

# NEWS

Telub

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## Telub 25 years!

No piece of pastry p. 3



To prevent disaster p. 8



New technology  
at Telub Inforum p. 8



The quiet guys p. 10-11



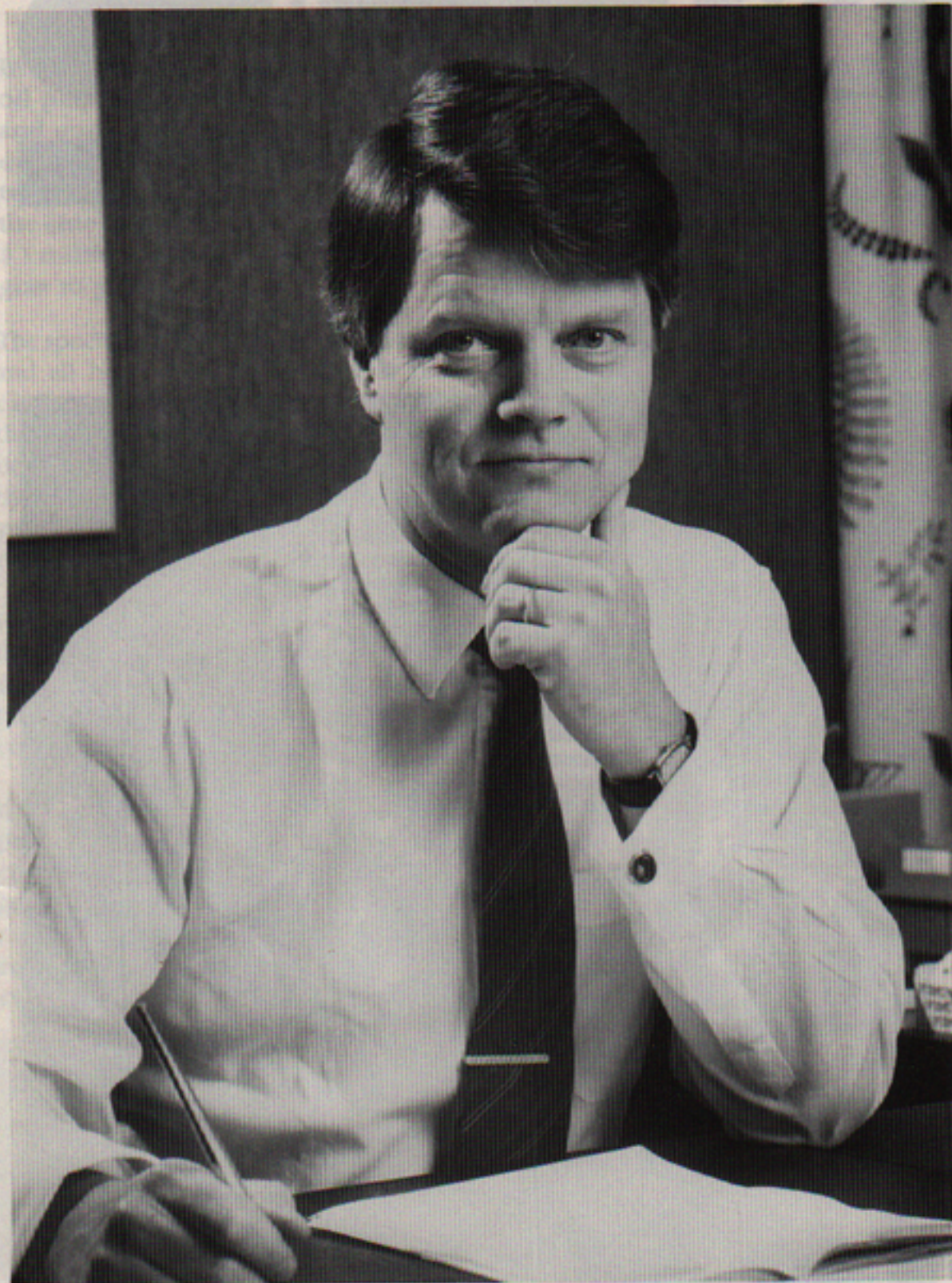
## Merry Christmas!

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The past year has been one of hard work, of difficulties and of reasons for rejoicing. It takes time to get to know each other, to understand each other's cultures and styles of working. The most encouraging factor has been the positive attitude we've met in the new Telub companies. The Telub spirit, which we have developed over the past 25 years, has spread very rapidly to our new European friends.

We will go on in 1989 to strengthen the positions we have already established and to further develop our activities in Europe.

For the time being, we are still quite small in Europe. But we will get bigger and stronger, both through the growth of our own companies and through further acquisitions.

I want to thank all Telub employees for your fine work and support during 1988. I wish all of you and your families a very fine Christmas and holiday season.

Staffan Håkanson

## We are the Telub Group

**Telub**

Telub News is a newsletter for the Telub Group's employees as well as others interested in our business. It appears three times a year with Managing Director Staffan Håkanson as publisher.

The newsletter's contact person is Anita Björilin, who can be reached at -46.(0)470 420 00.

Telub News is produced by Telub Inforum.

The Telub Group is one of the largest consulting and technical companies in the Nordic area. The Group has around 2,000 employees and annual revenues of around SEK 1 billion. Headquarters is in Växjö.

The Telub Group has five main business areas: Technical services and systems for defense and public administration through Telub Teknik in Sweden and Telub Teknisk in Norway.

Technical information through Telub Inforum in Sweden and Norway, Indust-

riell Dokumentasjon in Norway, SPS Technical Ltd and Industrial Artists Ltd in Great Britain.

Third party service through Telub Service in Sweden, Norway, Denmark, Finland and Telub Bitronic in West Germany.

Data processing technology and data communications through Owell and Opiab.

Technical services and systems for industry and other commercial markets through Opiab, Telub Industri and Telub Security Systems.

# The Danish Market: No Piece of Pastry

Some travelers say Denmark is the last outpost of the central European beer culture, and that its pastries deserve all the praise they get in travel guides.

Don't ask the team at Telub Service A/S, Telub's Danish subsidiary, to help you confirm this. They probably don't have time. Telub Service A/S is a market leader in nationwide computer maintenance in Denmark and intends to stay there if it has to fight giants.

Two giants that Telub's Danes have kept at bay are IBM and DEC, who, understandably, fought tooth and claw for the attractive service contracts for their own equipment.

Teeth and claws are fine, but Telub Service held its own on a couple of other points—technical skill, reputable workshops, and an excellent supply of spare parts.

One reason for this level of service is that the Danes have a core of people, with director Göran Johansson at the head, who have been with the business since it was started 13 years ago.

## It pays

Continuity is something customers value. But there have also been necessary changes.

"We have expanded, switched premises, taken over some other companies and opened new branch offices in outlying parts of Denmark. In this business, the competitive 'long knives' get pulled, but we have fought a good fight," says Göran Johansson.

The competitive spirit is paying off. After going head on against IBM to get service contracts for its System 34 and 36 minicomputers, Telub Service moved into the Digital DEC PDP-11 series as well as the Micro-VAX.

## Best on the market

In the PC field, the company services a wide range of products from IBM, Olivetti, Commodore, and ACER to name a few.

By last summer, some manufacturers didn't see the sense in fighting. FACIT



Led by director Göran Johansson, Telub Service A/S is expanding in Denmark. Here with Iben Andreasen, Frank Thygesen and Finn Parbo

A/S, the local subsidiary of the Swedish office equipment and peripherals manufacturer signed a cooperation agreement with Telub.

FACIT believes it sells some of the best equipment on the market and, naturally, signed on one of the best service companies to keep its customers happy.

## Not big enough

Today, Telub Service A/S has 35 employees and its headquarters in light, open

workspaces in the Glostrup district of Copenhagen, near an important industrial zone. There are two branch offices in the provincial towns of Vejle and Ålborg.

"We are looking to expand further," says Göran Johansson, "We want to offer complete information processing maintenance services to Danish industry, municipalities, banks, airlines, travel agencies and many others. Three people are working full time on finding new markets for us."



*Christer von Schantz and Lars Frennemo – two Certified Professional Consultants.*

## Telub Teknik Certifies its Consultants

**There is a boom for consultants in Sweden. That goes for consultants who have 20 years of industrial experience and a series of university degrees, as well as "consultants" who will grease the wheels of your corporation with snake oil if you just grease their palm...**

Telub, which rightly considers itself a provider of serious consulting services, has taken an important step in helping customers see some of the important "little differences" between consultants and consultants.

Recently, there was a graduation of sorts in Växjö, at which Telub group chief executive Staffan Håkanson addressed Telub Teknik's first crop of Certified Professional Consultants as well as "graduates" of more senior rank.

### Many Aspects

Staffan Håkanson spoke of the certification program, which also offers career

tracks to Certified Professional Specialist and Certified Project Manager, as an important advance in professional development within Telub Teknik.

It says to the employee that his or her specialized knowledge has been proven and is very important to the company. Certificate holders will get a higher salary as well as a personal development budget to advance their know-how.

They will play an important advisory role, working directly with the company's senior management in developing long term strategy.

### Specialists

The first two Certified Professional Consultants at Telub Teknik are Lars Frennemo, a specialist in the use of Artificial Intelligence (AI) in industrial maintenance programs, and Christer von Schantz, whose speciality is quality control of software.

Lars explains that certification affirms his authority as a specialist and may make more people within and outside Telub seek out his advice.

"I can more easily spread know-how about expert systems," he says, adding that he will probably use the development stipend to attend courses or a professional conference somewhere outside Sweden.

### Not isolated

Also named at the "graduation" were 15 Senior Consultants, each with more than 15 years of experience in their specialties. They were selected, too, for their good reputation among customers as problem solvers.

According to Staffan Håkanson, the certification program is limited to Telub Teknik for now, but could be adapted as a management development program in other Telub units, such as Inforum and Telub Service.

# SEK 60 million defense order among biggest to date

A SEK 60 million order for a mobile microwave telecommunications network for the Swedish army is the among largest to date for Telub Teknik.

The system is designed to link the army's materiel depots, providing secure wartime communications should Sweden's ordinary telecommunications network be knocked out of action.

The mobile units are designed to be completely self-sufficient with their own antennae, power supplies, transport vehicles, etc. They can be assembled by ordinary soldiers in a very short time.

## Important part

Sven-Åke Hultsjö, head of the production department in Växjö, said around 200 units would be delivered. Prototypes will be delivered by the turn of the

year 1989-90, with deliveries of production models to be completed by 1992.

Other departments, such as Telecommunications, have contributed to defining the specifications and testing of the units. Telub Inforum will deliver the user and maintenance handbooks, valued at SEK 4 million.

## High quality

According to Sven-Åke, the production part of the job will keep many skills busy over the next few years.

"The order comprises electrical, telecommunications, and mechanical design, as well as manufacturing, assembly, and quality control in all of these fields," he explains, adding that "everyone in the department is very happy and involved with the order."



Jan Lindström, Knut Karlsson, Tommy Dablqvist and sitting Magnus Notini and Bertil Pettersson Telub Teknik.

# Telub at 25: Back

**Turning 25 is a pretty big milestone for a company in the data processing field. It means Telub has been around for quite a bit more than half of "the computer age" on this planet. That's worth celebrating.**

Although there have been anniversary events throughout 1988, the culmination was reached in October when celebrations with meals, entertainment and dancing were held on five consecutive weekends for employees in all of FFV Telub's majority-owned companies in Sweden.

Nordic people party pretty much the same as folks elsewhere in the world, but there were a few aspects of Telub's birthday celebration that everyone ought to know about. For one thing, it was marked with the formal opening of Telub Futurum, a center for visitors, customers and personnel training and development.

## Meeting friends

In the best Scandinavian/Silicon Valley tradition, the Futurum is a place to go for exercise and relaxation (including a sauna) as well as meetings and seminars. There's a new restaurant where you can take customers and other guests.

In line with the Futurum's name, the opening ceremonies coincided with a seminar on the future of Telub and data processing. Telub's managing director Staffan Håkanson, however, took a quick look back and noted with satisfaction that Telub at 25 was one of Sweden's largest consulting firms with annual revenues approaching 1 billion kronor.

## Our responsibility

With obvious reference to the Futurum as a place for recreation and expanding one's professional horizons, Staffan Håkanson declared that "The individual must stand at the center of a knowledge-intensive company such as Telub. The company's future will be determined by our ability to attract, keep, and develop competent employees. Our anniversary, therefore, is dedicated to the people in Telub, the company of the future."

## Good future

Group chief executive Rune Nyman spoke on what that future may hold in the development of information technology.

He said that after the evolution of hardware from the mainframe to the powerful personal computers of today, the future would be dominated by user-friendly, customized "systems" made up of a variety of compatible units needed for whatever tasks the information system is used.

In composing these systems, the role of specialists and consultants such as Telub will increase, Rune Nyman predicted.

## Not alone

Per Torphammar, an expert on electro-optics spoke of the future role in information processing of technologies in the "borderland" between optics and electronics, especially for the storage and transmission of large quantities of data. Later, Per Torphammar joined Staffan Håkanson and Telub board member Rune Brandinger in a panel discussion of "The Human Factor in a Service Company Like Telub" that was led by Bengt-Åke Gustafsson, a university lecturer.

The 25-year old birthday celebrant also got a number of gifts and prizes, including a tree planted by eight employees who have been with Telub since its founding, and a glass sculpture given by the union locals to be used as a traveling prize for the best bosses in the Telub group.



*Göran Stenudd presents the Telub Service gift to the lively "25-year-old" Staffan Håkanson.*



*Some of the anniversary guests in Telub's exhibition hall.*



*Telub's previous Managing Directors, Benkt Dablberg and Eric Malmberg, had occasion to meet again during the anniversary celebrations.*

# ck to the Future



*FFV Group President  
and Director General  
Rune Nyman points  
to the future for Telub.*

# New Technology at Telub Inforum Video Replaces Handbooks

We all know it. Some genius who designs the service handbook places the parts list 100 pages away from the schematic. And you have reason to suspect that the writer who is supposed to describe just how to remove that delicate circuitry never operated anything more complicated than a door knob. Has anyone asked how much you get paid for turning pages, and how much for working?

That may be all over soon, because Telub Inforum AB, the people who have been writing those pages you love to turn,

have found a better way. Instead of a book, you pop in a video disc that pertains to the equipment you are working with, and with a few simple commands, you have all the diagrams, lists, and even video sequences of procedures at your fingertips.

Need to remove that power supply? Watch the hands of a senior technician do it with just the right tools while he tells you what he is doing. What is the number of that bracket? Pop up the parts list with a keystroke. Instead of turning those well-thumbed pages, you are using interactive video.

## Not a minute

Gunnar Carlson of the Informatics division in Växjö explains that "with this technology you can select pictures and video sequences very quickly and efficiently. With the computer software, you can find any picture in seconds. On the video discs we use, you can store up to 35 minutes of motion pictures, or 55,000 still images, that is, text pages or diagrams."

This new technology can also be used for several purposes, for instance, in training new service technicians or as a



*The endless rows of ring binders containing service instructions and other technical information will soon be replaced by interactive video, says Gunnar Carlson at Telub Inforum.*

sales tool. To show how easy something is to service, the salesman just pops in the same video sequence of key parts being disassembled.

## Specially designed

"We've just produced our first 'product', a test project to study how this technique works, but it will also be used as an instructional aid at a Swedish Air Force technicians' school," Gunnar explains.

In developing the interactive video,

he explains that Telub Inforum has drawn on its own computer skills, but is also cooperating with Mediabolaget, a Swedish company that has refined the video disc technology specifically for presentation and instructional applications.

## A head of the U.S.

Gunnar thinks that in the near future, a very large part of the instruction books, parts lists and other service and tech-

nical literature that fills the shelves at many companies could be replaced by interactive video databases. In the U.S., the aircraft manufacturers Boeing and MacDonnell Douglas are already using interactive video extensively.

"We are now starting to catch up," Gunnar says, "And when it comes to developing standards and common norms for handling technical information, I believe we are ahead of the U.S."



# The Checkups That Prevent Disaster

From the Arctic north to the salt-sprayed cliffs of the west coast, Sweden is a destructive testing lab for masts, pylons, guy wires, antenna

"Masts can corrode and then simply fall down, explains Roger Sundkvist of Telub Teknik's mechanical division in Arboga, Sweden". One reason for the more rapid corrosion of masts is increasing air pollution, Roger says, but adds that proper inspection and maintenance can prevent losses under almost all circumstances.

## Safe methods

Not only does a collapsing mast knock out part of a vital defense network, it can also cause damage to surrounding property for which the Swedish defense establishment can be held liable.

That's why FFV, together with local Swedish Air Force personnel, has been conducting regular inspections of radar, communications, and navigation towers across Sweden. The first round of inspections assisted by Telub Teknik will be completed within four years.

## "The flying Anderssons"

Many inspections, by necessity, occur at great heights. One could call the teams

housing, radomes and wiring that make up the communications, navigation and traffic control system of the Swedish Air Force.

sent by Telub Teknik "the flying Anderssons" – Hans, Bernt, and Mats – except they are three unrelated specialists who happen to have a very common last name in Sweden.

The Anderssons don't even "fly" together, since there are three roving teams of inspectors, consisting of two Telub employees and a "local" from the Air Force or defense establishment.

Besides having little or no fear of heights, the technicians have to be masters of both subjective and objective inspection techniques. This means that whenever something "doesn't look right" it merits a check with the proper instruments.

## Further steps

These checks, in turn, are recorded in what will soon be a detailed database about the condition of all of the Swedish Air Force's outdoor masts and towers. This will allow studies of what materials and assemblies are most subject to failure, allowing optimization of maintenance procedures.

# "Paperless" Documentation On and Under the Sea



*We are off to a start in Norway, says Anders Thunbjer.*

Sometimes it pays off to know the right questions rather than have all the answers.

Can you run an oil platform or a submarine at sea without paper?

As far as submarines go, Telub Inforum is trying. Together with the Australian Submarine Corporation, the company is working on "paperless" technical documentation for Australia's newest submarines.

At the Offshore Information Conference 88 in Bergen, Norway this September, a whole team from Telub Inforum in Norway and Sweden asked "can you have a paperless offshore oil platform?"

"What drew the most interest from visitors to our stand was our projects for the Swedish Defense Forces and the Australian Submarine Corporation," says Anders Thunbjer, who is responsible for Inforum's offshore sector in Sweden, "The problems of technical documentation are the same, even if the volume of information in the offshore field is several times larger."

Together with his Norwegian colleagues Øystein Waernes and Arne Gregerseb and a team from Sweden, Anders says Telub succeeded in making promising contacts among many Norwegian offshore operators.



# The Quiet Guys With

Most of us assume that if Telub wasn't doing its job properly, quite a few people would throw fits. But most people don't know that there are six quiet guys in Telub Teknik who, literally, have people's lives in their hands.

Börje Dahlberg, Sune Magnusson, Rolf Ståhlberg, Olle Söderberg, Mikael Örnhem and Nils-Åke Holmqvist are the

team charged with maintenance of medical equipment under Telub's contract with the Swedish Defense Forces. The contract, which Telub has had since the early 1970s, was recently renewed for a five year period.

Through their shop in Växjö pass the blood gas analyzers, suction pumps, sterilizing apparatus, portable X-rays, anesthesia dispensers, etc. that Sweden's defense establishment keeps ready, just in case.

## Realistic

Sweden hasn't been in a military conflict for well over 100 years, but that doesn't make the inspection and maintenance job any easier. A lot of equipment gets set up under realistic conditions during training, and the Swedish UN peacekeeping forces send their medical equipment to Växjö for regular checkups.



Telub's specialists in medical equipment maintenance, l. to r. Olle Söderberg, Mikael Örnhem, Rolf Ståhlberg, Börje Dahlberg, and Sune Magnusson.

# Lives in Their Hands

## Safe

The six guys also check the equipment of the emergency field hospitals that Sweden's civilian authorities keep stored across the country and ready for use in the event of war or natural disaster.

These hospitals can be unpacked in a few hours to turn a school, a district health clinic or other building into a fully-equipped hospital.

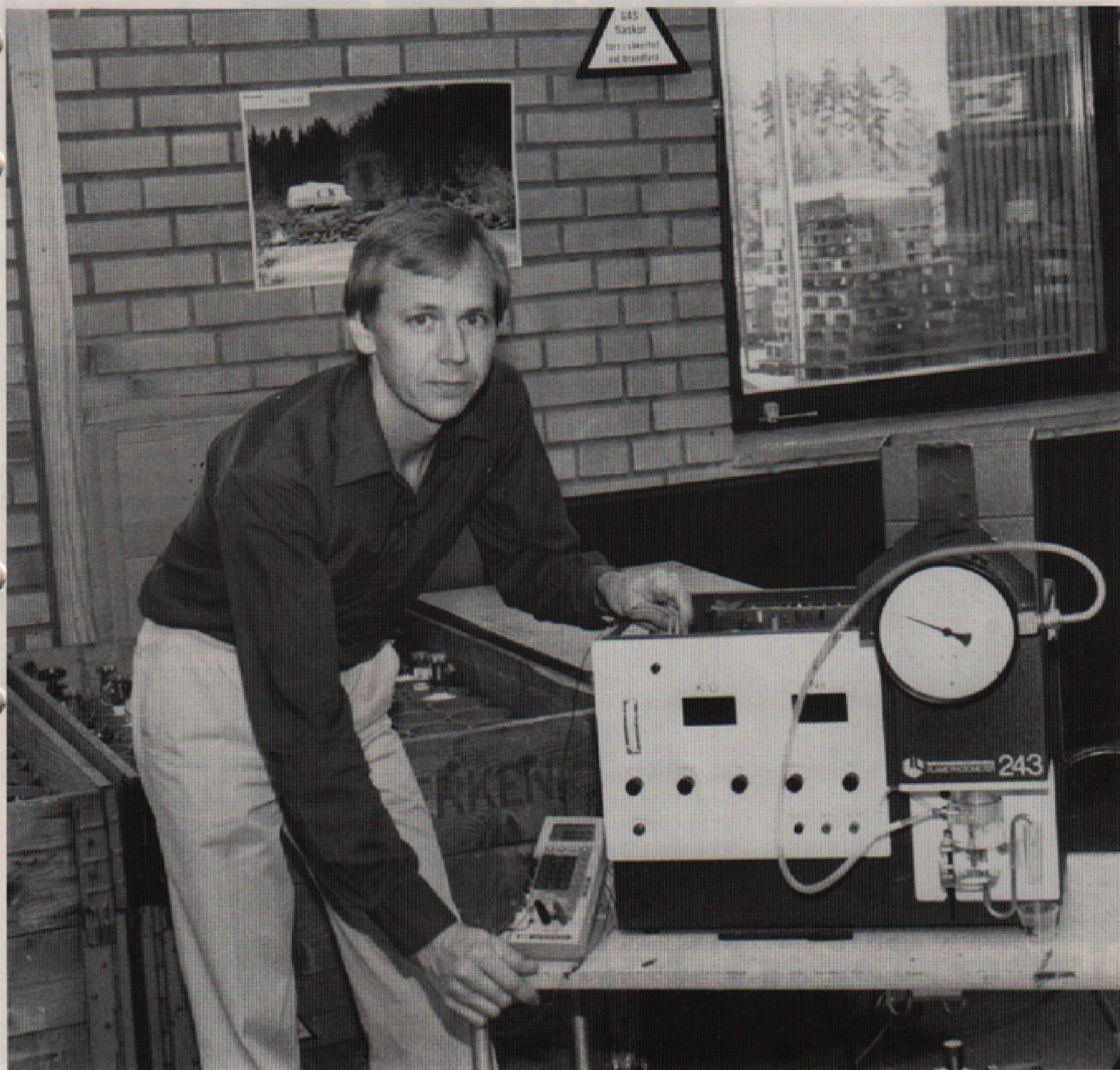
The Telub team makes sure that equipment sitting in safely stored cartons will work perfectly if it ever has to be unpacked.

## Good training

Naturally, Sweden's military and civilian emergency medical preparedness doesn't rest on the shoulders of a little

known Telub shop crew alone. The soldiers and emergency services officials who have custody of the equipment get regular training from Telub.

"We have a couple of groups here every fall who we drill on how to handle this equipment," says Nils-Åke Holmqvist.



"We are pretty anonymous within Telub. But if everything works properly, then we don't get any attention, do we?" says group leader Nils-Åke Holmqvist.

# On the North Sea: Information in Bytes, Not Tons

In a roaring gale, a big crane on your oil platform has started all by itself and gone out of control. In its random madness, it is wavering between batting a small helicopter over the side or thwacking the pallet with \$ 1 million in new well-head control gear to pieces.

The specialist operator is on shore leave, and all helicopters are grounded. You can barely grip an instruction manual as thick as the London Yellow Pages and a dog-eared, looseleaf maintenance log that the wind is starting to pick apart as you ascend the icy ladder to a control room...

Science fiction nightmares can and do happen on the high tech offshore oil fields, leaving very little time to thumb through thousands of pages of documentation to solve glitches that could become million dollar disasters in minutes.

But even for everyday maintenance, there has got to be a better way to use the precious time of skilled technicians. Precisely because they are skilled, those guys(or gals) will follow "the book" rather than instinct when taking apart equipment they get to check only once every six months.



*P.O. Jonasson gathers his thoughts before speaking to the Stavanger seminar about Inforum's newest projects and development work.*

## Better off

Wouldn't it be better to turn on a PC or plug a laptop into the nearest network



*David Larret of SPS (l) with Inforum's Göran Ramfors take a bite to eat after telling seminar participants what SPS and Inforum can offer the Norwegian offshore industry.*

plug and sift through a few on-screen menus to isolate the problem or find the procedure?

This possibilities are opened by the emerging technology of computer-supported documentation, both for text, illustrations, and technical diagrams, and they were discussed in an offshore context recently at a seminar jointly organized in Stavanger, Norway by Telub Inforum, FFV Telub A/S, and SPS Technical Ltd., Telub's British subsidiary.

## New technology

Per-Olof Jonasson, from the Informatics department, presented a couple of ongoing projects aimed at "paperless documentation" such as the system being adopted by the Swedish Defense establishment or the one being used in Australia to operate a "paperless submarine". Both use technology developed by Telub.

David Larret of SPS spoke of his company's experience on the British North Sea oil fields, dealing both with documentation problems as well as with maintenance supervision. In their flexibility, computer based documentation systems can be used to both store and access enormous amounts of information that would otherwise fill small libraries and to present this information for training, maintenance, or quality con-

trol purposes.

Computer-based documentation, for instance, can be accessed by a software that reminds platform operators that a certain maintenance cycle is due, selecting the necessary instructions. The same instructions can be used in a refresher training session before employees embark on the maintenance job. Any electronically recorded maintenance log becomes part of the record accessible for the next cycle, with any relevant information stored for quality control purposes. A part that wore out long before its official "life expectancy" would be automatically reported to the supplier.

## Leading

Supported by Inforum in Sweden and SPS, FFV Telub A/S is establishing a strong base for providing its products and services to the Norwegian offshore sector. Göran Ramfors, marketing manager for Inforum sees the opportunities in Norway as "pretty big, even if it may take some time to get specific contracts. Our combination of experience through SPS, information processing know-how through Inforum, and presence in Norway through FFV Telub A/S is something no one else I know of can offer. And it is just this combination that's needed to increase the quality of documentation and maintenance management in the Norwegian offshore industry."