Finland, an overview

Finland is geographically situated between Sweden and the Soviet Union with the Arctic Circle running through it. The Republic of Finland covers 337 thousand square kilometers including 32 thousand square kilometers of lakes and 187 square kilometers of forest. 27 thousand square kilometers of soil are under cultivation.

The President of the Republic is elected for a 6-year term. Mr Urho Kekkonen is currently in his fifth term of office. Parliament has 200 members elected by universal suffrage for 4 years.

Finland has a population of 4 800 000, 60% of whom live in towns and urban districts.

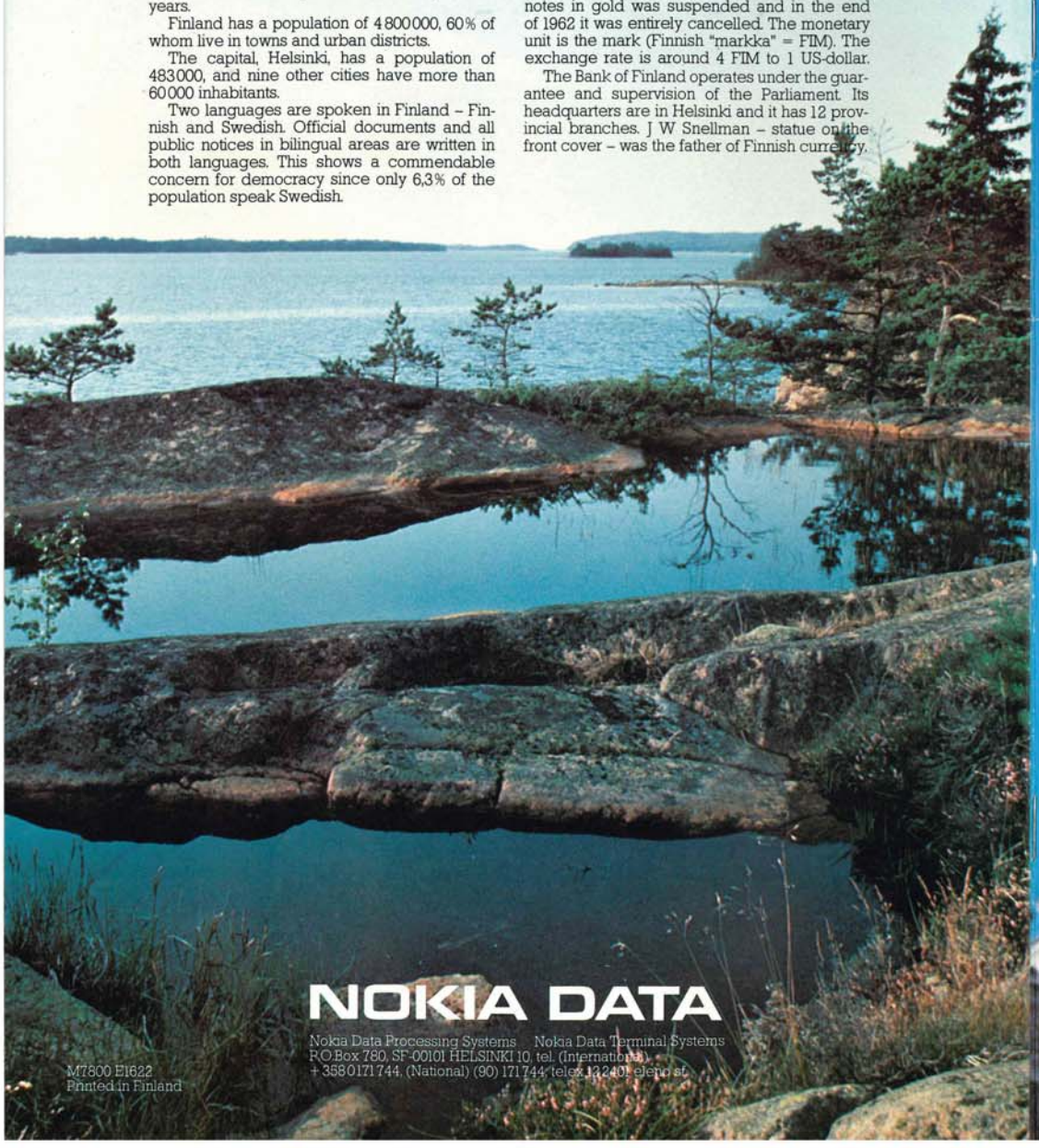
The capital, Helsinki, has a population of 483 000, and nine other cities have more than 60 000 inhabitants.

Two languages are spoken in Finland – Finnish and Swedish. Official documents and all public notices in bilingual areas are written in both languages. This shows a commendable concern for democracy since only 6,3% of the population speak Swedish.

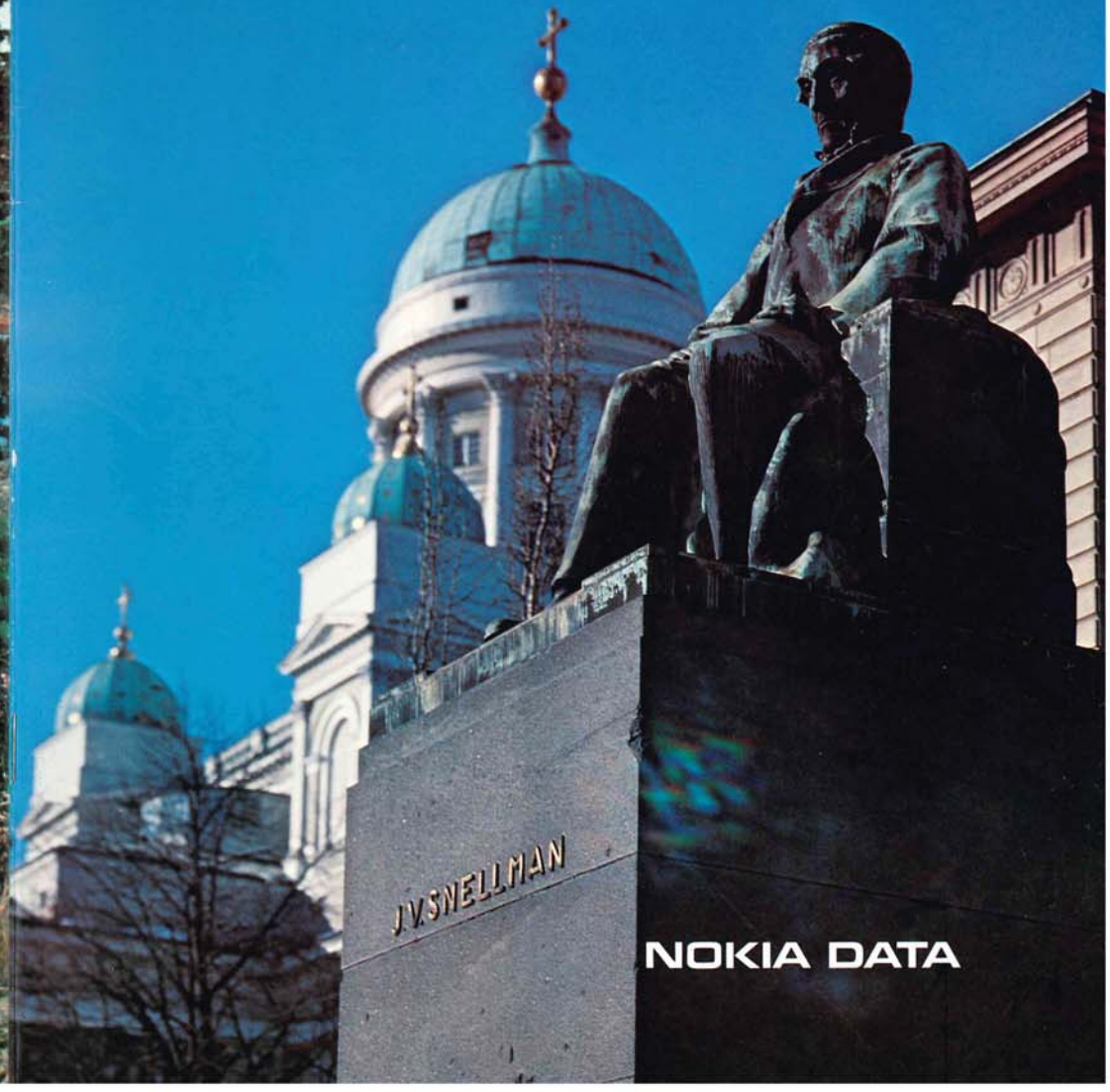
Gross domestic product percentage by industrial origin in Finland is: agriculture 4%, forestry and fishing 5%, manufacturing 32%, construction 7%, trade, restaurants and hotels 11%, transport and communication 9%, banking and insurance 4%, ownership of dwellings 7%, other services 21%.

Since 1860 Finland has had its own monetary system. From 1877 until 1914 the country was on the gold standard and returned to it in 1926. In 1931 the Central Bank's duty to redeem bank notes in gold was suspended and in the end of 1962 it was entirely cancelled. The monetary unit is the mark (Finnish "markka" = FIM). The exchange rate is around 4 FIM to 1 US-dollar.

The Bank of Finland operates under the guarantee and supervision of the Parliament. Its headquarters are in Helsinki and it has 12 provincial branches. J W Snellman – statue on the front cover – was the father of Finnish currency.



Nokia computer systems for Finnish banks.



NOKIA

Cii Honeywell Bull

Nokia and Honeywell synergy for long range development.

As the supplier of several real time banking systems covering the whole of Finland Nokia's solutions are based on the synergy of own production and Cii-Honeywell Bull equipment. In Finnish Banking, Nokia's own minicomputer and terminal systems work together with the main frame and data communications hardware of the world wide computer company Cii-Honeywell Bull.

The development work of the second generation of banking systems (Banking systems for the 80's) has started. The new generation of banking terminal systems, the new systems architecture, and distributed transaction handling create the foundation for the realisation of the new systems. The development work of distributed systems is a long and challenging task because the new banking services should first be linked to the present systems.

Helsinki City area boasts of the Headquarters of almost every Commercial Bank in Finland. It is also the domicile of Nokia Banking Systems Development and Sales Organisations.

Nokia is continuously working to integrate the new DSA-systems architecture and Mikko products to present banking systems. In the picture Kari Kyttälä, Heli Lehtinen and Marja Heinonen (Nokia) are planning Nordic Public Data Network and DSA-connections.

Bank of Helsinki

Mini 6 and Mikko – important tools for the development of services in the Bank of Helsinki.

The inter-bank network for ATM transactions of commercial banks was developed on Mini 6 hardware and DSA systems architecture. Three commercial banks have each a dual Mini 6 which is connected both to the respective bank's real-time system and to the inter-bank network.

The dual Mini 6 of the Bank of Helsinki is connected directly to the IBM mainframe with the Mini 6 Channel Interface Unit. All the Mikko terminal controllers in every branch of the Bank of Helsinki are connected to the bank's SNA network by special line protocols developed by Nokia Electronics.
Mats Haglund (Bank of Helsinki) and Helena Tuominen (Nokia) have performed testruns of the inter-bank system.

Bank of Helsinki with its 116 branch offices was the first commercial bank in Finland to install an on-line system throughout its whole network. The 380 Nokia made Mikko teller terminals at its branch offices are now in direct contact with the central computers in Helsinki. Like the other commercial banks, Bank of Helsinki is developing automation in the area of Automatic Teller Machines, inter-bank payment transfers, and corporate customer services.

Bank of Helsinki has a bank staff of 1485 employees. The total balances were 4.43 billion FIM in 1980. Total deposits were 2 billion FIM in 548.000 accounts. The bank has over 31.000 shareholders, 54% of whom are households. International operation is a main point of interest also in the Bank of Helsinki; abroad there are affiliates already in many countries.

Nokia delivered to the bank a total of 110 Mikko minicomputers and 380 teller terminals, starting the installations in 1976. At that time this was the first non-IBM system in the world which was connected to a bank's IBM-mainframe using SNA-network concept.

Salli Aho (Bank of Helsinki) and one of the Mikko computers.

KANSALLIS-OSAKE-PANKKI

The real time system of Kansallis-Osake-Pankki is one of the most advanced in the world.

KOP is well known for its advanced EDP computer facilities – like the real-time control centre based on the Mini 6. To control the large banking network KOP and Nokia have jointly developed a system which utilises colour graphics, special terminals and wall maps to display the current status of network elements. The system specialists in this picture are Juhani Peltola (KOP), Heikki Koskinen and Klaus Oesch (Nokia). The KOP central system can be seen in the background.

Kansallis–Osake–Pankki is one of the two leading Finnish commercial banks. Founded in 1889 its current assets amount to 24.15 billion Finnish marks. KOP has over 2.5 million customer accounts and 185000 shareholders. In its 433 branches KOP has a total of 6200 employees.

In 1970 KOP made a decision to build a real time on-line transaction processing system covering all of its branches. Nokia was selected to provide the whole system consisting of mainframes, front end processors, communication concentrators and branch level equipment, all with related software.

This decision was a real starting signal for the Finnish minicomputer production. Nokia developed and manufactured a new minicomputer Mikko 2, and later a new generation of it to work as the terminal controller in branches, and teller terminals in all 433 branches. Installations in the branches began in 1975, and the whole network of 475 minicomputers and 2232 teller terminals was completed in March 1981. The development work for the minicomputers and terminals enabled Nokia to succesfully market its banking systems to other Finnish banks. It also enabled Nokia to widen its operations internationally with a complete range of minicomputers including point-of-sale systems, data entry and intelligent terminals.

KOP is operating in full real time a triple Honeywell 6080 system, four Datanets and six System 700S installed in Helsinki. A dual DPS 8/70 has been installed for back-up, customer service and development work. The branch network is on-line, with the facility to handle up to 40 transactions per second. The end-user response time is 3–4 seconds in 90% of the cases.

Throughout the day the account files are updated in real time. The current balance of all accounts is available to every branch. The main customer services consist of deposit accounts, cheque accounts, standing orders and loans. In addition there are special applications for foreign services and securities.

Advanced special system for foreign banking applications (foreign exchange, foreign payments, external accounts) have been developed for two Mini 6 computers. Hannele Seppänen (KOP) and Seppo Vuorinen (Nokia) are studying system utilization reports.

OKOBANK

Okobank's system for the cooperative banks shows the best of the Nokia and Honeywell synergy.

Okobank is the central bank for Finland's cooperative banks. It was founded in 1902 which was in fact the year when the first co-operative banks opened their doors to the public. There are now 372 cooperative banks with 821 branches; in all 1193 banking outlets. Including Okobank itself, they employ some 10 000 persons. The Cooperative banking organization currently has more than one fifth of the deposit market in Finland.

The cooperative banks now offer a full range of commercial banking services although at the outset they were basically aimed at agriculture and its related industries.

In 1974 the decision was taken to build a real time network for the Cooperative Banks. Nokia delivered the whole system including Cii-HB mainframes and concentrators plus branch level equipment of own production. The functions of the system were first available off-line but in 1978 Okobank began to offer on-line services. During 1981 the system will cover all Finnish Cooperative Banks. The system consists of about 430 terminal controllers and 1800 teller terminals, of which more than 80 % are working on-line, and of 300 offline data entry terminals equipped with integrated modem and automatic dial up features.

Okobank's computer centre has today a triple H66/80P, four Datanets and seven Mini 6 as line concentrators. The central system is growing by a separate DPS 8/70 system that will be used as backup, and for applications development purposes.

The development work of data processing for the Cooperative Banks has been a spectacular one and it will continue as an on-going programme in the future as well.

A typical branch of a Finnish cooperative bank. Mr. Tapani Pyötsiä from Nokia is acting as a client.

The corporate research department of Okobank utilizes the services of the world wide MARK III network marketed by Nokia in Finland.
Okobank has also developed a database to interactively calculate and analyse financial models of corporate customers.
In the picture Riitta Hakuli (Okobank) and Liisa Nakari (Nokia) are using a MARK III terminal.

POSTIPANKKI

An advanced data communications network will form the basis for the funds transfer of Postipankki (and of the post offices).

Postipankki's Kaivokatu branch in Helsinki city is the most lively bank branch in Finland. Branch manager Timo Yrjölä (Postipankki) and Martti Näveri (Nokia) here checking the monthly availability report of the system.
In the foreground Mikko minicomputers between the bank terminals and dual Honeywell 66/60P.

The Finnish postal bank – Postipankki – is a full bank service financial institution which is run under the supervision of the Ministry of Finance. It accepts deposits from the public and is involved in other activities both in the banking field and post-giro. PSP has 29 branches and also the advantage of 3200 post offices which handle most payment transactions under the control of the Post Administration. In 1980 PSP had deposits of 10.1 billion FIM and assets of 15.1 billion FIM. It runs 3.2 million deposit accounts and 122000 post-giro accounts.

It handles annually approximately 50 million deposit account transactions and 150 million post-giro account transactions.

PSP has a payroll fo 5300, 3200 of whom work at the head office.

Most of PSP's computer applications are decentralised. In addition to the central installation in Helsinki there are six regional centres which will be connected together with a Mini 6 network. Applications to be run in the network include file transfer and transaction processing using the Nordic Public Data Network.

The main applications in PSP are savings and deposit accounts, post-giro, payment of wages and pensions for client organizations and payment of certain union contributions.

In 1978 a dual Honeywell 66/10 was installed in Helsinki to take over all interactive transactions from the various application areas. The system is based on the DM IV database and transaction processing software. In 1980 the real time equipment was upgraded to H66/60P.

The on-line teller terminal controllers and teller terminals for postal bank system were also delivered by Nokia. The installation of Mikko 3 minicomputers and terminals began in 1978. In 1981 the system will include over 50 minicomputers and over 300 teller terminals and video display terminals for back office functions. Similar systems are also in pilot use in post offices performing payment transactions.

Kari Myyrinmaa is responsible of the EDP operations department at Postipankki. In the picture he is studying the real-time system functions together with Kari Leino (Nokia).

skopbank

Skopbank's development steps into the 80's – the new generation of banking terminals, and dual DPS 8.

Skopbank is a commercial bank owned by Finland's savings banks. As a banking group they have about one third of the Finnish deposit market. Skopbank performs normal commercial banking business but as the central bank of 278 independent savings banks – with complete banking facilities in 1286 service points – it takes care of many kinds of central bank functions. Since 1964 EDP has been one of the most important Skopbank's services to the savings banks, and the role of EDP in running the daily banking business is nowadays nearly indispensable. In 1980 Skopbank handled about 110 million transactions on 4.2 million accounts, and the real time network connected over 1300 terminals to the central system. By the end of the year 1983 the network will have to 2800 terminals.

The growth of Skopbank's EDP functions has been very rapid. The first GE 400 was delivered in 1966, followed afterwards by two more. Real time processing started in 1975 on a dual H6080 using TDS, IDS and Fastnet software.

In October 1980 Skopbank signed a Master Agreement with Nokia Electronics on the Terms for Large Scale Computer Contracts for the 80's. Dual DPS 8/70 will be delivered in middle 1981 for the new generation of savings bank's real time system. Yet another DPS 8/70 system will be installed during 1981.

With branch level equipment Skopbank opened a new era in 1980. It made a delivery contract for Nokias new generation banking terminal system which also allows a very cost-efficient solution for the smaller branches.

The new Nokia system concept distributes the different branch level functions to separate dedicated processors connected to each other via a fast local bus. Using this architecture the system is easily expanded for additional work stations and function types according to the growing data processing needs in the branch.

Skopbank opened a new era with their branch level banking system. In the picture Helena Koskinen (Skopbank) with Juha-Pekka Vihavainen and Osmo Mäenpää (Nokia) looking at the newest bank terminal products in Nokia's factory.

Skopbank is also the first Page Printing System user. Skopbank's EDP centre produces every night several thousand pages of printed output to their customer Savings Banks with the fast Honeywell PPS. Kari Siitonen (Skopbank) is operating the system with Seppo Soininen (Nokia).

Union Bank of Finland has Honeywell large-scale mainframes and data communication equipment.

Founded in 1862. Union Bank of Finland is the oldest commercial bank in Finland. The bank has 312 branch offices and a staff of 6.491. Consolidated assets are 28.5 billion FIM, and total domestic deposits 12 billion FIM in 2.5 million accounts. The bank's equity is divided among 200.000 shareholders, 97% of whom are private individuals. Union Bank of Finland, like the other commercial banks, is rapidly developing its international banking operations.

Union Bank of Finland continues to automate its retail banking operations. The bank has installed over 2000 teller terminals and about 80 ATM's, generating peak loads of more than 30 transactions per second. The TELESYP corporate banking system – the first of its kind in Europe – provides banking services to corporate customers through terminals on their own premises.

The basic services are: deposit accounts maintained in real time, loans and guarantees, payments in transit, general ledger, foreign business, trust operations, and corporate finance services. The cash dispenser card – introduced in 1978 broadened the range of public banking services offered.

Terminals in the 312 branches of UBF are hooked to the mainframe and its large data base via the Datanets. Esko Heiskanen (UBF) is responsible for the communications network.

UBF utilizes Mini 6 computers to dedicated systems. Jouko Ylä-Sulkava (UBF) is one of the developers of Mini 6 networking software.

Union Bank of Finland is processing 1 million transactions per peak day with a dual H 6080 and this dual DPS 8/70 mainframe – the first one in Europe – which represents newest Honeywell technology. Pekka Järvinen from UBF and Olli Heimo and Pekka Kivi from Nokia are discussing DPS 8 hardware and software maintenance.