



## SUCCESS STORIES

### SmartTCP

Automatic Welding

#### SMARTTCP

SmartTCP is the leading supplier of automatic welding solutions for one-off and small batch production. The SmartTCP solution means a technological breakthrough in the area of automatic welding. SmartTCP's revolutionary software automates complex and tedious robot programming tasks. It creates accurate and reliable robot programming, up to 100 times faster than either on-line or off-line programming techniques. The solution has been developed in collaboration with Kuka, Fronius, Güdel and Visual Components. SmartTCP was founded in 2002 in Israel and has the main office and the automatic welding demo lab in the United States.

[www.smarttcp.com](http://www.smarttcp.com)

#### VISUAL COMPONENTS

Visual Components Oy is a world leading 3D simulation and visualization software specialist. With a new generation of simulation products Visual Components offers machine builders, system integrators and companies using complex turnkey manufacturing solutions a simple, quick and highly cost effective way to build and simulate their complete production lines. Now with the help of 3D simulation, it is possible for industrial firms to implement new production lines faster and more cost effectively with improved profitability. Visual Components Oy was established in 1999 and operates from Helsinki, Finland with the support of a global reseller network.

#### Visual Components Oy

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### 3D SIMULATION ENABLED THE AUTOMATIC WELDING SOLUTION FOR SMALL BATCH & ONE-OFF PRODUCTION

VISUAL COMPONENTS PRODUCTS EMBEDDED IN SMARTTCP'S REVOLUTIONARY TURNKEY SOLUTION.

SmartTCP has developed an intelligent, breakthrough solution for automatic welding. Now even small batches can be welded by using the automated, robot based turnkey solution. Also one-off production can benefit from this new automatic welding solution. The founder and CEO of SmartTCP, Mr. Efi Lebel says: "Our solution can weld any large, complex assembly that fits within the working envelope - first time seen, in a short time. It is a modular, flexible and automatic off-the-shelf manufacturing solution. And it can be implemented in a wide range of manufacturing applications after a short set-up. This is a similar revolution for arc-welding as Hewlett Packard did for traditional printing by introducing digital technologies in the late eighties."

Until now, automatic welding has been possible only for simple and repetitive large volume fabrication in large amounts. The reason for this has been the complex and time consuming robot programming. The complexity has made small batch production automation uneconomical. Therefore all one-off welding work has been done manually. "The current problem is that there are simply not enough competent welders in the world to deliver high quality welding – and the estimated annual growth rate for welding is now 5 %. This means that automation is the only way to guarantee the sufficient supply of welding capability – not to mention the enhanced quality," describes Mr Lebel.

Automatic welding brings totally new opportunities especially for small and medium-sized companies, who operate e.g. as subcontractors for the bigger companies. "Our automatic welding solution is much faster than using the traditional human workforce – we estimate approximately 3-5 times faster delivery with our solution compared to the welders. And our robot programming is up to 100 times faster than either on-line or off-line programming techniques. As a result also the quality of the welding seam is much better. All this means lower cost and maximized productivity – not to talk about new business opportunities with enhanced capacity," states Mr Lebel.

Visual Components 3D product family is in a major role in the solution. "Everybody in our organization – from design to testing and to sales - uses Visual Components 3D product family – naturally as they are all embedded in our turnkey solution. We have used other simulation tools earlier but Visual Components was the only possible product for us when we started developing our solution to the full capability – simply due to its true flexibility and modern features. Also the fast service, continuous development and competent professionals convinced us to build a partnership with Visual Components," says Mr. Lebel.

