the I.P.Sharp *newsletter*

TELEX ACCESS TO SHARP APL

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T       0057564 1442 070978
        INTLX MTL CA +
E       1 P SHARP TOR

L       PTS
        4418859+
E       21.44
        18859 ITS NL+
X       1 P SHARP TOR

        SHARP APL CAN NOW BE ACCESSED FROM THE
        WORLDWIDE PUBLIC TELEX NETWORK, USING THE
T       STANDARD TELEPRINTER. NO SPECIAL MODEMS,
        ACOUSTIC COUPLERS, OR OTHER ATTACHMENTS ARE
E       REQUIRED.

L       THE NORMAL USE OF TELEX IS TO TRANSFER
        WRITTEN COMMUNICATIONS FROM ONE TELEPRINTER
E       TO ANOTHER OVER A SWITCHED TELEGRAPH NETWORK.
        MOST CALLS, INCLUDING INTERNATIONAL ONES,
X       ARE SET UP BY AUTOMATIC SWITCHING EQUIPMENT.
        THE CALLER EITHER TYPING OR DIALING THE
        DISTANT SUBSCRIBER/S NUMBER.
T
        ACCESS TO SHARP APL IS PROVIDED BY DIALING
E       THE TELEX NUMBER OF A MINICOMPUTER. THE
        MINICOMPUTER ACTS AS A PRE□PROCESSOR FOR
        ESTABLISHING AND MAINTAINING A CONNECTION TO
        THE SHARP APL PACKET□SWITCHING NETWORK, AND
        HENCE TO ONE OF THE MAINFRAMES ATTACHED TO
        THE NETWORK. ONCE THE MINICOMPUTER HAS
        RECEIVED AND ANSWERED THE USER/S CALL, IT
        WILL RESPOND WITH AN ANSWERBACK CODE WHICH
        VERIFIES THAT THE CALL IS ESTABLISHED. THE
T       USER THEN PROCEEDS WITH THE SIGN□ON SEQUENCE
        AND SUBSEQUENT DIALOGUE AS IF USING AN APL
E       TERMINAL.
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TELEX (continued)
Before everyone throws out their APL terminals to switch to Telex, some of the disadvantages should be pointed out:

- the terminal speed is slow (6.7 characters per second).
- the character set is very limited: as little as 47 printable symbols (A to Z, 0 to 9, and only 11 others), which doesn't allow too many APL operators.

the page width is limited to 69 characters.

These limitations will restrict the usefulness of Telex considerably, and it is certainly not recommended for those who wish to write programs in APL. Provided that the terminal use is normally confined to data entry for existing APL applications and a limited amount of report printing, Telex will be useful, particularly to:

- the multinational corporation wishing to expand APL access to all its branch offices, including those in countries the Sharp Communications Network has not yet reached. In some cases a Telex connection may be more economical for branch offices not within local call range of the nearest Sharp network access point, even though normal access is available within the same country.
- users with only small APL requirements, and who already possess a Telex machine. The user is saved the cost of acquiring a special APL terminal.

Since the teleprinters are normally equipped with paper tape readers and punches, Telex access will provide a simple means of transferring APL output to punched paper tape, and for entering to APL paper tapes prepared either off-line on the teleprinter or by other computer systems. Off-line preparation and verification of paper tapes will reduce the connect time required for data entry applications. To allow paper tapes to be read, we have implemented a special modification. A user connected to APL normally types each line of input, followed by a carriage return, then waits for APL to respond with a linefeed or bell - the signal to proceed with the next line. The paper tape reader cannot be stopped at the end of line, but runs continuously once started. To overcome the problem, input from Telex is buffered in the interface minicomputer, and bells and linefeeds can be suppressed.

To allow the essential APL operations, some of the characters of the standard Telex character set are treated differently from the normal Telex keyboard characters. All APL Telex users will have keys for . , (← → + ¯ ∨ ∧ ? and (simulated) backspace, and many users will also have $ □ and +.

Access via Telex has been provided at the Amsterdam office (Intersystems B.V.) - the access number and answer-back is 18859 ITS NL.

For those who, despite the warnings given above, must try to write programs or execute other APL operators at a Telex terminal, a useful workspace is available. Workspace 5 *FONT* provides function definitions which are equivalent to the APL operators for which no symbols exist on the Telex keyboard. The workspace also provides a means of editing functions by translating the function text into a representable form (using character strings beginning with *?* for all non-printable characters) which can then be edited with an editor similar to 4 *EDIT,* before being translated back into a function definition.

Further details can be obtained from your local I.P. Sharp representative, or from Asoka Nimalasuriya in Amsterdam, or Simon Garland and David Chivers in London.