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I.P. Sharp newsletter

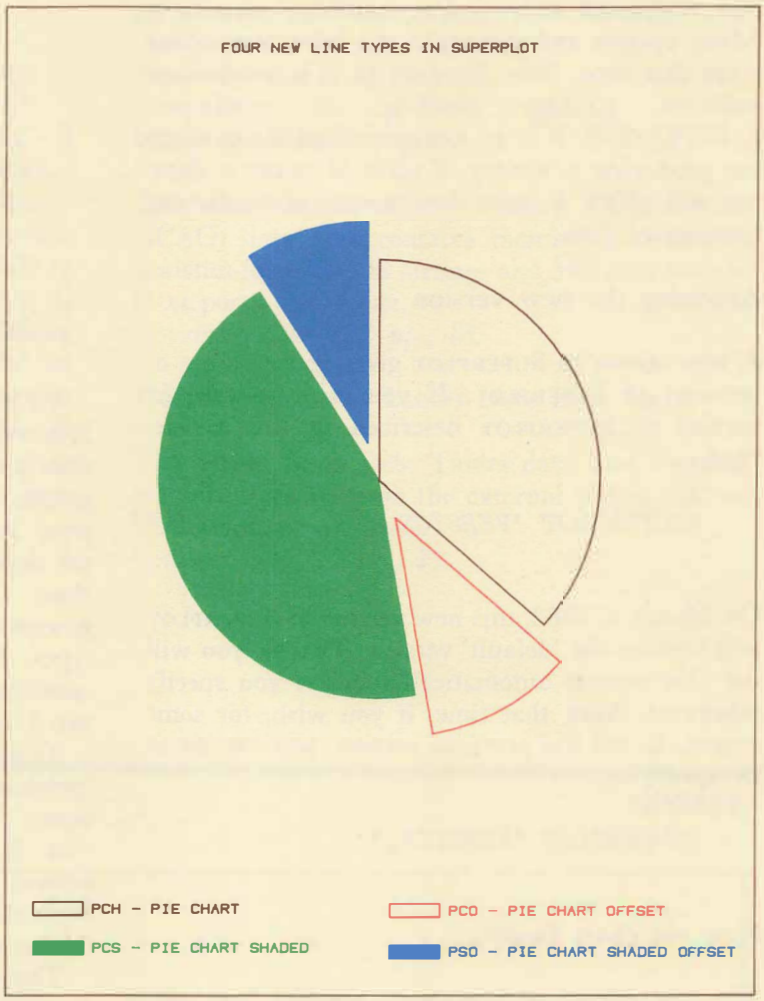
SUPERPLOT

A New Release

Phillip King, Toronto

A new version of SUPERPLOT software—*VERSION 4*—is now available. The new release contains many additional features and options. This article describes a few of these enhancements; in particular, the facility to plot pie charts.

SUPERPLOT is a general-purpose business graphics system. Anyone wanting to graph data can use it; you don't need to know anything about APL or about computers. It graphs or charts data according to your specifications on a wide variety of devices: daisy-wheel terminals, graphics video display terminals, and flatbed plotters.



CONTENTS

SUPERPLOT has changed considerably since it was first introduced, in 1975, as a new display option in MAGIC. The first version was intended only for use with data accessed through MAGIC, and supported only a few hardcopy terminals. Many options and terminal types have been added since that time. Now SUPERPLOT is a stand-alone software package residing in workspace 3 *SUPERPLOT*. It is an extremely flexible package for producing a variety of plots of numeric data, yet still offers a convenient means of displaying time series data.

Accessing the new version

A new option in SUPERPLOT gives you a choice of versions of SUPERPLOT. If you wish to use the version of SUPERPLOT described in this article, type:

```
ΔSUPERPLOT 'VERSION,4'
```

On March 1, 1982, this new version of SUPERPLOT will become the 'default' version. That is, you will use this version automatically, unless you specify otherwise. After that time, if you wish, for some reason, to use the previous version, you can do so by specifying:

```
ΔSUPERPLOT 'VERSION,3'
```

New pie chart facility

The new release of SUPERPLOT contains four new line types for specifying different kinds of pie charts. These are:

PCH	-	ordinary pie chart
PCO	-	pie chart, offset from centre
PCS	-	pie chart, shaded solidly
PSO	-	pie chart, shaded solidly, offset from centre

The pie chart on the front page illustrates these four types. This chart was plotted with the following statements.

```
ΔSUPERPLOT 'TYPE,PCH,PCO,PCS,PSO'
ΔSUPERPLOT 'LEG,OUT,BOTTOM'
ΔSUPERPLOT 'LAB,1,PCH - PIE CHART,
  2,PCO - PIE CHART OFFSET,
  3,PCS - PIE CHART SHADED,
  4,PSO - PIE CHART SHADED OFFSET'
ΔSUPERPLOT
'STYLE,SOL;COL,BLACK,RED,
  GREEN,BLUE'
ΔSUPERPLOT
'SIZE,7.5 10;OFF,BL,0 .25;
  AXES,NONE'
ΔSUPERPLOT 'TIT,2,FOUR NEW LINE
  TYPES IN SUPERPLOT'
NOTIMESERIES
'H' PLOT 1 4 ρ 100 30 120 25
```

Pie charts are different from any other line type in SUPERPLOT in that they present a *relative* rather than an *absolute* display of data. In other types of graphs drawn with SUPERPLOT, the value of a point may be obtained by reading its value from the dependent (*Y*) axis; this is not true of a pie chart. For this reason, the *Y* axis is omitted from groups which contain any of the four pie chart line types. In other respects, however, pie charts are consistent with other SUPERPLOT line types, as Figure 1 illustrates.

Traditionally, pie charts have been considered 'point-in-time' graphs. The implementation of pie charts by SUPERPLOT expands that limited definition. It is now possible to create complex plots of several pie charts, using either *TIMESERIES* or *NOTIMESERIES* data, in a framework that is consistent with the rest of SUPERPLOT.

The plot in Figure 1 consists of two groups. Each group consists of the *same three time series*, the only difference being the line type. The bottom bar of each stack in the top group is analogous to the first sector or wedge of each pie in the bottom group, the middle section of each bar to the second sector, and so on. To state this explicitly: a complete pie is defined at each *X* tik, consisting of one observation from each element of a data series in that group.

Any pie chart, no matter how complex, may be specified using the *LINE*, *TYPE*, *STYLE*, *COLOUR* and *SHADING* options. Explanatory text may be specified using the *TITLE*, *FOOTNOTE*, *LABEL*, *XLABEL*, *XTEXT* or *OBSERVATION* options in the usual manner. There is no need for you to learn new options. You can continue to use these options in exactly the same way you would for any other type of plot.

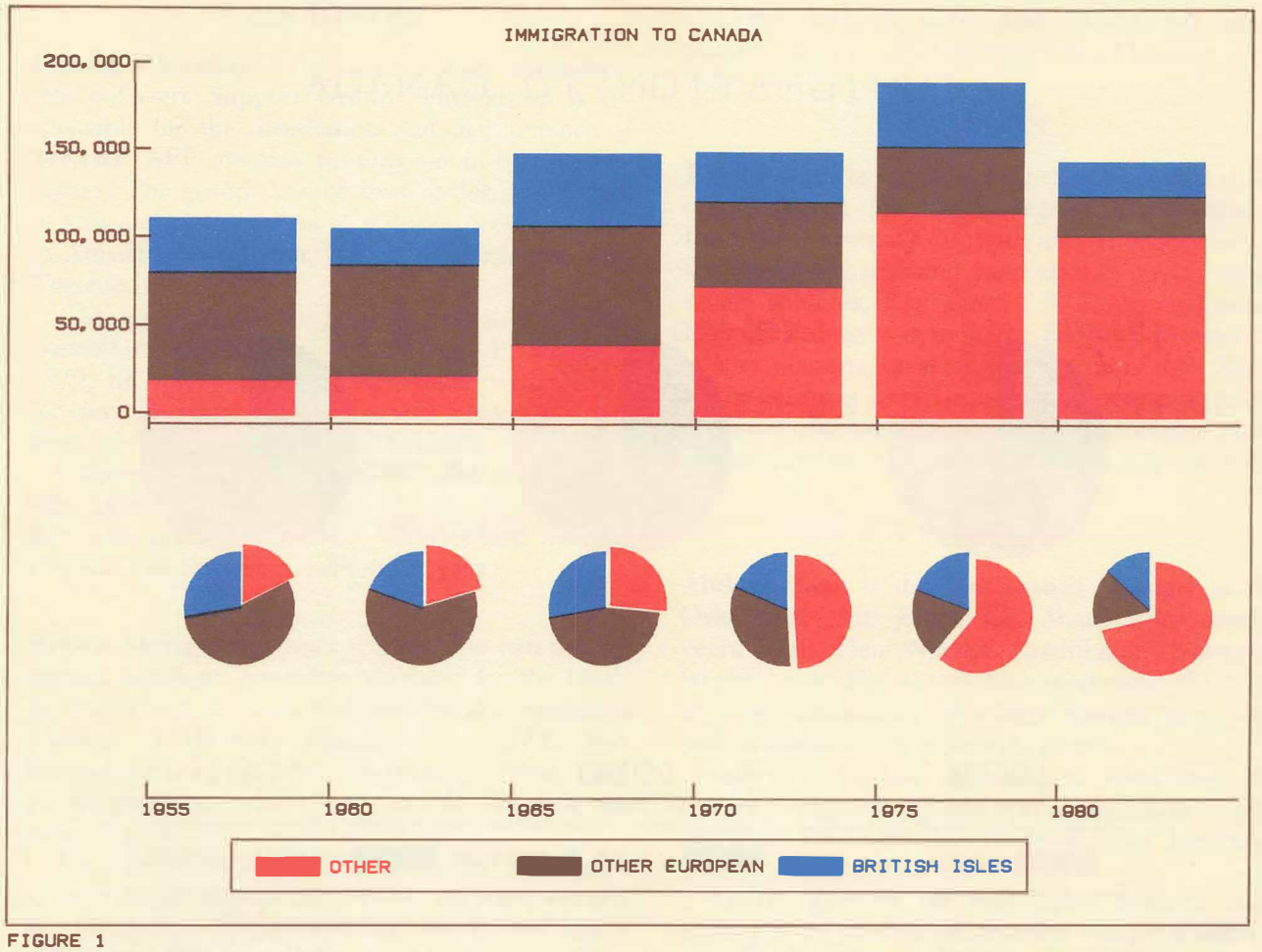


FIGURE 1

The plot in Figure 2 demonstrates two other features unique to pie charts. As has been mentioned, the *Y* axis is not printed, but the appearance of the *X* axis is changed as well. The *text* for the *X* axis, whether default or user specified, is printed, but the *X* axis itself is not. The *X* axis text is printed directly under the centre of each pie, rather than directly under each tik as in an ordinary plot. Figure 1 demonstrates that an ordinary *X* axis conveys exactly the same information. The other feature concerns observation text. In pie charts, the text is placed in an appropriate place for the pie, and user specifications such as *RIGHT*, which would result in nonsense for wedges of a pie on the left, are ignored.

Other enhancements

In addition to the pie chart facility, this new version of SUPERPLOT contains two new options: *SEPARATION* and *VELOCITY*. The *SEPARATION* option allows you to specify that each colour of the plot be produced separately. *SEPARATION* is designed for people who wish to reproduce a colour plot in a publication. It is a convenient way of preparing the artwork required by printers. It is also designed for making overhead transparencies. *SEPARATION* allows you to let each colour on a transparency dry before applying the next colour. The *VELOCITY* option controls the speed at which a flatbed plotter's pens move. *VELOCITY* is useful when preparing overhead transparencies, which require slow pen movements for even application of ink.

Further information on both options is available in the *SUPERPLOT User's Guide, Preliminary Edition*.

Significant changes to the *PLOT* function have been made. As before, *PLOT* causes an N-task to be started which does the actual processing, but which workspace is run depends on the version in use. The N-task workspace for the new version has been completely rewritten, using SAGA to perform all device-dependent calculations. By making

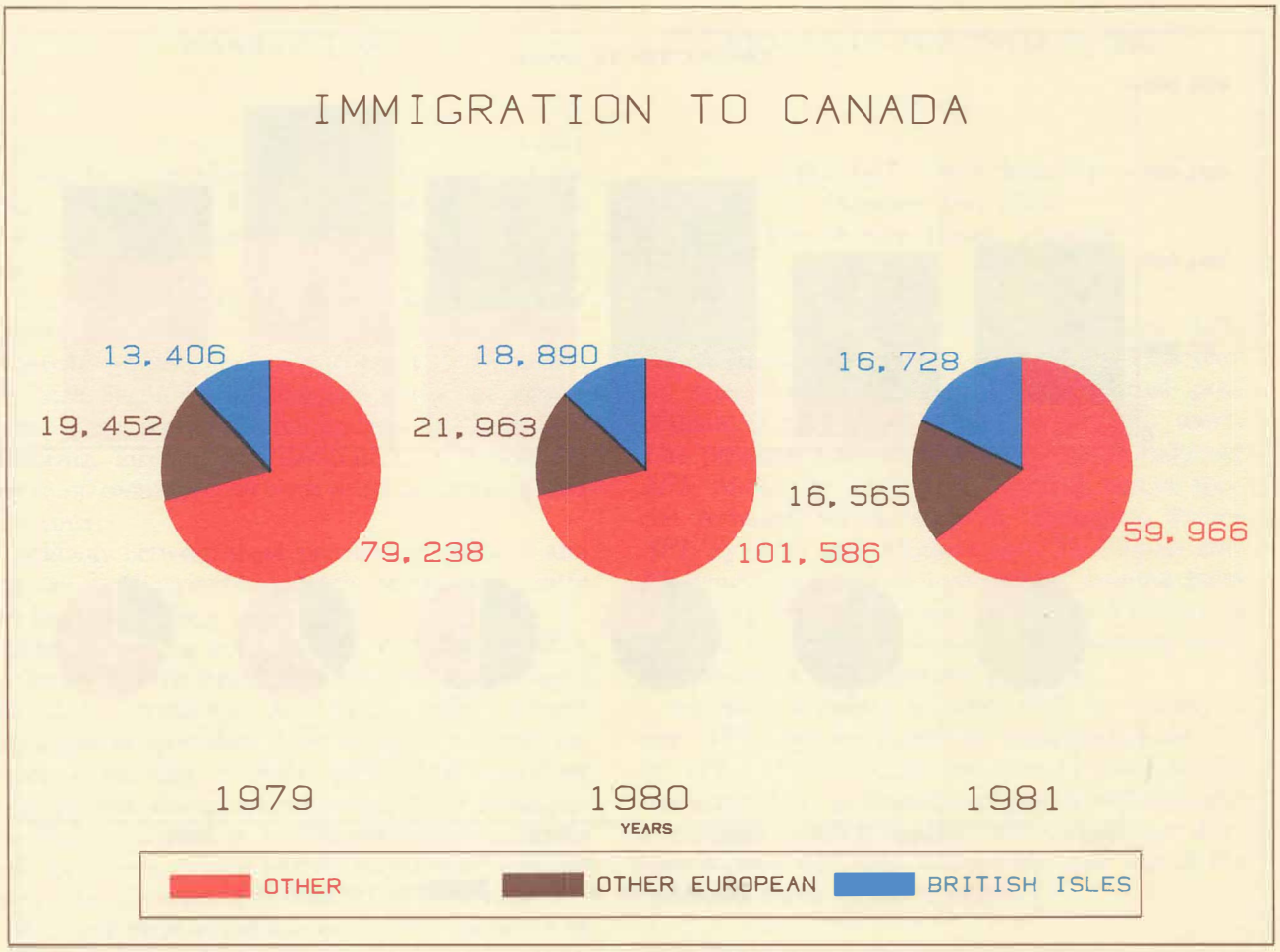


FIGURE 2

use of this common device interface, we can provide a wider range of device support. In addition to the many graphic devices currently being supported by SUPERPLOT, this new version using SAGA supports two more terminals, the HDS Concept and the HP7220 series of flatbed plotters. (SAGA was featured in the November/December issue of the *I.P. Sharp Newsletter*.)

In addition to the *SUPERPLOT User's Guide*, a *SUPERPLOT Reference Card* and *SUPERPLOT* brochure are available on request.

If you have any questions, comments, or suggestions concerning SUPERPLOT, please contact your local I.P. Sharp office, or *SUPQ* through the MAILBOX.

CORPORATE NEWS

NEW DIAL ACCESS NUMBERS IN TORONTO

The new telephone numbers to access the I.P. Sharp network in Toronto are:

30 cps (416) 365-1444

120 cps (416) 365-1466

CHANGE TO MVS

Several months ago, we changed the operating system, under which SHARP APL runs, from DOS to MVS. This will not provide any additional facilities for our users. The change was made entirely for our own operational convenience. Some of our customers are interested in the SHARP APL operating environment, so this announcement is just to keep you informed.

CITIBASE ECONOMIC DATA BASE

Andy Neilson, Toronto

The CITIBASE economic data base is now available through the SHARP APL system on a daily-update basis. This data base is offered to all users of the I.P. Sharp network with no surcharge or subscription fee.

CITIBASE is a data base of U.S. economic statistics gathered from over 100 government and private sources. CITIBASE monitors over 4,500 of the most important economic statistics in time series form. Most series go back to 1947. These series include *National Income and Product Accounts* (NIPA), which contain the gross national product and all of its components. CITIBASE also holds all the data from *The Business Conditions Digest* (BCD). The BCD is the handbook of business cycle indicators, a set of time series whose fluctuations lead, lag, or coincide with turns in the U.S. economic cycles. They can be used to evaluate the relative soundness of the economy.

Data from *The Federal Reserve Bulletin* is also incorporated into CITIBASE. These series, related to money supply, include M1A, M1B, M2, M3 ..., bank assets and reserves, credit and interest rates, as well as industrial production.

CITIBASE contains information on the producers' and consumers' price indices, on wholesale and retail sales, and on construction and housing starts. As well, CITIBASE has information on employment and unemployment, the work week, and average earnings. Other series are included to provide a comprehensive view of the U.S. economy.

The data contained in CITIBASE is of interest to all sectors of business. Possible uses for the data include:

- U.S. macro-economic analysis and forecasts
- Industry and sales forecasts
- Market research
- Strategic planning
- Growth and trend analysis
- Analysis of current business conditions
- Historical research

The data is national in scope. Combined with regional data from other sources, however, CITIBASE can be useful for comparing regional data against CITIBASE's national perspective.

The data is updated on the I.P. Sharp system by the economics department of Citibank. Its staff, trained at the National Bureau of Economic Research, are among the most experienced handlers of economic data. The data is checked extensively, both before and after it is entered into the data base.

As soon as the data is available, it is updated on a daily basis. Much of the data is obtained from press releases, which are published before the actual 'source' document is published. This means that many series are available in the data base well before the source document in which they are published.

Regular users of CITIBASE may wish to subscribe to *CITIBASE NEWS*. This monthly newsletter contains information on any changes of definitions or additions to the data base, as well as a schedule of when a series will be updated. To receive copies of this newsletter contact your local I.P. Sharp office, and ask to be placed on the CITIBASE newsletter mailing list.

Using CITIBASE

Access to CITIBASE is available through the MAGIC retrieval system. MAGIC enables you to use simple, English-like commands to perform displays of data. It can also be used in conjunction with other software packages available on the I.P. Sharp system, such as SUPERPLOT and EASY, for graphics and econometric analysis.

Before you can use CITIBASE, you will need to access a directory of the information available. To obtain an alphabetic directory of all series, by series code, type the following:

```
)LOAD 39 MAGIC
CITIBASE 'DIRECTORY'
```

In the near future, we will produce a CITIBASE manual. This manual will describe how to access a series in the data base; as well, it will contain a reproduction of the series directory produced by Citibank for CITIBASE. The series directory includes sources of data, units, and frequency. In the meantime, to obtain a brief description of the data base, type:

```
CITIBASE 'DESCRIBE'
```

To access the data, you must first specify a timeframe. You can also specify that MAGIC automatically supply labels and titles, or you can supply your own. In the following example, MAGIC is used to access retail sales data from CITIBASE, and to calculate month-over-month percentage changes in that data.

```
CLEAR ◇ RESETOPTIONS ◇ NOYEAREND ◇ LABELWIDTH 25
MONTHLY, DATED 3 81 TO 6 81
1 3 5 7 PUT CITIBASE 'RTR72,RTRR,RTDR,RTNR'
2 4 6 8 PUT 1 PCHANGE ITEM 1 3 5 7
TITLE 'RETAIL SALES'
TITLE '(MILLIONS OF DOLLARS - SEASONALLY ADJUSTED)'
1 3 LABEL 'TOTAL IN CONSTANT $,      IN CURRENT $'
5 7 LABEL 'αDURABLE-GOODS STORES,NONDURABLE-GOODS STORES'
2 4 6 8 LABEL '      ∘/∘ CHANGE'
'H' DISPLAY ABOVE,ONLY 4 81 TO 6 81
```

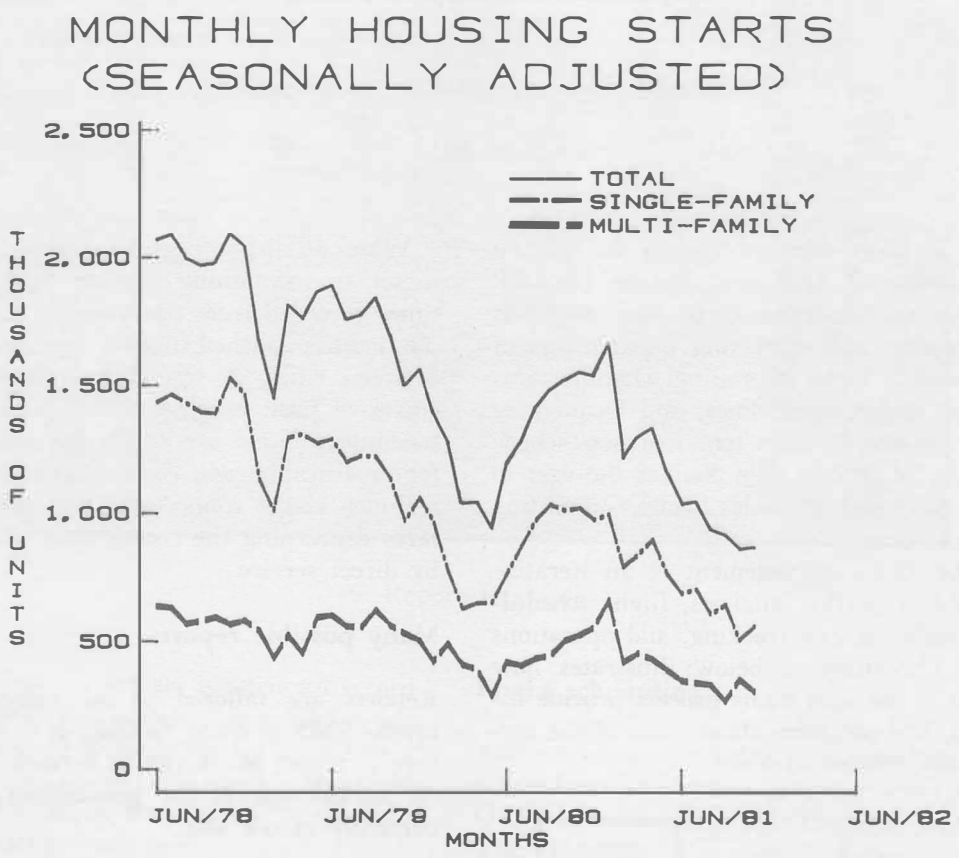
RETAIL SALES
(MILLIONS OF DOLLARS - SEASONALLY ADJUSTED)

	APR/81	MAY/81	JUN/81
TOTAL IN CONSTANT $	44,164	43,892	44,766
∘/∘ CHANGE	-2.25	-0.62	1.99
IN CURRENT $	85,855	85,501	87,384
∘/∘ CHANGE	-2.00	-0.41	2.20
DURABLE-GOODS STORES	26,356	26,536	27,532
∘/∘ CHANGE	-7.29	0.68	3.75
NONDURABLE-GOODS STORES	59,499	58,965	59,852
∘/∘ CHANGE	0.54	-0.90	1.50

For more information on CITIBASE, contact your local I.P. Sharp office or direct your queries through the MAILBOX to either *ECOQ*, the economic data base query group at I.P. Sharp, or *CITIQ*, the group at Citibank responsible for CITIBASE. Alternatively, users may telephone Citibank in New York City directly, by calling Ann Wood at (212) 559-5312.

CITIBASE is a data base similar in content to the DRICAPSULE data base, which has been available on the I.P. Sharp system for the past two years. We believe that CITIBASE will provide users with a more complete and timely source of U.S. economic information. As a result, the DRICAPSULE data base will no longer be updated after February 1982.

The following plot shows the dramatic plunge in housing starts over the past year. The plot was drawn using MAGIC, in conjunction with SUPERPLOT.



NEW HEADQUARTERS

The international headquarters of I.P. Sharp Associates has a new address. The offices have moved across the street to the new Exchange Tower. Over the past several years, I.P. Sharp has grown to occupy several different locations in downtown Toronto. These new facilities will consolidate all Toronto locations, to serve customers better and to allow for expansion of the computer centre.

Effective January 1st, the new mailing address is:

I.P. Sharp Associates
Box 418, Exchange Tower
2 First Canadian Place
Toronto, Ontario M5X 1E3

The phone number remains the same:

(416) 364-5361.

Our various Toronto offices are relocating to '2 First Canadian Place' on the following dates:

January 4	Data Centre and Pick-up and Deliveries to the 19th floor
February 15	Corporate Offices to the 19th floor
March 8	Special Systems Division to the 20th floor
March 15	Toronto Branch Office to the 20th floor

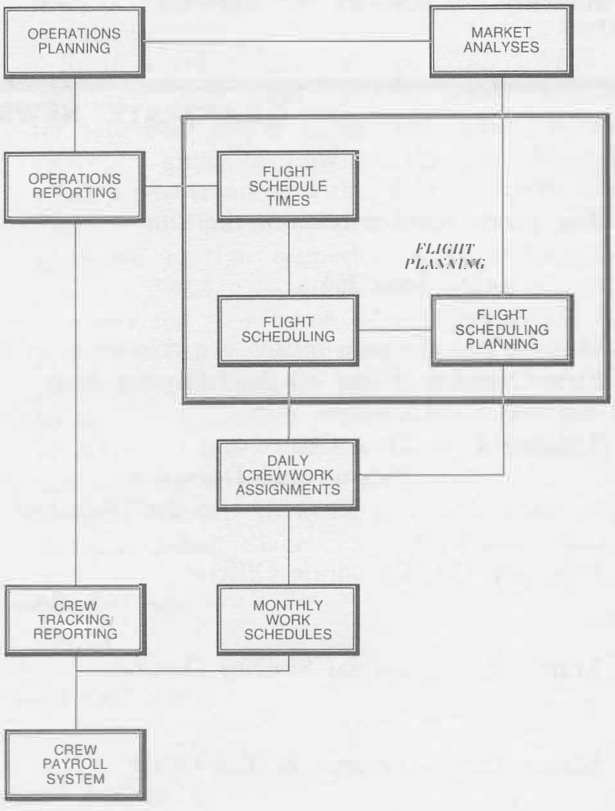
DECISION SUPPORT SYSTEM FOR AIRLINE SCHEDULE PLANNING

Caroline M. Colburn and Roberto S. Skertchly

Palo Alto

An on-line decision support system for airline schedule planning is now available on SHARP APL. A **S**chedule **M**anagement **S**ystem (SMS) is used by planning and marketing departments of airlines to assist in flight scheduling. Data pertaining to routes, connections, times, and frequencies can be manipulated to form tentative new schedules. A variety of reports then enables the user to evaluate the proposed schedules before committing to any one of them.

Airline operations management is an iterative process involving market analysis, flight scheduling, crew scheduling and tracking, and operations evaluations. The diagram below illustrates how various parts of the operations process provide input to others, and identifies those parts of the system specifically related to SMS.



When an airline begins using SMS, a data base is set up containing master block times (flight times recorded from operations), passenger schedule times (published flight times), and statute miles between cities. A second data base contains archives of past, current, and possible future flight schedules. These are easily accessible to the user for modification and recall. Additional stored data includes viable connections between cities served, fares concerning the connections, and cities linked by direct service.

Many possible reports

Reports are tailored to an individual airline's needs. SMS is quite flexible; it can generate any type of report which can be derived from this data. As an example of the possibilities, some reports currently in use are:

- Departures Reports: departures from stations by day of the week
- Operations Summary: a summary of aircraft miles and hours by routes
- Schedule Comparison: compares two or more schedules by type of aircraft, by day: departures, block hours, aircraft miles, and aircraft seat miles
- Connections: all on-line connecting flights by city pairs
- Gate Activity: arrivals, departures, and on-gate time by station

DAYS : MTWTH
STATION: ONT

FLIGHT	FROM	ARRIVES	DEPARTS	TO	FLIGHT	ON GATE	
			0700	SJC	707	-----	BBB
			0710	SMF	427	-----	BBB
			0730	OAK	755	-----	BBB
228	SJC	0816	0835	SFO	613	0:19	B
606	SFO	0915	0935	SJC	227	0:20	B
654	SMF	0950	1005	LAS	654	0:15	B
712	SJC	0951	1015	SFO	753	0:24	BB
655	LAS	1155	1210	SMF	655	0:15	B
132	SFO	1215	1235	SJC	719	0:20	B
708	OAK	1301	1335	OAK	709	0:34	B
756	RNO	1415	1430	RNO	757	0:15	B
704	SMF	1450	1505	LAS	704	0:15	B
603	LAS	1540	1555	SJC	603	0:15	B
608	SJC	1556	1615	SMF	437	0:19	B
626	SFO	1740	1800	SFO	135	0:20	B
724	SJC	1836	1855	SJC	761	0:19	B
438	SMF	1855				-----	BB
760	OAK	1931				-----	BB
758	SJC	2111				-----	BBB

Gate Report Example

In addition, some reports are constructed according to requirements set outside the airline. *Quick Reference* is designed to meet the specifications of the *Official Airline Guides* (OAG); and the *System Timetable Report* can be sent directly to press for a published passenger schedule.

DEP	ARR	FRQ	FLT NO	VIA/ STOPS	EQP
TO LAKE TAHOE					
755A	1050A	X67	702/825	LAX	DH7/DH7
800A	1115A	6	703/827	LAX	SH3/DH7
310P	555P	X6	760	1	DH7
335P	650P	1234	811	2	DH7
335P	650P	57	807	2	DH7
TO LOS ANGELES					
630A	715A	X67	700	0	SH3
755A	835A	X67	702	0	DH7
800A	845A	67	703	0	SH3
1005A	1045A	DAILY	704	0	DH7
1125A	1205P	X6	708	0	DH7
120P	200P	6	710	0	DH7
120P	205P	X6	710	0	SH3
310P	350P	DAILY	760	0	DH7
415P	455P	6	712	0	DH7
520P	600P	DAILY	716	0	DH7
625P	710P	X6	720	0	SH3
820P	900P	1234	722	0	DH7

System Timetable Example

Flight scheduling

Another feature of SMS is the Interline subsystem, which links an airline's proposed schedule with the OAG data base available through SHARP APL. The *Interline Connection Report* shows how flights from the proposed schedule connect with the flights of other carriers. Flights which narrowly miss an important connection may then be rescheduled. Interline's parameters may be set by the user. The parameters include carriers, timeframes, and minimum connect time.

With SMS, the design and evaluation of new flight schedules become a smooth and easy process. Because proposals take much less time to formulate, planners can create schedules further in advance than before. In addition, SMS gives marketing analysts the capacity to explore alternatives thoroughly before deciding on a schedule. Reports generated by SMS facilitate the process of implementing a new schedule, by enabling the planning department to transfer information easily to both operations and outside organizations.

SMS is part of a larger system for airline planning and operations management which will integrate the procedures illustrated in the diagram above. The system is being developed by Roberto S. Skertchly and staff in the I.P. Sharp Palo Alto office. Three airlines are currently using SMS, and several others will begin to soon.

Workspace of the Month

I KNOW I HAD THAT PHONE NUMBER SOMEWHERE...

Clement Kent, Toronto

I.P. Sharp offers users of its time-sharing service local dial up from hundreds of locations worldwide...*if* you know the phone number. Let's say you are planning a trip (with your portable terminal), and you want to sign on to SHARP APL in the city you are visiting. How do you find the local dial-up number in that city?

Workspace 1 *NETWORK* has a complete description of dial-up numbers and sign-on procedures for the I.P. Sharp, Datapac, Telenet, Tymnet, PSS, and Telex communications networks.

The program *PHONES* prompts you for the name of a country, state/province, or city. It then prints a complete list of all local access numbers at the given locations. For sign-on procedures, the functions *IPSANETHOW*, *DATAPACHOW*, and so forth, for the respective networks, give a point-by-point summary of how to get your terminal and our computer talking.

So if you're planning a trip,)*LOAD* 1 *NETWORK* and get the local access phone numbers for wherever you're going; and print a handy reference guide of how to sign on. If you're using a new terminal with a different speed, check *PHONES* to find out which local access number gives you the right connection speed, or baud rate.

Check *PHONES*, a quick reference of all phone numbers for your home city, if you should have problems with the communications network. Many cities in North America and in Europe are served by two, three or four separate networks, any one of which can get you on to the SHARP APL time-sharing service.

Remember...1 *NETWORK* gives you access to I.P. Sharp's 'global village'. Don't leave home without it.

IT'S A SNAP!

Enroll now and find out how

Attention project planners, coordinators, controllers, managers, and anyone who works with project management applications. Attend a half-day seminar and find out how you can use the project management package, SNAP (**S**HARP **N**etwork **A**nalysis for **P**rojects). Whatever the environment—operations research, software development or industrial engineering—SNAP can significantly improve your ability to control projects. Although a basic knowledge of project network analysis techniques is assumed, plan to attend if you are thinking of computerizing your project management application for the first time. For those who already have experience in computerized tools, you will find this modern approach refreshing.

Calendar

Vancouver Hyatt Regency Hotel	March 22	1:30—5:30 p.m.
Calgary Calgary Convention Centre	March 25	1:30—5:30 p.m.
Toronto The Westin Hotel	April 5	1:30—5:30 p.m.
Ottawa The Skyline Hotel	April 8	1:30—5:30 p.m.

There is no charge for this seminar; however, all attendees must pre-register. Please call your local I.P. Sharp office if you would like to register or require more information.

For more details on SNAP, see the article *Project Management* on page 3 of the September/October issue of the *I.P. Sharp Newsletter*.

THE TECHNICAL MANAGER

Michael Berry, Boston

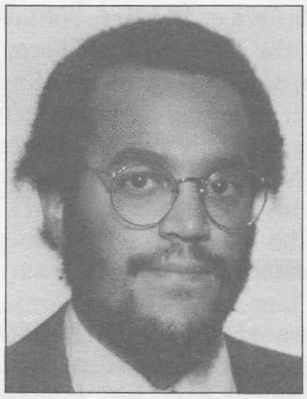
Traditionally, the branch manager has had to wear several hats with responsibility for overall operation of the branch. These responsibilities could be grouped together as sales and administration on the one hand, and, on the more technical side, writing proposals and evaluating hardware and software.

But as the company has grown, both in size and in the number of products and services offered, it has become increasingly difficult for one person to handle the entire branch operation. In some offices, such as Boston, New York, and Rochester, technical managers are responsible for the functions outside of administration and marketing. This position involves producing proposals, looking after education (internal and customer), setting benchmarks, staffing projects, setting and enforcing standards for quality control, and keeping up with new developments in software.

A major responsibility of the technical manager is project evaluation and proposal writing. This enables a branch manager to determine the price quotation and delivery date of a customer application. By working out the staffing of a project, approximate length to complete it, and the resources required, the technical manager provides the necessary technical support.

The technical manager keeps abreast of developments in software and hardware which might be useful to customers or might prove to be productivity aids to the branch. These days with SHARP APL itself growing at such a rate, it's the technical manager's responsibility to study and report on the usefulness of these new features, both to the local technical staff and to customers.

In addition to changes in SHARP APL itself, there is a steady stream of new software packages, data bases, terminals, plotters, printers, technical documentation, and courses to keep track of. Consequently, the technical manager must be both teacher and student. She or he is responsible for developing and teaching classes and seminars locally. As well, a fair amount of the technical manager's time is spent attending classes, seminars, and conferences; keeping up with the literature; experimenting with new software; and sharing ideas with other technical people.



Michael Berry

Barbara Siebert

Grace Hucko is the technical manager in the New York office; and there are two recent appointments, **Michael Berry** in Boston and **Barbara Siebert** in Rochester.

Boston

Michael Berry is the new technical manager in Boston. When he was in elementary school, his father brought home the first portable terminal, and ever since then, Michael has been involved with APL. At Oberlin College, he received an A.B. in mathematics and taught APL to students as part of an experimental program, and later, taught it to faculty.

After working several summers for I.P. Sharp while a student, he joined the Boston office in 1978 as a full-time employee. He has worked on a number of different applications including a cost and budget system for an insurance company, various private data bases, a billing system, and numerous small systems utilizing public data bases. He has also been involved in teaching APL and some software packages such as MAGIC.

Michael has a strong theoretical interest in the APL language and a strong concern in APL education.

Rochester

The Rochester office's new technical manager is **Barbara Siebert**. In three short years with I.P. Sharp, Barbara has been an aviation programmer in New York City, and she has worked on a financial system for Xerox in Rochester. Before her new appointment, she was manager of Time-sharing Support with responsibility for all time-sharing customers.

Barbara earned her Masters of Business Administration in marketing at the University of Toronto. Following graduation, she worked in retailing.

In addition to her experience with aviation data bases and Sybron, Barbara has a special interest in MAGIC, MABRA and MAILBOX.

HELSINKI

I.P. Sharp is now represented throughout Finland by **TMT-Team**. TMT-Team is the leading APL consultant in Finland. The company was founded in November 1980, by **Tapio Saarinen**, **Mikko Kyostila** and **Timo Seppala**, all of whom have had long careers with IBM. Tapio is managing director; Mikko is responsible for audiovisual production; and Timo is in charge of APL operations. In their first year of operation, **Seppo Kaltio**, responsible for APL production, joined the management of Team. At the start of 1982, the company consists of seven people plus one part-time employee.

APL services offered by TMT-Team include consulting on in-house systems, customized application programming, APL program product development, and APL education. In addition to the APL services, TMT-Team is involved in education and promotional activities.

I.P. Sharp will complement APL usage in Finland by providing network services for multinational firms and the international data bases for on-line business information.

Early in the new year, TMT-Team will be installing an alpha concentrator in their new office in the heart of Helsinki.

Finland has a high concentration of APL users, and there is an active APL Users' Association, FINNAPL. FINNAPL will be organizing the APL 84 Conference to be held in Helsinki.

DUBLIN

A new office of I.P. Sharp Associates opened its doors on January 1, 1982. **Deirdre McAlpin** is the new branch manager of the office in Dublin.

Deirdre joined the company in 1976. Since December 1978, she has been based in London, responsible for the accounting in various European offices. Now she is glad to be back in her native land promoting SHARP APL.

(Right to left) Standing: Seppo Kaltio, Tapio Saarinen, Timo Seppala, Mikko Kyostila Seated: Ritva Halme, Arto Juvonen

ROCHESTER

Charles Chandler is the new manager of the System Software Support Group. This group is responsible for the installation and maintenance of SHARP APL systems running on in-house computers. The group, headed by Charles, has grown in size and now consists of a dozen people located in Amsterdam, London, Palo Alto, Rochester, and Toronto.

Charles brings to the position probably the best possible experience. Prior to joining I.P. Sharp in 1979, he was a system programmer with Xerox for several years. There he was responsible for their in-house installation of SHARP APL.

Currently there are over 20 in-house installations of SHARP APL. With significant growth in this area planned for 1982, Charles and his colleagues should have a very busy year.

Robert Metzger has been appointed to two newly-created positions, education manager for the United States and product manager for the education package, *A Working Introduction to APL*. Bob learned APL at the State University of New York at Binghamton, where he received his B.A. in mathematics.

He started with I.P. Sharp as an APL programmmer in Rochester in 1974. He then worked on accounting applications in the Boston office and, at the same time, earned a M.Div. from Gordon Canwell Theological Seminary. In 1979, he returned to Rochester as technical manager. Bob may be familiar to many readers of the *I.P. Sharp Newsletter* as author of several articles on APL programming tools and techniques.

Bob is looking forward to introducing the new education package and to developing other educational services. If you wish to learn more about SHARP APL or have other educational needs, please contact Bob through the MAILBOX code *RCM*.

LONDON

Ray Hussey is the new branch manager in London, Ontario. He has a degree in mathematics from the University of Waterloo. After a career in the classroom teaching mathematics to secondary school students, Ray joined I.P. Sharp in London and worked on a system for Labatt's Breweries.

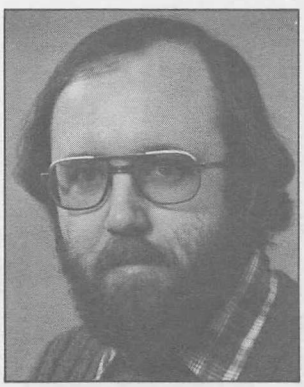
Ray plans to increase the profile of I.P. Sharp in the business community of southwestern Ontario. He is also keen to use the new education package to increase our customers' knowledge of APL.

OSLO

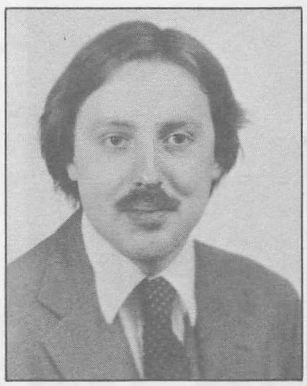
Anders Haan is the new branch manager of the Oslo office. He joined I.P. Sharp after several years with Den Norske Creditbank, Norway's largest bank. He started his career with the bank as a systems analyst, and later worked as a business consultant to corporate clients.

Anders, a native Norwegian, completed his studies in engineering and operations research, primarily at the Massachusetts Institute of Technology.

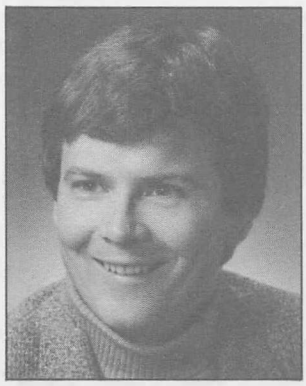
Anders' goal for the Norwegian business community is to provide an efficient computer service for decision makers. He has a strong interest in giving all users, large and small, the capability of accessing information from the public data bases available through SHARP APL. As well, he plans to make available the I.P. Sharp network to companies in Norway that are operating internationally. In this way, these companies can consolidate their business and utilize a common set of decision-making tools.



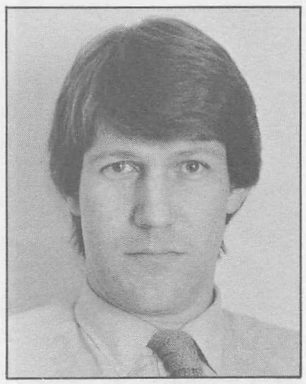
Charles Chandler



Robert Metzger



Ray Hussey



Anders Haan

WARRINGTON

Warrington, in northwest England, is roughly halfway between Manchester and Liverpool. Since it can provide local dial access from both cities, it was chosen as the site for the I.P. Sharp office for this region.

The port of Liverpool, the original home of the Beatles, is also home to a fair amount of industry. Whereas Manchester, in the heart of industrial northern England, is home to a variety of manufacturing enterprises including light and heavy engineering, aircraft, and computers. It is also the centre of commerce, in such areas as banking and insurance.

Midway between these two sites of industry and business is Warrington, rapidly becoming a centre for high technology industry.

The marketing team in the Warrington office is Richard FitzGerald, branch manager, David Meredith, consultant, and Nick Telfer, project management specialist. They divide their time between promoting SHARP APL, and providing support and advice where needed. For example, the Warrington office provides a communications link for Leeds, which has dial-up access, and for Hull, which serves a customer's private node.

Richard FitzGerald has extensive experience in cost, financial and management accounting. During his 11 years with Massey Ferguson, where he started to use APL, he developed his computer skills working with a variety of management information systems. Since coming to I.P. Sharp, he has been introducing SHARP APL to the business community in the northwest.

JOIN US IN TORONTO IN 1982

at the

1982 APL Users Meeting
October 4-6, 1982
The Westin Hotel, Toronto

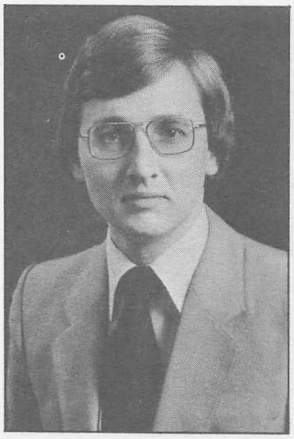
I.P. Sharp Associates will host the third APL Users Meeting, once again, in Toronto. This year an even more comprehensive and varied programme is planned to appeal to all APL users. The program features workshops on *Introducing APL*, *Managing APL*, *APL Training*, and on special technical topics, such as, *Designing Secure APL Systems*, and *Measurement Techniques and Efficiency*. Sessions on applications ranging from *Budgeting Systems*, *Decision Support Systems*, to *APL in International Banking* will increase your knowledge of your system's potential.

Set aside **Sunday, October 3rd**, if you are a new APL user, or if you are anticipating the use of APL. There will be four parallel sessions introducing APL to financial planners, statisticians/economists, managers, and actuaries. These day-long courses will help you get the most out of the following three days.

POSTER: If you would like to receive a copy of the 1982 APL Users Meeting poster, write to:

Marketing Services Department
I.P. Sharp Associates
Box 418, Exchange Tower
2 First Canadian Place
Toronto, Ontario M5X 1E3

Richard FitzGerald



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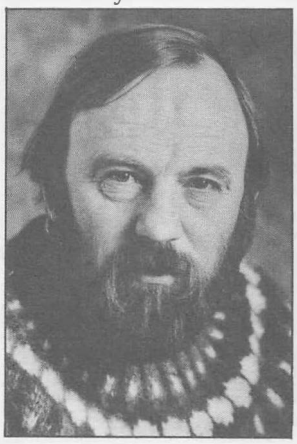
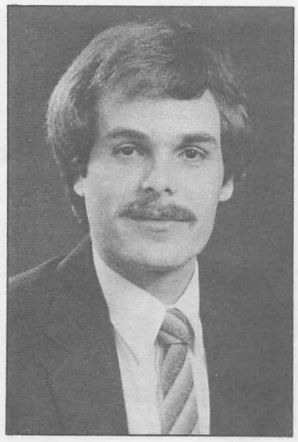


David Meredith



BOOK ENDS

Jane Minett, Toronto

Public Data Bases Catalogue (*new*)

I.P. Sharp is a major worldwide supplier of numeric data, and now offers over 60 public data bases. This catalogue contains a one-page description of each data base, and includes such information as: source, updates, documentation, history/frequency, and a sample access. I.P. Sharp is becoming more and more unique in not requiring our customers to pay a surcharge or royalty for the use of these public data bases. An on-line version of this catalogue is available in 1 *DATABASES*. (If you would like just an overview of our public data base offerings, ask for the *Public Data Bases* brochure.)
November 1981, 71 pp., n/c.

Changes to MABRA (*new*)

This pamphlet is a supplement to the MABRA manual, published in March 1980, and documents all changes and enhancements to MABRA since then. A *must* for MABRA users.
November 1981, 37 pp., n/c.

ICAO Data Base (*new*)

The International Civil Aviation Organization (ICAO) data base contains monthly and annual statistics for over 400 airlines and 300 international airports worldwide.
November 1981, 32 pp., $4.

World Bank Debt Tables Data Base (*new*)

The World Bank Debt Tables data base contains annual information on the external public debt of 99 developing countries.
October 1981, 15 pp., $3.

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SHARP APL Communications Network

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• Alliance • Ann Arbor • Austin • Baltimore • Birmingham • Buffalo • Clewiston (Fl) • Dayton • Des Moines • Des Plaines • Detroit • Ft. Lauderdale • Geneva • Greenwich (Ct) • Hartford • Hull • Knoxville • Laurel • Leeds • Liverpool • Lyndhurst • Minneapolis • Oxford • Quebec City • Raleigh • Red Deer • Regina • Santa Ana • Stuttgart • Sunnyvale • Syracuse • Towanda • Ukiah

Our private, packet-switched network connects with the Value Added Networks in:

• Alaska • Argentina • Bahrain • Bermuda • Chile • Dominican Republic • Hawaii • Israel • Japan • Luxembourg • New Zealand • The Philippines • Portugal • Puerto Rico • Taiwan

In the continental United States, the SHARP APL Network is interconnected with the Value Added Networks to provide access in 170 more cities, and 40 more in Canada. In all, with the 92 cities served by the I.P. Sharp Network listed above, SHARP APL is accessible from close to 400 places via a local phone call. Please ask at your nearest I.P. Sharp office for a complete list of access points and access procedures. Our private network also connects with the worldwide Telex network via the Rochester, New York and Amsterdam codes.