

Conference aimed at keeping European machinery in the forefront of technology



Keith S. Campbell, Executive Director of the OMAC Packaging Workgroup talked on the subject of "What global end users want"

The very future of the packaging machinery industry in Europe was the subject of a major conference held towards the end of September in the city that is widely considered to be the home of the industry, Bologna.

Over 500 decision makers from the Italian and international packaging industry attended the event entitled "The Heart of Packaging." They came to listen to representatives of some of the largest global producers of branded consumer products, such as Unilever, Nestlé and Pharmacia, as well as professors from the field of mechatronics, international machine builders and automation companies. Between them they addressed the impact of new technologies on machine building in the packaging industry and discussed ways in which manufacturers and end users can work together to the benefit of both.

The conference content impressed attending dignitaries, including UCIMA president Marco Vacchi, Italy's deputy minister of economics Adolfo Urso and the

president of the province of Bologna, Vittorio Prodi, who represented the office of the President of the European Commission.

Why was the conference held now? One of the main reasons is that the Italian and indeed the entire European packaging machinery industry, is seen as being under threat from other parts of the world unless it acts quickly to exploit the latest technologies.

Parallels were drawn between the packaging market and the Swiss watch industry. Although the Swiss pioneered quartz technology the industry decided to forego its initial advantage in favour of continuing with mechanical designs. Within a few years a large number of Swiss watch manufacturers had gone out of business as manufacturers from other parts of the world

How do you spot a Gen3 machine?

To date there are no hard and fast regulations covering the definition of Gen3.

The term is used to describe machines that take full advantage of servo technology and are freed from all mechanical restraints.

First there were mechanical machines. Then came what can be described as hybrids ie machines that were adaptations of mechanical designs but took advantage of servo drives to replace some mechanical drivetrain components. For Gen3 you really need to start with a clean sheet of paper.

When looking at any type of packaging machinery from a filler or cartoner to a

case packer or palletiser there should be visual clues to any claim to be Gen3.

Gen3 machines typically employ modular construction and often modules are interchangeable to allow the machines to be rapidly reconfigured to run different products. Also without the need to support mechanical drivetrains the machines will be more streamlined and feature a smaller footprint and thanks to improved synchronisation of movements the need for accumulation conveyors is reduced.

Gen3 machines can be integrated with



Erwin Fertig, Chairman of the Board of ELAU AG welcomes UCIMA President Marco Vacchi

flooded the market with the new watches and it took many years for the Swiss industry to get back on its feet.

This example made it clear that the packaging industry must make the leap to electronic machines to remain competitive. Electronic packaging machines - which are more productive and flexible than mechanical packaging machines - are the future in this sector, as progressive packagers and machine builders all agreed. Conference organiser ELAU is the worldwide leader in the automation of packaging machines and the company's focus is on control systems for servo machines from the new third generation - Gen3 packaging machinery.

Erwin Fertig, Chairman of the Board of ELAU AG, summed up the event, "It's now clear that ELAU is recognized in Italy as well as the other global centres of machine design - the crème de la crème of the

packaging market - as providing the core technology for Gen3. The packaging machine industry in Bologna thanked us for introducing them to future trends, new issues facing packagers, and innovative solutions."

The site of the event was chosen with great care. Firstly, Italy is the fifth largest economic power in the world and the number three in the field of packaging machines. Secondly, the region of Bologna, where ELAU's subsidiary is based, is the centre of the machine building industry - hence the name "The Heart of Packaging."

Erwin Fertig says he is already planning the next such event, "for a medium-sized company playing in the Champion's League of packaging automation, this event provided an opportunity to demonstrate technological leadership."

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other systems such as SCADA, MES and ERP. Remote diagnostics and preventative maintenance are advantages of this type of machine and certain adjustments can be made while the machine is running.

They feature a great many more servo drives, whereas hybrid machines may have used anything from four to twenty servos to replace mechanical drives, Gen3 machines may feature as many as eighty. As a result tool free changeovers can be measured in minutes rather than hours.

To make these machines work there is also a new type of control architecture. In

the past, control architecture was described as centralised or distributed, either using an intelligent controller and dumb drives or relying on intelligent servo drives. Gen 3 machines combine both, for example electronic camming and gearing functions are calculated in the controller, not the drives while all servo loops are performed in the drives.

This means only a position command needs to be sent over the network, making it possible for many more servos to operate on a simple network without loss of responsiveness.

It is this centralised/distributed approach that is the key to Gen3 performance.