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 - Specific Cards Repair
 - LCD Panels Replacement
 - SW & HW System Back-Up
 - Win ME/NT/XP, DOS, OS/2,...
 - VME, MULTIBUS, PC-104,...
 - Touch-Screens Repair
- Low Level Device Drivers Development
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Panasonic CF-19, CF-30, CF-31 SW Integration



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Discontinued
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TECHNICAL BULLETIN

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FOR THE ATTENTION OF AUTOMATION MAINTENANCE DEP'S & FIELD TECHNICAL PERSONNEL

REDESIGN & REMANUFACTURING OF ELECTRONIC CIRCUITS & COMPUTER SYSTEMS

This is to attract a special attention of industrial automation maintenance departments and of field technical personnel to possibility of redesign and remanufacturing of the electronic circuits and industrial computer systems as listed and described below.

1. Industrial Computer Systems Backing-Up

Many old fashion-, expensive and/or hard-to-find computer systems are still used in control and supervision of the industrial machinery. Such computer systems commonly are running on the non-regular operation systems as MS DOS, OS/2, Windows NT, Linux and on other unique Real-Time Kernels, and are integrated using special HW components as PC/XT, PC/AT, EISA, VME, Multibus, EXM, SMP16 and other becoming currently exclusive Buses and corresponding I/O Interface Cards.

It is strongly recommended to perform proper backing-up and imaging both System- and Application Software of such system before any failure might has place, and so that the software might be easily recovered when required.

Very unique and hard working computer systems, which required to be properly functioning without unexpected failure interrupts, should be inspected and backed-up both of their HW and SW components.

2. Electronic Circuits Redesign & Remanufacturing

OEM Discontinued, non-supporting and dramatically expensive electronic circuits are also still used with industrial machines. In cases when such old electronic circuits are deeply damaged, and/or are "hard-to-find", "expensive-to-purchase", it should be considered to evaluate a reasonability of remanufacturing of the circuits taking in account the Cost/Volume ratio. Once the ratio evaluation would become positive, the following procedures might be performed:

- Electronic circuit reverse engineering
- Firmware/SW reverse engineering if applicable
- HW and FW/SW redesign of the circuit
- Manufacturing of the redesigned circuit

Related resources:

<https://www.praftec.com/tb/TB-053-251029-FW-BACK-UP.pdf>
<https://www.praftec.com/tb/TB-052-220525.pdf>
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