

March 23, 2004

## FOR IMMEDIATE RELEASE

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## DSM Somos® 9120 Resin Gives Performance Edge To Production of Panasonic Camera Phones

March 23, 2004 — With the introduction of DSM Somos® 9120 ProtoFunctional® resin to its production line, Malcolm Nicholls Ltd (MNL) has been able to cut prototype build times of Panasonic's new X70 camera phone by one third.

The decision of Panasonic to specify Somos® 9120 for the X70 camera phone prototypes was based heavily on the need for part flexibility. The clam shell for the phone assembly utilised snap fittings and, since functional testing was required, these would need to reliably withstand repeated clipping and unclipping.



Richard Haines, Design Engineer for Panasonic Mobile Development Communications of Europe Ltd (PCMDE) explained, "We needed the prototypes for trial assembly to carry out over packing detection, and to test fit mock up PCBs. In addition, we used them to carry out RF testing to ensure that the case and the components functioned correctly. These trials required us to open up each clam shell several times, thoroughly testing the integrity of the clip fastening."

To meet the delivery requirements of Panasonic, MNL built multiple masters simultaneously in 9120 to be used directly for evaluation. They were pleased with the results.

"Some resins we have worked with are very brittle and have caused serious problems for the workshop," says MNL Technical Director Ross Nicholls. "The simple act of removing supports from a model could result in its damage, which would then require repair or actual rebuilding of the SL master."

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"With Somos 9120, part breakage has been virtually eliminated, and in addition we have achieved around 30% reduction in build times on our SL machine through faster resin reaction times, combined with zero pre-dip delay and zero Z-wait periods. Furthermore, we have found that 9120 is very process tolerant, so, for example, we can increase hatch spacing and simplify support positioning without reducing model quality."

For multiples of parts, MNL uses the SL master to create a silicone mould. Ross Nicholls sees further benefits from the properties of Somos® 9120: "We find that, depending on the shape of the model, it is possible to reuse the master to create additional moulds. The brittle resin we used in the past would result in the master shattering during demoulding. Furthermore, we find that 9120 does not distort during the curing process required for silicone moulds, which can reach temperatures of 60°C."

MNL was the first rapid prototyping service bureau in Europe to specify Somos® 9100 for all its SL models, after positive trials of the material in 2000. A natural transition to Somos® 9120 coincided with the upgrade of the laser on its SLA® 500/40 machine from argon ion to solid state in 2002.

### **About DSM Somos® Materials**

**DSM Somos ProtoFunctional® resins for stereolithography** provide advanced technology to respond to the changing needs of new product development and industrial design. In 2003, DSM Somos announced ProtoTool™ ceramic-filled resins, the first member belonging to the new ACT-SL™ technology and the result of a significant research and development program. Traditional non-composite ProtoFunctional materials by DSM Somos satisfy a varying range of characteristics: transparency, superior humidity and heat resistance, and outstanding mechanical properties, replicating those of many production grade plastics such as polypropylene, polyethylene, ABS and PBT. Technical data on all Somos® materials may be found at [www.dsmsomos.com](http://www.dsmsomos.com)

### **What is stereolithography?**

Stereolithography (SL) permits the rapid creation of 3D pieces utilizing a computer-controlled laser that polymerizes light-sensitive resins. The process is highly precise and constructs the object in a series of "additive layers," providing the advantage of producing highly complex forms that are difficult or impossible to fabricate by machining or traditional moulding techniques. The evolution of advanced SL materials offers the potential of moving stereolithography from prototyping into production.

### **About DSM Somos®**

DSM Somos ([www.dsmsomos.com](http://www.dsmsomos.com)) is an unincorporated division of DSM Desotech ([www.dsmdesotech.com](http://www.dsmdesotech.com))—a world leader in the development of UV-curable materials—and a member of the global DSM family. DSM Somos' corporate office is located at: 2 Penn's Way, New Castle, DE 19720, USA, Tel. +1-302-326-8100, [Americas@dsmsomos.info](mailto:Americas@dsmsomos.info). For more information on DSM Somos® in Europe: Fax. +39 06 9871694, [Europe@dsmsomos.info](mailto:Europe@dsmsomos.info)

### **About DSM**

DSM is active worldwide in life science and nutritional products, performance materials and industrial chemicals. With annual sales (pro forma including the recent acquisition renamed DSM Nutritional Products) of approximately EUR 8 billion, DSM employs about 25,000 people worldwide and ranks among the global leaders in many of its fields. DSM products are found in a wide range of end markets such as human and animal nutrition and health, cosmetics, pharmaceuticals, automotive, coatings, and electrics & electronics (E&E). DSM is headquartered in the Netherlands, with locations in Europe, Asia and the Americas. For more information on DSM, log on to [www.dsm.com](http://www.dsm.com)

### **About Malcolm Nicholls Ltd (MNL)**

Formed in 1971, MNL is a pioneer in the rapid prototyping service industry. The family run business is based in Bideford-on-Avon, Warwickshire. Malcolm Nicholls has been involved in many prestigious projects with leading companies in the automotive and consumer products market, including the Vauxhall VX220 sports car, developed under a joint arrangement with Lotus Engineering and, more recently, the X70 camera phone by Panasonic.

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