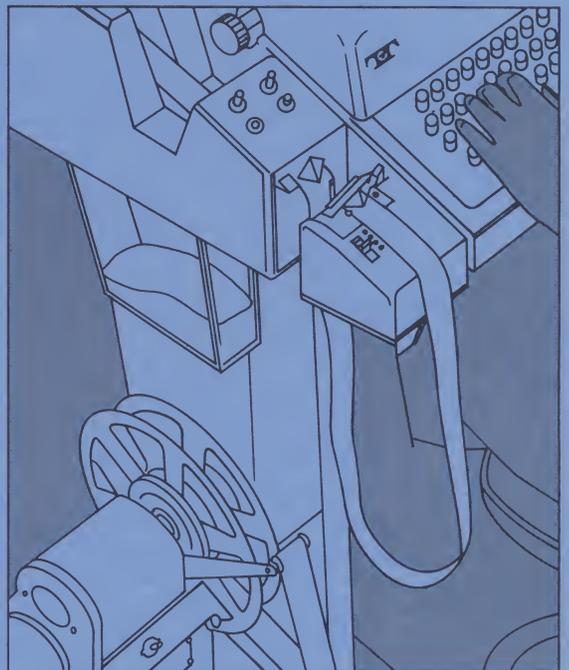




**CARS, INC. EMPLOYS
TELETYPEWRITER LINK**

to process auto dealers'
daily business overnight





case history:

The retail automobile business has changed fast. About half as many dealers today as two decades ago now sell twice as many automobiles. And retail sales are predicted to total about 10.5 million cars by 1970.

No longer is a dealership a one-man operation. Today's dealer manages a staff of specialists. To assist him for a more profitable operation is a new service, CARS, Inc., that provides a modern automated accounting and inventory system.

By using a Teletype Model 33 ASR (automatic send-receive) set and a high speed paper tape reader, a dealer can have on his desk each morning a detailed operating report for the day before and for the month to date. With the same Teletype equipment, he reports his entire daily business activity for computer input and processing on an overnight basis.

Several leading magazines are featuring the story of this important service developed by CARS, Inc.

For information about leased services featuring Teletype equipment, consult your local telephone or telegraph company. Or, to purchase, contact our Sales Organization at the general offices address listed on the back cover.

When ordering input-output terminals for your data processing systems, be sure to specify Teletype equipment—your vital communications link.

**COMPUTERIZED AUTOMOTIVE
REPORTING SERVICE, INC.
BIRMINGHAM, ALABAMA**

AUTO DEALERS RECEIVE LOW-COST CONTROL REPORTS DAILY FROM COMPUTER VIA TELETYPEWRITER LINK

EXCLUSIVE DATA HANDLING SERVICE PROVIDED BY CARS, INC.

"People are more effective and management can make decisions based on facts."

This sweeping assertion is welcome news to all automobile dealers faced with piles of paper work when they hear about a new electronic data communications service for processing accurate profit and loss statements every day.

The comment comes from John Williamson, President of Computerized Automotive Reporting Service (CARS), Inc., and a franchised new car dealer.

Backing him up is Beverly P. Head, Jr., investment counselor and once general superintendent of a grocery chain where he learned about inventory and management control. Head is board chairman and one of the founders of CARS, Inc., along with James R. Forman, Jr., a Birmingham attorney, and Thomas W. Perry, general dealership operating manager for dealership enterprises associated with Williamson, Head, and Forman.

"Using a computer to do instantaneously what takes hours and hours of labor is the only way to go," is Head's comment.

What he and Williamson referred to at the Birmingham, Alabama, headquarters of CARS is how to handle the accelerating business of the automobile dealer so that the dealer knows what to do to remain competitive, increase the effective-

ness of his people, and to increase profits.

Nationwide, CARS, Inc. offers the automobile dealer—large or small—a fast, accurate daily operating and inventory control, and a management report service. It is keyed to Teletype equipment and regular business telephone service that transmit data between individual dealerships and a central on-line, semi-real time computer. The system was developed with assistance from Southern Bell Telephone and Telegraph Company data communications specialists.

The reports give the dealer facts with which to manage his business on a day-to-day and month-to-month basis—or when he needs them. And this service, in most instances, costs him less than the salaries of two experienced secretaries or office girls.

FEWER DEALERS, MORE BUSINESS

When Williamson began searching for a better way to manage his dealerships in Alabama, Florida, Louisiana, and New Jersey about five years ago, he became aware of some revealing facts.

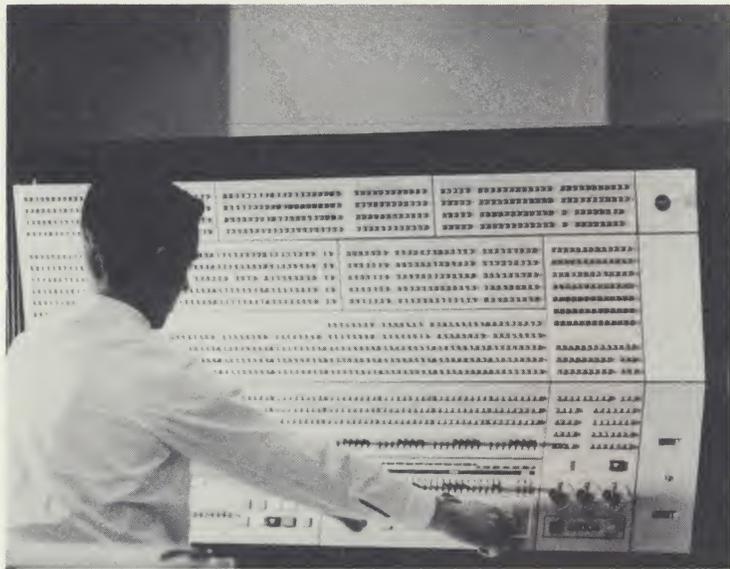
Less than 20 years ago about 49,000 auto dealers sold about four million cars annually. Today, about 28,000 dealers sell eight to nine million cars a year, and this number is expected to reach about 10.5 million in 1970. But only about the same number of dealers, or even fewer, will be doing this increased business—and paper work.

Concentration of more volume with fewer dealers has forced today's dealer from a near one-man operation into the role of a busi-

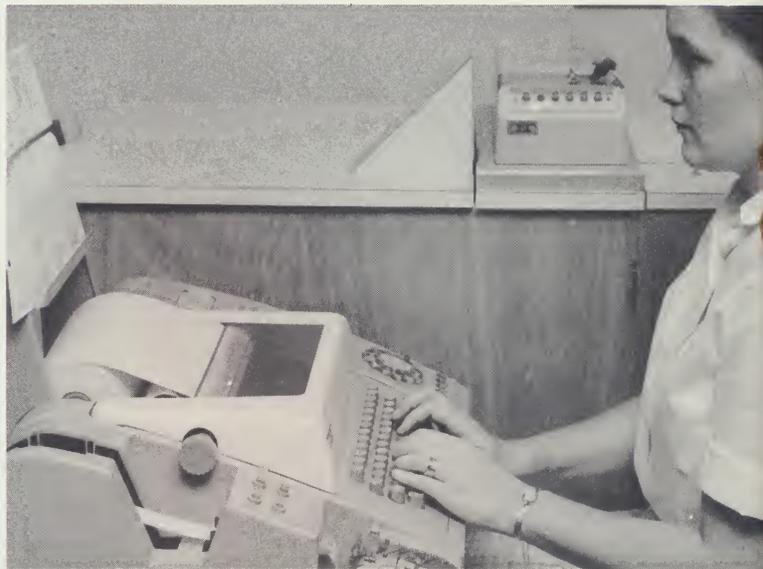


Beverly P. Head, Jr., chairman, and John Williamson, president (left), head CARS, Inc., which they developed to make business better through computerized record keeping for the nation's automobile dealers. CARS provides the only fully alphanumeric communications system for electronic data processing that is available to auto dealers.

At the computer center, the daily tape-coded transactions of six dealerships are received simultaneously over private business telephone lines. The computer contacts (polls) each dealership via Wide Area Telephone Service (WATS). There is no additional toll charge to the dealer. Bell System Data-Phone Service is employed for the high-speed, tape-to-tape transmission. It now takes about 25 minutes from initial transmission of the first dealer's data to the computer to the return of the last dealer's daily profit and loss statement to his office each morning.



Each daily transaction—from a parts ticket to a new car sale or bank deposit—is entered into the individual dealer's records from his office by a part-time operator using the compact Teletype Model 33 ASR (automatic send-receive) set. The typewriter-like keyboard allows the operator to punch a tape in proper form as data information is requested by a control tape. She sees on the teletypewriter page immediately what is punched in tape, and can correct any errors.



ness manager administering the services of a sales manager and salesmen, shop manager and mechanics, clerks and accountants.

Keeping costs down and profits up is a major responsibility and a challenge in this fiercely competitive business. Add to this the record keeping, including detailed monthly financial reports to the dealer's automobile manufacturer, and the problem becomes acute.

It became so serious a problem that the manufacturers in recent years have recommended automatic accounting and inventory control systems to their dealers to ease the work load, and have standardized reporting procedures.

In 1964, Head, Williamson, Forman and Perry, long-time personal friends and business associates, combined their experience and started work on an answer to the problem. Eventually they worked out a program and discussed it with automobile manufacturers and about 55 key dealers, their business managers, parts managers and auditors. From these discussions developed the final problem definition that resulted in the CARS, Inc., services.

One of the key needs that emerged was for an operating control report on a daily basis in time to be of real value to the dealer. This obviously meant utilization of fast, accurate two-way communications between an individual dealer and the CARS, Inc., computer center.

The solution was found through the use of Teletype communications equipment. This then made it possible last year for CARS, Inc., to put into operation a new electronic data processing service for individual dealers on an overnight basis. And it gave the dealer for the first time in this or any other industry, a daily operating control or a daily profit and loss statement.

THREE SERVICES TO FIT NEEDS

Three basic dealer services are offered. Two of these are accounting and the third is parts inventory control.

One accounting service especially helps small dealerships. It provides all normal accounting data for monthly reports to the automobile manufacturer, and a limited daily operating control.

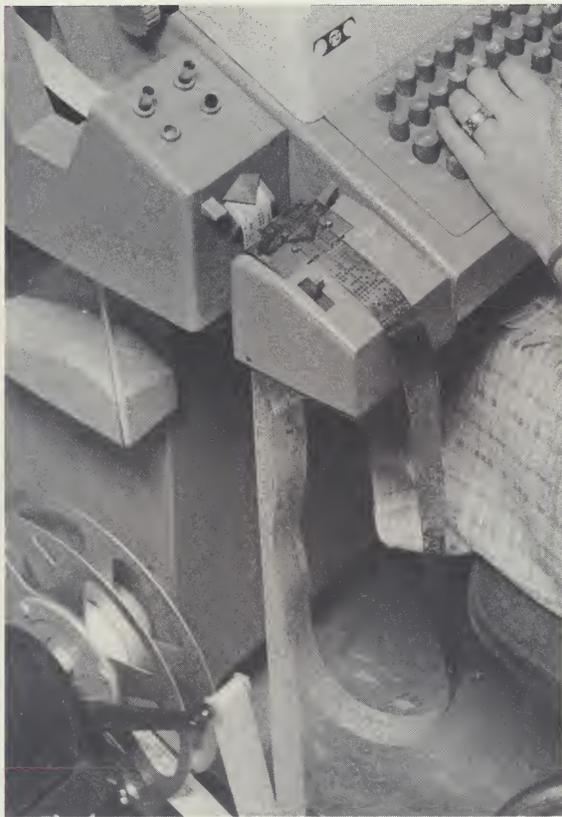
The second accounting service is more comprehensive for large dealerships. A daily operating control statement shows the dealer his cash flow inventory movement, department performance, and other operational data, along with normal accounting records and monthly analytical management reports. A dealership, with this service may receive up to 70 separate items that can be fed back to him daily and include anything he wants that is in his system.

Parts inventory control and parts ordering services can be adapted to requirements of any size dealership.

All three services have optional features to fit needs of any dealer.

With this kind of information, many profit improvement opportunities are at hand for the progressive and profit-minded dealer. But unlike other reporting services, the CARS system has three significant advantages.

CARS offers the exclusive advantage of daily reports on an overnight basis without requiring a costly investment in computer equipment or in additional clerical and bookkeeping help.



One Buick dealership, for instance, needs only one girl part-time to prepare input information so that the computer can produce accounting information that it would take two and one-half additional full-time girls with some bookkeeping experience to produce without the CARS, Inc., system.

Another major dealership doing about \$8 million in annual sales, obtains its parts inventory control, all accounting and management records, and customer billings with input time taking only about four hours daily.

Prior to input, all documents are costed for entering into the system as each sale or service is completed. This is not nearly as time consuming, however, nor does it require the skill that bookkeeping and accounting records require.

Secondly, CARS offers the only alphanumeric system available in today's automobile market. This alphanumeric capability is of great importance to future data communication possibilities.

ERROR-FREE OPERATION

The third CARS advantage is the error-free operation of its system.

The continuous looped control tape repeats its questions automatically if more than one entry must be recorded for the same kind of transaction when data is prepared for computer processing. Each entry is treated as a separate and complete document. In a single operation, from the same typewriter-like keyboard, the Teletype equipment punches a separate tape that contains both questions and answers for transmission to the computer. The combination tape is wound on a reel (lower left) automatically as it is punched.

Although data is transmitted automatically at high speed to the computer and teletypewriter reports are returned at 100 words a minute, any business activity document out of balance is rejected by the computer and never gets into the system.

Not only is the erroneous document rejected, but the computer lets the dealer know the next morning which document is out of balance, and whether it is wrongly coded or has a bookkeeping error. Only when the correct information is supplied will the computer accept the data and incorporate it into the dealer's reports.

The efficiency of the operation lies in the use of Teletype equipment that CARS employs, and its automatic and unattended transmission capability.

Equipment for CARS service is installed and maintained by the dealer's local telephone company. The equipment package includes a Teletype Model 33 ASR (automatic send-receive) set and the Teletype high speed tape reader that transmits at 750 words a minute (75 characters a second). All transmission is via Bell System Data-Phone Service. The only charge which the dealer pays directly to the local telephone company is the regular monthly service charge for a private business phone line.

The ASR set's four-row keyboard is similar to that of a regular office typewriter and is easy for a good typist to use. The set incorporates a send-receive page printer, a paper tape punch and a paper tape reader. Operating at a speed of 100 words a minute, the unit uses the U.S.A. Standard Code for Information Interchange (ASCII).

PRIVATE, AUTOMATIC TRANSMISSION

In operation, the CARS computer at St. Louis, Missouri, and the individual dealerships communicate over each dealer's private business telephone line.

There are no telephone toll charges to the dealer. CARS utilizes Bell System Wide Area Telephone Service (WATS) lines. This permits the computer to call—or poll—six or more dealerships at a time for incoming data and to return completed individual reports, three or more at a time.

For feeding data to the computer, auto dealers punch all required daily accounting and inventory facts into a paper tape, using the Model 33 ASR keyboard. At the end of the business day, the tape is placed in the Teletype high-speed tape sender. Later that evening, the computer dials the dealer's number, causing automatic transmission of the tape. Incoming data is stored on a memory disc at the computer center until time for processing.

Once information is processed, it is sent back to the dealer via the same telephone circuit and printed out on his teletypewriter.

Information not required for the daily operating control report is stored on magnetic tape until the appropriate 10-day or monthly management reports are needed. These are printed out and mailed to the dealer as required.

It takes about 25 minutes of elapsed time for the computer to collect information from dealers, prepare reports and send them back.

CARS, Inc., teletypewriter control tapes are standardized for electronic accounting systems recommended by General Motors, Ford, and Chrysler. The tapes are kept handy in the storage cabinet that CARS provides to dealers. A single, combined control and information tape is transmitted by a compact Teletype high-speed, tape reader at 750 words a minute (75 characters a second).



BUILT-IN ACCURACY CONTROL

The CARS system uses a number of individual teletypewriter control tapes to ensure reporting accuracy when data is being prepared for transmission. The operator at the dealership uses a specific tape for each business activity and transaction. When operated in the ASR set's tape reader, it causes the page printer to type out questions (indicative information) one at a time for the data information the operator is to provide. The data is digitally coded for the computer's benefit.

Each control tape represents a complete single document, indicating the start and end of one transaction, i.e., a repair order, a parts counter ticket, a car invoice or any other business recorded during the day by the dealer's employees.

The operator types in the proper information requested, and can see immediately on page copy both the question and her answer. This is a visual check for errors, and she can correct any before they go into the system. Simultaneously, as the Teletype set prints out the control questions and the operator types

The dealer's daily transactions, punched into paper tape, are rewound on a storage reel, and the tape inserted in the Teletype high-speed tape sending unit. During the night, the tape transmitter is activated automatically by the central computer at St. Louis, Mo., where the data is received and processed. The transmitted tape feeds through a chute to a protective bin from which it is retrieved for temporary filing by the dealer. The cabinet provides file space for the page-print reports showing each day's data preparation.



out the answers, a single paper tape of the combined information is punched for actual transmission to the computer.

"With the Teletype equipment communications system," summarizes Head, "we can link the individual dealer's daily operations to a computer that can do more, do it faster, and with greater accuracy than by manual means. This frees people to handle other work and more business without the need to add personnel."

EVALUATES INDIVIDUAL PERFORMANCE

Even personnel performance can be measured. Management reports can show the dealer the business volume of individual salesmen, service advisors, and mechanics, and the amount of their profit contribution by the day, the month, and by type of transaction.

One of the management reports is a complete customer follow-up report which lists service, new car or used car, customers who have not been to the dealership in 90 to 120 days or in 120 to 150 days.

This report would also indicate to the service manager when to suggest car maintenance, or to the sales manager and his salesmen when to suggest a new car. Inventory reports on parts not only show the manager the turnover, but what and how much he should order to maintain a complete, but minimum inventory.

A special advantage for the accountant is detailed horizontal ledger posting with customers identified by name as well as by account number. And a special service provides for the preparation monthly of individual customer statements in quadruplicate or duplicate.

CARS has further dealer services under development for even greater efficiency. It is working and plans to install soon a direct ordering system so that through CARS the dealer may order his parts directly from the manufacturer. This will save a number of days in parts order transmission time. Another possibility is to transmit auto sales and warranty claims to a central computer which will relay the data to another computer for action and provide even more efficient operation.

Meanwhile, CARS offers the only service to automobile manufacturers and dealers that uses a high-speed, two-way Teletype equipment communications system with a full alphanumeric capability for electronic data processing. This two-way data communication is a basic requirement for future efficiency between the automobile dealer, his service computer center, and the manufacturer.

TELETYPE



machines that make data move

TELETYPE CORPORATION • Skokie, Illinois • Little Rock, Arkansas • Washington, D.C.
General Offices: 5555 Touhy Avenue, Skokie, Illinois 60076 • Telephone: 312 676-1000 • TWX:
910-223-3611 and TELEX: 25-4051 (both have 24-hour automatic answering service). Government
Liaison Office: 425 Thirteenth Street, N.W., Washington, D.C. 20004 • Telephone: 202 ME 8-1016.

CARS10M868
Printed in U.S.A.