

INDUSTRY Banking Service Bureau COMPANY Fellesdata A/S Marstrandgate 6 Oslo 5 Norway APPLICATIONS Data Collection Data Conversion HASP Multileaving Work Station

## PROBLEM

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Fellesdata is a service bureau established and owned by Norwegian savings banks. Its major operation is the daily collection of accounts data from over 200 member banks with a total of over 2.8 million accounts and the return of up-dated accounts reports to those member banks before the beginning of business the following morning.

Fellesdata's first data collection system was based on paper tape transmission from the member banks. The paper tapes were converted to magnetic tape by an RC 3000, and the tapes produced were run on a GE 400. Listings were returned to the banks by mail or messenger.

Even at that time (1965) data communication was necessary for the reception of the paper tapes because the size of the country and tight time constraints made two-way mail or messenger operation impossible.

With the volume of data growing by over 10% per year, this system was soon felt to be inadequate.

#### REQUIREMENTS

By 1970 the volume of transactions was so large that an IBM 370/155 mainframe was ordered. At the same time growing personnel costs at the member banks made a fully-automated system desirable.

It was decided to install teller terminals at the member banks, with each bank having one or more central terminals to collect teller data onto cassette tape. Installation began in 1972. The long-range plans were for these central terminals to be on-line to the mainframe at Fellesdata. In the meantime, however, an interim system was needed.

An interim system would have to be able to collect data via data communications from those banks that were far from Oslo, while being able to input paper tape and cassettes from nearby banks directly. This data collection system had to be able to collect and process this data fast enough to allow data collection to begin at the close of business each day and the listings to be prepared in time for the last mailing of the same day, while the limit of 2400 bps for dial-up lines in Norway provided an additional constraint.

It was also desired to have data conversion facilities in order to relieve the load on the new mainframe, which would very soon become overloaded. Finally, requirements for data security made it necessary to operate the computer room as a closed shop. This made a remote entry terminal necessary for the programmers.

### SOLUTION

The first RC 3600 was purchased in 1973 to handle data collection. The purchase of a second RC 3600 in 1975 gave Fellesdata a data collection system that was able to handle the rapidly-increasing volume of data. Each machine has four 2400 bps communications lines and a special program allows all four lines to operate simultaneously with maximum throughput.

A third RC 3600 is dedicated to data conversion, to relieve the load on the mainframe. The data collection system can also be used for data conversion when it is not collecting data.

A fourth RC 3600 operates as a HASP Multileaving Work Station at 7200 bps, providing remote facilities for program development for the mainframe.

#### RESULTS

The dual RC 3600 data collection systems satisfy the interim system requirements within the time constraints present. It is also used for data conversion when not engaged in data collection. Equipment reliability assures that the systems can be operated around the clock, providing back-up to mainframe functions when data collection is not running.

The availability of cartridge discs on the system allows a sorted magnetic tape to be produced, reducing mainframe processor time.

Finally, the range of peripheral equipment on the data collection system allows input to be in the form of paper tape, cassette tape, or communications. This allows member banks to select their input medium.

The data conversion system relieves the load on the mainframe, which is becoming overloaded and will itself be enhanced by a second central unit when the full on-line system becomes operational. The HASP Multileaving Work Station allows programmers to access the mainframe for program development from their own location, which is necessary because data security requires that the computer room be operated as a closed shop. This RJE system gives the programmer easy access to the computer.

# SPECIAL SITUATIONS

Regnecentralen provides a wide range of computer hardware and software, and its development people can design and implement systems for a variety of special situations.

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