## **Reservations Communication System** Installed On the Pennsylvania

AN installation of a new combination of electronic devices, which will almost completely mechanize the handling of reservations for Pullman and coach space, and in busy hours will cut to less than a third the time now consumed in these transactions, has been announced by the Pennsylvania. Known as the "Intelex system," the new automatic reservation devices, pioneered and developed after associate of the International Tele-

munications, are being installed in ervations jointly with the Pennsyl-Pennsylvania Station, New York vania. City, and are already partly in operation for reservations from New York on all seven Pennsylvania daily trains to Chicago. The system was and insuring accuracy of reservations developed by the International Standard Trading Corporation, an

months of research and utilization of phone and Telegraph Corporation, the latest postwar techniques in com- and has been applied to railroad res-

## The Basic Problem

The basic problem in speeding up and ticket selling has been to get right to the ticket seller's window a record of all the space available. The new system accomplishes this, and at the same time, largely mechanizes the work of making reservations and completing ticket transactions. The Intelex system utilizes some of the principles of the dial telephone, magnetic recording, printing telegraph equipment, and automatic bookkeeping in achieving a completely new concept of reservation procedure. It works like this:

A traveler at the ticket window asks the clerk for a roomette on the Broadway Limited to Chicago for the next day. Instead of telephoning the reservation bureau, as now, to determine if a roomette is available, the clerk uses a special instrument, dialing in code to select the destination city and day of departure, and immediately hears through the instrument a voice recording of accommodations available at that moment on trains to Chicago for the requested date of departure. A roomette is available on the Broadway, so he sends the reservation bureau a short coded message, by telegraph printer, requesting the roomette and giving a ticket number for it. The message is received instantly by the operator of a new "space control unit," the heart of the new system.

## Substantial Time Saving

This unit, a console cabinet about five feet high, holds diagrams (reservation cards for each car) for all trains to Chicago for 60 days ahead. All the diagrams for one day are in a newly-designed file on a tray, there being 60 trays. The teleprinter message from the ticket clerk actuates the unit so that the proper tray containing the diagrams for the day wanted is selected by the machine and automatically slides out on a



The operator has received, on the teleprinter machine to the left, a coded message from a ticket seller requesting a reservation to Chicago for the next day. While the message is coming over the teleprinter from the ticket seller, the space control unit (shown at the right) automatically selects, from among the 60 trays in its cabinet, the proper tray containing the car diagrams for the New York-Chicago trains on the day requested. The unit ejects the tray onto the desk before the operator, who quickly selects the proper diagram from the simplified file in the tray, and assigns the reser-vation. She then types a confirmation on the teleprinter, giving in code, details of space assigned. Closing the tray file with her right hand, she sets the keys on the switch box above the teleprinter to send the message to the proper station or city ticket office to make a paper tape reference.

counter before the operator.

Quickly selecting the proper diagram from the tray file, the operator assigns a roomette and transmits a confirmation back to the ticket seller as the tray automatically returns into the unit, which is then ready for the next transaction. At peak periods, messages are automatically "stacked," and go to the machine in order, as each preceding reservation is made. The elapsed time from arrival of the message to dispatch of the confirmation averages less than 30 seconds. The ticket clerk, his order confirmed, completes the sale with the traveler at a big saving in time.

## If Space Desired is Unavailable

If, to continue the example, a roomette is not available for the next day on the Broadway, the ticket clerk is informed by the recording as to what accommodations are available on the Broadway, or on what other trains roomettes can be had for that day, and determines what the traveler would prefer. The time saving at the ticket window, where information as to available space is immediately at hand no matter how busy the reservation bureau, is one of the major contributions of the Intelex sytsem. New recordings are made in the reservation bureau whenever the last unit of a particular type of space on any train for any day is sold, or when cancellations



This is the alphabetical file used in ticket offices. The clerk is removing from the file a paper tape, received earlier by teleprinter from the reservation bureau. In code on the tape are the traveler's name, date of reservation, type of accommodation, train, and the time limit for picking up tickets.

again available.

Reservations made by travelers on the telephone are likewise quickened. When calling, the patron speaks to a sales clerk in the reservation bureau, who uses the recording feature to determine quickly whether requested space is available. The

make previously sold-out space clerk messages the space control unit operator, the reservation is assigned, and the traveler is asked where he would like to pick up his tickets, whether at the station or at one of the city ticket offices. Word of the reservation, the traveler's name, and the time limit for picking it up, are immediately transmitted to the station or city ticket office the traveler has selected.

Heretofore the traveler, having reserved space by phone went to any ticket office and asked a clerk for his reservation, whereupon the clerk telephoned the reservation bureau for confirmation. Now, the printed message, on tape, becomes a file record at the ticket office designated and when the traveler arrives for his ticket, it is only necessary to make the purchase and no time is lost. A new type of file retains the tapes, and indicates whenever a reservation has not been picked up within the time limit. Should that happen, word is sent back to the reservation bureau, and the space is replaced for sale. If the traveler telephones to cancel the reservation, the cancellation is passed to the ticket office and the space replaced for sale. The Intelex system also embodies a new form of car diagram card which provides a permanent record of every resevation transaction. The card is microfilmed before being placed on the train at the start of the run.

(For an earlier explanation of the Intelex system see page 419 of the July, 1948 issue).



This is one-sixth of the behind-the-scenes "brain" of the new Intelex system, which retains human contact between public and railroad by ticket sellers and This system utilizes some of the principles of the dial reservation clerks. telephone, magnetic recording, printing telegraph, and automatic bookkeeping.