News from Renishaw – MACH 2006
(Hall 5 Stand 5773)

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It's about time – seamless integration of probing, CAD/CAM and data processing

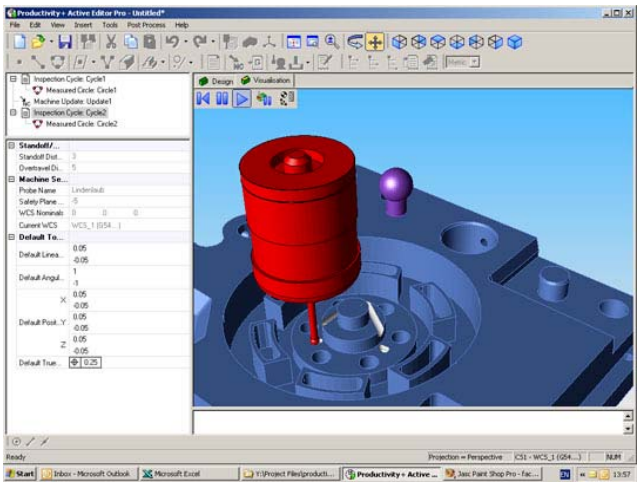
Visitors to the Renishaw stand at MACH 2006 will be able to see how Productivity+™ software and the latest probe systems integrate with design and manufacturing software. The Productivity+™ GibbsCAM® plug-in, a well established module within the GibbsCAM system but with additional new functions, will be used to program a probing cycle with the new TRS1 tool breakage detection system, OMP60 spindle probe, and NC4 compact tool setting system. The data measured will be processed for real-time logging, analysis and reporting.

Productivity+ is a powerful suite of products offering a new, simplified approach to producing probing routines for machine tools. Now, Productivity+ version 1.03 gives new functionality including XY co-ordinate rotation, 4th axis levelling and three new post-processors for leading controllers. Productivity+ software is available both as a plug-in to GibbsCAM software and as a stand-alone package named Active Editor – it allows set-up, process control, inspection, tool setting and tool breakage detection, to be programmed and integrated at the same time as toolpath generation.

The new **TRS1** tool breakage detection system allows manufacturers to run machine tools unmanned, with complete confidence that cutting tools damaged during a machining cycle will be quickly detected, eliminating the risk of scrapped parts. This innovative new unit projects a beam of laser light at a tool and monitors the scattered light that is reflected, to determine if the tool has been broken. It uses tool recognition technology that distinguishes between the tool and coolant or swarf/metal chips, and is also fast and reliable under real machining conditions.

Renishaw's new **OMP60** probe is the first of a new generation of optical transmission products designed for compatibility with all current Renishaw optical receivers and next generation optical systems. It brings the benefits of probing to a wide range of machining centres and mill-turn machines, offering users set-up time reductions of up to 90%, reduced scrap, reduced fixture costs, and improved process control.

The OMP60 probe is compatible with existing OMM/MI12 and OMI receivers, enabling current MP7, MP8, MP9 and MP10 system



Productivity+™ allows machine tool probe users to produce probing cycles and process control logic without specialist knowledge of macro commands

TRS1 tool breakage detection system – fast reliable detection of damaged cutting tools in-cycle

users to benefit from some of its innovations. It uses miniaturised electronics, first seen in the highly successful OMP40 probe, allowing the development of a compact unit measuring just ø63 mm and 76 mm long, making it ideal for a wide range of machines.

The **NC4** laser based non-contact tool setter, designed specifically to be fitted to CNC machine tools, is a part of Renishaw's growing range of non-contact solutions for a wide variety of machining centres. Renishaw has added to the NC4 product range with a series of compact fixed systems, setting new performance standards in a small package. Tools as small as 0.03 mm diameter can be measured and detected at any selected point along the beam and repeatability can be as low as ±0.1µm (2).

The NC4 incorporates the unique MicroHole™ protection system, as featured in all Renishaw non-contact products. Environmental protection is maintained 100% of the time, even during measuring routines, and with no complicated moving parts, risk of machine downtime is minimised. In addition, the NC4 benefits from the innovative failsafe PassiveSeal™ which maintains IPX8 environmental protection rating, even if the air supply fails.

In common with other models in the NC4 range, there is no focal point to identify, making installation quicker and easier. Its compact, highly robust stainless steel construction is built to withstand the harshest machine tool environments.

OMP60 compact spindle mounted probe


NC4 compact non-contact tool setter