small Circuits Make Small Devices

<http://rs6.net/tn.jsp?t=mvdgtgzbab.0.0.c7fyq5aab.0&ts=S0218&p=http%3A%2F%2Fwww.medic>

[aldesign.com/Farticles/FID/F13288](http://aldesign.com/Farticles/FID/F13288)>

## Conference Corner

Valtronic USA exhibited at MDM Minneapolis for the third straight year. First and foremost we want to thank all of you who came to our booth and our reception. We appreciate the time you took to spend with us and the questions that you ask as it allows us to learn and see things from a different perspective. It is always nice to meet new people and hear what their companies are doing and what the future holds for them. We are already looking forward to next year's show.

This show is important for us to stay on top of new happenings in the medical device industry and learn about products that are being developed. An important part of our strategic focus is to offer solutions to the medical market and have a strong presence there. We had the opportunity to meet many people from companies from the East to West Coast with very innovative and creative project ideas. We look forward to working with you on them.

In August Jim Ohneck was a panelist at the Growth through Global Innovation Manufacturing Caucus in Washington DC. Jim Ohneck represented the Valtronic/Oculatek partnership which provides a perfect example of international collaboration benefiting manufacturing in the United States. For more information go to American Manufacturing:Growth through Global Innovation <[http://rs6.net/tn.jsp?t=mvdgtzbab.0.0.c7fyq5aab.0&ts=S0218&p=http%3A%2F%2Fwww.crdf.org%2Fevents%2Fevents\\_show.htm%3Fdoc\\_id%3D380937](http://rs6.net/tn.jsp?t=mvdgtzbab.0.0.c7fyq5aab.0&ts=S0218&p=http%3A%2F%2Fwww.crdf.org%2Fevents%2Fevents_show.htm%3Fdoc_id%3D380937)> <[http://rs6.net/tn.jsp?t=mvdgtzbab.0.0.c7fyq5aab.0&ts=S0218&p=http%3A%2F%2Fwww.crdf.org%2Fevents%2Fevents\\_show.htm%3Fdoc\\_id%3D380937](http://rs6.net/tn.jsp?t=mvdgtzbab.0.0.c7fyq5aab.0&ts=S0218&p=http%3A%2F%2Fwww.crdf.org%2Fevents%2Fevents_show.htm%3Fdoc_id%3D380937)> .

Valtronic also attended the BioOhio 2006 conference in October. Valtronic's primary interest in the conference was the topic regarding the lack of new Bio Engineering student in today's Colleges and Universities. As expressed by the BioScience Educators Panel, "within the next 5 to 10 years 50% of the professionals working in the BioSciences will retire". "To off set this reduction in the workforce 15% of all new college student will be required to establish careers in the BioSciences, at this time only 4% of new students have enrolled in the BioSciences as a career path".

### **The big question was, how do we as an industry inspire the new incoming student body to undertake a career in the BioSciences?**

Valtronic addressed the panel by discussing the partnership program we are developing with academic institutions and the positive reception we have received from the students. There was an immediate interest amongst several of the attendees to learn more. If you would like to learn more about our Academic Relations Program, please contact Deb Marko Koeberer at 1- 888-291-9422 x 25.

## Meet the Staff

Jim Palagyi - Project Manager

**What is the most important part of your job?**

The most important part of my job is working with our customers to develop a product that meets their requirements and is also manufacturable.

**What is a typical day like for you?**

I support released products, this involves customer changes, parts, process and testing issues. I investigate and develop new projects. This requires looking at new processes parts and techniques. On any given day I will be involved in prototyping and documenting new projects.

**How did you get into project management?**

It was a progression from electronic design to managing all aspects of a customer's product including documentation, packaging, test and support.

**What is the most important lesson you have learned in your career?**

To never leave any aspect of a project to chance, all aspects of a project should be documented and changes made per revision control to ensure that the customers specifications are met and the highest quality is achieved.

**Lastly, what do you look forward to doing that is not work related?**

I enjoy the outdoors being it hiking with my dog, gardening or chopping wood for the fire.

## TechCheck

### Joe Horvath      Passing the Test

Everyone who buys a new product certainly expects it to work. Customers of electronic contract manufacturers are no different; they expect their products to work when they arrive at their factories. Therefore we implement test procedures along the way to ensure this happens. There are a number of different types of tests and inspections that can be done to verify that a product meets the customer's requirements, ranging from a visual inspection to a full functional test.

At Valtronic, we perform several tests depending on the complexity and type of product. One of the in-process inspections that we perform is a first article test. The term "first article" isn't entirely accurate. Although the inspection is performed on the very first product built, it is also done a number of times:

- \_. After the initial machine set up
- \_. At an alteration of a machine set up
- \_. At the start of every shift
- \_. At the change of a machine operator

The following are some examples of different types of first article tests: For stenciling of solder paste, the registration of the solder paste to the pads on the PC boards is inspected and the uniformity and consistency of the solder paste across the entire board. The volume of the solder paste can be checked based on the height of the paste.

Die attach epoxy is inspected in a similar manner. Die placement is inspected for placement and orientation.

Wire bonding is visually inspected for correct wire placement and correct bond formation; a destructive pull test can be done to verify the strength of the wire bond to the PC board and the die.

The first article inspection after the surface mount components are placed can be extensive based

on the number of components on the PC board. After the PC board comes off the pick and place machine and before it is reflowed, it is inspected to determine the component placement, orientation and values are checked to verify that the pick and place machine is set up properly. Resistor and capacitor values are measured. Semiconductors are checked for the proper component and orientation.

First article inspection is a very valuable tool to help guarantee that a product is built properly and is definitely an ounce of prevention for a pound of cure.

## University Relations

Deb Marko Koeberer

It is the mission of the Academic Relations Program to engage students and faculty to discover and share knowledge through collaboration and information exchange through the application of miniaturized electronic technologies in real world situations.

Recently, Valtronic USA has worked with a number of academic institutions to increase awareness of miniaturized technologies and how they are being applied to solve real world problems, specifically those in the biomedical industry. Don Styblo, VP of Technology, recently visited The University of Toledo to speak with Dr. Vik Kapoor's freshman engineering students about the many ways miniaturized electronics are being used today. This provided students the opportunity to look beyond their classroom instruction and envision how they can apply what they are learning to create their future.

In addition to engaging with students, we are also actively working with faculty members at The Ohio State University, Cornell University, MIT and Boston VA Research Institute to further research pursuits including projects to create an electrode to monitor epileptic brain activity and a retinal implant to restore sight.

Looking towards the future, it will be important to have highly skilled workers available to fulfill the growing needs of Valtronic USA. Collaborating with local technical schools to achieve this growth provides a win-win situation for everyone. The curriculum and skills students obtain are validated while jobs are filled by talent that is locally trained and reside in our community.

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