



# NETWORKED DNC CASE STUDY

## B Braun medicates CNC programs with Seiki Systems

SEIKI SYSTEMS LTD

Manufacturing Software  
Solutions

NETWORKED DNC SYSTEM

WWW.SEIKISYSTEMS.CO.UK

SEIKI SYSTEMS LTD

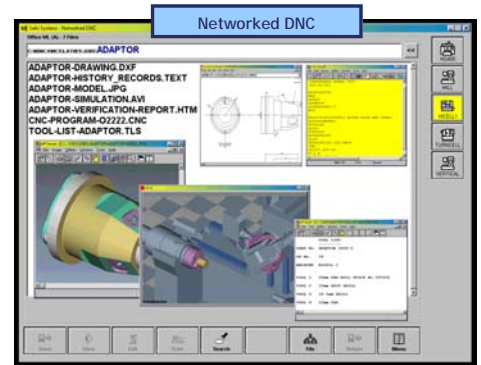
Olivier House  
18 Marine Parade  
Brighton  
East Sussex  
BN2 1TL

Phone: 01273 680411  
Fax: 01273 602564

E-mail: sales@seikisystems.co.uk

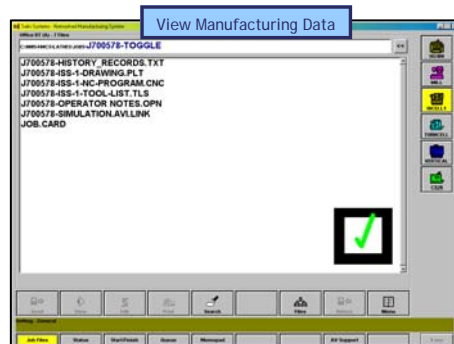
How do you effectively control, monitor and regulate the creation, distribution and modification of 18,000 CNC part programs to 28 machine tools in a busy production machining environment and at the same time maintain the security and traceability demanded by the medical industry? B. Braun Medical, a producer of a wide range of ultra-high precision surgical instruments and orthopaedic implants knows how, having absolute control over all its part programs in terms of accuracy, security, and traceability, following the introduction of Networked DNC supplied by manufacturing software specialists Seiki Systems of Brighton.

The Sheffield based business is one of the world's leading healthcare companies employing more than 29,000 people. As a result of the Seiki Systems installation it is now able to manage all the program demands at its two UK machine shops which house sliding head CNC autos, fixed headstock CNC lathes and vertical machining centres, most of which are equipped with a fourth-axis capability used to produce a wide variety of components, many of which involve complex profiling of stainless steel stampings and forgings. While most programs are generated off-line on its CAM system, any lower complexity parts tend to be produced by shopfloor generated routines at the machine. All in all, having more than 18,000 different part programs to be effectively managed, validated and distributed to the right machine tool, prior to the installation of Networked DNC, the chances of error were compounded.



As CNC technician Andrew Bradford explained: "We have been able to optimise all our manufacturing routines since we installed the Seiki Systems software giving near absolute control of program generation and distribution to individual machine tools. So important today is that we now have complete security, traceability and are more efficient in all aspects of program management which has without doubt helped boost confidence and improve team working." He follows onto to explain that because the system handles many of the programming tasks automatically, this has boosted productivity and helped with standardisation of the whole engineering department. As an example he says: "Solid model type 3-D data is transferred from our CAD system in the design office to our CAM system and the part programs can be easily edited at a shopfloor terminal before it is finally downloaded to the designated machine work centre."

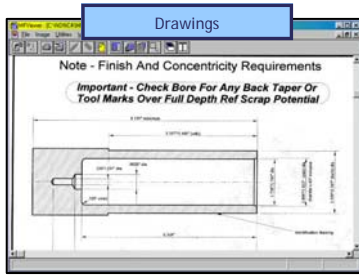
Seiki System's Networked DNC package is a mid-range system providing total control over NC program access, recording and reporting current status, any revisions, editing, transfer and usage records which enables all important audit records to be maintained in the production environment. Most important It will prevent unauthorised use and warn of unproven program requests while being able to automatically communicate in 'real time' the status, changes and operator actions as required by production supervision, production control, the programming office, design and quality control. The software can be installed either through a wired or wireless environment to provide 24 hour records with full traceability of program usage, machines involved and batch details - a very important and often forgotten factor in complying with stringent ISO and other high level quality standards.



B. Braun Medical Ltd has five shopfloor terminals referred to as nodes, by the company. These are installed in the two separate machine shops and each PC can support up to eight CNC machine tools. Each node serves one of five different cells/machines broken down as – all CNC turning machines, Fanuc controlled machines, Haas vertical machining centres, a special multi-machine production cell which manufactures Marchetti flexible nails and administration/service in the production engineering department.

## B Braun Medicates CNC programs with Seiki Systems, cont

At B. Braun Medical Ltd there are eight levels of access to the Seiki Systems software drawn from setters, programmer/setters and CNC administration staff. Programs can be up and down loaded to each terminal from the main server and the system is backed-up twice a day on site and once each day by way of a remote link to the company's headquarters in Thorncliffe Park, Sheffield.

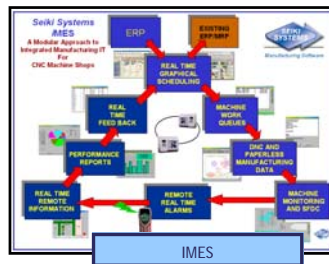


For General Surgical Instruments, B. Braun Medical produces a wide range of equipment including scissors, forceps, organ and tissue grasping forceps, bulldog clamps, vessel clips, approximators, dissecting/ligature forceps, surgical needles, wound retractors, intestinal/rectal instruments and gall bladder/liver instruments. Taking a product such as a standard forcep, these are machined in just two operations from stainless steel stampings on Haas vertical machining centres equipped with a fourth-axis in batch quantities of around 300 pairs. A pair is made up of left- and right-hand components. More complicated, retractors can be made up of up to eight separate parts which include racks, screws and springs which taken as a single product assembly demands numerous part programs.

The Aesculap Division of the company provides a range of products and services for use in operating theatres covering all surgical interventions and techniques, wound closure and instrument reprocessing. It also supplies an impressive range of orthopaedic implants, spinal systems and trauma devices. Surgical Instruments are produced under the Downs Surgical banner and these range from general surgery to ENT surgery and from Cardio Vascular Instrumentation to Obstetrics and Gynaecology. In terms of implants, Downs Surgical manufactures and distributes total hip replacement systems for both trauma and elective indications.

According to Mr Bradford there can be no doubt that the Seiki Systems software has made a big impact on the efficiency, accuracy and security of all program generation, but most important with regard to modification, revision and distribution of programs. Mr Bradford commented: "We can see immediately what a difference Networked DNC has made to our whole programming regime."

And based on its experience gained so far, the company is already thinking about upgrading the system quite substantially by going to Seiki System's very latest manufacturing software package iMES which stands for Integrated Manufacturing Execution System. With iMES software, B. Braun Medical Ltd will be able to easily graphically schedule and monitor in real time the workloads of its CNC machines following direct integration with its existing MRP system or by using the ERP capability within the software. Within the fully integrated system full machine monitoring, the co-ordination of tooling and fixturing data, production of performance reports and downtime records will be performed in conjunction with the secure, traceable and efficient transfer of the correct part program.



- Microsoft Windows based
- Uses standard PCs and networks
- Supports up to 8 machine tools from each shop floor PC
- Storage and display of all manufacturing data for each job
- Access controlled text and graphic file viewing
- Graphic file status control
- Quality level DNC with full control and management
- Simultaneous drip feed for all connected machines
- Viewing of web based HTML files
- 8 level user access control
- Compares and manages edited NC programs
- Log books recording each NC program transfer
- Supports Windows "short cuts"
- Links to PDM, MRP and Tool Management Systems
- Optional customisation via unique "script" facility
- Optional display of "work to lists" for operators



SEIKI SYSTEMS LTD

Manufacturing Software Solutions

NETWORKED DNC

WWW.SEIKISYSTEMS.CO.UK

SEIKI SYSTEMS LTD

Olivier House  
18 Marine Parade  
Brighton  
East Sussex  
BN2 1TL

Phone: 01273 680411  
Fax: 01273 602564

E-mail: sales@seikisystems.co.uk