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Telecottages, teleworking and telelearning

Lilian Holloway

Translated by Rick La Roche

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Foreword

In 1994, we find telecottages throughout Sweden, from Brösarp in the southernmost province of Scania to Pajala in the northernmost province of Norrbotten. In this report, Lilian Holloway from the Ammarnäs telecottage explains the development of telecottages in Sweden and abroad. Quite a lot has happened since the beginning of the 1980s when, inspired by the telecottage in Vemdalen, among other things, interest in telecottages began to grow.

The TELECOTTAGE '93 symposium in Australia provided the basis of this detail-rich report about telecottages. Lilian has interviewed Swedish and foreign experts and provides us with a good picture of a domestic and international "movement." The EU is holding the European Community Telework/Telematics Forum (ECTF), which is described in Appendix 2.

All in all, telecottages, teleworking and telelearning is about taking advantage of the opportunities offered by modern telematics: distance-independent work, communications, education and work across borders, as well as greater opportunities to make our own decisions about time and location.

Lilian Holloway has captured all of this in her report. She presents a variety of solutions that result from this freedom and the opportunities offered by telematics. TELDOK hopes that Lilian's easily read and entertaining report will inspire others to re-think their activities and take advantage of the benefits of teleworking and telelearning, for example in the form of a "telecottage".

Thank you Lilian for this excellent report! Thank you Rick La Roche for pro9viding the translation! And thank you Kerstin Petterson for editing the manuscript.

We wish you pleasant reading.

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Telecottage 93 – International Symposium

Between November 29 and December 1, 1993, I participated along with some 160 other people in an international symposium in Queensland Australia. The locations was the world-famous Gold Coast and the subject was Telecottages, Teleworking and Telelearning – Road to Rural Revival. (See Appendix 1.)

This report is based on lectures and interviews with various participants during and following the symposium. The main part is devoted to the symposium, but I also briefly describe the current situation of Swedish telecottages. Finally, I take a look at the future and analyze international experience and its significance for Swedish telecottages.

The principal organizers were Telecom Australia, Department of Primary Industries & Energy and the state of Queensland. They had invited a number of interesting lecturers to create a forum for discussion of the latest development in the field. The atmosphere during the symposium was extremely pleasant and informal. The symposium was well-organized and well-balanced in its planning. Delegates were given sufficient time to meet and discuss the various issues.

The three workdays were divided into different blocks. The first day was spent on teleworking and telelearning. The opening speaker was Gil Gordon, an expert on teleworking and publisher of *Telecommuting Review*. He presented an exciting picture of teleworking in rural areas and global trends. In the afternoon, Virginia Ostendorf described her experience in establishing telelearning programs. The emphasis was on the mistakes that have been made and how we can avoid them.

The second day began with Lars Qvortrup from the University of Odense, who described telecottages and rural revival. He also presented his recently completed international survey of telecottages. Following that, telecottages from different countries were presented in detail to offer delegates a deeper picture of practical experience from Sweden, England, Finland, the US, Brazil and Australia, among other countries. I have included England, Finland and Australia in this report.

Wednesday, the final workday, was spent in three different work groups. The subject of the first group was *"Planning, introducing and managing a successful telecottage."* The second group dealt with *political issues* in the subject, and the third group discussed *today's and tomorrow's technology* for teleworking, telelearning and rural telecottages.

Finally, I would like to give you a picture of how the world looks at telecottages, teleworking and telelearning, as well as knowledge about what is happening internationally, where Swedish telecottages are part of an exciting and rapidly growing movement that has come along at exactly the right time. Reality has finally caught up with the visions of the 1980s.

Lilian Holloway

1 Teleworking

Teleworking in rural areas and global trends

Gil Gordon is considered by many to be the leading expert in teleworking. He has worked as a consultant in the field for many years and has held numerous lectures for businessmen and politicians around the world. In 1984, he began publishing *Telecommuting Review*. He also co-authored the book *Telecommuting: How To Make It Work For You And Your Company*.

It is interesting to see how we speak today about teleworking and telecottages. During the past century, most of us have benefited from the industrial revolution, which ended an era of small industries, handicrafts and work at home as the principal type of occupation.

The circle is now complete, and once again we are talking about working at home. There are, of course, major differences, one of which is the role that technology plays today.

Gil Gordon examined the following three issues from today's perspective:

What are the underlying or hidden factors behind this change? What can we expect in the future? What must we watch out for?

In his opinion, there are five key factors that have prompted people to discuss these three issues. They are as follows:

1. Crowding and centralizing is not better – it has its costs.
2. The phenomenon of returning to our rural roots.
3. Goodbye to the manufacturing industry, hello to creating new work or recreating work.
4. Goodbye to the monthly salary, hello to running your own business.
5. The hyper-growth of technology. Telecommunications technology allows you to stay abreast of the world around you without being chained to a desk or a workplace.

What have we learned to date – or not learned about teleworking in rural areas?

Gordon also takes a closer look at several factors, including the following:

New jobs – relocated jobs

Be careful about relocating jobs. That is simply stealing jobs! There is a big difference between *localizing* jobs and *creating* new jobs. The difficulty lies in balancing localization, creation and budding.

Working contra making deals

Gordon maintains that the most successful companies that telecommute are those which spend equal amounts of energy on working and making deals. He also emphasizes the positive aspects of knowledgeable people moving to sparsely populated areas, but warns about the risk of "elite-thinking." Local people receive nothing but negative effects unless there is a social link.

We must not focus so much on technology that we believe that we must purchase state-of-the-art technology and communications before we can begin. Instead, we should acquire and use only the technology that we need. It is dangerous to believe that a telecottage functions simply because we have all the available technology right from the beginning.

Which challenges are we facing?

Gil Gordon does not believe that teleworking in rural areas alone will be the answer to unemployment. Nor does he feel that teleworking will fuel development or solve the classic problem of whether young people should remain in rural areas or leave for the city. If we are to understand more about teleworking's role in rural areas, there are a few challenges that we must master, for example:

- The art of balancing optimism and realism.
- How important geographic location is. A telecottage must be located where there are people or where people pass by, for example, close to a train station/commuter train station, bus station, etc. where people gather. This encourages people to use the services offered by a telecottage. Geographic location is equally important for technical equipment.
- The role of politicians and their support. This is a sensitive issue, which Gil Gordon tries to address. That market forces prevail is obvious, but any financial support provided in the beginning is an advantage. He is against long-term support, on the other hand, as it undermines the possibilities of a telecottage competing on equal conditions.
- The necessity of integrating the telecottage concept with education and the labor market. This is an important social issue, and Gil Gordon claims that it is time to stop training people for jobs that have no local market, i.e. jobs that exist in other places. This is an old worry.

"One of the greatest advantages of today's technology is that it is now fully possible to bring education to the individuals that need it and jobs to those who can work. This could also be a renaissance for a highly important area of work, namely handicrafts. As these various occupations are often found in rural areas, the opportunity to study them locally would provide greater skills and knowledge," he says.

In conclusion, Gil Gordon briefly describes the future and a number of scenarios, a few of which I would like to take up:

- Expertise and skills will replace the importance of being close to the workplace. The skills of a person will be more important to an employer than geographic proximity.
- The gap in income between urban and rural areas will diminish when it becomes technically feasible to perform traditionally urban jobs in rural areas.
- Small companies will flourish, especially in the form of smart, knowledgeable and skilled people who join forces. They will serve both domestic and international markets. An alliance can comprise as few as two or as many as 12 companies. Small companies will work together temporarily on projects.

  Large is not necessarily better, as large companies around the world have found out the hard way. We cannot apply the scale of economic growth that was necessary for agriculture and industry to information economics. It might, in fact, be just the opposite. What is needed, however, is some form of coordination. It will not be the top managers in a hierarchy that provide this coordination, rather it will probably take place at a crucial hub in the human network.
- We will talk bout going to the city in the same manner that city residents speak about going to the country today. It may sound impossible, but it is not unlikely. Tired urban dwellers long for the peace and quiet of the country to escape the city for awhile. It would be interesting if teleworking and telecottages developed to such an extent in rural areas that people began to long for a trip to the city – not to work, but to feel the pulse of the city!

Summary

Telecommunications technology and service appear to be the factors that will free jobs, education, entertainment, shopping, services and experiences from their geographic constraints in an effort to reduce the gap between the city and the country. There will always be cities, of course, and there will always be rural areas. And both of them will retain their unique characters. The difference will be that in the future, moving to the city for work will be a possibility rather than a necessity. In other words, we will have the best of what we want, when we want it and where we want it.

Telecommuting in Australia, the professional network

Anne Moffat is president of Technology Solutions Pty Ltd., Australia, a company that was established in 1993 that mainly does programming work for mainframe companies. Anne has considerable experience of information technology from England and Australia.

In the beginning of the 1960s, a woman named Steve Shirley started a company in England called FI (F International). She did this simply because she wanted to stay home with her son. Consequently, she offered her programming services from her home. She worked part-time and managed to solve her babysitting problems. She was successful beyond expectations, and she received more work than she could handle. Eventually, she began to ask colleagues if they could help her. Other companies heard about her company and business continued to prosper.

After more than 30 years on the market, FI currently has some 1,000 professional colleagues who work part-time on a flexible basis from their homes. FI now has some SEK 370 million in sales.

In 1965, Anne Moffat heard about FI while on maternity leave from her job as a programmer at KODAK and contacted Steve Shirley. At the same time, Anne was offered a position with Anglo-French Concorde. Her job was to design a program that would analyze an aircraft's "black box" after each flight. The system had to be completed in one year, and Anne's expertise was perfect for the job. Meanwhile, she had a babysitting problem with her 3 month-old baby, and therefore FI was the perfect solution. Anne was offered a position in FI's professional group as one of their programming resources.

Personal advantages

During the 1960s and 1970s, FI developed extremely rapidly, and considerable experience was gained. Anne Moffat speaks warmly about the personal development that is possible at FI. Employees feel great psychological satisfaction, they have high self-esteem, they enjoy belonging to a well-functioning team of friends and they achieve great self-fulfillment.

In 1972, the company had 400 people on its list, each of whom had specialties and expertise. Among this group were a number of men and women with special requirements. These included physically disabled individuals, authors who preferred to live in rural areas, singers who needed to be free certain times of the year, a daughter who was caring for her dying mother and the like. All of these people had certain programming skills that gave them a job at FI.

But what made this company so successful? Well, according to Anne Moffat, it was due to the acute shortage of skilled programmers in the 1960s. This, together with the fact that there were many women with young children in the company, generated tremendous publicity. Each article yielded additional business opportunities.

In the early part of FI's existence, there was a large problem with the turnover of programmers. This was partly the result of the hierarchical structure in the company. This created schisms between the people who participated as professional resources in a special group and the programmers who were on the duty list. The difficulties with this type of work structure were eliminated, and once a balance was achieved between the two groups in the company, everything functioned well. The result was a loosely connect network of professionals with excellent support and a small, centralized administration.

Resource centers

Today, FI is more of a conventional computer company, with a large headquarters in Hemel, Hempstead. FI still bases activities on skilled people who telecommute and has established a number of resource centers. These centers are open 24 hours a day and are located close to major and important traffic areas to be easily accessible.

An FI resource center provides a meeting place for colleagues, the possibility to take courses and access to equipment not available in their offices at home.

This is an early example of successful teleworking.

Transferred to Australia

Anne Moffat now works with a similar idea in Australia. The market for the company is primarily mainframe systems at major companies and organizations around the country. Programming through teleworking calls for well specified and documented systems and programs. These systems are between 10 and 20 years old. Once a system is fully developed, maintenance accounts for about 75% of the system's total costs. The concept used here is to change existing systems instead of creating new systems, something which Anne Moffat believes is best handles by a company's own programmers. This should yield great savings for companies and boost the productivity of the system.

Telecommuting in Japan with the help of temporary offices

Windy Spinks works at the Institute for Economic and Financial Research in Tokyo. She is one of the founders of *International Telework Forum* and *The Association of Satellite Offices* in Japan. Originally from Australia, Windy Spinks has worked in Japan for more than 10 years and she has extensive knowledge about the development of teleworking in Japan, particularly when it comes to satellite offices and temporary offices.

Windy Spinks describes a temporary office in Japan as an office that is pleasant, located close to nature and where a company offers its personnel the opportunity to perform some of their tasks, together with their families if they wish. In Japan, it is not unusual to work 10–12 hours a day (occasionally on Saturdays). If a company is situated in a major metropolitan area, it often takes 1–3 hours to get to and from the office. This means that families usually suffer, so a growing number of companies have realized the advantage of setting up offices outside the large cities. Employees are then able to take their families to these offices for short or long stays and carry out some of their tasks.

The current trend in Japan is establishing a more flexible way of working, which is evidenced by new experiments and new attempts at finding solutions for employees. This involves the introduction of Flex-time, part-time work, job-sharing, sabbaticals or teleworking. While there are numerous reasons for this trend, there are also a number of key factors at work here; demographic changes, changes in values, environmental factors, technological development (especially in telecommunications), economic downturns and downsizing.

A few main factors are behind the search for new solutions and structures in Japan, including temporary offices:

- Demographic change – a reduction in the labor force is expected.
- Further concentration and growth in Tokyo – the environmental factor.
- The necessity to boost work quality – economic downturns.
- The necessity to boost the quality of working life – a change in values.

What is a temporary office in Japan?

"An alternative office far away from home and headquarters, often located in a rural area close to leisure areas. Those who use temporary offices often stay there for several nights, living and working under the same roof," Windy Spinks explains.

What we should note is that the difference between a temporary office and a conference center or the like is that the former is used to carry out work that would otherwise be performed at headquarters and that employees choose their work times and can take families and friends along. Another important thing to remember is that these offices in Japan are often available for employees of major companies and not for free-lancers or small companies. Windy Spinks believes that, in the majority of cases, this is because these offices are privately owned and because several companies often have joined together to establish such an office.

There are currently six temporary offices in Japan; four more are being planned and three have been closed. They are located around Japan, and although they are few in number, they have attracted great interest.

Initial problems that arose were more of a practical nature. For example, the temporary office in Azumino received complaints about how space was utilized, as both working and living space combined. This made it difficult for employees to distinguish between work and leisure activities, as they used the same space for both.

Food posed another practical problem. Japanese men are not used to preparing their own food, and this soon became an issue. Niseko is one of the most popular offices. This is primarily because Niesko employs a married couple who take care of the practical details, but also provide information about local activities. The office in Yatsugatake is also popular with employees who use it. Having learned from past experience, designers located the residential section far away from the working section. This office is managed by a local company that handles problems and takes care of simple office duties, a large conference room and work rooms. The office is also located in a tourist area with good access to restaurants, which has solved the greatest problem – food.

Until now, these temporary offices have been started by private initiatives. At the local level, there is a certain political interest and perhaps even national interest, but no economic interest.

The private sector normally sets up a temporary office after an investigation group has been formed to handle the project. Project participants are from different companies within a variety of industries. Initiatives often come from a group of individuals from these companies who are friends or who have worked together in a project. The participating companies share the costs of establishing an office. Some also share equipment or services. These temporary offices are normally open to the public, but the majority of users come from member companies.

What can we learn from the Japanese experience?

Experience has shown that temporary offices are fully possible, and that they contribute to a marked increase in overnight stays in different places. One of the greatest advantages is the work efficiency an office provides for employees who take advantage of this opportunity. One of the greatest disadvantages is the feeling of guilt that many people have for their colleagues at headquarters, as well as the difficulty that some people experience in working alone. Windy Spinks draws the following conclusions:

- The concept of temporary offices is capable of being implemented and viable.
- Working methods and routines must match the temporary worker's way of working.
- Tailor-made premises and equipment are vital.
- Functional peripheral services must exist.
- Offices must be marketed and have a cost structure that suits the target groups.

2 Telelearning

The pitfalls of telelearning

Virginia Ostendorf heads a large company that organizes teleconferences and telelearning and is well-known as a consultant and teleinstructor. Virginia has been awarded many national distinctions for her books, and she has written about new technology in several publications. Recently, she was named to the Who's Who of American Women list.

Virginia Ostendorf has worked with telelearning for more than 14 years and has extensive experience in the field. She shares some of her experiences in the subject with us, and emphasizes the difficulties encountered in establishing a learning center. She attempts to explain why many good attempts have failed and what some of them have succeeded.

Many advocates of telelearning continue to maintain that their technological solution is the only valid one. Moreover, many of them would like to have you – an easily fooled beginner – in their telelearning network. Not even history can teach us that many telelearning networks come complete with all the well-known signs of failure. This is how you can end up as a loser:

1. Begin by buying equipment and not caring about how it is to be used.

It is not at all unusual to find equipment in place before the rest of the planning has been completed. Wrong! Totally wrong! All efforts at the beginning of a project should focus on identifying the potential students and examining their needs. The network should be planned on the basis of their needs, which should be considered in every decision.

2. Allow the technicians and the vendors to decide.

Decision-makers in different organizations often have established contacts with vendors. Naturally, these suppliers will emphasize the excellent qualities of their own products. *Technicians know about technology.* On the other hand, they often have a limited knowledge of what it is like to work as a teacher or an educationalist, of how to structure and plan an educational program, etc. They seldom have any practical experience of the range of programs on the market or full insight into existing programs.

There is always a risk that vendors and technicians will be given free rein unless we are careful. Schools are full of equipment which cannot be used and which is simply gathering dust.

The technology involved in telelearning is not so incredibly complicated that only a few people know about it. Acquiring a basic knowledge and understanding of these system is something that even non-technical people can do. Therefore, make sure that you allocate time to collect information and knowledge and let technicians serve as guides in the field.

3. Let educators or consultants who have never worked with telelearning make all the decision.

Just as technicians and vendors cannot make competent decisions regarding the best educational system, educators cannot either. Let them work with telelearning for at least one year before allowing them to recommend something for the network. Once they become experienced, listen to what they have to say. Some systems are more user-friendly than others for educators who use interactive teaching methods. It is extremely important that the equipment selected suits the educational method used in the network.

It is equally dangerous to leave everything up to a consultant. Choose a consultant with extensive experience of numerous technological solutions in the area. Make sure that the advice and knowledge given by a consultant can be of help in the internal training of the personnel in question. It is also important that the consultant review user-opinions. This is a must.

4. Do not talk to experienced users.

The true experts in telelearning systems are the ones with experience. If you fail to listen to them, you do so at your own risk. Instead, establish good contacts with them early on, ask for help and exchange experiences with them. If you find people that think like you, stay in touch with them during the project to ensure that you are on the right track. A few telephone calls to experienced individuals can save many thousands of crowns in the form of mistakes in purchasing equipment, software, etc.

5. Decide on a technological solution that excludes all other suggestions from the very beginning.

If you decide on your favorite system from the very beginning, you will not have to make decisions based on the need of the students, funds or anything else. You will end up with your own telelearning system, and no one else will use it.

Remember, no one system is better than another. The choice of technological solution should instead be based on several objective requirements and should be made without any preconceived opinions. Not even a vendor who wants to provide equipment should be considered at this stage. You must instead reserve the right to make independent decisions based on what is best in each special area. It is better to say no to the wrong solution than to waste money, time and resources on trying to get it to work.

6. Do not pay any attention to the unique conditions of your students.

Educators from cities must learn about the cultural differences and conditions that exist in a small town. If all the examples in a bookkeeping course involve large companies in the city but the students live in a secluded rural area, it is likely that the students will not recognize themselves or even care very much about the examples.

7. Make all the decisions about the planning of the project yourself.

It is better to listen to the opinions of users in the network and base the content of your courses and any technical changes on that. If you do not, you will surely get a technologically well-functioning network, but the users will not be committed or interested.

8. Place all of your administrative plans of action in a vacuum.

In addition to equipment and accessories, there are other factors that must be planned carefully if a network is to be successful. Plans of action and different work procedures in the network must be decided in close cooperation with the various recipients and together with the students who will receive the service. It is also a question of adapting to the recipient. You should send work tasks and the like to students when it is best for them – not when it is best for you.

9. Find someone to subsidize you to get the network started and then forget about all financial aspects after the initial stage.

Each new network should be based on an economic plan that ensures survival after the first period. Never start a network if you do not know how it is going to work out!

10. Assume that everyone will accept the network from the first second it starts.

Getting people involved in this process is based on three factors: planning the network on the basis of user needs, choosing a system that is easy to use and training everyone thoroughly who has invested in the network, is interested in the network or plays an important role in the network.

11. Do everything as quickly as possible.

Forget about planning, preliminary investigations, training and development. Everything that deals with telelearning takes time. It takes time to conduct a preliminary investigation based on needs. It takes time to investigate technological solutions and accessories. It takes time to choose equipment, changes course plans, find suitable teachers and develop them. Above all, it takes time to investigate, visit and develop relationships with the people who are to manage the educational centers in the network.

Develop a good plan with a realistic timetable and be flexible! A small delay in the process can be valuable if it involves investigating new conditions and changes during the process.

Finally:

Finally, says Virginia Ostendorf, all our students deserve the opportunity to get the best education at the least possible personal inconvenience.

If we respect the wishes of these people, we will be able to plan a telelearning network based on their wishes and needs. The only way that we can do that is *to offer good teachers – not technological solutions.*

3 Telecottages and rural revival

A survey of the world's telecottages

Lars Qvortrup, the University of Odense in Denmark and vice chairman of CTSC International (see Appendix 3), has extensive experience from a broad range of telecottage projects in Scandinavia and Europe. The following is a summary of a recently completed survey of the world's telecottages.

It seems as if telecommunications projects in rural areas are being conducted throughout the world. Whatever the case, these types of projects do not start automatically. Support and assistance are required in the beginning and follow-up is necessary.

Defining the telecottage concept

Lars Qvortrup defines a telecottage as: *"a manned local center that provides computer equipment and communications equipment for local residents in sparsely populated or rural areas or in poor suburbs. This equipment is available for everyone in the area. A telecottage helps private people gain access to telephones, telelearning, data courses and meeting facilities. A telecottage also helps small companies gain access to business information, office equipment, educational opportunities, etc."*

A number of these telecottages function as small, private companies themselves. The majority of telecottages receive financial assistance from local and national authorities to help cover costs. This support is provided directly and indirectly. The telecottages presented in this report are recognized by either national authorities or the association of telecottages.

International view

The first telecottages were established in Härjedalen, Sweden and Lemvig, Denmark. Since then, the number of telecottages has increased very rapidly. In November 1993, there were about 200 recognized telecottages in 11 countries around the world, and another 40 or so that were soon to be started. Of the 200 telecottages, 65 responded to a questionnaire that was distributed during the autumn of 1993. Of these, 55% are privately owned and 45% are public institutions.

Telecottages autumn 1993

Country	No. of telecottages
Denmark	9
Sweden	23
Norway	5
Finland	49

England	57	
Ireland	6	
Germany	47	(including planned)
Austria	5	
Australia	9	(25 by the beginning of 1994)
Brazil	4	
Canada	7	

The Nordic countries

Denmark

At the end of 1990, there were 10 telecottages in Denmark. They were the result of a national telecommunications program for rural areas that was carried out between 1986 and 1990. After that, the program was closed and financial aid was discontinued. Today, there are nine telecottages, two of which were started after 1990. A so-called computer bus, which travels from village to village and offers training and information services to local residents, is an interesting example.

Sweden

Since the inauguration of the telecottage in Vemdalen in 1985, some 40 telecottages have been constructed in Sweden. In 1989, telecottages stood at a crossroads and were forced to decide whether to operate commercially or continue to seek support. As financial support was difficult to receive, the association of telecottages decided to operate commercially, and members began to work as "ordinary" small enterprises.

In the autumn 1993, a sales office was set up in Stockholm, opening its doors just before the turn of the year. There are, however, a small number of telecottages in Sweden that continue to operate on a non-profit basis and which are integrated with or closely associated with local development and village groups.

Norway

At the end of the 1990s, there were only 10 telecottages in the country. Today, a few of the ones in southern Norway have been closed. In Finnmark, in the far north of Norway, nine new telecottages are being planned and the first three of these projects are under way. By the end of 1993, five of the telecottages were in full swing.

Finland

In December 1988, the first four telecottages were established. In 1989, a national initiative to support the establishment of telecottages was taken, and some 70 new telecottages opened their doors. Some of the Finnish telecottages are part of the local folk high schools and offer educational programs, while others are more business-oriented service centers. At the end of 1991, financial support was discontinued and after a brief crisis, the situation became stable. By the end of 1993, 49 telecottages were still active.

Scotland

Six pilot projects began following a conference initiated by British Telecom in 1989. The purpose of the conference was to evaluate the Scandinavian concept. The conference confirmed the need and the projects were started. One of the projects has developed into a highly successful teleworking concept.

England, Northern Ireland and Wales

Telecottages have grown rapidly in these three areas in recent years. At the end of the 1980s, there were no telecottages; by the middle of 1992 some 30 had been established.

Ireland

The first telecottage opened in 1988, and since then five more have become established.

The English association of telecottages

In 1992, the English and Irish association of telecottages was established. The purpose was to improve the possibility to choose work, education and service for local residents, as well as to develop the local economy by using telecommunications and information technology, including coordinating equipment and aids in local centers.

Since the association was established, there has been a dramatic and rapid development of telecenters and telecottages. According to the association's latest estimate (end of 1993), there were 57 telecottages in England and six in Ireland, of which 24 are commercial centers and 36 are publicly supported.

Germany

A highly active telecottage movement in Germany has developed good relationships in Germany and Austria. There are 47 functioning and planned telecottages, 20 of which have already opened. Telecottages have opened in the former East Germany to help solve the problem of poor telecommunications service. In this part of Germany, nine commercially operated telecottages opened between 1991 and 1992 and 13 so-called teleoffices were established by German Telecom.

All of the telecottages in this survey are private companies with financial support. There are, however, other types of telecottages. In Kassel or Norden, for example, there are two very large centers that do not call themselves local service centers, but suppliers of new technology to local companies, etc. Nor do they have any expressed feeling for problems related to rural areas and unemployment. Other centers in Germany, however, are more related to the form of local service that is represented in this report.

Austria

Austria boasts five established telecottages in small alpine villages, with a sixth under construction.

Australia

In November 1993, three telecottages were completed and 17 under construction received assistance from the national telecottage program. In addition, six telecottages have been opened in local areas and 20–25 more will be recognized by the national telecottage program in 1995. The state of Queensland operates about 30 so-called *Open Learning Centers* at present. As they specialize in telelearning, they have not been included in this report. They intend, however, to expand their local service and become telecottages.

Brazil

A project has begun in Brazil under the management of Tebras and with support from the United Nations Development Program (UNDP). This project involves only a limited number of telecottages; four in 1993. These will be used as reference cottages for other parts of Brazil, as well as other parts of South America.

Canada

Following the "Bridging the distance" conference in May 1990, it was decided to establish telecottages in a number of villages and small cities. These were to benefit from the Enterprise Network and its information service, as well as from a large number of open university courses that had been developed on the basis of the TCS interactive teleconferencing system. By the end of 1993, seven regional telecenters were established and linked to the ACOA/Enterprise Network. There are also three so-called minicenters in the same area.

Current vitality and its contribution to development of sparsely populated and remote areas

What equipment is available in a telecottage?

The components of a telecottage include the premises, personnel and equipment. Quite often, telecottages are established in schools, libraries, local municipal offices, etc. Usually, they contain an office, a general section with computers, a conference room, a work room for external users and a kitchen. The smallest number of employees required is two, one individual who is in charge and a part-time assistant.

The most common equipment consists of a copier, 2–5 computers, 1–2 printers, a scanner, access to a telecommunications network (possibly ISDN), a modem, a fax, video production equipment and sometimes even videoconferencing equipment.

If we examine the results of this survey, we see that 100% of the telecottages that responded to the questionnaire have access to telecommunications networks and computers. A little more than 90% have fax and some 20% have access to ISDN, while 9% have access to a videoconferencing system.

Software

The majority of telecottages offer a great variety of software in the different fields. It is common for each telecottage to have a local network. It is not unusual for telecottages in a region or a local area to network with one another.

Range of services in telecottages

There is a large difference between countries, but also between telecottages in the same country. The range of services offered at most places includes telecommunications, computer, consulting, educational, telelearning and equipment for the general public.

The most popular are computer courses, photocopying, fax services and office help. Some 55% of the private telecottages in the survey claim that they offer teleworking and telelearning, while the corresponding figure for publicly owned and managed telecottages is 27%. Some 44% of private telecottages offer translation services, while 24% is the figure for public telecottages. Public telecottages, on the other hand, offer more telelearning – 24% as opposed to private telecottages at 14%

Renting out office space is also quite common; nearly 67% of the private telecottages do so. The corresponding figure for publicly owned telecottages is 48%. This seems to indicate that telecottages support newly started companies in their area directly. One of the conclusions Lars Qvortrup draws in his survey is that private telecottages are used more intensively than public telecottages, except for telelearning and general services. Private telecottages often specialize in certain types of services.

The number of employees in the telecottages survey is quite similar regardless of ownership. Each telecottage has an average of 2.5 full-time employees, who serve some 37 visitors each week.

Visitors are both private individuals and businessmen. It should be noted that not all telecottages are open the entire work week and that some people visit several times in the same week. One of the major differences between Europe and the Third World is that telecottages in the Third World attract a large group of users who need a telephone. They also have a larger number of visitors each week.

Geographic and social contexts

Telecottages are located in geographically remote or socially deprived areas. Lars Qvortrup has taken a closer look at this concept in this survey. It seems that 11.5% of the telecottages in the survey are located in cities with more than 10,000 inhabitants, while 26% are located within a 10 km radius of a city. Over 60% are located more than 20 km from the closest city. Nearly 15% of telecottages are located more than 100 km from a city, and in Canada and Sweden two telecottages are located more than 350–360 km from the closest city.

This survey has not taken poor roads, traffic problems, etc. into account.

A large number of telecottages are established in regions that are dominated by industries based on agriculture, forestry, fishing or mining. These are also regions that are suffering from economic decline and are dependent upon companies from the outside, etc. and which have a great need to attract new companies,

preferably those which are information-based. This is also reflected in the high rates of unemployment in the various areas. Finland and Ireland suffer the most, averaging about 20% unemployment each, followed by Canada with 40% unemployment.

How long does a telecottage last?

The majority of telecottages that participated in this survey were established in 1990. There is very little to be said about the typical development of telecottages. The Nordic countries, on the other hand, have extensive experience and have been able to identify a general pattern. The majority of telecottages in the Nordic region were established in conjunction with some type of nationwide activity, for example the *"All of Sweden shall live"* campaign. A large number of telecottages were opened during the campaign, but a crisis seemed to emerge after about three years. There were two main reasons for this crisis. Either a financial crisis occurred when assistance was stopped or a telecottage was opened on an unrealistic basis. Lars Qvortrup has drawn a number of conclusions from the survey, the most important of which are listed below:

- The importance of making realistic assessments in the initial phase and of making a careful assessment of local conditions to ensure that the telecottage will "match" local problems.
- Realizing and understanding that an elimination process of telecottages takes place after a certain period of time. This is quite natural for a project of this type – even if the number should be as few as possible.
- Carefully planning general support for a telecottage. If support is limited to a particular time period, the telecottage must be carefully prepared to make the transition to private ownership. A period of 3–5 years is not unusual for transition to private ownership.
- Combining financial assistance with other forms of support, for example leadership training for those who are to manage a telecottage, setting up relevant databases for a telecottage network, etc.
- Providing ongoing and easily accessible information for telecottages, for example establishing an electronic help-desk function.
- Not viewing the establishment of telecottages as an isolated phenomenon. This type of project will be integrated with other projects, such as the development of telecommunications, but also projects involving agriculture, small business, education and the like.
- Moreover, the formation of an association, organization or the like for telecottages in a country is of vital importance. Organizations formed in Germany and England have proved to be an important source of inspiration for members. It would also seem that they can better support telecottages on their path to independence, i.e. future private ownership and full commercial activity.

Financial survival

In the 65 telecottages represented in the survey, some 55% are privately owned. The remaining 45% are publicly owned in one way or another. Even private

telecottages receive some financial assistance, however. When we take a closer look at these, the survey shows that, despite the fact that most of them are privately owned, 56% of the telecottages were the result of some form of public project or the like. The majority have also received financial assistance in the initial phase, a majority that in 1992 received revenues from public sources or a combination of public and private sources. This does not have to mean that this was direct financial assistance, rather it could have been in the form of education supported by municipal agencies, etc. In 1992, some 50% of the telecottages investigated said that they broke even, 27.5% said that they made a profit and 22.5% said that they suffered a loss.

How have telecottages contributed to local development? The last question Lars Qvortrup asked in his survey was how each telecottage had contributed to local development. There were four answers, ranging from considerably (4) to not at all (0). These responses are highly subjective, of course, and should be followed up by more detailed studies. Nevertheless, the results could be interesting. They show that the affect on the economy, social service, culture and employment was approximately 2.25. Telecottages feel that they have some influence on local development in these issues. The figure is even higher (2.90) where education is concerned. There is also a difference between privately and publicly owned telecottages. Privately owned telecottages feel that they have a greater possibility of affecting local business and the economy, but somewhat less when it comes to culture and the local labor market.

How do you plan, start and manage a successful telecottage?

Lars Qvortrup briefly described the international situation. To provide a more detailed picture of the situation in different countries, I would like to examine Finland, England and Australia.

This is how they do it in Finland

Telecottages are the answer to social change in Finland

Mirja Lauronen, the Finnish telecottage association (FITEC), describes the background:

From 1989 onward, telecottages have been opened in conjunction with development projects. Telecottages were intended to function as information banks and to disseminate information in rural areas. They were financed by the Ministry of the Interior, regional authorities, municipalities and the national Posti-Tele. Telecottages were opened in different places, for example close to municipal services, in schools, post offices, libraries, village cottages, office buildings, etc. The people who managed telecottages had a variety of backgrounds and skills.

By the end of 1991, financing of the projects was completed, and only the strong telecottages had the opportunity to continue to develop. In May 1993, only 45 of the original 70 telecottages were still operating. How did they manage to cope financially?

Mirja Lauronen says that some of them only operate on a commercial basis by selling software, computers and training programs. Two telecottages manage local development projects that focus on developing rural areas and telelearning. Other telecottages function as local service centers and, depending upon the expertise of the managers, have even assumed responsibility for other administrative work tasks. There is a group of telecottages owned by village associations, and they mainly provide a place for bookkeeping and telelearning activities. Twenty-one of the telecottages have a telebox connection, where information is spread and participant discussions are constantly under way.

The Finnish telecottage association (FITEC) was established in 1992 to safeguard traditional telecottage activities. The association tries to keep the network in operation and handle inquiries from companies and other interested parties. Products manufactured by telecottages and their specific skills have been entered into a common register. FITIC telecottages are trying to find a good working model for telecottages that will ensure their future. Let us take a look at the Lievestoure telecottage.

In the beginning, this telecottages was part of a nationwide experimental project initiated by the Ministry of the Interior and Posti-tele between 1990 and 1991. Its goal was to support the change of local business and to develop municipal administration with the help of modern information technology, as well as to offer educational courses. This telecottage also offered teleworking and strengthen the local post office. To accomplish this, one full-time employee was hired. The municipality paid 20% of this person's salary.

The goal for 1992 was to offer business skills and educational services using information technology and to participate in rural development by helping interested individuals learn about computer programs and teleworking.

The Lievestoure telecottage is the Finnish telecottage development center and the secretariat for FITEC. This telecottage is privately owned, but works closely with various interest groups, such as the university, municipality, business associations and the church. It has specialized in teleworking and business and occupational training programs.

Telecommuting and business-oriented educational courses at Lievestoure are aimed at supporting local business. One form of training that later developed into a general training program was a course held in the spring of 1993. The participants had very good knowledge of their particular occupations and could work independently, marketing their new skills once they had completed the course. They developed their business concepts and their marketing plans, using various teleworking working methods. The primary educational method was to work with the entire group, to work with each individual student and to undertake numerous practical exercises. The training program contained four main stages: Telecommuting methods and possibilities, business skills, communications and personal development. This educational program can be used in schools and telecottages throughout the country.

The telecottage in Lievestoure also started a development project for the village that aimed at providing an economic plan for the area. The plan was to contain wishes and demands from the inhabitants regarding service and the environment.

Traditionally, Lievestoure has been an economically independent area that has developed around a paper mill. The mill, however, was closed, and this resulted in a development program for the area that has attracted small businesses and new inhabitants. Lievestoure is situated on the outskirts of the municipality of Laukaa. The economic situation has forced the municipality to lay off employees and try to find new solutions for municipal services. In January 1993, about 21% of the inhabitants were unemployed, and local companies were having a difficult time surviving, as purchasing power declined.

In the service project that has come about as part of the development plan, the telecottage is trying to find new work tasks that it can undertake, for example, real-estate maintenance, janitor services, travel information, company information, telephone service, telelearning, etc. Telelearning has been discussed with much interest in Finland for quite some time. A few universities and private training companies have specialized in this, but telecommunications have been used only to a minor extent in this context. The university in Jyväskylä has begun a project for a network school that is primarily aimed at 13 to 19 year olds. The network school enables students to study on the basis of their interests and possibilities. The teacher's role is to support each student. The purpose of the network school is to change education from teacher-oriented to student-oriented. This opportunity will give the next generation a chance to adapt to social changes without losing their own knowledge and opportunities, as well as gain an understanding of the new telelearning culture.

Generally speaking, Finns have a high standard of education, professional skills and information technology. The knowledge of steering resources from a technological and social perspective is lacking, however. The adult population is facing a major challenge, as the equipment in network schools can also be used by adults in the evenings and on weekends.

This is how they do it in England

The Scandinavian concept for telecottages was used at the end of the 1980s by rural developers. The first conference on the subject was held the same year, and the first English telecottage–*The Moorlands Telecottage*–was opened. Today, this telecottage plays a leading role in developing training courses for teleworkers.

What is an English telecottage?

Alan Denbigh, chairman of the Telecottage Association, received this question and many others on the subject. Alan, who only works with the association's externally directed efforts, is a likable person with a strong commitment to his work. He says that there are currently some 600,000 teleworkers in England. A close cooperation between telecottages and teleworkers has yielded a magazine

called *Teleworker*, which is published once a month. Alan also feels that this cooperation will develop strongly, as the parties share so many common denominators. Telecottages and teleworkers alike benefit from this cooperation. The most recent issue of Teleworker describes how the English Postal Administration permits 10 of its employees to carry out their tasks 2–3 days a week at the WREN telecottage instead of traveling into the various London offices.

The difference between a telecottage in England and a private service company is the possibility to receive training and to use equipment. Interested users can receive access to technology and, through training courses, improve their skills. English telecottages are located in inexpensive, remodeled premises and often have been improved by local development organizations and training organizers, as well as by coops and private individuals. A telecottage shall offer new technology and new knowledge, service and equipment to small companies – especially to teleworkers – and it shall be open to anyone who wants to come in and use its equipment.

What type of equipment do you have in a typical English telecottage, I asked Alan, who gave me the following list.

- Equipment for people who work on their own.
- Computers that can be rented for use there or at home.
- Access to a variety of software and office equipment.
- Training/self-studies.
- Individual courses at low prices.
- Educational packages sponsored by the authorities.
- Educational packages sponsored by the EU.
- Educational courses for local companies.
- Open university courses.
- Office service.
- Fax service.
- Photocopying service.
- Word and text processing service.
- Desktop publishing service.
- Translation service.

It sounded a lot like what we have to offer in Sweden, with the exception of the educational programs. Swedish telecottages do not offer any regularly scheduled educational packages sponsored by an authority, but instead participate in purchasing activities on a purely commercial basis.

Alan also said that several telecottages are working to develop teleworking by offering a variety of services to geographically remote markets. Work tasks are often given to a telecottage's own subcontractors, people who either work at home or at a telecottage. The type of work task tends to be simple; registering or word and text processing. Although the work tasks do not require a high level of skills, the demand for quality is high – many times higher than if a company had undertaken the task itself. The tendency is the same in Sweden.

I asked Alan to describe the telecottages in more detail, and he used the Wiltshire Telecottages Ltd. example.

Wiltshire lies in western England, and there are three telecottages in operation. The first was established in Mere and is located in the library. The other two in the network were established in two small villages, Codford and Crudwell. These telecottages were established as local municipal offices for Wiltshire and must be self-financing within three years, according to requirements. Sponsors of these three telecottages have come from the public and the private sectors, such as British telecom, Barclays bank and the Commission for Rural development. Telecottages also have a base from which a number of activities take place, for example projects for unemployed people over 50 who are looking for jobs and a project for people under the age of 25 who want to start their own companies.

They cooperate with local employment offices to offer vacant positions to job-seekers. This helps the unemployed in the villages find out about any jobs that might be vacant.

Alan also says that the telecottages in Wiltshire, aside from providing service to the local population, have also begun to collect information about jobs at major companies. One marketing person has been hired, and a number of short-term contracts have been negotiated.

When I asked Alan about the economic situation of the telecottages, he said that it was a bit too early to see what will happen once the project is completed, as most of the cottages were established between 1992 and 1993. The signs are encouraging, however. I would like to present the results of a recently completed survey of four telecottages that shows which factors are believed to be crucial to success. They are as follows:

1. Clear strategies for the local market.
2. Educational programs for the local population.
3. Clear definition of goals for telecottage activities.
4. Cooperation with existing organizations (valuable).
5. Avoid using technicians as telecottage managers. A broad, general knowledge of things and good local contacts are better.
6. Start on a small scale and develop the telecottage as need increases.
7. The difficulty involved in penetrating external markets. One solution is to cooperate as a sort of marketing cooperative that can decide and control quality levels and spread the costs of marketing.

The English telecottage association

The association was established in 1993 and has two main tasks. The first is to support and encourage additional telecottages, and the second is to promote teleworking. The initial phase involved advocating the telecottage concept and attracting publicity, sponsors and interest in existing telecottages. Other, more practical activities that the association has carried out involved supporting the development of educational programs for teleworkers. The association has also reached an agreement with Apple Computer about supplying high-quality computer equipment to two telecottages.

The association has produced a series of fact sheets that have proved to be excellent reference material for teleworkers and people who want to start a

telecottage. The association also publishes a magazine – Teleworker – that strives to increase interest in teleworking and telecottages and which contains a list of all the telecottages in England and Ireland. The magazine is partly produced in a telecottage. All work tasks involving members and the task of organizing seminars are handled in another telecottage. The association has also procured commissions from several different companies for other telecottages.

Alan Denbigh sees a future where more and more people telecommute. This trend is supported by cutbacks and downsizing by major companies, which also means that some tasks will be performed by small, flexible companies, such as telecottages or teleworkers. The working culture will also change; not even public employees believe that they will be working at the same place and for the same employer throughout their working lives.

Alan also believes that the number of telecottages in England will increase greatly, and that each municipality will have about five telecottages. These will cooperate in networks and exchange expertise and technology with one another. On the outskirts of cities, people will adopt the idea of telecottages, and a special type of telecottage will be established in these outer areas. More people will need additional living space in order to work at home, and the picture-phone will make its breakthrough. He concludes by saying that teleworking and telecottages will probably have as a great an influence on our lives at home and at work as the industrial revolution once had.

This is how they do it in Australia

Ian Crellin, of the Department of Industry and Energy, is head of the government program for establishing telecottages. He is one of the driving forces I met at the symposium and who, together with Tom Cass, strategic manager for Telecom Australia in Brisbane, has been working hard for years to get telecottages started throughout Australia. Ian Crellin and Tom Cass can describe their experience in Australia best, and here are a few of the most important parts of their effort.

Background

The first experiments with the telecottage concept took place at the end of the 1980s. The focus then was on finding new ways to bring education to rural areas. The Department of Industry and Energy (DPIE) believed in the idea and began a pilot study to examine the possibilities of establishing telecottages. The study indicated an enormous interest from a variety of groups, and DPIE developed a four-year program for the establishment of telecottages. The program will be completed on June 30, 1996 and has a total budget of A$ 4 million, which is about SEK 21 million. This has made it possible to provide financial support to establish telecottages and to start projects to help local groups develop their telecottages, as well as to offer education and network support to all telecottages. Telecottages approved in the program have received between SEK 275,000 and SEK 600,000 in support over a two-year period.

Although the government's Telecottage program is the main sponsor, other government and federal organizations are also involved. Telecom Australia was the first of the other major organizations, and their contribution consists of actively participating in the local development effort, as well as of offering direct support in the form of connecting networks, lower telephone costs, etc. The municipality at the location where a telecottage is to be established is expected to provide financial assistance. However, this has proved to be difficult, particularly in poor municipalities. Instead, these municipalities have provided voluntary labor and rent-free premises.

At the same time that Ian Crellin began working with the telecottage program, Tom Cass was involved in helping local groups examine the possibility of using new information technology and telecommunications. The purpose was to take advantage of new opportunities and to solve a number of local problems. Meanwhile, the states of Queensland and Western Australia had opened a number of so-called *"Open Learning Centers,"* a concept which is not as broad as that of the telecottage.

The first two "real" telecottages established in Australia were located in Walcha, New South Wales and Cygnet, Tasmania. This took place in 1992, and the main sponsors were the Telecottage program and Telecom Australia.

What are the criteria for the Telecottage program? I asked Ian Crellin to briefly describe the demands that must be met to receive support from when starting a telecottage. He said that the proposal submitted to the Telecottage program must demonstrate a reasonable possibility of providing work and business opportunities that coincide with the demands and wishes of the local area.

The proposal must also show that there is adequate support from the local population and local authorities, which increases the chance of success.

The proposed telecottage must be able to cope financially in the long term – in practice, a period of two years. A credible business plan should be based on the aforementioned requirements and must describe the following, among other things:

- The business objectives and strategies of the telecottage.
- Which markets require the telecottage's services, and the effects that can be achieved in terms of new jobs and commissions.
- How the local population will be informed and kept informed about the services of the telecottage, and how these services are to be marketed to the public.
- A budget that shows the financial situation during the first two years, and a three-year budget that shows how the telecottage will be able to take care of its own financing.

In addition, skilled people must be present who can manage, support and develop the telecottage's activities according to the business plan, a so-called management group.

Applications may be submitted throughout the year. They must be formally correct according to requirement specifications to avoid a lot of extra work at a later date. As many people want to start this type of activity, it is extremely important

to have a well-prepared application. How can the grant from the DPIE Telecottage program be used?

- Computers and accessories, software.
- Suitable telecommunications equipment.
- Office equipment and furnishings.
- Salary for a part-time manager.
- Reasonable installation and educational costs.
- Some initial marketing and distribution costs.

The grant may not be used for day-to-day operating costs after the initial phase. In certain cases, support may be received in the initial phase if there are special difficulties and conditions locally that might affect the possibility of opening a telecottage. This can also apply to courses arranged by the Telecottage program or the coordination of equipment and exchange of experience between different groups.

Those groups that qualify to submit an application have broad local support. Grants are not given to individuals, small interest groups, companies, schools, etc. These groups are instead encouraged to participate in the Telecottage program, either as members of the local telecottage management group or as a partner.

What are the responsibilities of the management group? To begin with, these individuals must operate according to the business plan and develop a plan of action for day-to-day activities. The management group must purchase and install the equipment agreed upon in the application. It must also handle employment interviews and all other activities normally carried out by company management, such as: administration, bookkeeping and accounting of grants received, premises, security, insurance, etc. Marketing and market activities are also part of the group's responsibilities, as is re-negotiating any changes in the business plan with the appropriate individual in the Telecottage program.

During the first two years, or as long as the grant lasts, a simplified form of regular accounting of normal activities is all that is required, along with an annual report.

There are no set lists of equipment to base purchases on. The Telecottage program does not purchase centrally, either. Local management groups must determine which equipment to purchase based on price, vendor, service and support. The equipment selected must meet the local requirements and the necessary standards for conducting educational courses.

The conclusion drawn by Ian Crellin is that the Telecottage program offers an opportunity for rural areas to examine the potential available in new information technology. This can create new jobs, lead to telelearning and open up new avenues of business.

Telecom Australia has been a driving force and a strong contributor to development in Australia. In 1990, they carried out a survey of future telecommunications requirements and participated in a study of the telecottage concept in 1991. They also worked together with the agricultural sector during the same year to identify their telecommunications needs and later as part of a development project involving the establishment of telecottages.

Tom Cass explains Telecom's current and future efforts regarding the establishment of telecottages. This commitment involves, among other things, sponsoring the formation of a national association. Telecom will also help finance a survey of changes on the telecommunications market concerning telelearning and teleworking. An important part of telecom's work also involves participating in different seminars, contacting the media and finding sponsors to finance the establishment of telecottages.

Telecom Australia's economic assistance is limited. It is provided in the initial stage and is comparable to British Telecom's support to English telecottages, i.e. primarily technical assistance and support. They intend to help underwrite the formation of a national association and are currently working on developing technical solutions to support telelearning and teleworking.

In conclusion, Tom Cass says that he expects to see development in Australia similar to that which has taken place in Scandinavia, i.e. private entrepreneurs will start and manage their own telecottages.

In Australia, there is no common description of the equipment that should be found in a telecottage. Nevertheless, a typical telecottage often has several computers, at least one modem, laser printers, scanners, CD scanners and office equipment. The premises have normally been divided to provide a certain degree of privacy for equipment users or for those who rent the equipment for a specific task. Some telecottages also have lecture halls with several computers (sometimes special communications equipment and video systems are available).

Equipment for videoconferences is also available at a few places. An evaluation of the possibility of offering videoconferencing systems has been made at several telecottages. The findings, however, indicate that demand is currently insufficient to warrant such an investment. Like many others, telecottages are monitoring technological development. This is an interesting technology for the future, primarily for education and work.

So far, the normal range of services offered at an Australian telecottage comprises computer equipment, arranging and carrying out training courses, marketing of local products in narrow markets, seeking information and providing access to information to the public via extensive databases.

Some groups have developed business activities that include secretarial services, desktop publishing, local advertising, BBS for marketing local products, a register of skills for people seeking jobs, the sale of satellite pictures and administrative skills to other companies.

It has been difficult for telecottages to attract commissions from companies in the city. This is partly a marketing issue and partly a problem of gaining acceptance for this concept among urban companies.

Byron Bay Telecottage Network Inc

We also visited a telecottage in Byron Bay, New South Wales. Byron Bay is a small coastal city situated on the easternmost point of Australia. It is known for its hippie community and has become a gathering point for young people from Australia and other parts of the world. Byron Bay's rate of unemployment is twice as high as the rate in other parts of Australia, and the municipality offers no advanced educational programs.

This telecottage was opened in February 1993 as the third in Australia at the initiative of Tom Cass, Telecom Australia, and Ian Peter, Pegaus Networks. They had participated in a special work group that identified Byron Bay's need for modern communications and technology.

The telecottage mainly offers residents the opportunity to use modern computer and communications equipment. A large number of computer courses have been held, and several companies rent the equipment. Education is also a major area for the telecottage, and plans are under way to start an Open Learning Center to give the local population access to advanced education.

The Byron Bay telecottage is operated on a non-profit basis. The management group consists of 10 local people, all of whom are volunteers, and one full-time and one part-time employee. Other volunteers provide additional help.

Telecottage trends in Japan

Windy Spinks maintains that the concept of working flexibly in different ways is attracting increasingly greater interest in Japan. The reason is because people are looking for ways to cope with the disturbances that arise from the enormous problems of Japanese metropolitan areas (overcrowding, commuting, air pollution, high real estate prices, difficulties in finding somewhere to live, etc.). Attitudes toward work are also changing – from a work-centered lifestyle to a life centered on the individual.

To date, life has been seen from an urban perspective. A new view is emerging, however, where flexible work is being viewed as a way to cope with regional economic stagnation. In one way, regional economic stagnation is the flip side of the metropolitan problem. The key issues are how to spread jobs to areas where there traditionally have been few opportunities and how to create high-quality jobs in the regions. Telecottages that provide information at high speed between cities and the countryside are the perfect solution.

How Ohoka began using software

In May 1992, the village of Ohoka in northern Japan began a project under the name *Lions Ohoka Educational Institute*. This was a joint project between private companies and public institutions to develop computer programs for educational courses. With an average 100 people per year moving away, this beautiful village with 1,750 inhabitants is a typical example of the rapid depopulation of Japanese mountain villages.

The software company was established in a former school just a short distance from the center of the village. The manager of the company was the former principal of the school, which was the first Japanese school to provide each student with a PC. The school's efforts were noticed by Lions Corporation, a software company in Tokyo, which is where the project originated. Some SEK 2 million in operating capital was invested by the village of Ohoka, Lions Corporation and the school's former principal.

At present, there are eight employees, of whom five are systems engineers and systems programmers. Some of the employees left Tokyo to return to Ohoka in the Nagano province and work at the institute. They use E-mail to communicate with colleagues at Lions Corporation in Tokyo and to program and transmit data. The village still does not have access to ISDN, but this is extremely important for the transmission of data. The software developed in Ohoka is marketed through 240 sales offices.

According to the school's former principal, the chief objective of the organization is to get the economy of the village on its feet again – not just to make money. Before the institute was built, there was only one local alternative for work – farming.

Now, a few students have begun a university program in computer science to be able to return one day to a potential labor market in Ohoka. The institute's main goal is to create a network that will improve village life and find new ways to help young people stay in or return to their village.

Japanese telecottages

In Japan, there are two types of telecottages; *Resort offices* and *Satellite Offices*. In October 1993, a satellite office was opened in the city of Shirataka (18,000 inhabitants) and in the city of Asahi (10,000 inhabitants). These two pilot offices are part of a rural development project that will extend past the year 2000. The following specific goals have been established for these satellite offices:

- To create new jobs by using information equipment. Each telecottage is equipped with communications technology, which ensures the creation of a new type of workplace that electronically links the workplace with metropolitan areas. It shall also function as a training center for potential manpower in the area and work to attract jobs to the center.
- To support the decentralization of office work. The telecottage shall provide space for moving office work from cities. This will make it easier for local authorities to maintain service levels and to increase the number of inhabitants during the day.
- To support local leasing operations. The telecottage will also help local companies recruit resources by providing workplaces, dwellings and leisure activities that satisfy the demands of returning workers, such as family needs, and of those who seek another way of life.
- To breathe new life into rural areas. As job opportunities increase in rural areas, the economic situation of the inhabitants will improve and the area will pick up again, as the project will attract new residents.

The next step after the satellite office is the resort office. While well-known, many of them have been closed. These types of telecottages are based on short visits from metropolitan workers, while the telecottage in Ohoka, for example, encourages people to move to the area on a permanent basis. As new people arrive or remain because of local job opportunities, the area begins to face a new set of demands. It becomes possible for people from urban companies to use the telecottages in Yamagata as resort offices.

Negotiations are currently under way between authorities and the Ministry of Finance to include the telecottages in Yamagata in a financial proposal for telecottages in 1994. If the budget proposal is accepted, the pilot project will be financed together with the Yamagata region, the cities concerned and the existing plan to create three new telecottages. Nationwide efforts to create new telecottages will continue, and this area will be monitored with great interest to see what happens internationally.

4 Planning, introducing and ... telecottages

Australia – establishing a nationwide association

The last day of the symposium featured three workshops. I joined one that involved learning how to plan, introduce and manage a successful telecottage. Ms. Gaye Short, an interesting and knowledgeable person from Western Australian Open Learning Network & Telecenters who has been instrumental in the opening of some 20 learning centers in the state, chaired the workshop. She is truly interested in finding the right combination of teleworking, telelearning and telecottages. For the workshop, she had assembled various telecottage representatives in a panel to try to answer questions from the participants and to speak about their own experiences.

This workshop attracted the most participants, and Gaye Short began by describing some of the efforts that have been carried out in Western Australia and the criteria for starting a telecottage – or WALINK Telecenter as they are referred to there.

WALINK Telecenters are interesting because of the effectiveness that the concept has had at the three locations where they have opened. A major need for further education, a strong local commitment and the desire to start a telecottage has facilitated efforts, according to Gaye Short. In 1991 and 1992, a number of so-called Open Learning Network Centers were established with links to Perth, where the course offering was located. This has been an excellent opportunity for teachers in Western Australia to pursue advanced education, and a large number of supplementary courses have been and are being offered. Other interest groups, including Edith Cowan University, have also begun to arrange different courses.

The project has attracted considerable interest, and with this as a background efforts to establish telecottages in the same network have begun. A number of unique conditions can be exploited: the existing network, the possibility to cooperate when purchasing and the opportunity to cooperate in finding new ways to look for work tasks. A number of potential entrepreneurs were identified, and of these a number of coordinators – future telecottage managers – were selected. They recently attended a joint seminar that focused on developing forms of cooperation and exchanging experiences. Being able to build on an existing concept has been a great advantage, and the new telecottages have found themselves very quickly. Gaye Short points out, however, that it is vital that the network attract a large number of members to achieve a stable financial situation, to offer high-quality courses and to create good possibilities for teleworking.

The coordinator is a key person in successful establishment and development efforts, a fact emphasized by many delegates. The coordinator must be the link between official institutions and a telecottage, as well as work to develop and

deepen cooperation between the players in the network. What then should a coordinator be expected to achieve? The results of our discussions can be summarized below. A coordinator must:

- be an entrepreneur
- possess good skills
- have good leadership qualities
- be a creator of business ideas and a marketer
- preferably be a part-owner of the telecottage
- enjoy local support.

A coordinator must use the aforementioned to create good balance between the social and the commercial aspects of activities, while achieving high product quality, ensuring quality control and working according to good ethics.

The participants also believed that it is not good if a coordinator operates his own company at the same time. This could be a disadvantage for telecottage operations, and a few people thought that it would be impossible to combine these activities without a negative effect on the telecottage.

Participants also developed a model to follow when structuring activities. Briefly, this model is based on a balance between social and commercial activities and permits educational activities to be independent. Municipal financing in the form of services to the inhabitants was a good local experience.

These discussions and conclusions were passed on to a work group that was formed after the symposium to develop a proposal for a national association. Their efforts continued for a number of months, and they engaged a large number of people from different countries.

The concept now being shaped aims at creating an association that will safeguard the interests of all individuals and organizations when it comes to teleworking in the broadest sense of the word.

Where financing of the new association is concerned, memberships fees will form the backbone in the initial stage. Sponsors will be sought, mainly to provide practical sponsorship in the form of lower telecommunications tariffs, etc. Conducting training courses and seminars is another method of financing. In the beginning, memberships fees will be low to attract as many members as possible. Those who, according to the proposal, are eligible for memberships in the association include:

- Individuals who telecommute in one form or another.
- Students and pensioners.
- Telecottages.
- Companies, brokers, suppliers, etc.
- Individual associated members.

A formal association was established in February 1994 under the Asian Pacific Telework Association (APTA) name. The purpose of the association is as follows:

- To work together with public agencies, municipalities, authorities and other commercial interest groups to inform the public of the advantages of all forms of teleworking.
- To function as an information forum for members. To provide relevant information concerning global, national, regional and local development and activities in the field of telecottages, teleworking and telecommuting.
- To identify and assist groups that will benefit from teleworking, for example the physically disabled.
- To offer members an infrastructure that will encourage them to spread information that could lead to jobs for other members.
- To develop and support regulations concerning quality and standards that will benefit all telecottages and teleworkers.
- To develop and present different types of training for teleworking.
- To offer members assistance and support regarding technology, legal matters, business planning, communications and security.
- To offer counseling to members and other individuals in all areas involving the planning and implementation of projects in the field of telecommuting, telecottages and teleworking.

5 Telecottages in Sweden – What is the situation today?

The national association of telecottages in Sweden (TC-S) was established in the summer of 1989 following a turbulent beginning of the year. Internal discussions were intense, and the association's first task was to structure internal operations.

Interest in telecottages was great during this period, and when the telecottages began their major, joint registration project in the latter part of 1990, the line of interested individuals grew.

In 1990, membership totaled about 40. In 1993, the number dropped to 25. The main reason for this drop was the difficulties encountered in conjunction with the general economic climate and the ongoing recession. This made it difficult to market telecottage services in a wait-and-see market. In the spring of 1994, however, organizations and companies began changing and adapting, and TC-S feels that the prospects of reaching potential customers are good. Appendix 4 contains a list of existing telecottages and their locations.

In 1991, a number of telecottages formed a corporation to market their joint resources in a better manner. The company was hit hard by the recession, and it was not until the latter part of 1993 that activities began to take shape.

In the autumn of 1993, the company set up an office in Stockholm in the same corridor as a number of similar associations. There were practical and personal difficulties in the initial phase, but in the spring of 1994 office activities got under way. An office in Stockholm provides members with a fixed base for their work in town (many telecottages have business contacts and commissions from the Stockholm area). The office will also serve as an information center for different interest groups about activities in rural areas.

Teleworking

The trend in Swedish telecottages did not lived up to TC-S expectations in 1990. Today, the situation is better, and the majority of telecottages have undertaken many types of work tasks facilitated by technology. This is especially true for the Segersta telecottage, which began an extensive cooperation with the Central Office of the National Land Survey in Gävle. In the spring of 1994, several telecottages were negotiating a variety of tasks from urban companies and organizations.

Telelearning

No substantial changes have taken place concerning Swedish telecottages. A number of experiments are under way, but no joint projects are being conducted. Unfortunately, neither the association nor the corporation has the financial muscle necessary to conduct test activities with different players. This type of activity has been carried out at the local level instead. The most successful telecottage in this area has been in Färgelanda, which also offers a comprehensive range of training programs.

An inventory of communications technology

Between 1992 and 1993, TeleDelta, in cooperation with TC-S, conducted an inventory of telecottage conditions concerning telecommunications and the use of various telecommunications services. This inventory yielded a number of interesting results, a few of which I would like to report below.

We must be careful when interpreting these results, however, as assessments such as "good coverage," "problem-free," etc. could be based on information from telecottages that have not tried to use the services in question and, consequently, have not reported problems in the questionnaire.

Mobile communications services

Practically all telecottages that participated in the survey have access to NMT450 and NMT900 mobile telephone networks, even if there are still a few rural areas without coverage. The same is true for MBS – mobile paging.

Personal paging with the Minicall system is a bit more difficult, however. The system offers good coverage for telecottages in central and southern Sweden, but there are problems in northern Sweden. The Arvidsjaur telecottage is the only one that can use Minicall. The conditions for Mobitex are considerably better – every telecottage, except for the ones in Ammarnäs and Löttorp, has access to the system.

Fixed communications services

Expansion of Plus services

In 1993, only a few telecottages had access to AXE and Plus services. Changes in overall planning are being continuously made, so it is impossible to predict when all telecottages will gain access to these services. Several telecottages have access to Plus services in urban areas or via cities located close by, while others are not planned to receive them until 1997.

ISDN

The inventory demonstrated the need for expanding the network to come closer to subscribers, and this is expected to occur as demand increases. It is, however, reasonable to assume that the main city in a region will be the first to receive access to ISDN.

The inventory also reported a number of development alternatives, including the possibility of tailoring solutions to particular locations through so-called foreign connection. This applies to Plus services and to ISDN. Individual subscribers will be responsible for costs, which are currently too high to make this a viable alternative.

Another possibility would be to request foreign connection to a switching center located close by that offers Plus services. In practice, this would mean that a subscriber would have to change telephone numbers to fit in with the new switching center's number series. The costs for laying a cable and quarterly fees would be extra.

Yet another possible development would be to utilize existing premises in a region's principal cities to gain access to the new communications services in a more inexpensive manner. This could take place with several other players and could, for example, comprise service-bureau activities that offer videoconferencing, telelearning, etc. The greater population in principal regional cities would make this alternative economically viable.

Finally, TeleDelta stated that in view of the telecommunications infrastructure, it would be an advantage if telecottages had the opportunity to pursue a flexible localization policy to some extent.

6 The future

Communications and telecottages

Development within the field of technology has moved forward in many areas in terms of communications, and it is high time to expand telecottage communications efforts. Lennarth Bernhardsson, chairman of the Swedish Telecottage Association, has extensive knowledge and experience in the subject. In the following pages, he shares some of his thoughts with us.

Today's and tomorrow's communications technology are about digital transmission. The fax is a case in point. The fax has developed into a form of high resolution image transmission that can handle photographs, drawings, etc. The technology is not dispersed, but the need to transmit a document with high quality and high speed is. An ISDN outlet and a G4 fax machine – and a recipient, of course – are all that is required.

Televideo technology can be used in a variety of business concepts, including everything from telelearning and conferences to decision-making support and the like. A telecottage can receive training material from near and far for student groups and businessmen. Another example of an area of use within the field of education mentioned by Lennarth is the possibility of elementary schools allowing students with so-called electives to be connected with other students with the same wishes. Why not take advantage of the educational resources of a neighboring municipality? The telecottage in Färgelanda is involved in a project to transmit computer training courses to eight locations in the county of Bohuslän and the province of Dalsland.

Lennarth believes that many telecottages perceive these as major, expensive projects. Moreover, not all telecottages can take advantage of ISDN. The majority of municipalities in locations where communication is usually difficult, for example in the province of Norrland, have a well-functioning ISDN with up to 2 Mb transmission capacity. This means that if a telecottage is placed within a two kilometer radius of a telephone switching center, it can receive ISDN at a very reasonable cost.

All companies, whether urban or rural, have or will have a need to communicate. That is why they use the telephone and the fax today. These communications channels meet part of these needs but not all. Much can be said about communications, but it is undoubtedly the basis of all human interaction. Today, we are interacting at an unprecedented level and over longer distances than ever. The Swedish telecottage association of the future will consist of communications-willing and information-hungry telecottages, regardless of the industry that forms the basis of the telecottage.

Education and telecottages

One of the major needs of telecottages in Sweden is to provide educational courses and business development. This is not unique for telecottages, of course. In fact,

it is a rather common need in small companies. There are numerous knowledgeable and skilled telecottages with well-established operations that have suffered from great geographic distances. This has caused priorities to be placed in other areas.

Joint projects and telecottages

Reality has now caught up with visions, and new attempts to improve cooperation with municipalities are necessary. In the early stages, Swedish telecottages, with a few exceptions, have received little or no support from politicians and certain other local players. Now that communications technology and telelearning and teleworking opportunities are becoming available in most municipalities, we will try to initiate joint projects at the municipal level. The skills and expertise available in telecottages will be perfect in this context.

Swedish telecottages – What can we learn from international experience?

If we compare Swedish telecottages with telecottages in Australia or England, it is easy to see that they have learned from our mistakes in the initial stages, for example when it comes to establishment and the requirement for local political support. In Sweden, local populations have often been very positive – and continue to be – while we found it difficult to get political support. The consequences have been difficult, and some telecottages are still suffering from this. The fact that this process took place so rapidly in – two years (1988–1990) – in Sweden and that some telecottages were poorly planned is another factor. This is similar to any other development program: it requires leadership, entrepreneurial spirit and skills for an establishment to develop and be vital.

Another consequence that left its mark was the insufficient period of time that sponsors were involved. Once they left the bandwagon, the telecottages were left to fiend for themselves more or less, and I believe that this was a fatal mistake. These types of process of change take time, and there are numerous obstacles to overcome. Continued support in terms of developing skills, concrete commissions and the like would have undoubtedly provided the telecottages with another chance to live.

Our experience in the field has proved to be important to international development. As was stated previously, if the focus is on finding a good entrepreneur from the very beginning, then telecottages have a good chance of becoming self-supporting after a certain period. Some of the financial support can consist of providing work tasks, which would offer a greater possibility of surviving and developing in the future.

Sweden and Finland have the greatest experience in this field. There are major differences between the two countries, however, where conditions are concerned. In Finland, a broad cooperation was started between government and municipal service institutions to maintain service to the population, and this process turned to the telecottages for help. Why this has not been the case in Sweden could depend on a number of things, but I believe that one of the decisive factors has been the practical difficulty involved in coordinating government and municipal concerns.

Today, many small municipalities find this necessary, and I believe that this is an opportunity for telecottages to develop local cooperation.

Telelearning and telecottages

We have much to learn from the rest of the world regarding telelearning. There is a great deal that we can learn, and given today's technology it is no longer a question of costs but of political willingness. I maintain that this is an extremely crucial question for the future of rural areas and for women in particular.

Teleworking and telecottages

The global development currently underway is of great interest even in Sweden. Experience is similar in the different countries, but in Sweden we still have not realized this. In the US and England, this is much more of a common feature in everyday work. I believe that Sweden is about to witness a very rapid change in the labor market in the next few years. This will open up opportunities in many areas, especially for telecottages, which will actively participate in this process of change in many places.

The future and telecottages

As I see it, we are standing at a dividing line. Swedish telecottages will either continue to work nationally and risk that they will fall behind in terms of international skills and commercial experience or they will go out and seek sponsors to be able to stay abreast of development. I believe that we must participate, as we cannot afford to remain on the outside no more than international telecottages can afford to be without us.

The current trend is perfect for Swedish telecottages. We have gained a variety of experiences and expertise which will position us well for the internationalization that Sweden is facing. Our expertise is important to the local communities that we live in, and several of us are local advocates of modern technology and communications in conjunction with business activities. In 1994, Swedish telecottages will face decisive changes. They will involve the choice of strategies and goals, but for individual businessmen it will also be a question of responding to market signals. And these signals are clear about one point – rapid communications!

There is a clear need for financial support for projects, especially for educational programs and the development of the Stockholm operation. Several members will also have to replace their technical equipment, and both the association and the corporation are facing major decisions in this area. While it is always exciting to meet changes, the general opinion of telecottages is that 1994 will be a highly exciting year.

TELECOTTAGE '93

International Symposium

"Telecottages, Teleworking, Telelearning: Road to Rural Revival"

Telecottage '93 will be the first Telecottage symposium to be held in Australia and will be a land mark event. World leaders in telecottages, teleworking and telelearning will present their latest findings on the potential benefits for rural communities in developed and developing nations.

Telecottages are multipurpose work and learning centres established by rural and remote communities to provide:

- Distance working opportunities
- Access to distance education
- Local training
- Services to the local community
- Aid to rural adjustment
- Reduced social isolation

29 November-1 December 1993
Pan Pacific Hotel, Gold Coast, Queensland, Australia

Sponsors

Telecom Australia

Telecentre Program, Department of Primary Industries & Energy, Canberra

The Office of Rural Communities, Administrative Services Department, Queensland

In Conjunction With:
International Association of Community Tele-Service Centres (CTSC)

Conference Administrator: Winkler Marketing Services Pty Ltd,
P O Box 889, Kenmore, Queensland, 4069, Australia.
Telephone 07 878 3358 Fax 07 878 2689 (International +61 7)

KEY-NOTE SPEAKERS

A group of eminent international speakers in the field has been assembled and brought to Australia for the first time under the sponsorship of Telecom Australia, the Federal Department of Primary Industries and Energy and the Queensland Government.

Gil Gordon is considered by many to be the most widely known and respected telecommuting authority in the world. Since 1984, he has published the industry newsletter, *Telecommuting Review*, and has also co-authored the book *Telecommuting: How To Make It Work For You And Your Company*. He has consulted widely, spoken to business and government audiences throughout the US and around the world and has been widely quoted in the business and professional press.

Wendy Spinks *is one of the founding members of the* International Telework Forum and the Satellite Office Association in Japan. She is an Australian who has been *working in Tokyo for more than ten years. She is* currently attached to the Institute for Economic & Financial Research, under the Japanese Ministry of *Finance. Wendy has intimate knowledge of the* development of telecommuting in Japan, especially satellite offices and resort offices.

Ann Moffatt is Principal Executive Officer of Technology Solutions Pty Ltd, a company which she established in 1993. Ann has wide experience of the information technology industry in both the United Kingdom and Australia.

Professor Jack Wood pioneered research into telecommuting applications in Australia and has spoken at many international forums.

Virginia Ostendorf is President of a large teleconferencing and distance education publishing company in the U.S. and is a well known consultant and teletrainer. She has received several national awards for her books and has written on new technology for more than a dozen magazines. She has recently been listed in the Who's Who of American Women

Adrian Rawlings has been extensively involved in distance learning at the Open University in the United Kingdom and has recently completed a project for the European Community DELTA program on future strategies for distance learning in Europe

Dr Roy Lundin is a Senior Lecturer at the Queensland University of Technology and recently led a project investigating the future directions for open learning in Australia.

Lars Qvortrup lectures at Odense University in Denmark and has vast experience in telematics and telecottages in Scandinavia and Europe.

Lars Engvall is President of the International Association of Community Tele-Service Centres (CTSC), and has wide experience in the establishment of telecottages in Europe, South America and Africa.

Alan Denbigh is Executive Director of the British Telecottage Association and has been the telecottage and telework adviser to Britain's Rural Development Commission.

BENEFITS OF ATTENDING

Telecottage '93 promises to be an outstanding forum for discussion of the latest developments in Teleworking, Telelearning and Telecottages.

Delegates can hope to:

- *Find out how Telecottages can benefit their* communities
- Meet and network with world experts in the Teleworking and Telelearning community
- Learn how to plan and establish a Telecottage
- Hear the current government policies and plans for Telecottages
- Discuss Telecottage case studies from around the world.

AUSTRALIA'S GOLD COAST

The Gold Coast is one of Australia's premier tourist locations and is a favoured convention centre.

It has a warm climate with almost 300 days of sunshine each year. The range of natural attractions is unsurpassed. More than twenty patrolled surfing beaches are the backdrop to sailing, boating and fishing. The unspoiled hinterland with sub-tropical rain forests is just an hour from the city centre.

Koalas can be cuddled, kangaroos and colourful wild lorikeets hand-fed. Theme parks and golf courses rival the world's best.

Sunday 28 November 1993

9.00 am	Optional bus tour to Byron Bay and visit to Australia's third Telecottage (Prior booking required)
7.00 pm	Evening cocktail reception to welcome delegates

Monday 29 November 1993

8.30 am	Registration
9.00 am	Welcome by the Chairman Opening Address by the Hon. Simon Crean, MP, Minister for Primary Industries and Energy, Canberra
9.30 am	**Keynote Address: Teleworking in Rural Areas and Global Trends** Mr Gil Gordon
10.30 am	Morning Tea
11.00 am	**Teleworking Case Studies:** **Teleworking in Japan: Resort Offices** Ms Wendy Spinks, International Telework Forum **Telework in Europe: The F.I. Experiment** Ms Ann Moffatt, former Director, F.I. International **Teleworking in Australia** Prof Jack Wood, University of Sydney
12.15 pm	**Question Time – Panel**
12.45 pm	Lunch
2.00 pm	**Keynote Address: Telelearning in Rural Areas** Ms Virginia Ostendorf
2.30 pm	**Telelearning in Europe** Mr Adrian Rawlings, Open University, UK
3.00 pm	**Telelearning in Asia/Pacific Rim** Speaker to be advised
3.30 pm	Afternoon Tea
4.00 pm	**Telelearning in Australia** Dr Roy Lundin, Queensland University of Technology
4.30 pm	**Question Time – Panel**
5.00 pm	**Close**
7.30 pm	Symposium Dinner

Tuesday 30 November 1993

9.00 am	Address by Hon. Tom Burns, MLA, Queensland Deputy Premier and Minister for Rural Communities
9.30 am	**Telecottages and Rural Revival** Mr Lars Qvortrup, Secretary, CTSC
10.00 am	**Community Teleservice Centres in Developing Countries** Mr Lars Engvall, President, CTSC
10.30 am	Morning Tea
11.00 am	**Telecottage Case Studies:** **Sweden:** Ms Lillian Holloway, Swedish Telecottage Association **United Kingdom:** Mr Alan Denbigh **Finland:** Ms Mirja Lauronen, Finnish Telecottage Association
12.30 pm	Lunch, Address by Mr David Oertle, Managing Director, Consumer Business Unit, Telecom Australia
2.00 pm	**North America:** Mr Kris Kimel, President, Kentucky Science & Technology Council Inc **Brazil:** Ms Helena Fischer & Mr Joao Mello Da Silva, Telebras **Australia:** Mr Tom Cass, Telecom Australia & Mr Ian Crellin, Dept of Primary Industries and Energy
3.30 pm	Afternoon Tea
4.00 pm	**Question Time – Panel**
4.30 pm	**Proposal:** "Formation of an Australian Co-operative Telecottage Organisation"
5.00 pm	**Summary**
5.30 pm	**Close**
Evening	Informal dining options available

Wednesday 1 December 1993

Optional Workshops 9.00 am to 12.30 pm

1. **Planning, Implementation and Management of a successful Telecottage**
   Chair: Ms Gay Short, Western Australia Open Learning Network & Telecentres
2. **Inter/Intra-Governmental Policy Issues**
   Chair: Mr Kenneth Moore, Rural Division, Federal Department of Primary Industries and Energy
3. **Technology For Teleworking, Telelearning and Telecottages in Rural Areas – Today and Tomorrow**
   Chair: Mr Anton Donker, Queensland Department of Administrative Services

12.30 pm	Light Lunch
2.00 - 4.00 pm	**International Association of Community Tele-Service Centres Open Forum** Theme: International Co-operation and Networking

The organisers reserve the right to alter the program without notice to registrants.

Registration Form

Please print clearly – photocopy for more delegates

Preferred Title _____

Surname _____

Preferred First Name _____

Position _____

Organisation _____

Address _____

_____ Postcode/Zip _____

Country _____

Telephone _____ Fax _____

Please register the above delegate for:

☐ **Telecottage '93 Symposium**

Sunday – Cocktail Reception
Monday and Tuesday – attendance at the two day symposium, conference papers, morning and afternoon teas and luncheons; Early Bird Offer (Register by 31 August 1993) _____ $395

Normal Fee (From 1 September 1993) _____ $495

☐ **Conference Dinner**, Monday evening

☐ Single _____ $50

☐ Double _____ $100

☐ **Day Tour to Byron Bay**, Sunday – tour and visit to the Byron Bay Telecottage, refreshments and luncheon _____ $80

☐ **Workshop**, Wednesday – participation at one of three workshops, morning tea and luncheon ___ $100

Please indicate your most likely choice of workshop:

☐ Planning and Managing a Successful Telecottage

☐ Inter/Intra-Governmental Policy Issues

☐ Technology for Teleworking, Telelearning and Telecottages

Total Purchase $ _____

Conference Payment: ☐ Cheque ☐ Or charge my

☐ Bankcard ☐ Visacard ☐ Mastercard

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WHO SHOULD ATTEND:

- Representatives of Federal, State and Local Government involved in policy development, job creation and training
- People involved in community social development activities
- Educators involved in distance education and open learning
- Academics interested in social change
- Telecommunications and information industry consultants
- Equipment suppliers
- Human resources practitioners
- Business people interested in training and productivity improvement
- Future analysts and strategic planners

REGISTRATION & ENQUIRIES

✆ **Telephone** 07 878 3358

🖷 **Fax** 07 878 2689 (International: + 61 7)

✉ **Mail** Return the registration form with payment in Australian $ to: Winkler Marketing Services Pty Ltd P O Box 889 Kenmore Queensland 4069 Australia

Payment: All payments are to be made in Australian $. Please include a cheque, or for overseas delegates a bank draft, payable to "Telecottage '93 Symposium" or complete the credit card payment details on the registration form.

Conference Language: English

Conference Address:
Pan Pacific Hotel, 81 Surf Parade, Broadbeach, Gold Coast, Queensland 4218 Australia
Telephone 075 92 2250 Fax 075 92 3747
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Cancellations: If you are unable to attend, a substitute delegate is always welcome. Alternatively, a full refund will be made for cancellations received in writing two weeks before the conference. Within two weeks no refunds are applicable.

Accommodation and Travel: All travel and accommodation arrangements are the delegates personal responsibility. Special conference accommodation packages at the Pan Pacific Hotel are:
Single or Twin/Double room $115.00 per night

To arrange the above accommodation package or alternatives, please complete the enclosed form and return to the accommodation organiser – Ozaccom Pty Ltd.

ECTF Brochure V. 940407

EC TELEWORK / TELEMATICS FORUM ECTF

Under the auspices of the European Commission,DGXIII, formed as an independent non-profit association, managed by the ECTF European Economic Interest Grouping

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What is the ECTF ?

The European Community Telework / Telematics Forum is a platform across European Union member states for concertation on telework and related telematics applications. The ECTF initiates actions to encourage the promotion of teleworking and the exchange and dissemination of information between telework projects and organisations interested in telework by means of seminars, conferences, publications and electronic library &conferencing within a dedicated "forum" on the international CompuServe host system.

The ECTF is an open forum in which over 3000 organisations and individuals representing European member states, regional governments, telephone operators and equipment manufacturers and many other private sector organisations have participated since it was founded in early 1992.

Concertation and dissemination actions are implemented through the network of ECTF Coordinators covering European countries in liaison with the USA and elsewhere globally.

History:

The ECTF was launched under the auspices of the Telematics Programme of the European Commission, DGXIII, in January 1992 and has been formed as an independent non-profit association managed by a consortium of leading international telework experts: the Management Group of the ECTF European Economic Interest Grouping.

Mission:

The mission of the ECTF is to become a leading European Think Tank on telework and its implications for employment creation, business competitiveness and restructuring, economic growth and cooperation, and the improvement of quality of life generally in the emerging information society.

The ECTF is concerned with telework implementation within Europe utilising existing state-of -the-art technology, but, looking ahead, that telework should be integrated into, and comprise a main application and rationale in the deployment of, global "Electronic Information Superhighways" and be stimulated thereby, in liaison with similar initiatives worldwide.

A key goal in this prospect is the generation of new kinds of jobs in new kinds of businesses, particularly new small businesses, and the enhancement of existing enterprises.

The ECTF is expanding its concertation and networking activities, and thematic coverage, within Europe and especially in Eastern and Central European countries.

The ECTF is establishing a world class library and resource & training base at the ECTF International Secretariat in Madrid in partnership with the Spanish Universities Enterprise Foundation.

Aims and Objectives:

To stimulate telework development and implementation throughout Europe - including Eastern and Central European countries.

To address key policy and strategic issues on organisational competitiveness, and to overcome barriers to telework.

To explore and promote new kinds of business opportunities, new working practices, and new approaches in economic revitalisation and job creation as enabled by telematics applications.

To instigate and/or promote the establishment of Regional Telework Forums for local action as well as European-wide thematic Focus Groups and ECTF Round tables as regional think tanks and to assist in maintaining liaison among these groupings.

To provide training and other resource information on implementing telework programmes - including referrals to other centres of expertise.

To promote the establishment of key telework demonstration centres to function as show cases and test beds for existing and prospective advanced multi-media communications. These demonstration centres may take the form of "Multimedia Laboratories" or entire new or revitalised "Wired Communities".

What Does the ECTF Do ?

Arranges or instigates Regional Telework Forums by providing Guidelines with reference to key resources; initiates or assists regional seminars and conferences,

small workshops, thematic Focus Groups and Roundtables; promotes exchange visits; and develops and delivers telework training sessions. These concertation activities are generally initiated and sponsored by organisations in the respective EU member states. The role of the ECTF is primarily to encourage and advise and provide networking and contact services for these concertation actions.

Publishes a newsletter - "ECTF News", and promotes on-going debate and discussion, events notices, electronic conferencing and access to key documents on the ECTF CompuServe electronic forum.

Promotes and disseminates results of EC and national R&D actions in telework as well as "Calls for Proposals" for EC and national funding.

Advises on forming trans-european consortia for joint ventures and R&D projects, and on the preparation of proposals, business and marketing plans.

Advises the European Commission on key policy and strategic issues on promoting the take-up of telework and investment stimulation -particularly within the context of the EC White Paper: *Growth, Competitiveness, Employment: The Challenges and Ways Forward Into The21st Century* . The White Paper is available directly from the EC Office of Publications, Luxembourg: F: 352 48 85 73 or 48 68 17.

Who Can Join ?

The ECTF is open to any individual or public or private organisation interested in the development, stimulation, and implementation of telework and the development of enabling methodologies and technologies.

How Do I Join?

Simply by filling in the attached application form in this brochure or in "ECTF News".

What are the Benefits of Membership ?

* A year's subscription to "ECTF News".

* Special discounts at ECTF events and training sessions.

* Access to the ECTF forum on CompuServe - with initial usage discount.

* Advice and referral to centres of expertise on telework, key EC and national R&D projects, documents and publications, case studies and training.

* Advice on participation in EC and nationally funded R&D actions.

* Opportunity to provide feedback and recommendations to the European Commission on policy and strategic issues and up-coming R&D actions.

How Do I Become an ECTF Coordinator or Focus Group Leader ?

Applications and nominations for positions as ECTF Coordinators and/or Focus Group leaders should be sent to the ECTF International Secretariat . A personal and company CV, concertation action plans, and/or telework issue and approach for a Focus Group, and indications of having secured local or regional support to the cover costs of proposed concertation actions should be provided.

There is no funding from the ECTF for ECTF Coordinators or Focus Group Leaders. Regional concertation actions are sponsored by local organisations, telephone operators, and/or equipment manufacturers. Final decisions, open to review, as to appointments as ECTF Coordinators and Focus Group Leaders are made by the ECTF Management Group.

Application Form:

First Name:

Last Name:

Position:

Company / Organisation:

Division / Department:

Address:

Postcode:

Country

Telephone: Fax: E-mail:

Annual Membership Fees:

The following fee schedule applies in all countries - except those in Eastern and Central Europe and Developing Countries, in which ECTF membership is currently being offered without fee.

Individual or Small Business (<10 employees):
100 ecu / year

Larger Companies / Organisations (>10 employees):
200 ecu / year

Sponsoring Membership:
..... ecu / year (>200 ecu / year)

An invoice will be sent on receipt of applications for membership and annually thereafter.

To Join CompuServe - Contact CompuServe Directly:

UK: T: 44 272 255111
France: T: 33 1 47 14 21 60
Germany: T: 49 89 66 55 0111

Apply for ECTF initial free usage and sign up kit. Having logged onto CompuServe, select the ECTF forum by the command: GO: ECTF.

CTSC — The International Association of Community TeleService Centers

CTSC was established by a number of people with vast experience in technological cooperation within the field of telecommunications and by researchers who have studied how information technology has influenced society in general from a social and economic perspective, but with an emphasis on developing countries.

The association was established in 1989 and is headquartered in Nice, France. The current board, which is elected for a four-year period between 1993 and 1996, comes from different parts of the world; Brazil, Portugal, the Congo, Denmark, France, Germany, Greece, Italy, Norway, Poland, Sweden and the US. Several of the members are actively involved in developing different forms of telecottages in their own countries and also work spreading information about CTSC's concept in various national and international organizations.

The purpose of the association is to provide service to institutions, organizations, associations, foundations and other groups with similar social, humanitarian, educational, scientific and cultural goals by studying, supporting and creating telecottages. The aim is to promote the development of teleservice in developing countries and other countries. The association works in three areas:

- Through studies and research in developing countries, establishing telecottages that are adapted to local conditions and based on local needs.
- Through developing and supplying educational programs to manage and operate telecottages.
- Through conducting these studies, contributing to the social, economic and administrative development in the region (country) in question.

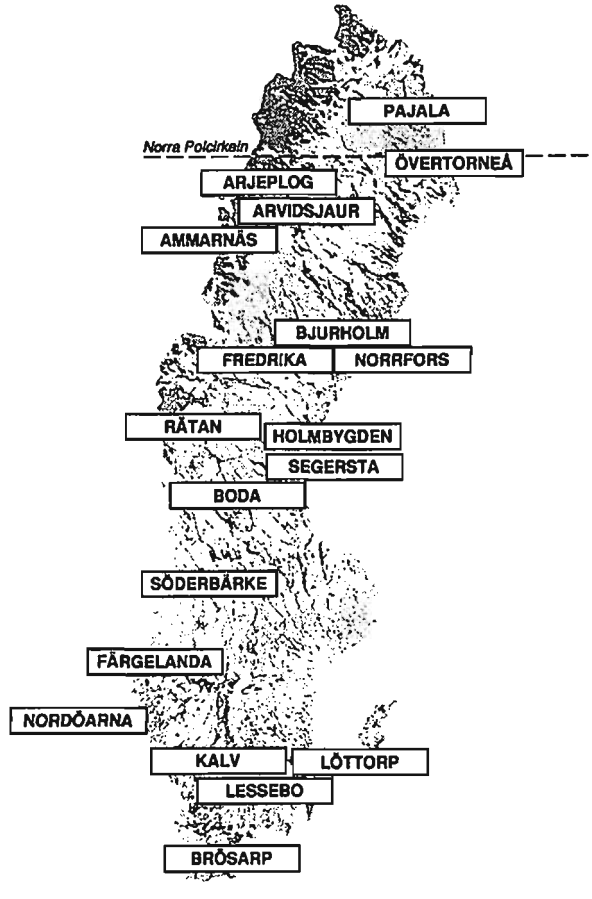
If you would like to find out more about CTSC International, please write or fax to:

CTSC International
44, avenue de la Marne
Batiment "B"
F-06100 NICE, France

Fax: +33-93 81 50 75

Telecottages Sweden

TC-S



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TELDOK was initiated in 1980 by the Board of Telia AB, then Swedish Telecom, to *facilitate early and easy-to-read documentation on the use of telecommunicationg information systems.*

TELDOK aims at documenting, as early as possible, working applications of new information systems and arranging study trips and seminars directly related to this task.

TELDOK's aims include to...

- Document, as early as possible, applications of new telecommunicating information systems at work
- Publish, distribute, and—where needed—translate to Swedish, while comparing to the Swedish situation, information on the use of new telecommunications systems at work
- Arrange study trips and seminars directly related to the preparation and dissemination of information pertaining to practical applications of telecommunicating information systems at work

TELDOK activities are coordinated by an Editorial Board with wide representation from the communications technology corporate user community, research, organizations with an interest in IT use, government authorities, suppliers, and Telia AB, Sweden's largest telecommunications operator.

TELDOK has issued over one hundred publications, mostly in Swedish, distributed at no cost to over 3,000 preofessionals in Sweden and the Nordic countries.

Recent TELDOK publications partly or completely in English include:

TELDOK Report

90E Telecottages, teleworking and telelearning. December 1994
86E The TELDOK Yearbook 1994. May 1994
71 CSCW (Groupware)—A Promise Soon to be Realized? March 1992

Via TELDOK

21 Information technology, social fabric. May 1993

These and other TELDOK publications may be ordered free of charge from DirektSvar—call +46-8-23 00 00 or FAX to +46-8-10 13 27.

The TELDOK editorial Board welcomes new ideas for projects to study and document practical applications of new telecommunicating information systerms.

To contact the Editorial Board, send a *FAX* to +46-8-713 3588, Bertil Thorngren or P G Holmlov, Telia AB HQ, Corporate Strategy, or to +46-8-32 65 24, Anna Karlstedt, IMIT, Stockholm School of Economics; or send an *email* message to bertil.thorngren@hq..telia.se or pg.holmlov@hq.telia.se.