MTS NCTest PAL-examination on PC

Preparation, Performance Test and Examination

NCTest enables the cloze test NC examinations according to the PAL-examination standards* to be carried out **paper free** on **PC**. **NCTest** distinguishes between a mode for exam preparation and a mode for the exam itself. The exam mode may have the examination start and duration times preset. The examination programs as well as the model solution and the examination drawings are created automatically in encrypted form with the examination preparation module **NCPrint**. At the start of the examination they are decrypted and are re-encrypted and stored as examination documents when the exam time has elapsed. The exam evaluation happens automatically at the end by calculation of the points achieved.

To practice or do a performance test an examination form file is chosen and the examination is registered.

NCTest can be used not only for PAL2007/2009-examination control* but in principle also for any DIN/ISO-NC-program language.

According to the PAL-examination guidelines*, the examinee is then offered two examination forms for completion:

- The **cloze-test-method NC program** appears in a wide window whilst the **work plan** is situated above it in a smaller display window.

Mandatory fields are shaded in gray. It is possible to jump back and forth between different required address fields by using the tab key or the arrows in the toolbar.

In practice mode, the examinee can check whether the answers provided are correct (green) or false (red).

In the display situated above the actual cloze-test program window necessary information and specifications currently relevant to machining can be shown alternatively to the workpiece drawing display via the toolbar button:
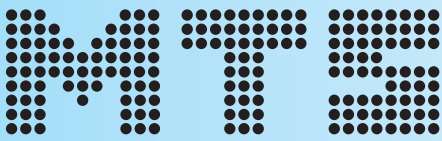
Specifications: **Workpiece Drawing**,

Aids: **Programming Instructions** with Graphic Explanations,

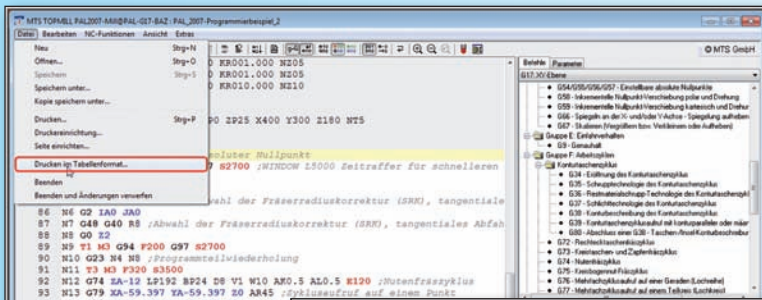**Tool List** with Technological Specifications,

General Examination Notes.

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   Industrie und Handelskammer Region Stuttgart

MTS MATHEMATISCH TECHNISCHE SOFTWARE-ENTWICKLUNG GMBH

NCPrint

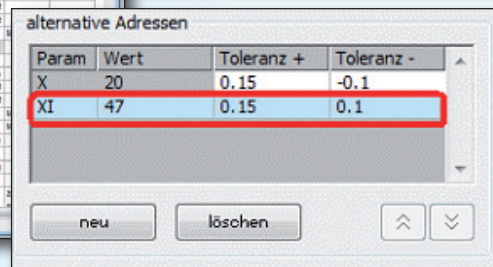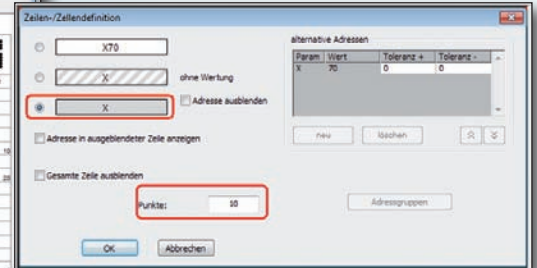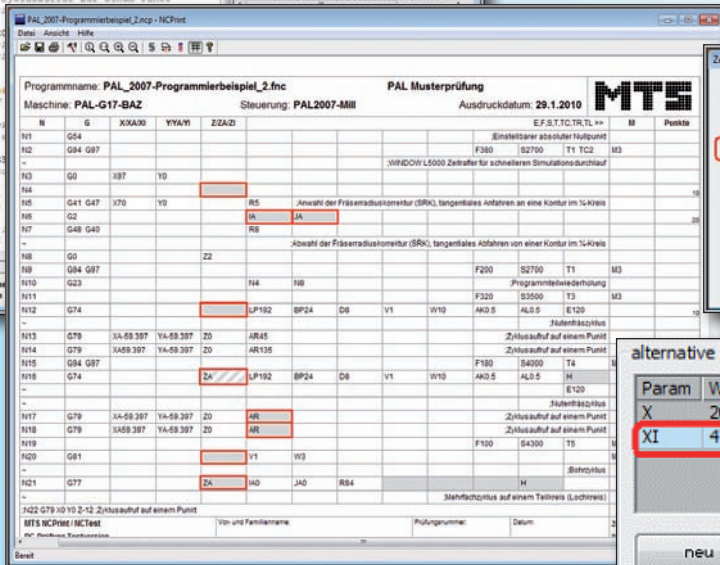## Creating and Printing of Cloze-Test Examination Documents

The software module **NCPrint**, which is an integral part of **NCTest** and also of **TopMill** and **TopTurn**, is used to create exam materials for **NCTest** or to print out cloze-test examination forms.

On the basis of a DIN/ISO program a cloze-test program can be created. It is possible to hide some of the NC program data, alternatively

- address values,
- address values and addresses,
- address groups with alternative inputs,
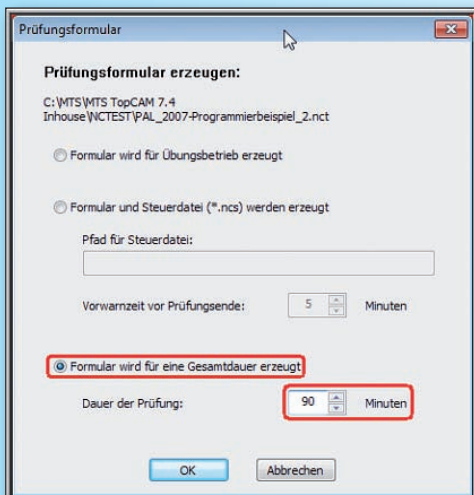- whole NC-blocks (NC-rows)

and to assign individual scores for each correct completion. Address values can have a non-symmetric tolerance assigned to them.

If the initial program has a PAL-setup* sheet with the necessary technological data, a tool sheet will be automatically created according to the guidelines of the PAL2007-examination controls*.

In addition, a workpiece drawing and a work plan with a clamping sketch may be provided as graphic data files. The work plan can also be made to be partially hidden and must be completed in the exam. A text file containing notes about the examination procedure can be added.

The cloze test program can be printed in form of a paper exam, which is how PAL* currently performs the examinations. This will include freely configurable layout data (headlines and bottom lines of pages) and supplementary information, tool sheet, work plan, workpiece drawing and complementary examination notes.

After the exam form has been saved onto the PC, these additions for the paper free examination can be placed as graphic displays above the cloze-test program on the PC.

Departing from the control system specification in the setup sheet the NC-Editor's help texts and the corresponding graphic aids are determined for **NCTest**.

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