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Low-cost, high efficiency with integrated PCs - Don't reinvent the wheel

Abstract

Only a few EDP-shop managers have already realised the power of Personal
Computers in HP3000 environments. Others still ignore PC software with
easy-to-use, low-cost user-interfaces. PC's are often simply used as dumb
terminals.

However, with today's powerful terminal-emulators you have the tool to
integrate the world of PC-programs with existing HP3000 applications.

PC-hardware and software is more economical than HP3000 software and often
much more user-friendly.

HP3000-programs can control your PCs and use ready-made PC programs to carry
out HP3000 work overnight.
PC-programs can use HP3000 data without file transfer (direct access).

With your HP3000 programs, you can even do things that you never dreamed of.
For example: showing pictures, dialing your phone, using on-screen
calculators, using keybord macros, switching between up to four running
HP-online sessions with one keystroke.
Examples of powerful PC programs demonstrate that you can greatly enhance
your existing HP3000 applications at a low cost without any program
modification. Some of these PC programs do the work of $ 5000,- HP programs
at bargain-prices of $ 50,- or less.

Introduction

More and more users have become familiar with PCs and apperiate the many
powerful programs which are available.

They are beginning to ask the HP computer-shop why data processing with
these systems is often not very user-oriented and why the generation of an
application is so time-consuming and expensive.

Since firms fully utilize the computing capacity of their HP 3000 and since
there is a growing backlog in most EDP departments, the end users are
beginning to solve the problems which they have with their PCs themselves.

If this development is not properly channelled, great integration problems
will result with the existing host applications due to incorrect,
undocumented end user applications.

Therefore, the integration of PCs must be planned and regulated by the EDP
department.

The EDP department can often assist the users more quickly, efficiently and
cost-effectively by methodically including the PCs and the many efficient
PC programs available than by buying or developing HP programs.

What is integration?

I understand "integration" to mean the inclusion of the PCs and the
integration of PC programs into HP 3000 data processing.

Points of emphasis:
1. Terminal emulation
2. File transfer
3. Improving HP applications by using PC utilities
4. Resource sharing
5. Distributed data processing
6. End user support during planning and creation of applications
7. Problems with integration.

You do not have to wait for announced PC integration programs such as "New Wave" or 'PS/2'-systems with 5 MB storage and large hard disks. In many cases, you can work with the small PCs available and proven PC programs. Even expensive HP 3000 applications for example 'HP Access', 'Business Report Writer' and word processing programs can be replaced by low-cost PC programs.

The most important PC tool for the integration of the HP 3000 and PCs is a good terminal emulator. Our company decided to use REFLECTION 3+ from Walker Richer & Quinn. The following text is based on the features offered by this program.

1. Terminal emulation
PCs are generally only used for local processing (e. g. word processing, spreadsheets) and in addition as a terminal for the HP 3000.
The possibilities of terminal emulation are often not fully explored.
Here are a few features of terminal emulation which alone justify the use of PCs:
- 'Type Ahead' extremely facilitates work with the HP 3000 as the user does not have to wait for the HP prompt.
- Display of 132 positions on the screen with EGA boards or by horizontal rolling of up to 10,000 characters.
- In contrast to most terminal users, PC users can switch to the world of colors even with HP\3000 programs.
- Terminal emulation is programmable. Therefore, applications can be automated and the HP is relieved from CPU-intensive UDCs. For example, with Reflection's integrated command language, the PC can be forced to automatically select a modem at a particular time, to register with a HP 3000 and to start a host application.
- Reflection can be used to produce menus from which both PC programs and HP applications can be started. Therefore, the user has a uniform user interface.
- A software printspooler is also available with Reflection so that work can continue on the PC during printing on a PC printer.
- The display memory of a PC is not limited to 2 - 8 pages, it is only limited by the PC storage. Therefore, you can roll hundreds of lines forwards and backwards.
Many of these points are unknown or unfamiliar to EDP personnel.

In addition to terminal emulation, Reflection is an efficient communication programm, a PC editor, a printer spooler, a graphics tool and a PC backup program.
When Reflection is used as a communication program, data can also be transferred between two PCs (for example because of different disk formats) or data can be exchanged via a PC between different HP or DEC computers or BBSs can be accessed with Reflection.

2. File transfer

HP data can easily be further processed on a PC when corresponding programs are not available on the HP 3000. The load on the HP 3000 is shifted when evaluations are developed and carried out on PCs.
Furthermore, PCs can perform certain tasks better than the HP 3000, for example creating graphics or performing optimization calculations.

How many PCs are only used during working hours? Outside working hours, they could work for the HP 3000.
To do this, the transfer of HP data to PCs must be planned and organized.

In order that only (little) changed data must be transferred, programs should be developed or bought which extract changed data from HP data bases and transfer them automatically to PCs without any user intervention. HP programs should be adapted so that changed data are additionally written in special files for filetransfer to the PCs. They can already be formatted on the HP in such a way that they can be taken over in the PCs spreadsheets or database e.g. dBaseIII without having to be further converted.

Of course, the data cannot be transferred onto hundreds of PCs, however, in PC networks HP data can be easily mirrored onto file servers. Some efficient PCs in departments or computer centers can also be supplied with HP data. Then query jobs and reports can be shifted from HP 3000 to PCs.

Diskstorage on PCs costs less than 25% of the price of HP disk storage.
Therefore, PC disks can be used for archiving HP data.
When archiving on HP tapes, the data cannot be made as easily available for evaluations as when using PCs. PC removable disks are especially suitable for this purpose (e.g. Tandon 'Data Pack' with 30 MB per component at the price of 400 US$).

An example of the time needed for data transmission:
If 10,000 data changes arise daily with 100 bytes, the contents of about a
1.2 MB disk must be transferred to PCs. With 19200 bauds, the transmission
time amounts to approx. 8 minutes.

If the data are to be transferred during the day, this can take place
without hindering the work of the PC user because the data can be
transferred in the background. Therefore, the PC can be used, e. g., word
processing in the foreground and simultaneously file transfer in the
background (multitasking).
This means the HP can access the PC without the PC user having to intervene.
In addition to this data transmission (with error checking), all data
recorded on the display can also be logged on a PC disk and are immediately
available for further processing on the PC.

Of course, the file transfer from the PC to the HP 3000 is just as easy.
Thus, PC tools can be used for data entry and the captured data can be
automatically retrieved from the HP 3000 in the background.

3. Improving HP applications using PC utilities
The possibilities already described do not require any PC or HP 3000
programs in addition to the terminal emulator.

Some useful PC programs which can be used constructively with HP
applications are described in the following section.

The graphic in supplement 1 shows that all entries from the keyboard and
all display outputs of the HP 3000 must run through the terminal emulator.
It acts as a filter and certain character sequences are recognized by
Reflection and forces the PC to perform certain tasks.

This graph also shows that other programs in addition to the terminal
emulator can be stand by in the PCs memory to be activated by pressing a
hot key within a PC or even HP application. By this means, then PC and HP
processors are actually used simultaneously.

Examples:

- Reflection can be loaded a second time as an additional program (second port required). When additional software (DesqView) and ports are available, even four connections to the HP 3000 or DEC computers can be active at the same time. By pressing one key, the user can switch over from one application to another.

- The keyboard can be reconfigurated with Reflection so that at the touch of one key many characters can be keyed in. This can save a lot of time when entering data or during program editing.
  In addition, there are further keyboard enhancer such as Prokey and DesqView which automatically learn the keyboard layout (keyboard recording) or like 'Cruis Control' can speed up the cursor dramatically. This especially simplifies the writing of programs.

- On-line help systems also belong to a state-of-the-art user interface. Without programming effort, standard PC programs can be used as a help system. You only need to record the help text and the user can already call this help within HP programs by pressing a hot key.
  (Examples of help systems are: Instant Assistant, Saywhat and Flash Up Windows).

- Sometimes the data from a HP 3000 application displayed at the terminal must be recorded for other purposes. These data are usually written down on paper re-entered into a PC for other applications. When resident PC programs are used, the HP data can be transferred directly from the display to a PC storage or directly into an application which is loaded simultaneously on the PC (cut and paste).

  A tool specially suited for this purpose is the memory-resident spreadsheet LUCID 3D. However, DesqView, Sidekick, Take Over, Magic Mirror or Tornado-Notes are also suitable. This data transmission can also be computerized with keyboard macros.
  With the aid of such programs, a user can also immediately record HP error messages and can offer the programmer information which can assist debugging.

- Data from the HP can be immediately converted into business graphics (e. g. 'Graph in the box') by memory-resident graphic programs.

- Word processing can be performed much better on a PC than on the HP\3000. Better programs are also available for the editing of programs on the PCs than on the HP. Writing small (text) modules the filtransfer from PC to HP is scarcely noticed. These programs can also be integrated into HP applications in order to be called by HP applications.

- Desktop Utilities
  Some further help functions can facilitate the users work. E.g.
  at any time, a pocket calculator can be loaded on top of the HP-application and the results can immediately be taken over in an input field of a HP program without additional writing. Help functions are available for the user for the conversion to hexadecimal, octal or binary. A table of all ASCII characters can be called during running any program.

  With TSR ('terminate and stay resident') phone programs, the PC can dial phone numbers directly out of a HP screen (for example Sidekick, NyTalk).

DesqView 2.0 turned out as best universal tool. Several useful utilities are combined in one program: - Multitasking-Environment, -Keyboard Macros, -Cut and Paste, -DOS-Shell, -Task-Switching, -Menue-System, -Autodialing, altogether for 129.00 US$. In connection with a Memory Board (e. g. Rampage-286), Multitasking can be carried out even above the 640K DOS limit. With a DesqView addition, the 'protected mode' of 80386 processors is also supported.

4. Resource Sharing

Most PCs are equipped with a printer. These printers can be also used by the HP in order to print out lists immediately on the working place where they are needed.
If no printer is connected to the PC, the PC operator can also use the HP printer, without having to buy additional programs next to Reflection.

The printout is easily carried out through file transfer (possible in the background) on the HP printer. However, this should be avoided because of the HPs' capacity.
We have connected 5 PCs, the HP 3000 and two printers (laser and matrix printer) to a small computer (Logical Connection, price approx. 500.00 US$). Each PC and the HP 3000 can now use both printers.

If possible, the PCs should store evaluation data in addition to the HP. By this means, the HP is relieved from evaluations. This double storage inreases data security and the end users can also generate calculations or reports when the HP does not work. The additional memory costs on the PC are low (for exarple 300 MB disk for 2600.00 US$).

5. Distributed processing
Upon development of new HP applications, it must be kept in mind in which way the PCs can be included in this process.
Programmers should consider to perform parts of the processing on the PC and to use the HP only for central required processing.
Of course all users of this new application must get PCs.
The PC programs can have direct access to the HP with specific assembler routines when data are not available on the PC.

Meanwhile, the developers of Reflection expanded their terminal emulator also by PPL features (Program to Program Link).
These permit the access to the loaded Reflection via PC programs.
The called Reflection PPL routines keep the connection to the HP.
The PC programs can then be developed in such a way that the required data are loaded to the PCs in larger intervals. If during the daily work the required data are not found in the PC data base, the PC accesses directly the host data base.

With the aid of multiple tools which are available for PCs, programs can be developed on PCs much more quickly. Due to reasonably priced PC screen and program generators, the development of PC software is even cheaper than for HP 3000.
The creation of reports can be accomplished especially quickly on a PC.
The programming of a simple report with sort and two joined data bases can take place within two minutes.

With a powerful PC (HP Vectra RS 20), printing a report of 5000 records (into a spooler) with sort takes less than three minutes. Including file transfer (if the data are not yet on the PC), the first creation of this report takes approximately 10 minutes. (Program: Relational Report Writer).

A fool proof program for updating master files with 20 fields, including check against two other data bases, generic key search on two files and a few testings can be finished with the aid of a PC program generator in less than 30 minutes. (Programming language and data base: Foxbase+, own program generator).

There are a few programming systems which can be already used on PC and on the HP 3000 and which therefore allow applications running on PC and HP 3000. Since this tools are very expensive, the use of lowcost PC tools is more economical in many cases. There are reasonably priced PC products which can already be used on different system. The above mentioned Foxbase+ runs under MS DOS, Unix (SCO-Xenix), in the 'protected mode' on 80386 processors.

Distributed data processing can also mean storage of HP screens on the PC. To do this, Reflection offers 'Formscaching', as on the HP terminal 2624. Furthermore screens can be taken over from other PC screen generators. This screens can be activated by short commands from the HP.
The transfer of screens can be avoided while working with remote computers. Thus the application runs more quickly on a PC an cuts data transmission costs.

All the examples described can be implemented immediately without great financial effort.

The control of the PC can always be kept by the HP. Because of the Reflection commands, the HP can monitor the PC. The only requirement is, that the PC is switched on and Reflection is loaded. An example in which way PC commands are issued by the HP is shown in supplement 4.

More and more standard HP programs are able to access PC features in conjunction with Reflection commands(e. g. 'Qedit' by Robelle, 'Hello 3000' by Sydes).

By suitable own programs, you can take the possibility to link to PCs which
are just in a session and even to those which are not logged in.
With the aid of 'Tell' and 'Warn' commands of the MPE, one cannot transmit
commands via Reflection to the PCs, since the MPEs tell/warn allows no escape
sequences. Therefore, an own program must be written or the MPE must be
patched. (The patching of the Tell/Warn commands was exactly described in a
Interact magazine).

6. End user support during planning and creation of applications
Meanwhile more and more users are acquainted with PC programs like dBaseIII,
Lotus or Symphony. Thus they can solve many problems by themselves when the
data from the HP are prepared for them.
In order to avoid an unorganized and not documented second EDP, the EDP
department should guide the users and train them in the application.
Suitable aids for the documentation and the data backup must be specified and
its use should be monitored.

Special PC training programs can effectively support this training. These
programs, for example 'Instant Replay' by Nostradamus or 'Dan Bricklin's
Demo-Program' can 'take photos' from existing applications and combine them
for interactive demos.

New applications can be generated and tested as prototypes already before
creation on the PC together with the users. Thus, the appliccation is exactly
decribed.

7. Problems with integration
In order to avoid problems, the use of PCs must be well prepared. Supplement
2 shows a checklist of important subjects.

Data security is especially important when using PCs. It must be ensured by
monitor programs that the users cannot install own programs. Viruses on the
PC may be the result of unexamined software.
In addition, hidden programs could be used in order to record the number of
key strokes (keyboard recorder such as 'Instant Replay'). Thus all passwords
can be found out and the data security would be endangered.

In order to minimize the training effort, the user interfaces of PCs and hosts should be uniform.

Every PC application can be started with the aid of Reflection out of an HP program. Thus an uniform user interface could be installed on the host (HELLO 3000 has this interface).

An HP system offers the advantage to be used also by normal terminals.

In order to relieve users who are already acquainted with the HP from learning the MS-DOS commands, I have programmed a small command interpreter in Turbopascal for PCs, which offers a similar user interface like MPE on the HP, for example 'LISTF . ' instead of 'DIR *.*' or 'PURGEACCOUNT' instead of 'REMOVE DIRECTORY', with 'REDO', 'NEWACCOUNT', passwords and so on.

Upon redevelopment of HP programs, one should learn from existing PC programs and adapt the user interface to well-known PC programs.

If you use many PCs, you should take into consideration that the update of the PCs is carried out from the host. Using hundreds of PCs can no longer mean wandering around with the floppy from one PC to the next in order to install a new release.

An HP monitor should check regularly whether unallowed programs are available on a PC and whether the disk capacity of a PC is still sufficient. In addition, the HP can transfer a program to the PCs via file transfer which collects all required data and transfers them to the host. Here these data can be checked.

In addition, a PC support program must be available for offering remote support for PCs (for example Carbon Copy).

Enclosures
1. Diagram HP/PC/Terminal Emulator Environment
2. PC integration checklist
3. Why PCs should be used instead of dumb terminals
4. Example Cobol program for accessing PCs by HP

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┌─supplement 1══════════════════════════════════════════════════════════╗
│  ┌─────────────────┐  ┌──────────────────────┐    ┌──────────────────┐ │
│  │  HP 3000        │  │  DOS                 │    │                  │ │
│  │                 │  ├──────────────────────┤    │     monitor      │ │
│  │                 │  │  DOS-addition (driver)│   │                  │ │
│  │                 │  ├──────────────────────┤    │                  │ │
│  │                 │  │  RAM-Disc            │    │                  │ │
│  │                 │  ├──────────────────────┤    │                  │ │
│  │                 │  │  TSR-programs        │    └──────────────────┘ │
│  │                 │  ┌──────────────────────┐                         │
│  │          ◄──►   │  │  1. copy of Terminal-│    ┌──────────────────┐ │
│  │                 │  │     emulator         │◄───│     keyboard     │ │
│  │          ◄──►   │  ├──────────────────────┤    └──────────────────┘ │
│  │                 │  │  2. copy of Terminal-│◄──┐                      │
│  └─────────────────┘  │     emulator         │   │                     │
│                       │     acting as filter │   │                     │
│                       │     between PC and HP │  │                     │
│  ┌──────┐ ┌────────┐  └──────────────────────┘   │   ┌──────┐ ┌───────┐│
│  │disc or│ │printer │        ▼              ┌──────┐  │disc or│ │printer││
│  │tape   │ │        │  other PC-programs    │floppy │  │      │ │plotter││
│  └──────┘ └────────┘                        └──────┘  └──────┘ └───────┘│
└────────────────────────────────────────────────────────────────────────┘
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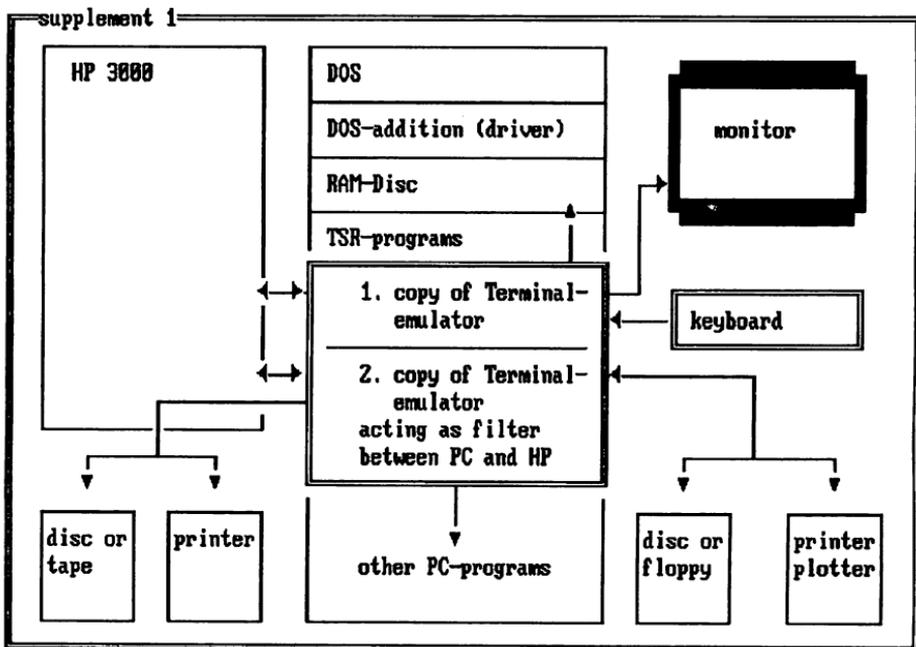
c:\instant\doc\bild1   Rolf Schleicher 19.06.88

1. There should be a configuration file on the HP for each terminal or
    PC. This file should contain information about the hard and software
    used at each desk (workplace) so that all HP programs have
    information available about which resources can be used, for example:
    slave printers, PC programs, disk space etc. On the PC there should
    also be a configuration file wich can be updated by a PC program and
    transferred to the HP3000.

2. Begin by developing the procedure to update the PCs by HP.

3. If you plan downloading data to the PC and uploading after changing
    to HP, you must have a logging strategy. Data entries on HP should
    have additional fields which show whether the downloading to the PC
    was successful (date/time, etc.).

4. There must be backup-PCs available with all disk space free.

5. Train some (interested!) people as PC specialists.

6. Reserve a budget for buying PC programs and for testing their
    features.

7. At each PC an 'SOS' start disk must be available for the case when
    the hard disk doesn't work, so that at least the terminal-emulation
    can be carried out.

8. Train the end user to use the PC and its programs efficiently.

9. Keep in contact with other PC users. Share your knowledge.

10. Supervising of PC disk space is necessary. New programs need a lot of
    space and the PC disks are soon full of garbage.

11. Each PC needs a lot of floppies for a backup, at least 100 floppies
    for a 20 MB-disk (two generations of backups on 360KB-floppies).

12. Coordinate your printers (with switches like LOGICAL-CONNECTION).

13. PCs should have colour screens and graphic capability.

14. Design your workplace carefully (PC cooling fans are noisy and must
    not blow into colleagues' faces).

15. Plan PC maintenance strategy (backup PCs are often more economical
    than maintenance-contracts).

16. Control the software licenses centrally in order to keep track of
    software updates. Keep the original floppies of installed software in
    a central place.

17. Pay attention to data security (passwords, security system).

18. Buy cheap (laptop) PCs for training end users (and for taking home at weekends).
19. Subscribe to PC magazines.
20. All your programmers should work with (AT-compatible) PCs with colour screens.
21. Develop your own integration and software strategy.
22. Work out software programs which are transportable to other computers.
23. The following should be organized and controlled: user interfaces, help systems, use of colours, meaning of function keys and screen design.
24. Plan your end user support.
25. Always consider whether PCs could be used instead of HP (HP as file server).
26. Share the end users' experiences by holding user meetings and creating a PC newspaper.
27. Build up an extensive library of books and software.
28. Try to use the same commands and user interface design on both the PC and HP.
29. Consider using removable hard disks or floppies with at least 10 MB capacity (Tandon PAC, Bernoulli-drives).
30. Backup the directory structure as well as the data. The former is more important!
31. Do not carry out software developments without using PC prototyping and creating demos and tutorials.
32. Train the users to avoid possible pitfalls of end user tools.

Some arguments for changing from the 'buy terminal' to 'buy PC' strategy.

1.   Terminals often only work with a special computer. If you change the
     computer brand (this happens sometimes), you may have terminals which
     don't work with the new computer.

2.   If you have two computers for example HP and DEC or HP and IBM, you
     need two terminals on your desk. A PC can be connected to more than
     one computer at the same time with hardware and/or software.

3.   PCs offer the user a wider range of possibilities than terminals. This
     is the reason why they should be used even when a PC itself is not
     necessary for current applications. Here is a list of features you
     have available at a PC terminal with REFLECTION terminal emulation:

3.1 Formscaching: screens can be stored in the PC memory and must not be
     transferred between HP and PC. This saves time and money used for
     remote computing and is highly recommended for taking power from the
     HP.

3.2 Some resource-consuming procedures (for example UDCs) can be performed
     by the PC.

3.3 You can switch on the 'type-ahead' feature of the PC terminal in order
     to type as fast as you can without having to wait for the HP's prompt.

3.4 REFLECTIONS built-in printspooler allows you to continue working while
     the slaveprinter is printing.

3.5 Horizontal scrolling allows you to see wide lines on the PC. With
     high-resolution screens you can display 132 columns without scrolling.

3.6 You can use a pointing device (for example mouse) to move the pointer
     on the screen and to carry out vertical and horizontal scrolling.

3.7 You can keep hundreds of lines in the PC's memory which can be
     scrolled back and forth (also with the HP150!)

3.8 For little money, you can have colour and graphics.

3.9 Data from the screen can be directly transferred to the PC storage, so
     that error messages and data must not be written down and can be
     directly computed with PC programs.

3.10 The keyboard can be designed by the user or extended by the HP-program
     to support all kinds of applications.

3.11 During HP applications, at the touch of a key, the user always has
     another computer available which can perform certain tasks much better
     than HP programs (for example word processing, graphics, spreadsheets).

3.12 The PC can be controlled by other computers (like HP3000) and can be
used at night as a co-processor for creating graphs or calculating
inear programming.

3.13 With a PC terminal you can easily switch over to more than one
application without having to finish one job before starting a new
one. If you have four serial ports on your PC, you can switch between
four HP-applications and, if necessary, additional PC programs.

3.14 Cheap printers, connected to the PC, can print out at your desk just
the lines you need. The printers can also be shared with the HP.

3.15 Data sharing between HP and PC is easy when automatic background file
transfer is used.

3.16 The PC can control the HP. With the simple REFLCTION command language,
the PC is able to send commands to the HP at pre-defined times.

3.18 If IBM computers are connected to HP via SNA/IMF, IBM users can use
all these features without expensive coax cabelling or interface cards
in the PCs.

I thank my wife for translating my lecture with the computer translation
system "LOGOS", installed on a WANG VS/85.

All mistakes in this text are made by the WANG-computer.

```
$CONTROL USLINIT

*this is an example of a cobol-program which receives input via
*the info-parameter of the run-command and sends this
*command with added prefix back to then terminal-emulator.
*Author: Rolf R. Schleicher, Harksheider Str. 29, D2000 Hamburg 65

 IDENTIFICATION DIVISION.
 PROGRAM-ID. PC.
 ENVIRONMENT DIVISION.
 DATA DIVISION.
 WORKING-STORAGE SECTION.

 01  PC-VARIABLE PIC X(80).
 01  REFLECTION.
     05  ESCAPE              PIC X VALUE %33.
     05  REFLECT-SEQUENCE  PIC X(3) VALUE "&oC".
 01  INFO-LENGTH         PIC S9(4) COMP VALUE 80.

 PROCEDURE DIVISION.
 START-p1 SECTION .
     MOVE SPACES TO PC-VARIABLE.
     call intrinsic "GETINFO" using pc-variable
                          INFO-LENGTH \\.
     IF INFO-LENGTH = 0
        DISPLAY ESCAPE "H" ESCAPE "J"
        DISPLAY
        "CORRECT SYNTAX: RUN PC;INFO=" QUOTE "command" QUOTE
        DISPLAY "-------------------------------------------"
        DISPLAY "This program takes your input from the"
        DISPLAY "INFO-parameter of the RUN-command."
        DISPLAY "It adds the REFLECTION-prefix '<esc>&oC' to"
        DISPLAY "your command an sends it back to your PC."
        DISPLAY "-------------------------------------------"
        DISPLAY "With RUN PC;INFO=" QUOTE "HELP" QUOTE " you"
        DISPLAY "will get a list of REFLECTION-commands"
        DISPLAY "-------------------------------------------"
        DISPLAY " ".
*--------------- calling REFLECTION -------------------
*switching off standard terminal response (S,U or F)
     DISPLAY REFLECTION "SET DISABLE-COMP-CODES YES".
*-----------------sending your command via REFLECTION ---
     DISPLAY REFLECTION PC-VARIABLE.
     STOP RUN.

*Example for using the program:
*----------------------------
*SYNTAX:   RUN PC;INFO=" your command"
*1. the MPE-command     :RUN PC;INFO="DIR *.*"
*   causes the PC to show the PC-directory on the HP-screen.
*2. the MPE-command     :RUN PC;INFO="SHELL FORMAT A:"
*   turns the PC to DOS, starts formatting a floppy in driv A:
```