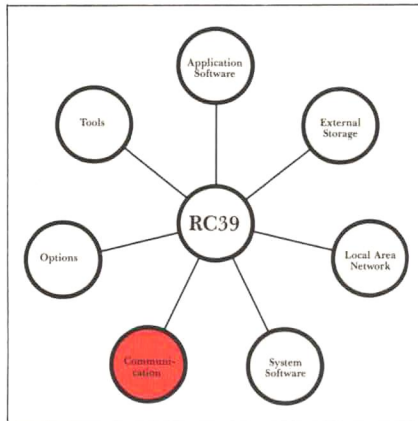# SW3804 — IBM 3270 Programmer's Toolkit

The IBM 3270 Programmer's Toolkit comprises professional, high-quality utilities. The software package contains the communication tools necessary for the creation of advanced applications incorporating 3270 communication with host computers, such as distributed, hierarchic database systems.

RC Computer

SW3804 — IBM 3270 Programmer's Toolkit

The software package SW3804 requires a local environment in the form of an RC39 multi-user computer and related programs, and a host computer with which communication is effected via a 3270 connection and the applications executed hereon.

The package contains two separate parts:
- A program simulating a 3270 printer unit which stores data received from the host computer in RC39 disk files.
- A procedure library "programmer's toolkit" enabling a program developed for the local environment to communicate with the host computer via a 3270 connection.

SW3804 presupposes installation of SW3803, IBM 3274 emulator, on the RC39 multi-user computer. SW3803 presupposes that RC39 is provided with an RC3931 communication adapter and at least one F641/F642 communication adapter.
SW3804 has no further hardware requirements.

Simulated 3270 Printer

The simulated printer is an available function, which does not require any user programming. The mode of operation is simple: Data received from the host for printing on the simulated printer is stored on the RC39 disk. Data received in one single transmission from the host is placed in the one file, which is then closed and a new one is opened when a new data stream arrives.

As the data stream for a printer does not contain file names, these are generated automatically and given a serial number.

Once a file has been stored on RC39's disk, its contents may be further processed in the same way as any other file with the utilities available in the local system. It could be a report for local text processing, or raw data for loading in a local database, or a source code for compilation. The possibilities are many.

Programmer's Toolkit

The Programmer's Toolkit is a procedure library giving a program developed by the user locally access to the host computer on the same terms as a terminal operator at a 3270 display terminal. The terminal unit has no physical existence, but is simulated by a program executed on the communication processor and called a soft device.

User communication with the local program is effected in the same way as with other programs executed locally, and requires no information about the communication facility.

Possible applications:
- Reading of information which is not stored in the local database, but extracted from screen images transmitted from the host computer.
- Reporting of data to be stored in a central database.

As is the case with real terminal units, a soft device incorporates a device buffer featuring 1920 character positions, which the host may devide in fields with different attributes, some fields containing read only text, while others are reserved for text entry. By means of the Programmer's Toolkit procedures, the local program may:

- Insert text strings in the input fields.
- Read the contents of the device buffer, field by field.
- Read the placing and coding of the attribute characters delimiting the fields, and make a map of the field locations.
- Start transmission of data or brief attention messages to the host, just like an operator pressing SEND, PF or PA.
- Wait for the host to unlock the keyboard thus indicating that the screen image has been updated and text entry may continue.
- Select host computer in case of a dual host configuration.
- Read the contents of the status line, as if displayed on a real terminal unit.

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