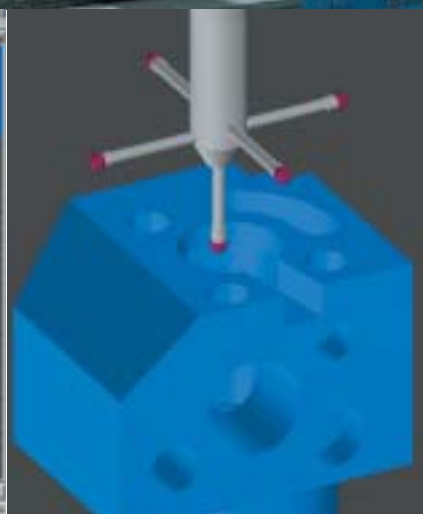
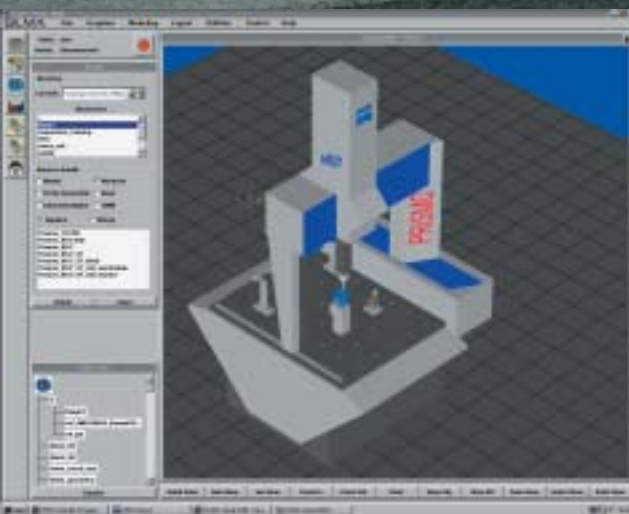


# Reliable Parts Programming Through PC Simulation of CMM Runs



The perfect solution  
for programming  
CNC runs in UMESS  
with

- CNC data
- Collision control
- Measuring volume survey



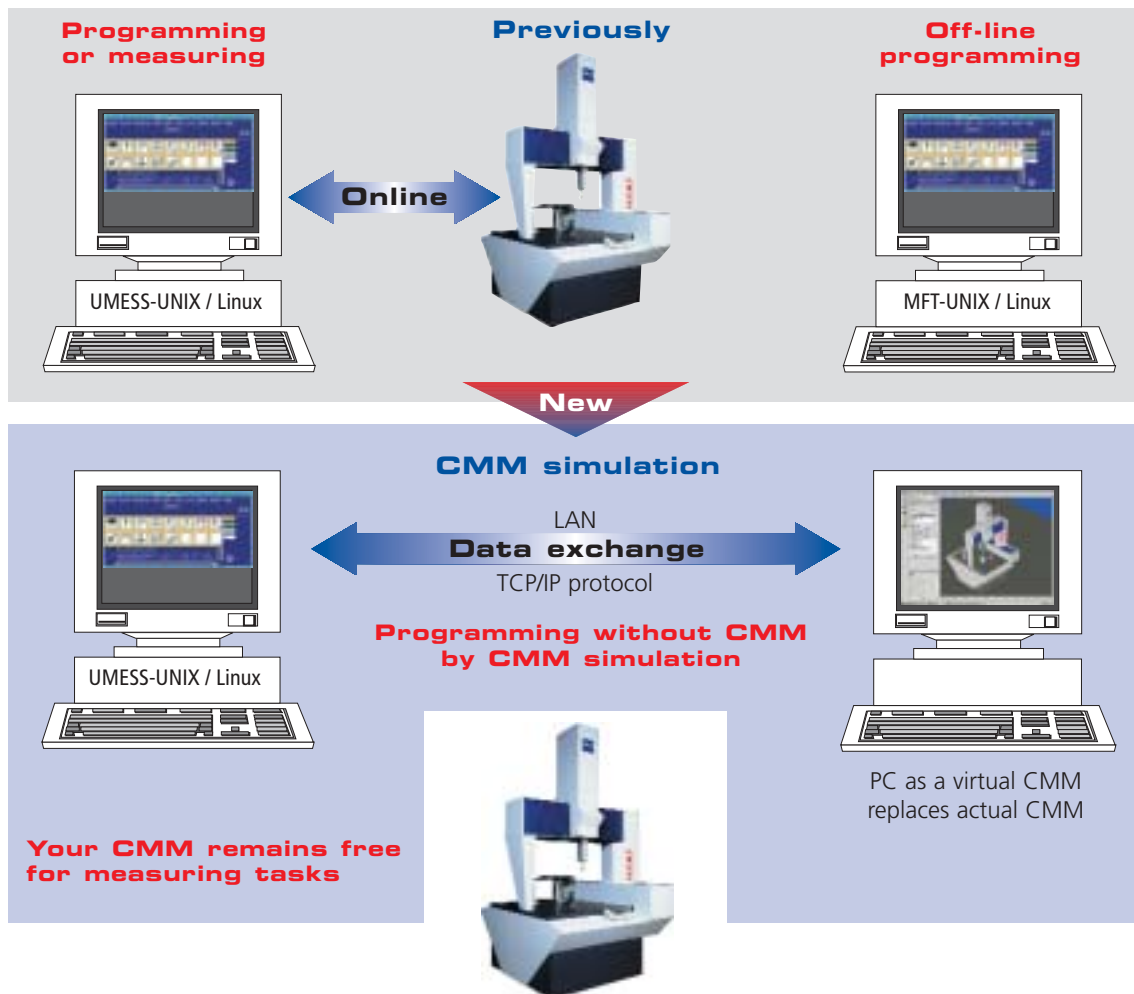
SIMPLY MEASURE

# Parts programming at virtual CMM:

**Around-the-clock measurement has become reality: you can program a workpiece for the next CNC measurement while your coordinate measuring machine is still in the process of measuring. In a simulation program created by Carl Zeiss in cooperation with SILMA, a PC simulates the measuring machine installed in your production. You treat your measuring machine and workpiece on the monitor as if they were real. Only more simply and faster, leaving you time for the actual measurement.**

**Enjoy the benefits of reality, avoid its drawbacks.**

By simulating CNC runs and programming measuring runs on a virtual coordinate measuring machine (CMM), you gain time for your actual measurement, with programming being easier to perform. Provided the appropriate tools and the virtual CMM are available, programming is clearly simplified. In addition, the user is supported by a comprehensive on-line help system.



# More time for your measuring tasks.

On the monitor, there is no need to concentrate on the question whether the stylus is on a collision course with the workpiece. The system reports collisions and any overshooting of the measuring range. This eliminates unpleasant surprises in your actual measuring run.

The simulation includes the entire measuring machine, all available components and the workpiece. Even if you are using several Carl Zeiss measuring machines, they will all be included in the virtual measuring and programming system.

It goes without saying that all the benefits of **UMESS** are at your disposal, including graphics support. The necessary data for workpieces and fixtures is read in via CAD formats. All workpiece coordinates determined by simulation are stored in CNC measuring programs by **UMESS**. The essential advantage is that you can now use CAD data also with **UMESS** to simulate CNC runs and to transfer points from CAD formats.

## System configuration, hardware and software

The overall system consists of

- one workstation with **UMESS-UX** or
- one PC system with **UMESS-Linux** or **CMM-OS** + appropriate measuring software
- one data system with
  - **VCMM** (virtual CMM)
  - **SIMU** (simulation program for CMM control)
  - freely selectable **CAD interface**,

all of them communicating with each other via a TCP/IP protocol.

The CAD data formats ACIS, CADDs, CATIA, IGES, SLA, STEP, UG and VADFS are supported.

## Virtual coordinate measuring machine (VCMM) from SILMA

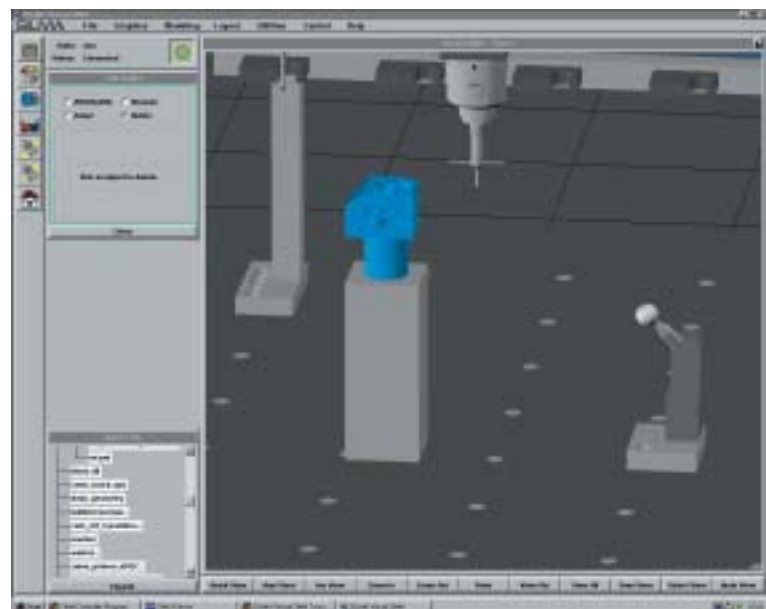
At present, the following machine configurations are supported:

- Bridge and horizontal-arm CMMs with touch trigger systems
  - **ST3**,
  - **RDS** (with and without CAA) with **RST**
  - Probe changing magazine
  - Rotary table

In the future,

- continuous contact scanning and
  - self-centering probing
- can also be used virtually in conjunction with our **VAST** and **MT** scanning probes, in other words all actual functions offered by **UMESS** today.

All standard coordinate measuring machines from Carl Zeiss are available as a **VCMM** for use on a state-of-the-art PC. Just call us and try out the benefits of simulation for yourself.



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For advice, please contact: