

Panasonic Industry Europe GmbH

Robot & Welding
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41468 Neuss, Germany

Panasonic
BUSINESS

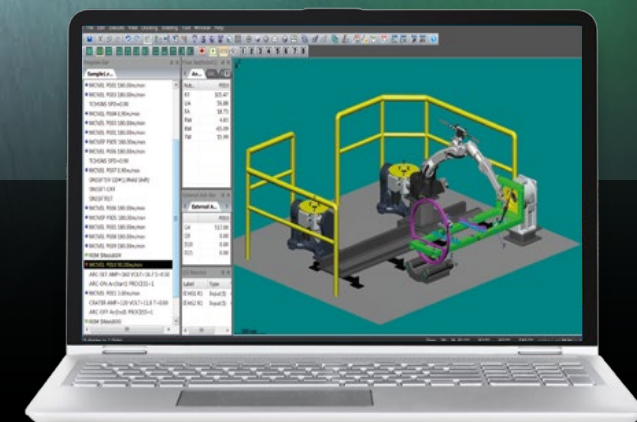
SIMPLY WELDING.

PC SOFTWARE FOR ROBOT AND WELDING SYSTEMS

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Panasonic Robot & Welding - Version 2017



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INCREASED PRODUCTIVITY
THROUGH ON- & OFFLINE-ACCESS
TO YOUR **ROBOTS.**

PC SOFTWARE
FOR ROBOT AND WELDING SYSTEMS

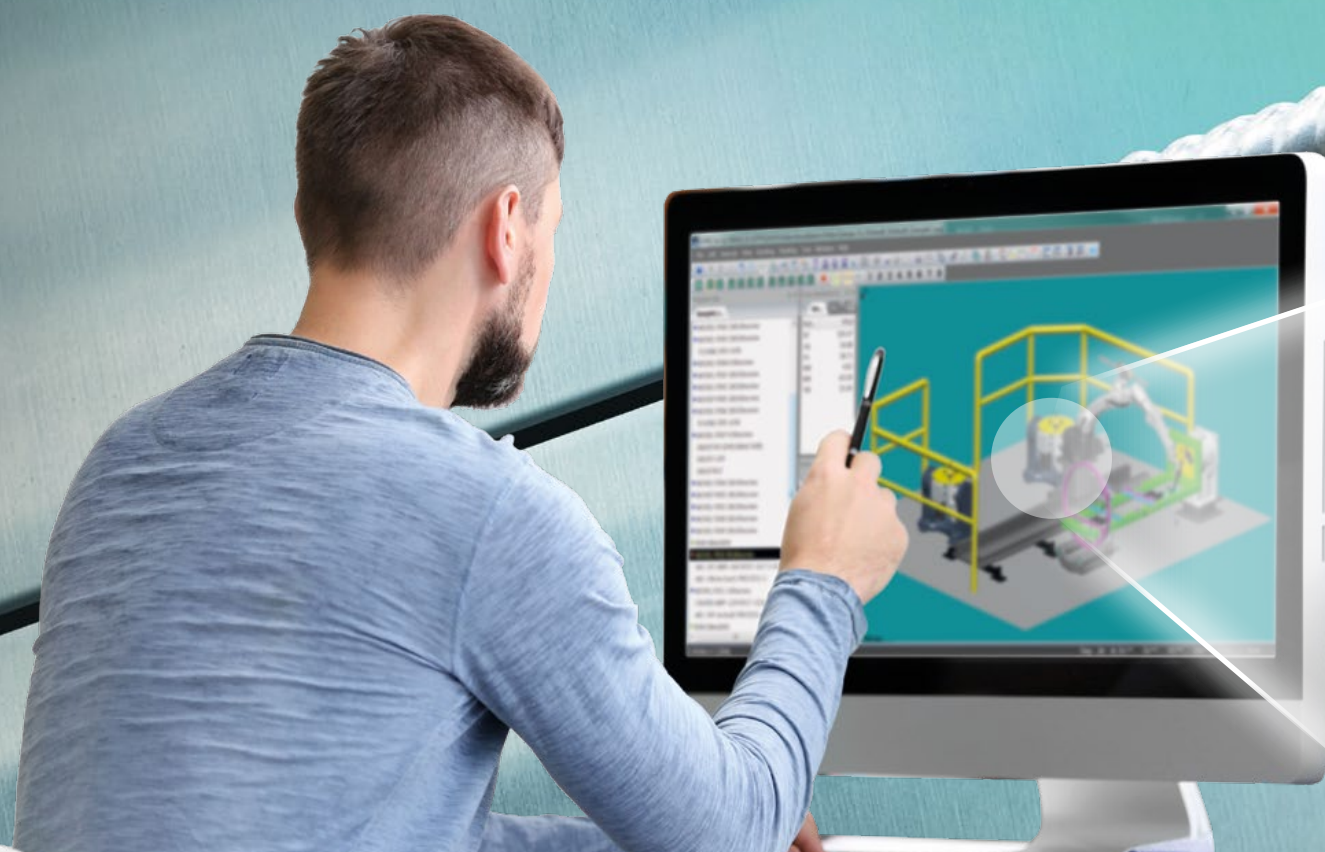
YOUR
WELDING SYSTEM
IN THE
PRODUCTION!



YOUR
WELDING SYSTEM
IN THE
SIMULATION!

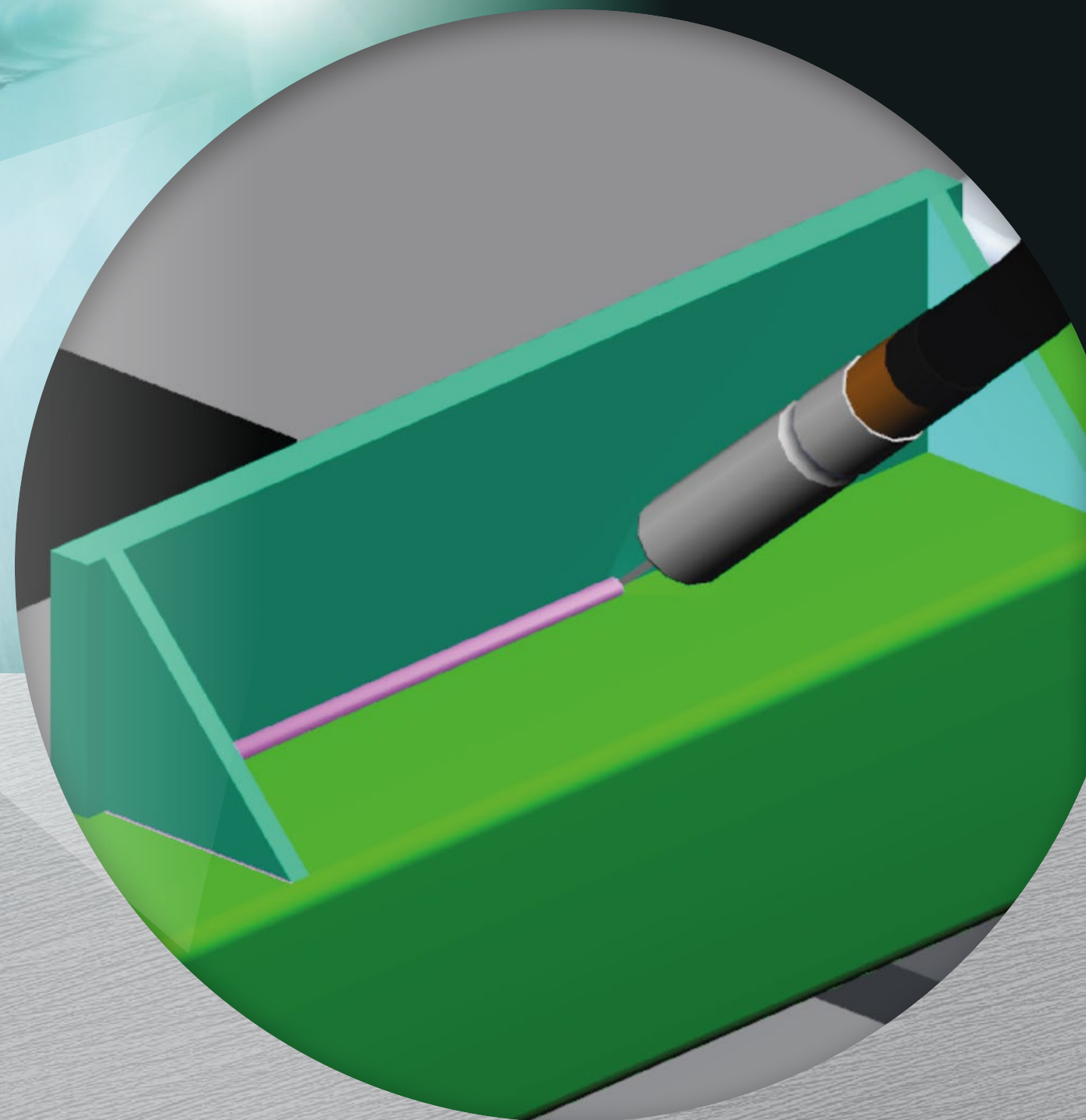
» YOU REQUIRE **OFFLINE** PROGRAMMING OF YOUR ROBOTS? «

DTPS
PART OF THE G2/G3 PC TOOL SOFTWARE



That's easy! With the Panasonic
DTPS SOFTWARE.

With DTPS, the Panasonic **Desk-Top Programming & Simulation System**, Panasonic robot programs can be created and edited offline. This makes it possible to run the robot program on the PC in simulation and optimise the robot movement with the corresponding welding parameters offline.

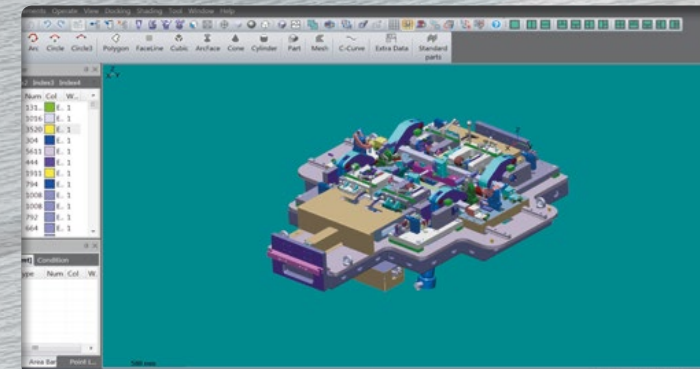


» YOU WOULD LIKE TO ORGANIZE
YOUR PRODUCTION TO BE MORE
PRODUCTIVE, SAFER AND
EFFICIENT? USE **DTPS.** «

DTPS
PART OF THE G2/G3 PC TOOL SOFTWARE

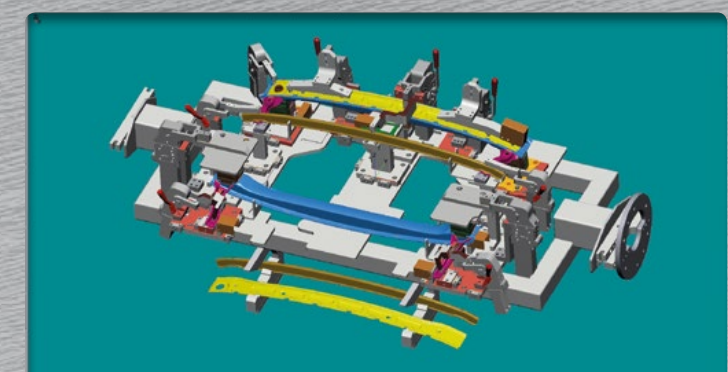
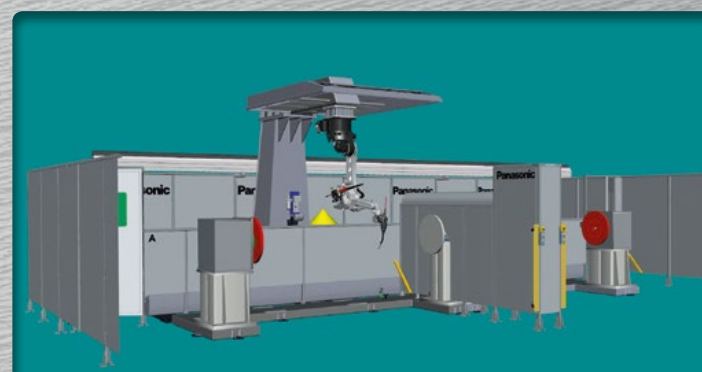
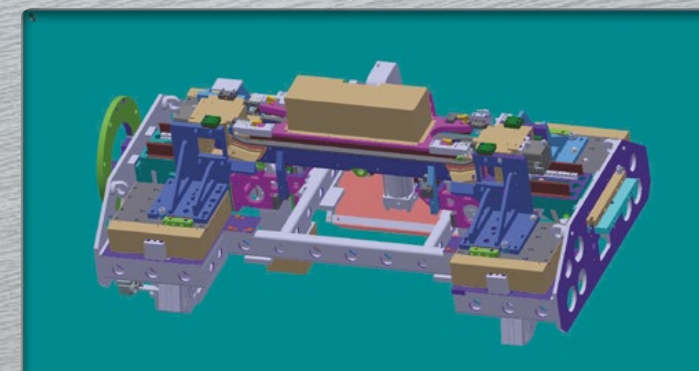
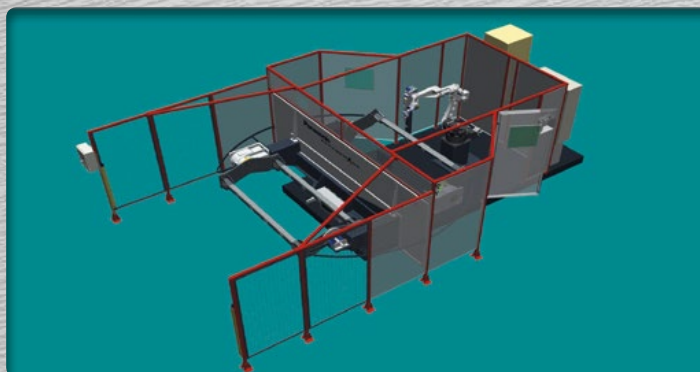
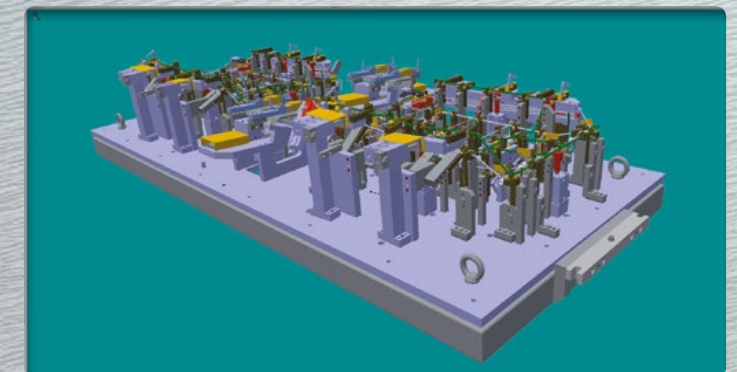
IMPORT

of external CAD data into
the DTPS program is no
problem!



SYSTEM CONFIGURATION

Layouts can be easily
created from the
work desk!

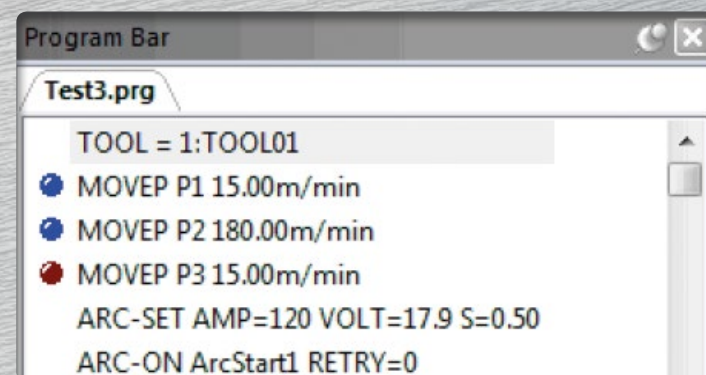


HIGHER PRODUCTIVITY, SAFER, SMARTER. WITH **DTPS.**

DTPS
PART OF THE G2/G3 PC TOOL SOFTWARE

PROGRAM PRESENTATION

Offline programming as well as processing and optimization of existing programs? This software makes it possible!



WELDING AND CYCLE TIME CALCULATION

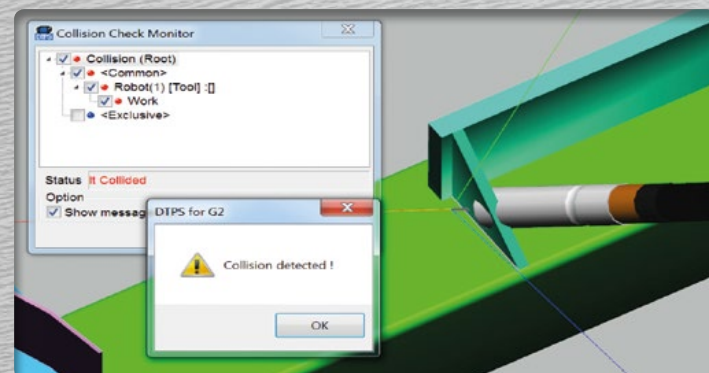
Through this investigation an initial piece cost calculation and utilization analysis is possible.

Step	1 - 1425
Total Time(sec)	477.024
Arc ON time(sec)	358.501
Arc ON rate(%)	75.2
Welding lenght(m)	1.700
Number of Welding Line	189
Wire Length(m)	9.788

Information of each step ☐ Don't display no movement step

Step	Command	Distance(mm)	Time(s)
1	TOOL = 1:TOOL...	0.00	0.0
2	MOVEP P1 15.0...	0.00	0.0

Jump to
Simulation
Modify Pose

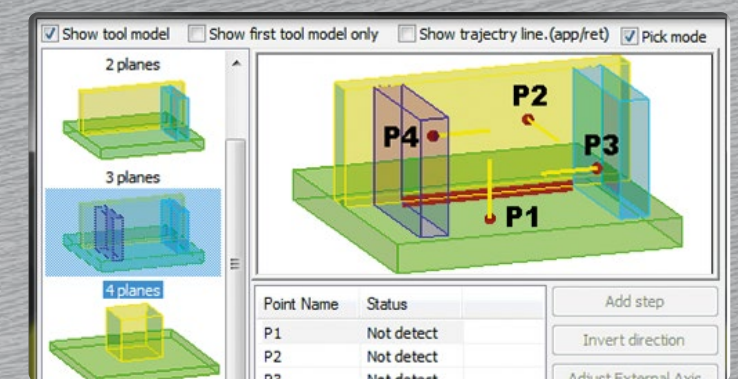


COLLISION MONITORING

Jigs, tools and workpieces can be checked for accessibility and working area clearance.

TEACHING NAVI

Supports you in the creation of an optimised motion sequence.



TRANSFERRING PROGRAMS FROM THE PC TO THE CONTROLLER? <<

PC EDITOR
WITH THE AUTO RECEIVING FUNCTION

Yes! With the Panasonic
PC EDITOR.

With the PC Editor you can edit robot programs directly on the PC. Checks, adjustments and corrections of movement as well as process parameters are possible with this module.

ITEM COUNTER

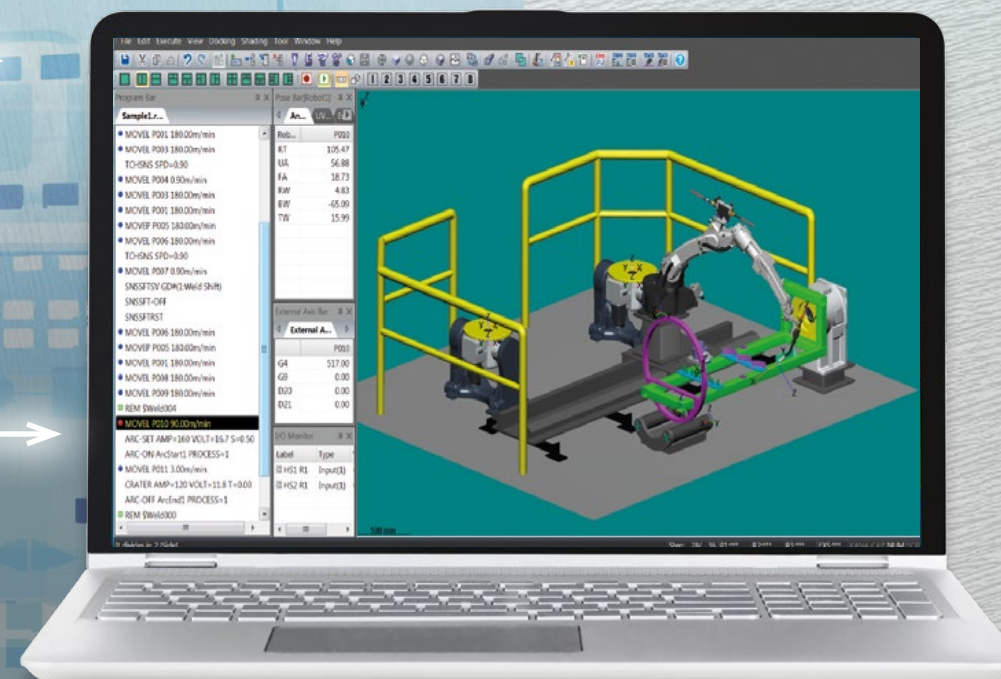
ERROR HISTORY

WELDING PARAMETERS

ROBOT PROGRAMS

AND MUCH MORE

BACK-UP TRANSFER



With the extra Auto Receiving Function you can automatically transfer back-ups from the robot controller to your computer per ethernet connection.

» PROCESSING PROGRAMS AS TEXT FILES? «

TEXT CONVERTER
PART OF THE G2/G3 PC TOOL SOFTWARE



PRINTING ROBOT PROGRAMS

```
PC Editor TXT - Editor
Datei Bearbeiten Format Ansicht ?
<< FILE INFORMATION >>
Robot      : TM1400(WGH3)
Comment    :
Sub Comment(1) :
Sub Comment(2) :
Mechanism  : 2(Robot,G5)
Creator(User-ID) : robot
Welder     : 1:TAWERS
User coordinates : None
Created    : 30.04.2017 07:31:23
Modified   : 10.05.2017 11:46:08
Origin Program : TEST
Program Edit : All enable

<< POSE DATA(S) >>
P001 RT=0.000 UA=-25.000 FA=-25.000 RW=0.001 BW=-120.000 TW=0.000 G5=16.600
P002 X=257.976 Y=155.042 Z=517.913 U=-180.000 V=74.999 W=179.999 G5=16.600
P003 X=674.613 Y=588.431 Z=84.290 U=-5.328 V=16.877 W=179.573 G5=-82.345
P004 X=624.374 Y=591.487 Z=248.846 U=-5.338 V=16.881 W=179.562 G5=-82.345
P005 X=674.926 Y=589.052 Z=85.680 U=-5.338 V=16.880 W=179.563 G5=-107.015
P006 X=674.947 Y=589.314 Z=84.720 U=-5.333 V=16.878 W=179.570 G5=-134.437
P007 X=661.170 Y=588.113 Z=129.672 U=-5.337 V=16.881 W=179.563 G5=-134.437
P008 RT=30.635 UA=37.883 FA=3.732 RW=-16.072 BW=-79.814 TW=150.648 G5=-211.183
P009 X=674.816 Y=586.909 Z=85.574 U=-5.338 V=16.879 W=179.562 G5=-211.183

<< COMMAND(S) >>
<<> Begin of Program
TOOL = 1:524
(+) MOVEP GP#(2:BAZA B) 100.00m/min
(+) MOVEP P002 160.00m/min
(+) MOVEP P004 160.00m/min
```

ARCHIVING ERROR MESSAGES IN PAPER FORM

```
TextConverterDataText - Editor
Datei Bearbeiten Format Ansicht ?

Error history
No.      01
Date     10.05.2017 11:06:38
Content  E7001 collision detected
Sub information FA
Program  TEST
Position P015

No.      02
Date     10.05.2017 07:33:39
Content  E7001 collision detected
Sub information RW
Program  TEST
Position P036

No.      03
Date     10.05.2017 07:33:32
Content  E7001 collision detected
Sub information RW
Program  TEST
Position P036
```

Yes! Quite simply with the Panasonic
TEXT CONVERTER.

With Text Converter, it is no longer a problem for you to create text files from robot programs and general system data. Such text files support you in archiving, documentation creation and analysis of programs in paper form.

Create the relevant data, e.g. the last error and alarm messages, in paper form to ease analysing optimum system utilisation.

Easy conversion back from text format to robot program format is also possible!

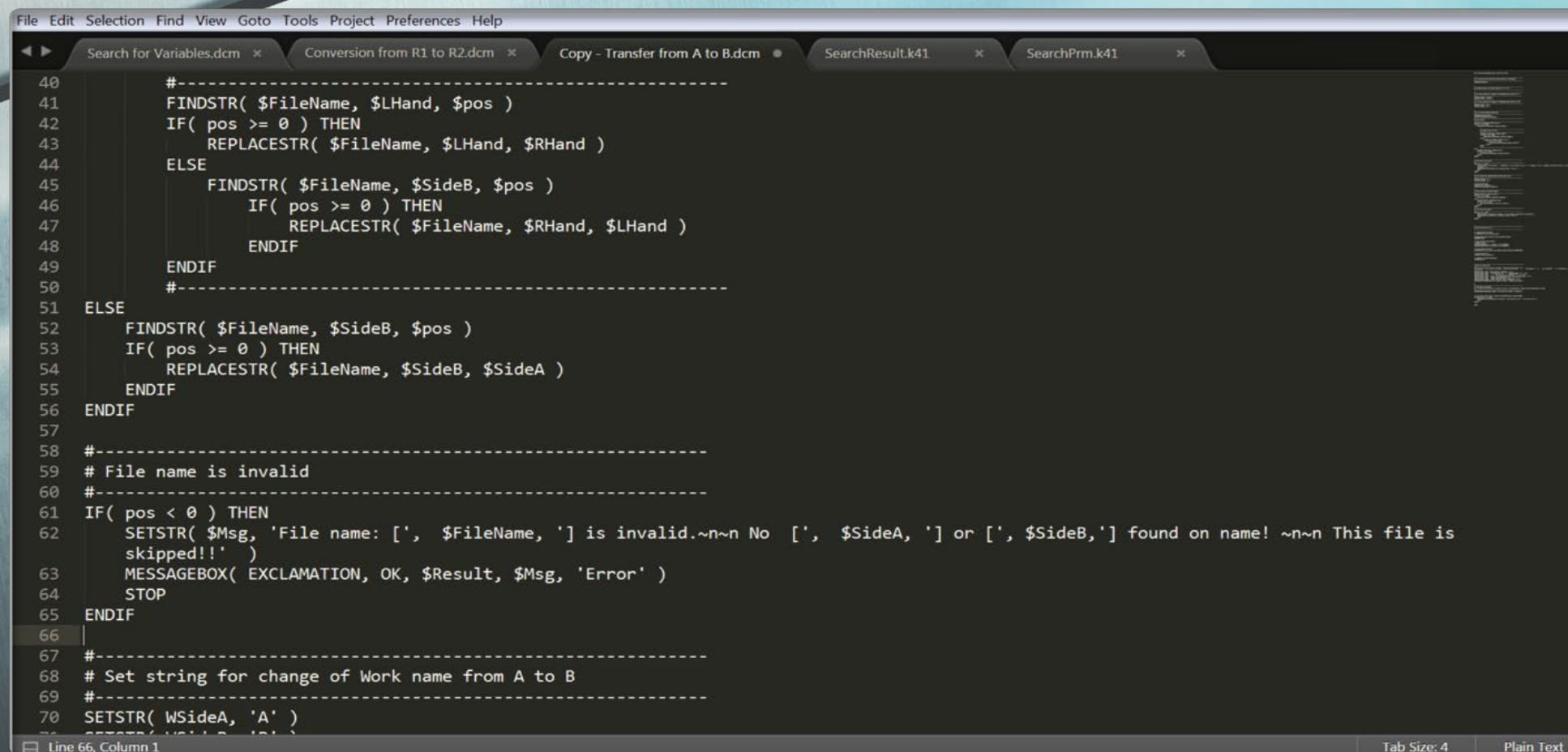
» ADJUSTING SOFTWARE ACCORDING TO MY INDIVIDUAL REQUIREMENTS? «

DTPS MACROS
PART OF THE G2/G3 PC TOOL SOFTWARE

No problem!
With the Panasonic
MACROS.

You can use the macros to program additional functions that are outside the software's default settings.

Adapt the software according to your individual and specific requirements. We guarantee the highest degree of flexibility in the application of this software!



```
40 #-----
41 FINDSTR( $FileName, $LHand, $pos )
42 IF( pos >= 0 ) THEN
43     REPLACESTR( $FileName, $LHand, $RHand )
44 ELSE
45     FINDSTR( $FileName, $SideB, $pos )
46     IF( pos >= 0 ) THEN
47         REPLACESTR( $FileName, $RHand, $LHand )
48     ENDIF
49 ENDIF
50 #-----
51 ELSE
52     FINDSTR( $FileName, $SideB, $pos )
53     IF( pos >= 0 ) THEN
54         REPLACESTR( $FileName, $SideB, $SideA )
55     ENDIF
56 ENDIF
57
58 #-----
59 # File name is invalid
60 #-----
61 IF( pos < 0 ) THEN
62     SETSTR( $Msg, 'File name: [, $FileName, ] is invalid.~n~n No [, $SideA, ] or [, $SideB,] found on name! ~n~n This file is
63     skipped!!' )
64     MESSAGEBOX( EXCLAMATION, OK, $Result, $Msg, 'Error' )
65     STOP
66 ENDIF
67
68 #-----
69 # Set string for change of Work name from A to B
70 #-----
71 SETSTR( WSideA, 'A' )
```


» ONLINE PRODUCTION MONITORING IN **REAL TIME** WITH YOUR PC? «

PRODUCTION MANAGEMENT FUNCTION
REAL-TIME MONITORING OF PRODUCTION

No problem.
With the Panasonic

**PRODUCTION
MANAGEMENT FUNCTION.**

Do not leave anything to chance! Show
the current welding parameters in
wave form directly on your computer
over remote access.

At the same time, you can display
the utilisation status of your welding
robots in production via Ethernet
on your computer. The robot will be
allocated and shown in various states
of operation.

**WELDING
CONDITIONS**

**WELDING DATA
IN WAVE FORM**

**ACTUAL VERSUS TARGET
ACTIVITY PERFORMANCE
COMPARISON**

ROBOT POSITION



Additionally
representable data:

- I / O status
- Running program
- Load utilization of the axes [Load Ratio]
- and much more ...

» SIMULTANEOUS DISPLAY OF MULTIPLE ROBOTS ON THE PC? «

PRODUCTION MANAGEMENT FUNCTION
HAND PROGRAMMER REMOTE DISPLAY

Robot No. 1:

NORMAL
OPERATION



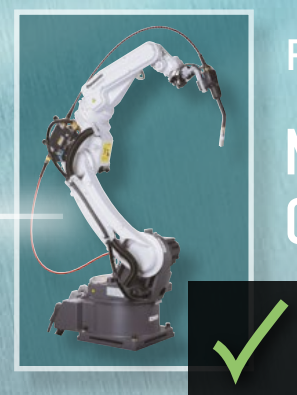
Robot No. 2:

ERROR



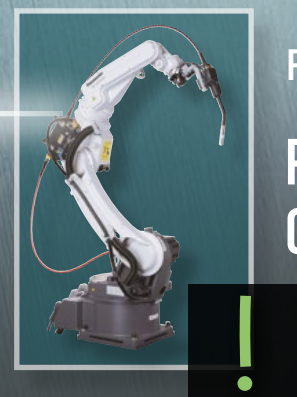
Robot No. 3:

NORMAL
OPERATION



Robot No. 4:

PROGRAM
CORRECTION



Absolutely, of course!
With the Panasonic

**HAND PROGRAMMER
REMOTE DISPLAY FUNCTION.**

Show the current display of the
handheld programmer on the PC?

No problem! With the hand-held
programming device remote
display function, a real time remote
monitoring function on your PC of
the hand programmable device is
possible. This allows you to control
the robot status in real time.

But you want to observe multiple
hand-held programmers
simultaneously? This is also
possible!