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# **The Health and Safety Issues for Teleworkers in the European Union**

## **Consolidated Report**

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WP/97/29/EN



**EUROPEAN FOUNDATION**  
**for the Improvement of Living and Working Conditions**

# **THE SOCIAL DIMENSIONS OF TELEWORK:**

## **The health and safety issues for teleworkers in the European Union**

Consolidated Report

by

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### **SELECTED BIBLIOGRAPHY**

**Annex 1: Technical Annex**

**Annex 2: Cases by Korte (Empirica)**

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## 0. INTRODUCTION

This report is part of a series of three reports on the social dimensions of telework. The reports should however be readable on its own. Therefore some introductory parts of this report are common to the other two reports, those on labour law and social security positions of teleworker (see also Blanpain 1995, Pennings 1995).

### *Labour market changes*

Telework has many faces. On the one hand, some categories of workers have traditionally worked part of the week at home, such as, for instance, university professors. The fact that telecommunication is now available is not a radical change.

Newer forms of work include telework in various forms and conditions: home based typing; telebooking-sales and call centre functions; design from home; telecottages; telecentres; consultancy from home; special needs group (e.g. the disabled) integration; translators from home; maintenance via teleworking; mobile sales and a virtual telework organisation.<sup>1</sup> Some of this work is done by categories of workers other than that mentioned first. It may mean that they now have an opportunity to do work which they could not do before, because, for instance, their mobility is seriously reduced, such as in the case of persons caring for another person and for the disabled.

Another category of workers may exist of persons who are self-employed, or even those who become self-employed as they expect to be able to earn more as a self-employed person working with telecommunication.

In the future telework may become of increasingly more importance as it has serious advantages for persons who want to have a particular task done. Telework reduces the costs of office space.

### *Driving forces*

There are many driving forces behind telework, among others the technological revolution in telecommunications. A very relevant aspect, is, however, the wish of increased flexibility, which is partly at least to the benefit of the employer or contractor.

Enterprises may ask a person not engaged under a contract of employment to do a particular task. This may be very cost efficient. In many parts of the world enterprises do their utmost best to realize a 'lean production'. Telework fits well with this development. It can therefore be seen as an integral part of the fundamental changes, which characterise at present the labour markets' structure of work and rationalization of developed post-industrial societies. These changes are as dramatic as the shift which took place last century, moving people from an agricultural society to an industrial society, when agricultural labourers were pushed from the field and the barn to the enterprise as workers and dwellers of cities. In the future a lot of work will be done by people operating in various, be it short and consecutive projects, in which they will work in a rather independent way with for many, but not for all, a lot of room for initiative and creativity.

Flexibility may, however, also be to the advantage of the teleworker. For the latter advantages may exist with respect to the place of work, working time, pay and status, social coverage,

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<sup>1</sup> Korte, W.B., *Descriptions of typical teleworking situations*, 1995. Mimeo.

possibly diminishing costs regarding office space, increased productivity, less travel, the growth of the potential for networking even across boundaries and the like.

***The approach to teleworkers in this report (see Pennings 1995)***

These developments of the labour market and structure of work may mean that in the future the borderlines between the categories described above, which was not an exhaustive enumeration, will disappear. For this reason this project is an *exploration* of the legal aspects of teleworking in general. We will not restrict ourselves to a particular group of persons working with telecommunications, as this might lead us to overlook more general developments and problems. In the final section we will analyze which problems are specific for (some categories of) teleworkers.

In a study on telework in Britain, researchers from Newcastle University distinguished between five types of teleworking:

- electronic homeworking: the most common form of telework, connected to work from home through a modem and other communications equipment;
- telecottages and neighbourhood centres: shared multimedia facilities, close to houses, reducing costs, favoured by development agencies;
- mobile or nomadic working: teleworkers who operate both at home and on the road;
- group or team work: made possible by advances in technology to facilitate a 'virtual team' located at any distance from each other;
- call-centres and remote offices: companies which have begun production functions, creating electronic remote offices to handle mostly back office functions.

***Legal tools***

One thing, however, is sure, namely that the traditional juridical tools which were developed over almost a century and contained in individual and collective labour of the Member States of the European Union and of the Union itself, are not self-evidently appropriate to deal with the newer realities in the world of work. The question arises whether the labour norms, developed to deal with a Taylorised situation are adequate to cope with the problems, which go along with the present developments of telework.

Our present law arsenal, with some nuances in a number of countries, divides the world of labour into two categories of people engaged in work: employees and self-employed. The question is whether that distinction is appropriate to deal with the new realities and the challenges which these developments entail.

***Central questions as regards health and safety***

The aim of this study on health and safety of teleworkers is to provide an overview of

*-the rules and regulations governing occupational health and safety aspects of teleworking in the members states*

*-the main issues regarding occupational health and safety of teleworkers in the member states as coming from existing research, statistics, case studies or literature. The report will identify possible risks to the health and safety of teleworkers and the existence (or the lack or the need) of legal provisions to cover these risks.*

This report is based on fourteen country reports and discussions in the rapporteurs meetings. The proposed list of content of the national reports is presented in annex 1. Given the limits of the scope of this report, it gives an overview of the items of the list concentrating on some key issues defined in the rapporteurs' meetings. Amendments and additional comments to the country reports were asked focusing on the specificity of issues in relation with type of telework, job profile and job content.

As regards some key topics discussed in the meeting, national reporters were also asked the following summarizing questions: Are there key issues specified to telework? Are there issues relevant to all forms of telework? Are there specific measures to be taken? Summary of these questions is presented in the conclusion part of the report.

# 1. DEFINITION OF TELEWORK

## 1.1 National definitions in health and safety study

Telework is, as most national reporters underline, *not* a legal category. This means that we have, as far as the subject of this general report is concerned, to rely on a *functional* definition only. That definition should be broad enough to embrace the various possibilities of telework, especially those where newer work situations emerge.

Neither is there a definition of telework in social security in the various Member States. Probably there never will be a separate legal category of teleworkers, as many different groups of workers use telecommunications on a place other than the traditional work place.

The national reporters tried to find a definition in the national literature or applied the definition which was given at the start of the project, i.e. that a teleworker is a person working on a place which is not the employer's premises with means of telecommunication.

Many rapporteurs used the broad definition of telework discussed in expert meeting in Dublin, without a strict criteria of time and place of work. Some specifications and estimations of the amount of teleworkers were presented. It should be noted that the country figures may differ between three consolidated reports, if different data sources have been used.

The **Belgian** report describes formal tele(home)projects under the headings of telehomework, tele-office work, district offices, and telework, without formally defining them. Also tele-extra-hours, incidental telehomework and satellite offices are mentioned. Need for clearer definitions of "telework" and "telehomework" is expressed from the employee and trade union side.

By the **Danish** rapporteur, telework is usually defined as occupational work carried out in the home of the employee by means of a computer which is connected to a network where the host computer usually is placed in the firm of the employer. Slightly different category is occupational work carried out in the home of the employee by means of a computer no matter if it is connected to a computer network. These definitions and the report do not cover self-employed persons.

In **Finland**, a wide definition of telework has been adopted. The main focus of the cases presented is on employees who are working from home electronically on at least for one day a week. The cases are describing the situation of teleworkers in employee status. Research data on other types of telework is lacking, like in most other countries.

The **French** report takes as a starting point the following definition: 'Telework is a way of organising and/or carrying out a job in an everyday and main capacity as far as the principal elements of the work itself are concerned, under the following cumulative conditions:

- on the one hand, the work is carried out:
  - at distance, i.e. outside the immediate boundaries of the location where the result of the work is expected.
  - where there is no physical possibility for the management of constantly overseeing the performance of teleworkers.

- on the other hand, the work is carried out with computing and telecommunications tools, and necessarily implies transmission by one or more telecommunications techniques'.

The French definition stresses the new organisation at the core of telework. The report lists the different types of telework which exist in France (freelancers, groupware users, travelling executives, teleservice companies, offshore work, telecentres, home-based workers). The report has given most attention to the homebased telework. The reasons given for this are e.g. that it appears that health and safety regulations for freelance teleworkers are the same as for conventional freelancers. Although groupware work in itself is a new type of distance work, working conditions and regulations have only been marginally affected if at all. Travelling executives have long been used to working in this way and only communication with their companies has changed. As for health and safety regulations concerning offshore work, they are largely beyond the scope of this report. Lastly, the norms and practices for telework in telecentres or for teleservice companies are very similar to those relating to small companies in the service sector.

The *German* rapporteur states that a clear-cut definition of teleworking has as yet failed to emerge. A quite diversity range of terminology is currently in use: homebased teleworking, remote work, the home office, the information technology supported home workstation, electronic home working, the satellite office, neighbourhood office or work telecentre. The name 'teleworking' is an umbrella term covering all the various ways teleworking can be organized.

For the purpose of the study, the *Greek* report defines telework as "Work carried out, for a significant portion of time, far from the employer's main premises and requires the use of telematics".

Broad scope of definitions and types of telework is presented also in the reports from *Ireland and the Netherlands*. The *Dutch* rapporteur analyzes the definition of telework in relation to homework and to the scope of Working Environment Act.

Some state reports (e.g. *Germany, Ireland, Finland*) are giving different figures of teleworking, depending on how narrow or broad definition have been used in the sources of the statistics.

As regards place of work, the *Italian* report mentions also teleworking carried out at third parties' premises, namely the clients of the enterprise on behalf of which workers are actually working, for instance in matter of advice or consulting concerning administration, finance, fiscal issues, etc. However, in every case the concept of telework implies the telematic-aided transmission of an organized set of data (which represents the result of the work - e.g. a document) to an employer, or to a user in general, placed in a remote location. This requires the availability both of an hardware and of a software unit connected by a telematic network.

In *Portuguese* report, the following definition is accepted: work performed outside the company's main place of business, using telecommunications technology such as telephone, fax, computers or other such technology using VDU, which depends on companies (but outside their facilities) or which is performed by a self-employed worker.

Like most reports, also *Spanish* is focused on home-based teleworking. Also telecentres and satellite offices are mentioned.

In *Sweden* like in other countries, too, telework and teleworkers have not been given any statutory definitions. Various studies for various purposes have been carried out regarding - "telework" - "distance work" - "flexiwork" - with different, non-legal definitions. In order to make this study comparable with the others by "Telework" is meant work involving computers and telecommunications in a way which is independent from a fixed traditional location. "Teleworker" is a person performing such work, either as employee or as self-employed."

The *United Kingdom* -rapporteur adopts as a starting point two main types of teleworkers reported in empirical studies in the UK by Huws: 1. Employees: Teleworkers similar to those in Example 11 in Annex 2 ( see examples of Korte in Annex 2), usually management or professional staff who are full-time employees with employee status and are fully integrated into the corporate culture, participating in training and staff development programmes and typically spending one to two days a week on the employers premises.

2. Non-employees: Teleworkers similar to those in Example 10 in Annex 2., who are involved in a small number of extensive teleworking schemes, usually self-employed staff, typically engaged in data entry, typing, translation, editorial or research work. These teleworkers are more likely to work part-time, to be paid by results and to spend virtually all their working time at home.

## 1.2 Analysis of the national definitions (according to Pennings 1995)

In most definitions given, the national reporters of the three study groups retain two elements, namely:

- (1) the place of work
- (2) the use of telecommunication.

### *ad 1. The location.*

The place of work is somewhere other than the traditional work place of the employer. Working at the home of the teleworker is certainly covered. As a matter of fact, the data available seem to indicate that the majority of teleworkers work at home. Telework can, however, also be performed in an employer-independent telecottage or telecentre. Telework also covers working in hotels, on planes, etc.

Working at a satellite, organised by the employer, thus under the control of the employer, is for obvious reasons not telework, since a satellite belongs to the premises of the employer. The same goes for forms of work like teledisponibility<sup>2</sup>, teleconsultants or tele-actors.<sup>3</sup>

It is disputed whether there should be an indication of the amount of time spent as teleworker as compared to working on the employer's premises. The amount of time is relevant to some questions only. If we want to know how many persons are teleworkers, it is important to give a definition in terms of time spent working away from the employer's premises, while using telecommunications. For other questions the amount of time is less relevant. If we want to know the social security position it is important to make an inventarisation if the position of workers at home regardless of the time they spend working at home with telecommunications.

An element of the definition is also mentioned that the location is to be *freely* chosen by the teleworker or can be a condition of the individual contract (of employment) to be concluded between parties. If there are, however, persons who had no choice to become teleworker, it

<sup>2</sup> Employees, who can be reached by telecommunications (alphanpage, car phone, or at home for urgencies).

<sup>3</sup> Employees who can be reached for consultation by clients, e.g. in banks, especially in the evenings and on Saturdays, giving additional flexibility regarding the working time for the employer.

would not be appropriate not to describe that category. That element of the definition shows more a desirable situation, but is not suitable as a definition for making an analysis. For that reason we leave that part out.

*ad 2. The use of telecommunication*

The second element retained in the definition concerns the technology used by the teleworker. Teleworking involves the use of telecommunications: computer, fax, telephone, satellite, disks, CD roms. By means of these instruments there is a telecommunicated exchanges of words, designs and the like. It is different from traditional (home)work as it does not produce manufactured goods like furniture, textiles or even books. Still, from the Greek report in social security study we learnt that some types may be called telework, which is in between manual work and transfer of bits. This is the case of a person who uses the computer to manufacture machines etc. at home.

The nature of telework done varies enormously, ranging from work of a very low level and rather repetitive, like data-entry jobs to contributions of the highest/creative level and thus having the most added value, like in the case of research, development, consultancy, arts and so on.

### 1.3 The ILO and homework.

At this moment, the ILO is working on a convention on homework. In the reports which are made in order to draft this convention, a lot of information on homework is given. In the draft convention it is proposed to define 'homeworker' as a person who in his or her home or in other premises of his or her own choice, other than the workplace of the employer, carries out work for remuneration which results in a product of service as specified by the employer, irrespective of who provides the equipment, materials or other inputs used, as long as this person does not have the degree of autonomy and of economic independence necessary to be considered an independent worker under laws, regulations or court decisions. In the report of professor Blanpain the ILO-reports are quoted at length. We restrict ourselves to mentioning that the ILO definition of homeworker is:

- (1) limited to employees, and does not cover self-employed persons;
- (2) includes teleworkers as well as other employees, working at a distance, also the traditional homeworkers.

This means that this definition is both smaller and broader than we need and it is therefore not appropriate to define teleworkers. From the ILO report it appears that some Member States, such as the International Ladies Garments Workers' union (Canada), the Danish Employers Confederation, France, and the United Kingdom, criticize the ILO for not paying attention to teleworking.

### 1.4 Conclusion

Both elements, constituting telework, namely the location of work and the use of the telecommunication and technology, need to go together. Indeed, employees who work exclusively or mainly on the premises of the employer, using telecommunication are not looked upon as teleworkers (according to Pennings). On the other hand the use of telecommunications is crucial in our definition.

On the basis of these considerations we use the following (functional) definition of telework (Blanpain 1995):

***telework is the work performed by a person (employee, self-employed, homeworker.) mainly or for an important part of the time, at (a) location(s) other than the traditional workplace for an employer or a client, involving the use of telecommunications as a central and essential feature of the work.***

## 2. THE PHYSICAL SETTING

- 2.1 Adequacy of the work environment (work station, environmental factors, software design)
- 2.2 Adequacy including safety of equipment (choice, maintenance)

In this section both guidelines and actual situation of the physical setting is described.

In **Belgium**, specific standards and regulations concerning the physical factors are to be found in the General regulations for labour protection (ARAB). It applies to all those who engage labourers according to an employment agreement and to all workers themselves, including the tele(home)workers. The employer is obliged to take all necessary material safety measures for the workers against all demonstrable risks inherent to their labour. By Royal Decree of the 27th of August 1993 concerning working with visual display apparatus the European Directive 90/270/EEG of the 29th of May 1990 dealing with the minimum measures in relation to safety and health in working with visual displays is transformed into Belgian legislation.

Teleworkers have an office as work environment. Most of the telehomeworkers have reserved a separate room as working space. The disposal of a separate working space seems to be necessary in order to be able to work quietly and to create a clear division between work and family life. In the contract between ABB (insurance company) and the telehomeworkers it is even mentioned that the telehomeworkers should dispose of a separate space in order to be allowed to do telework. ABB demands that the telehomeworkers should engage themselves to take care of sufficient lighting, air conditioning and heating. Beforehand the enterprise checked whether there was a suitable working space available in the house. When a teleworker works partly at home and partly at the office, the situation can occur that one keeps a personal office in the enterprise or that a joint office is at the disposal of all telehomeworkers, also called a changing office. In the last case, the employee no longer has a space of his own which is not always agreeable.

Not all the regulations mentioned in the ARAB are applicable to the work environment of telehomeworkers. It is for instance very difficult and not logical to apply in the case of telehomework such rules as: separate toilets, pictogrammes should showing escape routes, a refectory which should meet with the hygienic regulations. In the contract of ABB with the employee it is stipulated that the safety officer of the enterprise will check, case by case, the workrooms at home. A description of these rooms is made and put down in a report.

In **Denmark**, the general terms concerning the use of screen terminals can be found in the government order concerning work with screen terminals (no. 1108 of 15 December 1992). Section 5 of the government order refers to the annex of the order in which the specific demands are stated. The report states that at present parts of the government order concerning screen terminals, work station design, environmental factors and software design is not valid for occupational work in one's own home.

It is the responsibility of the employer that the screen terminals comply with the above mentioned demands and the standard of the screen terminals are maintained. The demands are not valid for work in private homes. In the report, some data concerning occupational computer home workers (n=16) from the 1990 Survey of Work Environment and Health in Danish Employees have been presented.

In most cases described in the *Finnish* report, the employers take the technical responsibility for the maintenance of work stations. However, the setting up of work stations and working environment (desks, chairs, lightning, ventilation) at home is mainly on the responsibility of the teleworkers. Majority of teleworkers have work stations also at the office, which means that they have basic knowledge and experience of the ergonomic recommendations and guidelines. This depends generally on how the employers have organized the working conditions. In the cases referred, the teleworkers are using the standard software used in their companies. The safety use and costs of equipment are specified either orally or in writing.

The *French* rapporteur states that the definition of a telework place and the regulations which apply to it is of central concern. In professional practice, nothing particular has been foreseen on this subject. Certain travelling teleworkers could, in fact, telework in their hotel rooms, on the road etc. However, the majority of companies recommend to homebased teleworkers that a room be turned into an office that is cut off from family life and can be locked so that people who are not employed by the company do not enter that room, although this is not absolutely necessary.

The majority of companies have equipment and electricity installed by professionally qualified staff who are recommended and authorized by the company. The work station is installed in accordance with the norms applying to administrative screen work. As regards environmental factors, heat from the work station equipment - in particular computers or printers - must also be taken into account. Because heat from computers tends to dry the air, teleworkers must, for their own comfort and the good working order of their equipment, check the hygrometric level of their offices. Suitable soundproofing is necessary, particularly for telephone transmissions.

The 14 May 1991 legislation states that software must respect ergonomic principles and be adapted to the required task as well as the user's level of knowledge and experience. In France, the level of communications information technology is high; e.g. the Integrated Service Digital Network, ISDN, has been operating commercially in France under the name of Numeris since 1988.

Equipment for telework must be distinct from household equipment:

- Telephone lines, installation and maintenance and communications costs are met by the company. France Telecom offers the possibility to install card phones and freephone lines.
- Electricity and heating bills are open to negotiation between the company and its teleworkers, the company being billed directly where possible.
- Office furniture and supplies are normally billed to the company.

For the installation and organization of the work station, an ergonomic layout is indispensable, as well as awareness of operating rules by users. The common 'tennis elbow'-type muscular-skeletal injury is particularly prone to occur in telework and it can be qualified as work-related injury, even though it has not yet been recognized as such.

In telework, because all informal help disappears e.g. colleagues who are computer literate, playing the role of the 'handy man', and must be replaced by easily accessible and convivial technical assistance: manuals, personalised user guides, help lines, training sessions, etc.

In certain cases teleworker has to invent a solution himself, relying on his own experience and newly acquired skills. What strikes as being a cognitive problem for an employee integrated in a company becomes much more serious for an isolated employee.

As regards VDUs, in *Germany*, too, there are a wide array of regulations and guidelines which, in principle, are also applicable to the teleworker. The difference is, as experience has shown, that the employer is de facto no longer solely responsible for matters such as the ergonomic design of the computer, the offices, workstations, workflow organization, occupational safety or the various forms of insurance required.

In the EU-countries, ergonomic regulations serve to protect the interests of employees; employers and the self-employed are however not bound by these restrictions. But even permanently employed staff may face legal uncertainties or risks as regards the upholding of occupational safety standards at the telework station. The German report emphasizes that teleworkers are full members of the staff and that the employer remains bound to guarantee that the home workplace is designed and outfitted in line with applicable ergonomic standards.

It is of vital importance that the teleworker is aware of the relevant health issues and accept the responsibility to act accordingly. This awareness of the problems is often lacking among those affected, as previous experience with the ergonomic design of home PC workstations for private purposes has shown.

In the majority of German cases studied, the employer was responsible for setting up the telework station. For the self-employed service provider, on the other hand, it is absolutely essential that he/she has in-depth knowledge of computer-related technologies because he/she alone is responsible for the selection, installation and maintenance of both his/her hardware and software.

The recommended guidelines covering an employee's workstation in the office can be applied, a few specifics excepted, to the telework station as well. The fundamental danger here is that the teleworker, left wholly or partially to his/her own devices in complying with these guidelines, will above all lack the expertise in ergonomics and the sufficient funds and may end up with a poorly designed workplace. This conclusion is reached in one of the few extensive case studies done on the work environment of data entry staff. The subjects of this study, all female teleworkers, are legally viewed as self-employed (under work and services contracts).

"Most of the women have a home-based office, albeit quite often a very small one. Four of the women work in a room which serves another purpose (kitchen, living room, nursery, bedroom). Office furnishings such as a writing desk, a chair, a lamp, a bookshelf, etc. were in almost all cases supplied by the women themselves. Workstation design is left to the women (...). In summary we can say that the outfitting of the workstation, its design, equipment and furnishings, is for the most part not up to current standards."

In *Greece*, the 18 salesmen presented in a case study do not face any problem with the workstation design because they use only a telephone. Problems will arise when teleworkers work from home and use a P/C. The majority will not be able to use adjustable chairs and desks and will use their home furniture. The opinion of the rapporteur is that if telework is going to be carried out from home, teleworkers will not face major climate problems. Maybe lighting problems must attract attention. The microclimate in Greek offices is generally bad. For remote and satellite offices the problem will be more serious. According to Greek law (Presidential Decree 398/19.12.94) the employer/owner is responsible for the choice and maintenance of the appropriate equipment. The purchasers/dealers are obliged to give information on how the equipment they sell meets the criteria for health and safety. According to preliminary results of the ongoing project "Development of a VDU Health and Safety Tool for SMEs", employers' and employees' knowledge regarding criteria of health and safety is very limited.

In *Ireland*, Work Station Design is covered by the Display Screen Directive 90/270/EEC which is implemented in whole by Part VII of the 1993 General Application Regulations.

Work stations in use before 31st December 1992 have to comply with minimum requirements and must comply with the full requirements by 31st December 1996. All new work stations installed/designed after 1st January 1993 must comply with the full requirements straight away. The minimum and full workstation requirements are listed in the report.

The adequacy of the work environment is monitored by the Health and Safety Authority Inspectors who visit work places to check compliance with the 1989 Act and the 1993 General Application Regulations. The Health and Safety Authority in Ireland has most of the telesales companies on its register and would inspect them on a regular basis. However, where teleworkers are working from home they are rarely inspected by the Health and Safety Authority for the following reasons: not on H.S.A. computer register, not readily identifiable when putting new work places on register, authority unaware of their existence.

Equipment choice is covered by the Use of Work Equipment Directive 89/655/EEC. Part IV of the 1993 General Application Regulations implements this Directive in Irish law. It states that in selecting work equipment account should be taken of the specific working conditions, characteristics and hazards in the place of work and any additional hazards posed by the use of such work equipment. The Regulations also put a duty on the employer to ensure that the equipment used by the employees is without risk to their safety and health or ensure measures are taken to minimise any such risk. The self-employed teleworker would be covered by the same laws. Equipment maintenance is covered by the same "Use of Work Equipment" Regulations and requires the employer to ensure work equipment is kept adequately maintained throughout its working life. These conditions also apply to the self-employed teleworkers when they use their own equipment/V.D.U. Depending on the contractual arrangements between the teleworker and the client/employer equipment maintenance could be the responsibility of either party.

According to the *Italian* report, from a physical point of view, VDU workplaces include: hardware unit equipped with VDU, software, printers, modems, faxes, telephone, chair, desk and, more generally, the surrounding environment. This definition of the workplace is also valid in the case of teleworking carried out both at home, or in satellite offices. Physical risks found in a VDU workstation are related to the possible accidents, the VDU type, the task performed, the connected devices, the supporting components (chair, desk etc.) and the environmental parameters. VDU operators may experience the effects of accidental electric discharges both from the hardware unit and the connected devices, or traumatism from fallings and even mechanical accidents. The prolonged use of a VDU may induce ocular fatigue, eye strain and postural problems. In the Italian report, Non-Ionizing Electromagnetic Radiation (NIR) is also mentioned as one possible risk. For VDUs mounted on vehicles, a higher potential of harmful accidents is likely to occur. In addition, risks connected with a prolonged exposure to noise and vibrations produced by the moving vehicle may be present.

The use of telematic supports to perform the remote control of mechanical means (or operative systems in general) assigned to carry out harmful operations may also be regarded as telework. This peculiar branch of telework (which may be defined as "telecontrolling") might present high risks, because of the potentially severe environmental and health consequences, both at a short and long term, of accidents due to the human error during telecontrolling. For this, rules on mechanical, electrical and chemical safety of plants and equipment (ISO and UNI standards, EU Directives, IEC guidelines) may be applied.

Like most others, also Italian report states that the rules regulating a good VDU workstation are codified by international guidelines (ISO, UNI standards etc.). Regarding the workplace organization, the accident prevention and the easiness of access to the workstation must be assured by the furniture arrangement. Dangerous or inflammable materials must not be present in a workplace. A fire-extinguisher must be promptly available.

The *Portuguese* report summarizes the common criteria of design of the workplace and safe work environment. Also choice and modification of software and the organisation of the activities which imply the use of monitors is discussed, without specific reference to telework.

The *Spanish* rapporteur stresses that it would be very useful to get a definition of the workplace of teleworking and to establish some criteria about the conditions and requirements that telework should satisfy. First at all, in order to choose the teleworkers, companies should consider the physical setting that teleworkers have. From this point of view, and thinking of workers in employee status, a home workplace should be considered as an extension of a normal workplace, where organization and employee could keep their joint statutory responsibilities.

It is necessary watch over some conditions that guarantee a healthy environment to teleworkers, e.g. that the teleworking place should be part of a living accommodation (no garage or cellar), and the place should have been built under the relevant building regulations of the country. It should also be isolated, separate and independent of the living area. In order to guarantee a spacious, orderly, and comfortable workplace, each teleworker must have a minimum work area, ceilings should have a certain height, access to telework place should be easy. Work area should be tidy up with regularity. Also recommendations for lighting, ventilation and noise prevention, also in avoiding a nuisance for third parties are given.

As regards security equipment adequacy, not only the worker should know what to do in emergencies but also other persons who are implicated should have an active role in this concern. It should be established security standards like burglar alarm, smoke-fire detectors, fire extinguisher, safety system for electrical risks (circuit breakers, plugs...), periodic checks of working and maintenance of the security systems, a correct location of the security systems, the implicated persons should know the use of the safety systems, to study the easiness or difficulty to escape in case of danger (stairs, lifts...), and emergency plan.

In the Work Environment Act (Prop. 1976/77:149) in *Sweden* it is stated that the safety of machinery and other equipment that has been handed out to the employee, to be used in the employee's home or elsewhere, is the employer's responsibility. It is also the employer's responsibility to make sure that necessary safety measures are taken and that satisfactory training and information is given, with special consideration of the fact that the employer cannot supervise the work in the same way as when it is performed within the employer's premises.

Also the Swedish report describes the problems concerning the physical setting of telework/distance work with the use of computers and VDUs in, for instance, a home setting. In connection among the new symptoms a "mouse arm" is mentioned. The equipment can generate emissions which are capable of causing irritation and other discomforts to the user, an important point to be considered in the selection and installation of equipment. When designing and selecting software and systems, starting point should be the aptitudes and needs of the users and the requirements posed by the activities and the task.

Provisions are laid down in an Ordinance of the Swedish National Board of Occupational safety and Health (AFS 1992:14) "Work with visual display units (VDUs)" which also implements the provisions of the EC directive on this subject. The provisions shall be applied to telework.

The Swedish report mentions that the employer shall ensure that an employee normally having to work with a VDU for more than one hour during the working day undergoes a vision test, at regular intervals. Vision tests are best arranged through occupational health services, if available. Glasses which are specially adapted for VDU work are to be regarded as working equipment.

Like the Dutch and the Finnish report, also Swedish report pays attention to the fact that many of the VDUs in use are still based on cathode ray tubes. The main preoccupation here has been with electrical and magnetic fields. Research has not established any clear connection between the various fields surrounding the VDU and other equipment and the symptoms and subjective disorders affecting the individuals concerned. Nor, on the other hand, has it been possible to rule out these fields as one of the underlying factors. Research continues, but in the meantime greater preparedness is needed for helping and supporting those persons who experience discomforts.

Research findings to date do not suggest any connection between skin disorders and electrostatic fields from VDUs. On more recently manufactured screens, the electrostatic field is screened off already.

For the sake of job satisfaction, the individual needs to be able to influence the quality of his work and to check the result of it. The system, therefore, must give the employee immediate feedback on his performance and actions. Delayed response times, for example, are a potential source of annoyance and stress.

The use of VDUs and computers at work can imply closer qualitative or quantitative surveillance of the employees. This in turn may be experienced as an encroachment on privacy and may augment the mental burden of work if it takes place without the employees' knowledge. To prevent this, quantitative or qualitative control, through the data system, of the employee's work input must not be undertaken without the employee's knowledge

The report from *the Netherlands* states that considering the fact that telework is only recently becoming an accepted type of working relationship, little information is known about the working conditions of teleworkers. The most typical stress symptoms as regards VDU-work are discussed.

In the Netherlands it is generally assumed that the electromagnetic radiation from VDU-equipment remains under the levels that are considered to be acceptable at most. Furthermore there are no indications that one's eye sight decreases in consequence of VDU-work. Eyestrain, however, proves to be a frequent complaint that clearly interrelates with the time daily spent in front of the VDU. Also VDU-workers often complain about muscles and joints, particularly in their arms, their shoulders and their necks. It is generally assumed that these complaints, known collectively as *Repetitive Strain Injury* (RSI), occur at work requiring unilateral high frequency operations and where the work place has not been adapted to the ergonomic standards. It is assumed that health complaints like head ache, fatigue, tension and skin irritation are not directly related to VDU-work, but particularly relate to ergonomic circumstances as well as circumstances such as inner climate, long working hours in front of the VDU (more than 5 hours a day), monotonous work and high pressure of work.

In 1988, as part of its intention to withdraw the Act on homework 1933 the Labour Inspectorate investigated the working conditions of homeworkers in order to decide on the need for legal protection. Generally speaking employers appeared to be badly informed about the working conditions of their homeworkers. Work places are often badly heated and lighted and are inadequately ventilated. Many homeworkers have a wrong posture during work because they don't have good chairs and desks. Usually homeworkers work with their own machines or with (cast-off) machines that are put at their disposal by the employer. It was also concluded that bad labour conditions of homeworkers indirectly have a negative effect on their working conditions: low pay and a weak bargaining positions can be the cause of high work pressure and long working days to acquire at least a decent income. Of course this does not hold true for teleworkers with good labour conditions.

If the teleworker works in a room which is controlled by the employer, it is obvious that the choice for equipment and furniture will be made by the employer. If, however, the teleworker works in his own home, it is not self-evident that the employer designs the workplace. It is

possible that the teleworker himself designs the workstation and chooses both the equipment and furniture. The question is whether this would do for the employer to comply with his duty of care under the Working Environment Act, the Decree on work with display screen equipment and the Decree on homework. The answer to the question is negative. The employer has specific duties of care under the Decree on homework. By virtue of article 13 of the Decree on homework the employer shall provide the teleworker with an efficient sitting accommodation and an efficient work surface or a work desk and also appropriate artificial lighting. This regulation does not apply if the teleworker already owns furniture and artificial lighting. The employer's obligations are restricted to the workplace connected provisions and, e.g., do not extend to the environmental circumstances, such as heating and ventilation.

If the teleworker uses equipment which he owns, this has some drawbacks for the employer. The owner of the equipment has control over its use (article 5:1 Civil Code). Such control by the teleworker could conflict with the employer's interest to determine that the equipment only be used for business purposes and be protected from third persons.

The employer is obliged to take care of the correct installation of wires and cables so that the teleworker can safely use the equipment (article 12 Decree on homework), the expenses to be paid by the employer.

According to Regulation 3 of the DSE Regulations (1992), employers in *United Kingdom* have to ensure that workstations comply with a set of minimum safety requirements laid down in the schedule to the DSE Regulations. This applies to both users and operators, and includes some environmental factors of the workstation.

Real situation in U.K. is that little attention has been paid to the health and safety of teleworkers, despite growing public awareness of the hazards of intensive display screen equipment (DSE). Teleworkers questioned in the IPMS survey (Huws, 1994) stated that having to maintain a static working posture, cramped surroundings and unsuitable furniture were all major causes of health difficulties. The teleworkers felt that payment of allowances for the purchase of suitable furniture and the adaptation of premises would remedy these problems.

No legal requirements exist about whether teleworkers should have designated rooms for work, or whether a workspace contained in another room (such as a living room, kitchen or bedroom) is adequate.

Teleworkers questioned in the IPMS survey (Huws, 1994) felt that poor lighting and inadequate heating were both possible causes of health difficulties. However, there have been suggestions that teleworkers are generally less stressed than other workers because they have greater control over their work environment (The Independent, July 1995). One problem highlighted by the Employment Department survey on teleworking (1992) was that of space. Financial factors inhibit the ability of teleworkers to designate one room purely for work. This problem especially affects teleworkers at the bottom end of the occupational scale (non-employee clerical workers etc.), and many of these people have to work in multi-functional areas such as on kitchen or dining room tables or in corners of living rooms or bedrooms. Teleworkers with space problems expressed irritation at having office material in the house which intruded on their living space. Most British housing is not ideally suited to teleworking since houses are planned on the assumption that the home is not a workplace, and the general trend is for houses to become smaller. If having a separate room was to be made a condition for teleworking, telework would cease to be a viable option for many people. Studies show that a proportion of teleworkers actually prefer working in a room also used for other purposes, perhaps for the company, or to be partially available to the family.

Employment Department Group managers guide recommends that it is better for the employer to provide the equipment rather than the teleworker, in order to minimise problems of compatibility, to ease arrangement of insurance and to ensure that health and safety conditions match those found in the office. The guide also emphasises the importance of

communications technology. For example, written documents are generally the most accurate and unambiguous means of communication for legal and financial tasks and face-to-face, telephone or video-conferencing technology is more suitable for sales, administrative and management functions. The Employment Department survey (1992) found that when electronic types of communications were the norm throughout the organisation (i.e. there was an electronic communications culture), the fact that some workers were home-based, rather than based in a separate office was hardly noticed. Nevertheless, some problems did emerge with communications technologies, e.g. in logging in to the computer or when using the telephone and fax or e-mail at the same time.

### 2.3. Legal status

One of the core issues of this study is the question of legal status of teleworkers, as regards health and safety. Laws, decrees, regulations and national and E.U. directives regarding labour law, work environment, working hours, labour inspection, employment contracts, VDU-work, homework etc. were discussed in details in many reports.

In *Austria*, the preconditions of telework at home is to have appropriate standards. The equipment of a workplace at home is not on the responsibility of the employee. There is a risk that doing telework the existing employee protection law could be undermined. This law relates to out-of-home workplaces. There is a lack of health and safety regulations for nomadic staff, e.g. as to ensure that reasonable hours are adhered to when travelling long distances especially by car. Flexibility should not mean stretching working hours beyond legal regulations and reasonable limits. The Austrian rapporteurs suggest that teleworkers should have employee status. Now employees have to prove in court that they meet certain criteria to have employee status.

It has to be set down in a contract how many hours are to work at home and at the office. There should be collective agreements dealing with working conditions induced stress and collective agreements about salaries of teleworkers. Regulations to prohibit electronic forms of supervision are also suggested by the rapporteurs.

In *Belgium*, telehomeworkers are domestic labourers and they do not fall within the range of applications of the existing legislation, as for them there is no legislation of its own. The law of the 10th of February 1934 concerning the regulation of domestic labour and hygiene and the law of the 15th of December 1950 concerning the amendment of this law are co-ordinated in the Royal Decree of the 5th of April 1952. The specific legislation on domestic labour, although concise, was abolished however by the law of the 5th of December 1968 on the collective employment contracts and the joint industrial committees. Because of this the domestic labourers, and thus also the telehomeworkers, find themselves in a legislative vacuum. In Belgium there is a tendency in the legal doctrine and the jurisdiction to classify homework under the regular employment contract, but it creates ample situations of vagueness and legal insecurity. Regulations are dispersed and sometimes submitted to contradictory exceptional measures. On the 27th of January 1995 the council of ministers accepted a preliminary sketch of law concerning domestic labour. In this preliminary sketch the term "domestic labour" is defined and the employment contracts for domestic labour are settled. The definition remains to be based on the notions of authority and wage, but is also founded on two characteristics of domestic labour, viz, that the employee chooses the place of employment himself and that the employer has no direct access to it. This last regulation thus excludes all direct control. The legal situation in Belgium thus seems to be subject to change. The discussion of the social dimension of telework applies to all employees, thus also to the telehomeworkers at least when they fall within the range of applications provided for in the

Law on the employment contracts (WAO). It is mentioned when a certain situation is specifically applicable to telehomeworkers.

The basic problem of the telehomeworker is the question whether the agreement with the telehomeworker falls under the domain of application of the WAO. As in Belgium it concerns mostly telehomeworkers who spent part of their working hours at the office, there are up to now few problems. The Law on employment contracts, the General Regulations for labour protection, the regulations on visual displays and the collective labour agreements are unsufficiently adapted to the specific situation of telehomeworkers with the result that protective measures for this category of employees are lacking. The minimal legal regulations concerning telework, such as the employment contracts, the terms of employment, the working conditions and the General Regulations on labour protection, create legal insecurity for employer and employee. The regulatory implementation of tele(home)work is thus to a large degree restricted by the legal aspect.

In the advice of the National Labour Council (NAR) there is a reference to the following problematic domains: remuneration and working time, safety and health, disappearance of the difference between work and family life and between work and rest, social isolation of domestic workers and problems concerning career opportunities and possibilities in the field of professional training. The Council is convinced that, within this framework, a margin should be left over for the responsibility of all parties engaged. The social discussion partners might however play an important role in this matter, especially on the level of the branches of industry.

It is defined that the employer is obliged to take an accident insurance for the employees which insures them during working hours and on their way to and from the work. The measures of the law on industrial accidents of the 10th of April 1971 apply to all employees. The only specific rule in case of telehomeworkers concerns the accident that happens to the domestic worker on his trip from the place where he treats raw materials or semi-finished products which are entrusted to him by the employer, to the place where he gets or delivers the raw materials or products. This accident is considered to be an industrial accident. Special issues in relation to insurances (industrial accident insurance, fire insurance, civil liability insurance,...) do not occur in the case of teleworkers who work just like regular employees in a tele-office. A specific situation does occur in the case of telehomeworkers. The telehomeworkers have to be insured by the enterprise against accidents happening at home when he or she is at work for the enterprise. The employer has to inform the insurance company when telehomework is done. The fact that principally the telehomeworker defines the working hours himself, is an additional problem. Thus an accident can happen at any hour of the day.

For the telehomework-project of ABB-insurances the employer has the industrial accident insurance extended to an insured period of 24 hours a day, because the employer basically does not know exactly at what moments the telehomeworkers are at work. The telehomeworkers are insured in and outside the house in the sense that outside means around the house. Thus accidents happening for instance on a journey are not implied. The employer has the possibility to make the same insurance applicable to the telehomeworkers as well as to the regular employees, but in this case it has to be explicitly mentioned that the telehomeworkers are for instance not allowed to work in the weekend or later than 4 p.m. As there is no other information about the situation of insurances of telehomeworkers available, we were obliged to mention the ABB-insurances as an example. This implies in itself the lack of attention given to this issue.

According to the rapporteur from *Denmark*, there is no special governmental regulation covering telework or occupational work at home by means of a computer, although a certain order (no. 1108 of 15 December 1992) exists concerning screen terminals. The part of the order which is about the lay-out of the work place does not cover employees working in their own home. Therefore, only sections concerning the planning of work, e.g. pauses, and about

medical examinations of the employee's eye-sight and about the opportunity to get spectacles etc. cover occupational computer home work.

Generally where the Working Environment Act is valid in the employee's own home, it is the duty of the employer to provide secure safety and health working conditions. Maybe order is going to be changed so that the regulations concerning rest and days off will cover private homes also. This is due to the implementation of EU's Directive Concerning certain Aspects of the Organization of Working Time which does not except private homes.

In *Finland*, in relation to health and safety issues at work, the most important regulations are written in Labour Protection Act (299/58 with later modifications), Occupational Health Care Act (743/78), Contracts of Employment Act (320/70), Hours of Work Act and Act on the Supervision of Labour Protection and Appeal Procedure in Matters Concerning Labour Protection (131/73). These are specified by degrees and Decisions of the Council of State, e.g. Degree on Supervision of Labour Protection (954/73). Directive on the Minimum Safety and Health Requirements for Work with Display Screen Equipment (1405/93) gives one normative basis for planning and guidance of work situation of teleworkers in employee status.

There is no specific legislation as regards home-based telework Finland and the concept of telework or teleworker has not been defined in the Finnish legislation. In principle, the Finnish teleworkers' legal status with regard to labour legislation is very clear, since the legislation applied to them is the same as that applied to other workers and domestic workers. The most important distinction is based on whether an employment relationship exists between the employer and the employee. In general, the labour legislation does not recognize self-employed or other independent workers.

Based on the law for codetermination in companies (since 1979), fundamental changes at workplace must be negotiated between parties. This law is applicable in the private sector, public institutions having their own systems. In Finland, the employment relationships or the contents of collective agreements have not changed as a consequence of telework. Telework is voluntary, meaning that the employee has the option to evaluate the advantages or disadvantages of telework according to his own interests. In individual employment contracts, aspects like task content, duration of telework and working hours, remuneration and expenses caused by the telework, provision and maintenance of the equipment have been specified in written form. Telework can be agreed on either orally or in writing. It has been estimated (Luukinen 1995) that one out of five teleworkers in Finland have a written additional contract on telework. When the employee works for the most part at home or other place of his choice, the legal working time regulations do not apply to him. In some companies, possible overtime work have been agreed on with a separate written agreement.

In *France*, lawyers on the Telework Commission (1993) addressed the following question: 'Should there be a teleworker status?', answering: 'Telework does not in itself, by its nature, constitute a specific job which would make it necessary to map out a particular legal status'. They stressed that telework only amplifies difficulties or already listed legal risks. Lawyers have the opinion that the introduction of telework results above all from contractual initiative, as much on an individual as on a social level.

According to unions, on the contrary, e.g. the CFDT (Confédération Française Démocratique du Travail, the French Democratic Work Confederation), it is high time to legislate this kind of work, in order to find a framework which is both legislative and contractual, thus avoiding the pitfalls of this new way of working.

The application of the concept of work accident to teleworkers who work other than in telecentres poses a problem. All accidents occurring during work, whatever the cause, are, according to the law (Safety Code, article L.411-1), considered to be work accidents.

In the case of telework, the victim must prove the accident really happened in the work place and during work hours. Even material proof of the injury as well as proof of the causal relationship between the reported injury and the work must be given other than by the worker's own statement.

The problem is not a new one however, it arises as soon as the employer has no control over the employee.

Trips to hand in work are considered to be part of the job, which means the job is finished only when the work has been handed in and the teleworker has returned home. (c.f. the definition of telework given in the introduction where it is explicitly stated that this work includes the conveying of finished work of work in progress).

As regards health and safety regulations, employees with homebased worker status benefit from the legislation and rules applicable to employees.

Employers will have to ensure that their employees abide by regulations specific to the equipment used, in particular regulations for on-screen work. Additionally, this legislation allows for occasional breaks from on-screen work in order to prevent symptoms of eye strain and postural fatigue. The 1991 decree calls for 'medical check-ups'. The work doctor must examine the worker's eyes and sight before he/she carries out on-screen work. A correction device may be put on the screen should the eye test reveal problems.

Control over the enforcement of these regulations is difficult, particularly in the case of homebased telework. Theoretically, teleworkers should not spend more time in front of the screen than anyone else.

In *Germany* like in other countries there are no reliable data on freelance teleworkers. Most of the cases quoted therefore concern permanent employees and their legal situation. Contacts with supervisory authorities, responsible for the enforcement of occupational safety and health regulations, revealed that they too have had only limited experience with the field of teleworking. The same may be said of the German Association of Corporate and Factory Doctors (German Industrial Doctors' Trade Association). Nevertheless, an increase can be reported in the awareness of the legal and occupational safety issues which teleworking has raised in Germany.

German report states that, like in other EU-countries, ergonomic regulations serve to protect the interests of employees; employers and the self-employed are however not bound by these restrictions when establishing their working environments.

Differing positions are advocated in Germany, as regards rights to access to employed teleworkers' home (see also chapter 4.4.). A project group on teleworking (formed by ZVEI and VDMA) in a 1995 report concludes that there is no need to establish access rights by law. But as the employer is duty-bound to provide for the welfare of his employees independent of where they work, it will be accepted that employers should be obliged to provide instruction and guidance concerning occupational safety and ergonomic regulations and the requirement to abide by them.

In contrast to this relatively restrictive viewpoint, others argue that the workplace as a legal entity under the works constitution should be defined not merely by its location but also by its function. This would imply that teleworkers who work outside the main place of business are full members of the staff and that the employer remains bound to guarantee that the home workplace is designed and outfitted in line with applicable ergonomic standards. Working hours for permanent employees are regulated by the German Working Time Act and by collective bargaining or firm-level agreements. To the rapporteurs' knowledge, there are no specific regulations concerning breaks during working hours for teleworkers. It is left upon

the teleworker whether and when he wants to take breaks and to act according to recommendations for VDU work.

In *Greece*, if the worker is self-employed, he/she is not covered by the health and safety legislation. If he/she is an employee, no matter where the workplace is based, the employer is responsible for assuring good conditions regarding health and safety at work. According to Greek law (Presidential Decree 398/19.12.94) the employer is responsible for the choice of the appropriate equipment. The purchasers/dealers are obliged to give information on how the equipment they sell meets the criteria for health and safety. According to preliminary results of the ongoing project "Development of a VDU Health and Safety Tool for SMEs", employers' and employees' knowledge regarding criteria of health and safety is very limited. According to Greek law the employer/owner of the equipment is responsible for its maintenance.

In *Ireland* the health and safety laws apply to employees, self-employed and employers wherever they work. If this is in the home then the law applies there. The legal requirements on the employer and the self-employed to carry out risk assessments and put in place the most appropriate control measures to ensure health and safety would then apply at home. In practice it seems that the employer would have to get permission from the teleworker to go into his home so that he (the employer) could comply with his responsibilities. The Health and Safety Authority inspector, if he feels that a home is being used as a workplace, can inspect it for health and safety without requiring a court warrant. He has this power under Section 40 of the 1989 Act.

As for the homework, in the *Italian* legislation the figure of teleworker falls within the definition set up by article 1 of the Law 16 December 1973, No. 877. A peculiar aspect of homeworking is the performance of the work in premises which are external, both materially and juridically, to the employer's enterprise, and are property of the worker or, in any way, of his disposability. As for the employer who orders the homework, he is considered as an entrepreneur, and is obliged to enrol in a special "register of the employers" which is set up at the provincial labour office. The first subparagraph of article 3 of the Law, moreover, establishes that the employer who decides to get the work done outside his enterprise is obliged to keep a special book, where the name and the relevant address of the workers who are external to the productive unit must be written, as well as the indication of the type and the amount of work which must be carried out, and the value of the wages. Besides, it is ordered by the Law, for a better guarantee, that the aforesaid book, after having been numbered on all pages, must be presented to the labour inspectorate, to be authenticated prior to using it. The homeworker and the employer must sign the personal control card of the worker both when the work is assigned and when the work is consigned. Employment of homeworkers is exclusively mediated by the municipal sections of employment offices, allowing the employer to request a worker nominally.

The Italian report points out the possibility that the homeworker can carry out the work assigned to him being helped by other persons: help is allowed if these are members of his family living with him, or they are his dependents; making use of paid hands or apprentices is forbidden. The work provided as a help by any relative, in relation to the activity of the homeworker, is characterized by "accessoriness". The work done by the members of the family or persons living with him, in his help, is presumed free of charge according to the existing jurisprudence.

Italian regulations on homework are fit for "blue collar" homework, given the original role played by the homework, i.e. an extension of the factory work. However, the above-mentioned regulations can also be fitted to a white-collar work and, although partially, for teleworking activities.

*Spanish* legislation does not regulate teleworking in an specific way and that is why it is not possible to give it a legal status. The legal status that teleworking must adjust to is that referred to the technologies related and, on the other hand, that related with the contractual relation between employer and employee. What is regulated by the Spanish legislation is the homework contract. This contract forces, between other obligations, to get the approval of the Department of Employment and to communicate the place of working in order to verify health and safety conditions.

In the insurance issue, the normal practice is reduced to insure the equipment, besides those domestic insurances policies that the teleworker could have. However, a relation or contract of teleworking between the company and the employee should define in a detailed way this issue: clarify which aspects the insurance policy will insure (equipment, accidents, home, other persons at home, third party liability, fire, robbery...) and who contracts and who pays the insurance policy costs. It could be possible that this situation could create a conflict with the employees' domestic insurance policies and their claims policies. That is why an enlargement of the existing domestic insurance policy ought to be established, dividing the cost of the policy between the employer and the employee having into account the risks because of teleworking at home.

Also *Portuguese* report recommends four types of insured to be taken out to cover telework: Accident insurance, House insurance, Equipment insurance (computers and fax), and Third party insurance.

The Work Environment Act sets out the basic rules for the design of the working environment in *Sweden*. The Government has issued certain additional rules in the Work Environment Ordinance. The rules of the Work Environment Act set the framework for Provisions issued by the National Board of Occupational Safety and Health. Concerning the application to telework, the employer has the responsibility for the working environment without regard to where the employee's work is taking place. Also the Board's Provisions shall be applied anywhere in Sweden where an employee is working, unless there is an expressed exception or limitation of the Provisions. Thus, it makes no difference if work is performed within the employer's premises, outdoors, within the premises of another company, in a vehicle or in the home of the employee.

On the other hand, the demands for actions to adjust the working environment can vary due to circumstances in the single case. Circumstances that must be considered are where the work is done, the duration of the work at a certain place, how often work is performed at that place, what possibilities there are to change the working condition within reasons and the employee's freedom to organize his own work.

The employer's general responsibility, according to the Work Environment Act, cannot be repealed by collective agreements or by agreements between the employer and a single employee. In principle, the Work Environment Act also applies to work done by self-employed entrepreneurs personally. In case of self-employed working on their own or together with members of their families, without having any employees, it is only the Board's Provisions concerning machinery, other technical devices and chemical products which are applicable.

In *Dutch* law there are no special regulations regarding the occupational health and safety of teleworkers, but the general Working Environment Act does apply to teleworkers:

- if they work under a contract of employment or an appointment as a civil servant, regardless of the place where the work is done;
- if they work at home, except for 'really' self-employed homeworkers.

One of the basic principles of the Working Environment Act is that the employer and the employee together are responsible for 'health, safety and well being' at work. Nevertheless, the main responsibilities under the Act are imposed on the employer. Thus the employer is

mainly responsible for the working conditions of employees working at home, or working in a satellite office. If in a neighbourhood centre there is a person supervising the work done there, this person may be held responsible for the working conditions of the other teleworkers. Otherwise, the employer will be held responsible. If teleworkers are under their contracts of employment or their appointments as civil servants obliged to work at the premises of several clients, at the time when work is done, these clients are responsible for their working conditions. If teleworkers work at a mixture of locations the responsibility for their working conditions will alternately lie on the actual employer and/or different clients.

Since the amendment of the Working Environment Act as regards homework (law gazette 1994, 156) in November 1994, the scope of the Working Environment Act is extended to all teleworkers working at home, except for the 'really' self-employed teleworkers. The criteria that have to be met by homeworkers are circumscribed in the Decree on homework. The legislator did not mean to extend the scope of the Working Environment Act to, e.g., lawyers who have their practices at home and to enforce rules on their clients. An exception is therefore made for homeworkers who independently exercise their professions or trades and are used to commit themselves to perform work for third parties as well. The words 'are used' imply that an incidental order by a third party does not change the status of the teleworker. Furthermore the words imply that a 'really' self-employed teleworker does not in slack seasons instantly become a homeworker within the meaning of the Decree on homework.

The regulations regarding the occupational health and safety of teleworkers are to be found in the Working Environment Act and the Decree on work with display screen equipment (law gazette 1992, 677 implementing the EC-Directive of 29 May 1990 'on the minimum safety and health requirements for work with display screen equipment', fifth individual Directive within the meaning of Article 16 (1) of Directive 87/391/EEC, 90/270/EEC, L 156/14). For teleworkers working at home also regulations are included in the Decree on homework (law gazette 1994, 685). The Dutch Department of Social Affairs and Employment has issued a 'Publication on homework (including telework in a home)' which serves as a guide for interrelating the different rules in daily practice.

In case of a contract of employment between the employer and the teleworker, the first must also comply with the civil duty to protect the employee under article 7A:1638x Civil Code. This duty supplements the obligations under the Working Environment Act which is of public law. Roughly, the relation between the Working Environment Act and article 7A:1638x Civil Code is as follows: the public obligations are the minimum for complying with the civil duty to take care of health and safety protection. In other words, the employer could be held liable under article 7A:1638x Civil Code for damage due to a shortcoming in complying with his civil duty of care, notwithstanding compliance with the Working Environment Act. The employer's liability goes as far as to approach risk liability.

In **United Kingdom** there are no specific HSE Regulations regarding telework. Teleworkers are covered by the general provisions in the Health and Safety at Work (HSW) Act 1974 and its associated Regulations. Some of the requirements of the HSW Act have recently been made more explicit in the Health and Safety (Display Screen Equipment) Regulations 1992 and the Management of Health and Safety at Work Regulations (1992) which came into force on 1/1/93 as part of the UK response to the European Framework Directive (1989). However, domestic premises are not covered by some other health and safety legislation such as the Fire Precautions Act 1971 and the Offices, Shops and Railway Premises Act 1963, and therefore this legislation do not apply to teleworkers.

Under section 2 of the HSW Act, employers have a duty to ensure the health, safety and welfare of teleworkers who are employees, so far as is reasonably practicable. The degree to which teleworkers are covered by the Health and Safety (DSE) Regulations (1992) depends on two main criteria: the intensity with which they work with DSE and their employment status. Under the DSE Regulations, DSE 'users' are employees who habitually use DSE as a significant part of normal work, and DSE 'operators' are self-employed people who habitually

use DSE as part of normal work. Groups likely to be covered by the Regulations are word processor operators, secretaries, data entry operators, sub-editors, journalists, tele-sales staff, financial dealers and graphic designers, although other groups may also be covered.

All teleworking DSE users (teleworkers with employee status) who meet the criteria are covered by the Regulations. Determination of employee status takes account of a range of different factors including degree of control over work, level of financial risk, regularity of work and ownership of equipment. Self-employed teleworkers who are classed as DSE operators are covered by regulation 2 (analysis of workstations to assess and reduce risks), 3 (the requirements for workstations) and 7 (the provision of information). The distinctions between DSE users and operators are very important for teleworkers (Huws, 1994).

The degree to which teleworkers are covered by the Management of Health and Safety at Work Regulations (1992) depends on whether they are classed as employees, temporary workers (people employed under a fixed-term contract or otherwise carrying out work in the employers undertaking) or self-employed workers.

In summary, teleworkers are covered, in statutory law, by general provisions in the Health and Safety at Work Act (1974), the Health and Safety (DSE) Regulations, and the Management of Health and Safety at Work Regulations (1992). However, employers in the UK have both statutory and common law duties relating to the health and safety of their employees (Griffiths, Cox, and Stokes, 1995). Their general statutory duty is to provide and maintain safe and healthy work-places and working procedures in compliance with United Kingdom and European Commission health and safety legislation (as previously mentioned). Their common law duty is to take reasonable care for their employee's health and safety in all the circumstances of the case.

Common law duties are mainly concerned with civil liability. The common law position is that an employer has a personal duty to take reasonable care to provide a safe workplace, safe equipment and a safe system of work. The common law duty extends to psychological as well as physical health. The burden of proof at criminal law requires proof beyond reasonable doubt as opposed to the civil burden which only requires proof on a balance of probabilities. As a result, civil action by the employee for psychological or social problems is far more likely than an HSE prosecution, its prospects of success being far greater.

#### 2.4. Health and safety of persons other than workers

In *Belgium*, there are no specific regulations concerning safety and health for family members and/or visitors applicable to telehomeworkers. ABB - insurance company made it a condition that the office space of the telehomeworkers should be a separate space so that it basically can be locked up. During working hours ABB obliges the telehomeworkers to bring the children to school or to a day care center as this should be in favour of the quality of the work and the productivity. Also the partner of the telehomeworker should be working outside the house. This is however not the case in other telehomework-projects. According to the Council of Europe 1989, children of (tele)homeworkers might be endangered as they are directly confronted with the production process. In traditional domestic work the risk of contact with chemical materials will be larger than in the case of telehomework. But also in this second case, damage of the child can indeed occur, as it will be in the sense of "emotional" damage: when attention can be asked and when not, is in this situation not always as evident. Also in relation to the partner or to other family members a lack of clarity can occur. There are few results available of research into the effects of telehomeworking on family life. Telehomework can also have a positive effect on children.

In *Denmark*, there are no specific regulations regarding the health and safety of persons other than workers engaged in telework. The health and safety issues of other than workers have not been raised in described cases in *Finland*. In an insurance company, special attention has been paid to family members as regards prohibition of answering the phone when insurance customers are calling.

In *France*, health and safety of people other than workers who might enter the work zone has not been taken into account at all in telework studies. It is clear that noise from incoming calls (telephone and fax) should be taken into account because it may surprise and disturb members of the family (young children sleeping) resting during the day or at night. Furthermore, attention must be paid to the inherent danger of computing equipment - and its setting up, i.e. plugs and sockets - for young children.

In *Ireland*, health and safety of persons other than workers is covered by the 1989 Act which puts a duty on the employer to ensure that his undertaking should not put other persons, who are not his employees, at risk. In the home-working situation other family members would come into this category. Enforcement of Section 7 of the 1989 Act is only carried out in established workplaces with employers/employees and is not current practice in the home based workplaces.

In *Italy*, occupational rules establish that the workplace must not represent a risk for health and safety of persons other than workers. So, a workstation delimited by the rest of the environment and equipped with a locking access should be available to the teleworker. In the case of home telework, this implies the availability of an additional room where the working area may be organized. The access of family members or guests should be reduced at a minimum and, in any case, should be signalled by a warning light or a door-bell. For telework on vehicles, the question of the access of persons other than the worker arises only when the vehicle is stopped.

In *Portugal*, third party insurances are recommended. Although the people who co-habit with the teleworkers are not subject to the influence of the telecommunications used and therefore are not subject to the appearance of occupational diseases of a psychophysical nature, they may have access to the teleworker's workplace, with all the resulting consequences either for the work and equipment or for the non-worker.

Concerning the family members the **Spanish** rapporteur states that it should be established some rules of access to the telework place, such as deciding the moments and reason of access (i.e. cleaning...), protection and lock systems out of working hours (specially for children, elder...) as well as the adequate training of this persons just to manage themselves in emergency situations. It should also be contracted an accident-related insurance policy for people who access to teleworking area.

Other risks for the person who lives in the teleworking area arise from the working activity. For example, noises coming from telephone, printers, customer visits... can be sources of stress. The contract of teleworking between employer and employee should cover these issues also.

In the **Swedish** report is stated that health and safety of other persons than workers (i.e. family members) are covered neither by the Work Environment Act nor the Act on Occupational Injuries. Compensation is given by the general insurance system and by the workers private home insurance.

In *Dutch* law there are no special provisions regarding the occupational health and safety of the teleworker's house-mates. The Inspection in the Publication on homework only has stated that in assessing and evaluating the occupational health and safety risks in homework (including telework in a home) also attention must be paid to the presence of vulnerable persons, such as children and sick persons.

Under section 3 of the HSW Act in *U.K.*, employers have a duty to conduct their undertakings in such a way as to ensure, so far as is reasonably practicable, that persons not in their employment but who may be affected by the undertaking are not exposed to risks to their health and safety. A similar duty is placed upon the self-employed in respect to themselves and others. This Regulation covers people other than workers who might enter the workzone including family members.

Haddon (1991) states that the nature and scheduling of a teleworker's partner's work affects their ability to support the teleworker in terms of helping with the chores and/or children. A number of new demands arise for teleworkers because they are visible at home, and perceived as being available for children, partners, chores, other responsibilities, socialising with relatives, friends and other outsiders. It is best if some understanding and rules concerning the availability of teleworkers to their family are negotiated at the start. An important strategy involves enlisting the support of others, mainly partners, to prevent interruptions from children, friends, relatives etc. It is also important that teleworkers have the self-discipline not to let work encroach on family life.

The British Telecommunications plc teleworking guidelines to managers (1992) states that care must be taken to ensure that other occupants of the teleworkers home are aware of any potential dangers relating to the equipment, and that potential teleworkers must have considered the impact of teleworking on their household before they are allowed to begin teleworking. The guidelines also state that teleworkers must be able to provide a suitable workplace and storage space preferably away from interference (e.g. by children or pets).

### 3. THE ORGANIZATIONAL AND PSYCHOSOCIAL ENVIRONMENTS

- 3.1. Appropriate use of equipment
- 3.2. Work rhythms
- 3.3. Duration of work and time patterns

In *Austrian* report, many suggestions are presented as regards psychosocial factors in telework. Stress can be caused by e.g. lack of autonomy, stretching working hours, electronic monitoring, and limited possibilities in participation.

The *Belgian* rapporteur states that the application of protective measures concerning working hours is difficult in the case of domestic work. It demands the fixing of the time necessary to finish a certain task. Thus it can be traced whether there is in the working hours an intention built in leading to the obligation to work on Sunday or to do night work. The regulations concerning the protection of motherhood are also applicable to domestic workers. But the measure that pregnant employees are not allowed to do extra hours, again is not applicable to domestic workers to whom the telehomeworkers belong.

In the case with Janssen Pharmaceutica the employment contract is completed by the following additions: working schedule, inventory of material, exclusivity clause for the use of material and allowance for the material burden of the employer. The working hours are not mentioned as telework at home is not considered as being labour-bound. The telehomeworkers are getting a list of tasks with an average working time of 7 to 8 hours per working day. In Belgium there is a large variety to be observed in the working schedules. When an employee is spending his working hours at home, he/she is basically free to define his/her working hours. It is observed that women rather than men tune their working hours to their family life. Concerning the schedule of labour time it should be kept in mind that Sunday's work, weekend work, night work is in principle possible for all (tele)homeworkers. Concerning the terms of employment of tele(home)workers, it is concluded that in general, the situation of highly-skilled is better than that of unskilled or semi-skilled persons. This skill-issue is stressed in many other reports, too, e.g. Germany and U.K. and the career opportunities.

In *Denmark* there is no data that indicate how work stations actually are used and time spent by employees who are engaged in telework. The rapporteur cannot say if work at such work stations comply with the working environment regulation. Suspicion is brought that especially work related to informal telework arrangements might not be carried out in an appropriate manner. More evening and weekend work is possible but, on the other hand, work can be carried out more flexible in relation to the family life. It is stated that this problem might be dependent of the job and gender of the employee.

In *Finland*, case studies showed that one problem in the starting phase has been connected to computer- and telephone linkages and delayed response times. As a rule, the pay level has remained unchanged. In some cases, special remuneration has been paid for prolonged working hours. The opportunity of flexible attendance to work and family matters is the most common compensation. It has been tendency that the number of working hours

often increases at the initial stage of telework, as the teleworkers voluntarily prolong their working hours.

In an insurance company, productivity increased by an average of 40%, not only among the teleworkers but partly also among their co-working group members at the office. Flexibility, autonomy, and assuming of responsibility have increased in general, not only as regards specific features of telework. The mental stress of telework was considered to decrease, even though the number of working hours increased to some extent. Intensive short-term commitments to the telework were considered to reduce stress, especially if there was a possibility to arrange flexible working hours so as to comply with personal duties. Long-term intensive working, which clearly exceeds the norms on working hours, was, however, considered mentally and physically straining.

In some cases, workers intentionally used the possibility to scan bulletin boards and to reply to messages in the evenings or at night and during weekends, after all other work tasks and family activities are over.

In *France* technical possibilities to telework are well developed. At work, some people can learn how to use new equipment in a few days while others will keep on struggling with the keyboard and connections, seeking help whenever the machine will not respond to a command. The first type of people will be more at ease with telework.

Conceptual, creative and advisory tasks have been disassociated from the idea of working hours. Timetables and work rates are of minor importance to the company which is only interested in results. With all its communications equipment, telework enables employees to organize themselves according to fixed objectives and individual work rhythm.

Telework can be a source of stress from overwork, when last minute work is required by companies that precisely use telework to cut down on unexpected work load. An extreme cases of this, reported by a major French daily (*Le Monde*, 10 February 1993), is a teletranslation company that used 'teleworkers who could be called up at any time of the day or night'. Another possibility of overwork is related to the risk of accumulating telework jobs and moonlighting.

The French report strongly emphasizes the vision about new type of management. Middle managers are the most affected by this change as their roles evolve in the company: the modification of their controlling role can lead to strong resistance of telework on their part. As sociologist J-C. Marot (1993) claims, 'too often we forget that enterprise culture is based on control over the presence of the employee and on their availability at the request of their superiors. There are some managers who cannot manage unless they are in direct contact with their subordinates.' It seems necessary to set up a new type of management from the moment telework is being considered. This has been shown also in some other cases e.g. in Finland.

In *Germany* like in almost all countries, there are no reliable data on freelance teleworkers' organizational and psychosocial environment. In general, mastery of the software applications is likely not a problem for the vast majority of (permanent) employees studied. Probably high levels of qualification and the willingness to work independently have been among the decisive prerequisites for candidates offered a teleworking position by management. A very different situation is found involving the formally self-employed female home-based teleworkers in the printing industry, work requiring relatively low skills (word processing and text layout) which they had either mastered before starting their jobs or had picked up relatively quickly during (on-the-job) training early at the employing company.

Jobs are almost always commissioned on a results-oriented basis with payment made within the framework of a permanent employment relationship. In only one of the examples in Germany fees were paid on the basis of a work and services contract for freelancers.

Exhaustive case descriptions are available for female home-based teleworkers in the printing industry, who are employed (on a freelance basis) as work peak buffers for word processing and paid according to output. The amount of work they receive fluctuates and is difficult if

not impossible to predict. Most burdensome and disruptive to family life and free-time activities is often also tight scheduling of the jobs they receive.

It is conceivable that excess strain is placed on the musculo-skeletal apparatus and on the eyes which may later result in chronic disorders. Depending on the family circumstances, the strain to be expected may, however, be compensated by the advantages of being able to choose when one works, of being close to one's family and of working in a self-styled environment. But according to German report, it would be a mistake to assume this is the case for female home-based teleworkers, who do the lion's share of the housework and must often alternate between the various challenges work and family throw at them.

Working hours for permanent employees are regulated by the German Working Time Act or through collective bargaining or firm-level agreements. Employees often have a powerful PC at home which needs not be continually connected to company data processing equipment except for the retrieval or transfer of data. This leaves the task of time keeping solely in the hands of the teleworker (e.g. in a work diary, as at IBM, which must be submitted to a superior once a month). For teleworkers involved in results-oriented work, this method contains a hidden danger, namely the teleworker deliberately omitting from the time record "learning time" or "thinking time". There is a tendency for extra work to be performed "voluntarily" with the intensity of work increasing almost imperceptibly. These trends are particularly marked in professions characterized by workers with above-average qualifications who are highly motivated and career-oriented and whose tasks are done independently of one another, the computer and software professions being prime examples. The German rapporteur fears that such developments may be fuelled even further by teleworking and may lead to an uncontrolled expansion of time worked at the expense of time spent with one's family or enjoying leisure activities.

In *Greece*, for those teleworkers who are going to combine work with other commitments, the work rhythms will likely increase. It is stressed that teleworkers must receive training on how to organize their time, take regular short breaks and vary their activities. Like many other, also Greek report states that duration of work and overtime should be agreed on by written contract. Women often work one more shift of unpaid work at home being in charge of housekeeping, cooking and child care. When other members of the family will be present it is very likely that they will not be able to devote time for their paid work. Women will be obliged to work for their employer after they will have finished their house commitments. This will have as a consequence prolonged or asocial hours of work.

In *Ireland*, many telecentres automatically log and monitor telework through the computer equipment. This data is used to compile sales etc. and could be used to set targets. This could lead to teleworkers becoming machine paced and consequently have negative psycho-social side effects in the longer-term.

The responsibility for training employees is with the employer while self-employed teleworkers are responsible for their own training. It is emphasized that teleworkers should also be trained to use their computers and be familiar with the software. The national training body FAS in conjunction with one of the national universities is providing training on some pilot modules to teleworkers, covering areas such as communications skills for working by phone, working relations between teleworkers and clients and language skills for teleworking projects.

As regards duration of work and time patterns, teleworkers are not covered by conditions of employment laws. Also Irish report mentions that teleworkers often have a tendency to overwork because of the blurring of the distinction between work and home leading to occupational stress.

In *Italy* as telework involves a psycho-social dimension which is not covered by the existing regulations, it appears that the organizational aspects of work with VDUs, as established by

EU Directive, are not sufficient to satisfy the complete range of telework-related questions. VDU working stress, particularly during repetitive tasks, is flanked by problems associated with the performance of a job in remote locations (included home), with a reduced social life and a more difficult relationship with colleagues, and with reduced career possibilities.

In the case of home teleworkers, the presence of family members (especially children) may greatly interfere with the working activity. The psychological distinction between occupational setting by one side, and domestic and social environment by the other side may get progressively lost, with unpredictable outcomes on the future management of social and professional relationships by the teleworker.

As was mentioned in chapter 2.3., in Italy, the employers must enrol in a special "register of employers". Workers asking for it are enrolled in the register of homeworkers, established in any municipal section of the provincial labour office. Information annotated in the register must include data of the worker, his/her home, type and size of the job performed and remuneration.

The homeworker must be provided with a personal control card by the employer, including several specific annotations: date and time of work assignment, description of the job to perform, specifications regarding both the quality and the amount of stock assigned, amount of remuneration, amount of any advance on remuneration, date and time of consignment of the work with a specification of its quality and amount, the quality and amount of any eventual stock, indication of all remuneration and of the single elements composing it, with a specification of any deduction from wages.

Homeworkers must be paid on the basis of tariffs of full piece-work as they result from the collective agreements in force for the relevant categories. In the report it is also listed, moreover, that calculations must be done for: the percentage owed as a reimbursement of the expenses for use of machines and premises, electric power and accessories; the increase of the remuneration as an allowance for working on week-ends; the right to paid holidays; the Christmas bonus and the severance payment.

The *Portuguese* report mentions that the best time to use the equipment may be chosen by the teleworker so that the life-style is not disrupted by the telework environment. In order to prevent psychosocial problems, the work should be varied, creative and permit certain degree of personal initiative and freedom of action. Mental load, time patterns and ergonomic problems are suggested to be tackled by continuous training. Clinical fitness tests should give special emphasis to psychosocial issues.

The *Spanish* report states that teleworking as a new conception of working includes not only a new relation between the company and the employee or between the teleworker and his/her familiar relations or with working fellows but also includes customer and suppliers. Some problems that a wrong implementation of teleworking could generate are listed, e.g. loss of corporate identity, delays in decision takings, and excess of working load: "labour on call" misuse, 24 hours per day disponibility, and tendency to excess of work, workaholism.

The characteristics of teleworking require that teleworkers have some personal characteristics (high motivation, self-disciplined, able to overcome isolation periods, well organized, good time management...), characteristics of the physical setting (adequate space at home...) and characteristics of the family (number of family members, children, elder-care...). The decision about who is suitable to telework should depend on the immediate managers since they will have more knowledge not only about the working aspects but also about the personal situation of the potential participants to teleworking.

The roles and responsibilities of the different employees and management staff must be correctly defined. Good procedures of providing feedback and assessment of performance should be established. Companies, unions and employees should collaborate in order to get detailed agreements about the conditions and terms related to teleworking, as regards e.g. pay conditions, social benefits, career development and training, employment stability.

The advantages most often listed in telework/distance are, according to the *Swedish* report, the possibilities of independence and self-determination of work. The most obvious disadvantages reported are social isolation, no or little development of work, difficulties to separate working time from free-time and feelings of conflict between loyalty to employer versus family. In a survey of 128 persons teleworking from home, from local branch offices and telecottages about social consequences of telework/distance work, 91 % did not agree, however, to the statement that teleworking made them feel less loyalty or affinity to the company. The responsibility for the work, room for own initiatives, need for knowledge and competence, freedom to organize work and conditions for free-time activities increased, especially when teleworking from home.

Swedish report concludes, like some other, that perceived stress at work was not connected with the place of work but rather with what kind of work that had to be performed.

Work performed in the home of the employee is excluded in the Act on working time in Sweden. It is seen as impossible for the employer to control the actual time an employee spends working. Nor do working time regulations in collective agreements apply to home-based teleworking, such as regulated working hours and compensation for overtime. Therefore it is advisable to regulate this issue in separate an agreement regarding teleworkers.

In *the Netherlands*, from two separate general studies on the occupational health and safety of VDU-workers and homeworkers, it was concluded that arrangements regarding working time need attention, especially as regards monotonous, short-cyclic movements in the course of which teleworkers are seated in front of the VDU permanently. The working pressure should be given attention, both as regards working hours and psychological pressure.

By virtue of the Decree on work with DSE the employer must plan the worker's activities in such a way that daily work on a display screen is periodically interrupted by breaks or changes of activity reducing the workload at the display screen. Breaks should last at least 10 minutes. From an ergonomic point of view it furthermore would on an 8-hour working day not be safe to work for more than 5 or 6 hours with DSE. The employer should take this into account when ordering and planning the work. As the working hours draw near the maximum mentioned before, there is a need to take measures in order to diminish the workload. In daily practice, these requirements won't cause any problems, because most teleworkers also answer telephone calls, get coffee etc., so that the work will in a natural way be interrupted by breaks. By now there are no specific regulations regarding working hours in telework situations. Usually, employers and teleworkers only agree on the teleworker's attendance and accessibility by telephone at particular times.

Investigations have shown that most teleworkers appear to be more productive at home. One of the possible reasons for this is that they are not disturbed by their colleagues. However, some researchers point out that the better results are achieved only in the first period of their working at home, and that there is no prove of their keeping up the better results in the long term.

Furthermore, it has been shown that some teleworkers are inclined to become workaholics. This could especially hold true for teleworkers paid by the piece or paid by merit. Normally, however, teleworkers in the Netherlands (i.e. mostly employees or civil servants working part-time at home and part-time at the office) are paid by the hour.

In *U.K.*, teleworkers questioned in the IPMS survey stated that the intensive nature of their work, much of which involved meeting tight deadlines and targets was a major cause of health difficulties. The Employment Department survey (1992) found that one of the key ingredients for a successful teleworking scheme was a clear set of expectation or goals to work towards. Many teleworkers felt that they were under-managed and expressed a need for closer supervision. Some went so far as to provide their managers with evidence of progress even when it was not required of them. This tended to emerge as the result of anxiety that

they might not be perceived as working hard enough. Suitable reporting systems for the teleworkers are discussed in the report.

The type of management used differed according to the occupation of the teleworker. Managers and professionals were more likely to be managed by regular progress meetings and to be paid on a regular salary or time basis, whereas non-employees were more likely to be monitored by regular phone calls, to be paid by results or to be self-managers. This lack of trust could lead to stress on the part of the teleworker and further psychological, social, physical and organisational problems.

The Employment Department survey also found that non-employees tended to be more intensively managed than employees, who were trusted by their managers to a greater extent. However, this trend is not universal. About 20% of employees are managed by payment by results, time sheets or on-line monitoring. Only 50% of the organisations surveyed by Huws (1993) carried out any formal appraisal, and lack of formal appraisal was highlighted as a problem by teleworkers who did not receive any.

In general, employee status tends to be associated with longer working hours, managerial or professional work, greater mobility and more face-to-face contact with colleagues and clients, whereas self-employed teleworkers are more likely to be part-time workers, to be paid by results and to work more from home. With respect to time patterns, some clerical teleworkers reported that their work was very unpredictable and that some weeks they had twice as much work than others. For some self-employed teleworkers this means that their income will change from week to week which makes it very unreliable.

One important problem which is ignored in any legislation on teleworking is that of overwork or 'workaholism'.

One problem with the establishment of computer links between teleworkers and their employers addressed in the U.K. report is the possibility of work monitoring by means of keystrokes recorded on the computer software. Like payment by results, this method of monitoring could be highly stressful and could result in teleworkers not taking breaks which. However, a good employer could use this method to the employee's advantage by using it to make sure that they do take regular breaks. Computer links present a dilemma in telework because autonomy is an important benefit for many teleworkers, but, on the other hand, the same computer links can help to eliminate problems of isolation.

Haddon (1991) argues that teleworkers would feel less autonomy and freedom from detailed supervision if monitoring software constantly checked their progress. The report states that while different workers/types of workers may need to be evaluated, it may be important to consider using equipment which does not have monitoring facilities or which has facilities that can be turned off; or to monitor new recruits but to taper off monitoring at a later stage.

### 3.4. Work isolation

According to *Austrian* rapporteurs, human development and professional skills develop through social relations. An isolated work environment cannot be compensated for by intensifying family contacts. This is one reason why only doing tele-homework should be rejected.

In *Belgium*, a factor which can add to the psychic or mental workload of a telehomeworker is the social isolation and the fewer social contacts. Not all telehomeworkers will suffer from it. Much is depending on the self-management of the telehomeworker, as well as on the way in which the domestic work is organised within the context of the enterprise: complete/partial telehomework, the way in which consultancy about the work is organised (formal/informal). It has become necessary to organise social events to keep up the company culture.

It is however observed that the communication has improved because the teleworkers do not longer have to be on the road and because there is more opportunity to real contact when there are meetings. As to the relation with his immediate superior the relation should not

really alter but the contact should become much more intense. Further it is observed that the job satisfaction of the domestic workers tends to increase because of the larger attention of the employer for the domestic worker and because of the fact that the individual needs of the domestic worker are more taken into account.

The decreased amount of social relations was not a personal problem with the teleworkers in the *Finnish* companies studied. Being on a voluntary basis, the self-selection of teleworkers decreased the risk of stress due to isolation. To some persons, social relations were no issue as such. In one company studied, women expressed more concern about social contacts than men. This can probably be explained by both the type of work and by gender: women carry out office tasks mostly related to personnel administration, and men mainly technical tasks.

In one company it was noticed that the demands of those remaining at the office have increased, especially in the case of competent teleworkers. The office personnel also have to carry out some routine tasks for the teleworker, and changes in work rooms have been carried out. The reactions of the work mates have varied from very positive ones with flexible attitudes on both sides to the problems in the work climate and gubbling with trifles. It is therefore important to discuss together beforehand, how different matters and practical issues are to be handled.

In *France*, survey based on semi-guided interviews with homebased teleworkers in a large company showed that telework may lead to social isolation. It would seem that subconsciously, the teleworkers interviewed tend to associate telework and lack of interaction with colleagues. It also seems that teleworkers, because of their delocalisation, do not really take part in company life. Participating to union or management meetings by telephone does not seem to meet their need to belong and consequently makes teleworkers feel isolated. It was also mentioned that isolation is a risk linked to the disappearance of collective work and implied social relations.

Studies of process control have shown that too much uncertainty about the state of a system could lead to emotional imbalance for the operator and an unsuitable reaction in unforeseen situations. A certain emotional tension inherent in feeling responsible for work would turn into real stress under the reinforcing effect of isolation.

According to some researchers, distance between permanent and 'peripheral' members of staff can hinder learning know-how, knowing certain 'tricks', getting the 'knack' and acquiring informal knowledge which usually make work possible.

In all of the examples of individually organized teleworking schemes cited by Godehardt (1994) in *Germany*, the preferred alternating form involved some time being regularly spent at the company (e.g. 50% of working hours, one day per week or per month). There are indications that one "office day" per week is not enough to satisfy the need for informal social interaction. Like in France, German experience shows that in some cases feelings of isolation and discontent at the lack of a clear boundary between their private and professional lives have induced some members of the staff to shift their activities back to the office.

The *Greek* rapporteur estimates that, in general, telework will lead to work isolation with its bad consequences on mental health. This will be more serious for Greek teleworkers because they do not like to work alone, preferring to work with other people.

According to the *Irish* report, teleworking often leads to lack of both formal and informal contacts where the teleworkers spend very long periods of time working alone. Companies practising teleworking are recommended to build in social contact time for teleworkers through weekly office meetings, daily phone contact social events etc. Contacts with trade unions is one problem of self-employed workers and those people working from home.

The *Italian* report mentions that telework allows the subject to harmonize working rhythms with his/her biological rhythms, given the self-organization of daytime. In the case of both professionals and managers, social isolation in the workplace is not so important, because they strongly identify themselves in their profession and are able to self-organize their work.

In *Portugal*, to prevent isolation from being felt as negative, the worker must be required to make periodic visits to the company, depending by the type of work and on the psycho-emotional state of the worker.

Also *Spanish* report is in favour of formal explicit channels and procedure schedules of information and communication: consultations, informal communications with colleagues (by telephone, electronic mail...), procedures of news communications, events related with the company, access to and getting in touch with workers' representatives are listed. Regular evaluations of these procedures in order to avoid working and personal problems (isolation, feelings of "being forgotten", dissatisfaction, stress...) is suggested.

The *Swedish* report remarks that working alone need not in itself be stressful or dangerous. The stresses of solitary work vary widely and are felt differently by different people. However, the contact with fellow workers and other people during work constitutes a value which is important to preserve. Particular care shall be taken that the employee has sufficient education, information and instruction to carry out the work alone.

Especially in case of full-time telework, which is still rare in *the Netherlands*, the chance of experiencing work isolation becomes realistic. Teleworkers working part-time at the office, with clients or in a satellite or neighbourhood centre can still keep up contacts with colleagues, managers and/or clients. The mobile teleworkers working with a Dutch banking corporation, who complained about their isolated positions, were invited by the bank to attend regular meetings to discuss the work and company matters. Teleworkers with a Dutch computer company indicate that they don't at all experience isolation: they keep up their contacts with colleagues all over the world via the electronic mail system.

An other possible problem is that (especially full-time) teleworkers feel less tied to the company they are working for. They might feel more related to the clients and be in the position to directly negotiate with these clients, and set the employer off-side.

Furthermore, participation by (full-time) teleworkers in e.g. unions and works councils may drop. It might be hard (at least time consuming) for unions to reach teleworkers working at home. Teleworkers working full-time at home or in a neighbourhood centre are excluded from the scope of the Dutch Act on works councils. The consequence of this is that they cannot participate in the works council, unless the employer and the works council agree on their participation.

In the *U.K.* report, much attention is given to the issue of isolation. The Employment Department teleworking survey found that most teleworkers need to spend the equivalent of 1-2 days a week in the office if they are to stay in touch with developments in the organisation and do their work effectively. The Employment Department Group manager's guide to teleworking (1994) states that it is psychologically important for teleworkers to feel that they have a 'home' in the office when they visit the office, without being in anyone's way. This helps to create a sense of 'belonging' to the organisation giving them the same opportunities for appraisal and training as other staff. Team-building activities should include teleworkers and keep them in touch by using different means of communication, listed in the report.

The U.K. rapporteurs conclude that social isolation is generally regarded as the largest potential problem of teleworking in the teleworking literature. Isolation and loneliness are possible stressful aspects of teleworking as they are of any other form of work (Cox, 1993), and, like other stressful factors of work, can lead to further harmful psychological, social, physiological and organisational effects if they are not taken into consideration and properly dealt with. Therefore, there seems to be a worrying gap in the legislation because teleworkers are not legally protected against isolation in any way.

One problem is that other workers may not take account of the problems of teleworkers in the same way that they would take account of the problems of other office staff. For example, if a teleworker hands work in late it may be presumed to be because they are 'slacking' at home, whereas people would make allowances for an office worker if they knew he/she had external problems, or if they were aware that he/she had difficulties in obtaining the information needed. This lack of communication can lead to paranoid thoughts that people are stealing their ideas or talking about them behind their backs.

In extreme cases, the isolation coupled with the constant availability of food and drink and the ability to take breaks at any time can lead to eating disorders and alcoholism. There is anecdotal evidence that paranoia, eating disorders and alcoholism are reasons behind people giving up teleworking in a significant number of cases. People who did not have problems beforehand can start to develop difficulties once they are teleworking. This is thought to be to do with lack of feedback; teleworkers are often told if their work is wrong or inadequate, but rarely get positive feedback when it is good.

Cultural barriers to social integration need to be taken into account, especially in cases where the teleworkers tend to be in a different age group from the rest of the staff, or if they tend to have different family commitments from the other teleworkers.

On the other hand, some teleworkers stated that the reduced amount of communication with on-site colleagues and employers meant that they were less involved in unpleasant internal politics, that they had the isolation that they needed when they were busy, that they could take breaks when they needed them and that they did not have to ingratiate themselves with their employers.

Many managers held the view that isolation and integration were issues for the teleworkers, not their employers, and that people with high need for social interaction should not become teleworkers. Research has also identified the occurrence of managerial bullying in cases where isolated homeworkers have been presented with contract changes, without being given the opportunity to discuss the changes with colleagues or office representatives. As regards solving the problem of isolation, research is suggested about the type of communication that goes on in normal offices, so that what teleworkers are missing can be made apparent.

### 3.5. Job content, autonomy and job control

The **Belgian** rapporteur starts by mentioning that the introduction of telework for unskilled and semi-skilled functions will take place in another way than the introduction of telework for highly-skilled functions. With the first group of functions (the routine tasks) the employers in Belgium seemed to have a great urge to have control over the telework. To keep this control, projects in relation to the introduction of tele(home)work will be more strictly developed and followed up. Another important point is that because of the control demanded by the employers with regard to tele(home)work of unskilled and semi-skilled functions, terms of employment and remuneration are influenced. After all, control means that standards concerning tasks to be performed are fixed, which means that the working time will also be fixed. Again remuneration and terms of employment will here be influenced (Télétravail et Femmes, 12.09.95). Tele(home)work for highly-skilled functions is less strictly regulated. However, these employees already show an autonomy in the execution of the job. Where earlier the emphasis was put on the advantages of tele(home)work in relation to environment

and mobility, the conscience is growing that these advantages are insufficient to convince the employer to really implement this form of labour organisation. The problem is however that the advantages concerning efficiency, motivation to work, decrease of absence through illness and the like - advantages which go together with the introduction of tele(home)work - are far more difficult to quantify.

Regarding job content, the *Danish* research data is limited on only 16 occupational home work employees from the 1990 Survey of Work Environment and Health in Danish Employees. Indications of work content can be found in questions regarding work processes carried out, work demands, influence on working conditions and type of pay.

In one of the four cases analyzed in *Finland*, the top management encouraged the personnel to take an initiative and assume responsibility for their work, and tried to create an organization culture in which formal control was avoided. Because telework was based on the expansive use of the new tool, electronic mail, emphasis was more on communication and leadership culture than on specific changes in job contents. In another case, teleworkers represent all kind of duties ranging from skilled professionals to routine office tasks.

The impacts of telework on job content have been mainly positive. There is no specific monitoring or controlling system and the feedback and quality control are organized as in ordinary work. In an insurance company, the teleworkers make up only a small proportion of the whole staff, being carefully selected. Autonomy and capability for self-control, as well as the supervisor's trust are the key preconditions of telework. Also strong motivation and especially the teleworkers' high skills and mastery of tasks of the teleworkers are needed. In two Finnish pilot cases, experimentations have not, however, widened, partly due to the attitudes of supervisors. One motive to telework was the feared shortage of labour. Today under the condition of surplus of labour force, the basis for more flexible working arrangements cannot be the same any more.

In summarizing the experiences in Finland of the four cases studied as regards job content, telework has had positive effects. Telework provides better possibilities to concentrate on the work, to improve one's working methods, to organize one's work independently, and to plan the timing of the work on the basis of personal criteria. Other factors than job content are today modifying individual attitudes and motivation to continue telework.

In *France* professionals who have turned to telework can be put into two subgroups: secretaries, office workers, and technicians, executives and high-status professions. The first group consists of under-qualified women without real autonomy in their work. The second group are mostly men, highly-qualified, who have greater independence. In the first case, telework is not as yet socially recognized and can be a source of self-depreciation, as it used to be with homebased manual work. Devalorisation can be even stronger if the work requires neither qualification nor initiative.

One survey on teleworkers' professional identity brought to light the fact that the teleworkers interviewed were not integrated in the company because they were not accepted for what they had become. They often stressed the fact that they are above all employees, rather than teleworkers. The point is that, although teleworkers have acquired new skills in addition to their qualifications thanks to telework, these skills have not been recognized by their managers or colleagues, which means that their status in the company has not changed. These teleworkers have not, so it seems in the framework of telework, gained access to a new level of power related to their skills.

In *Germany* also the content of jobs performed by teleworkers ranges from the activities of the so-called knowledge workers (e.g. system management, programming) to simple data entry. Jobs are normally commissioned on the basis of a particular goal or result. As a rule, management views such "output-oriented" work, which demands long periods of undisturbed

concentration, as well suited to teleworking. Less apt to be considered for teleworkers are "presence-oriented" tasks which require a good deal of communication and personal contact with others.

In *Ireland*, work rhythms, control and job content issues are controlled by the contract between the teleworker and his employer or client. Technology can lead to de-skilling, poorer work conditions and poorer pay which all have serious psycho-social implications. It is stressed that jobs need to be selected which match the skills, abilities and needs of the employee with the task.

As regards job control and content in *Italy*, a managerial and hierarchical subordination of the homemaker to the employer is also assumed in the case of homework. This subordination precedes the working activity itself, given the technical provisions on the working modalities and, subsequently, the assessment of the correspondence between the instructions given and the work concluded.

The *Portuguese* rapporteur states that teleworkers, due to their isolation, may have a certain tendency towards independence and self-control. While this attitude is commendable in a freelancer or piece-worker, in which the teleworkers limit themselves to meeting deadlines, those workers who are full-time employees of the company cannot react in the same way, making it necessary to ensure that the work, performance and time are supervised.

In *Spain*, teleworking conception implies the impossibility to keep on working with the same schedules as in the office work. The impossibility of a direct supervision and the establishment of flexible timetable determine a new form of work organization and of job content definition. It is important to define the content, tasks and objectives of work in a concrete and clear way. Management should be based in the person's performance, management by results or by objectives. Objectives should be discussed and arranged by employees and management staff, and each one should know what is expected from him and what has to be done. The roles of the different employees and management staff must be correctly defined, and the several responsibilities and functions throughout the company should be detailed.

The *Swedish* report lists the prerequisites for a good computerized work content, emphasizing the use of teleworkers' creative capacity, job diversity and opportunity of utilising knowledge and skills. Empirical data from Sweden, like from Finland, has witnessed mainly positive impact of telework on job contents. As was mentioned earlier, stress is not connected with the place of work but rather with kind of work is performed.

Investigations in *the Netherlands* have shown that teleworkers experience an increase in autonomy and independence. However, colleagues working inside the office sometimes complain about the absence of colleagues, e.g., their accessibility at home. Furthermore, some managers complain about their ability to manage the teleworkers. In several publications on homework the consequences of teleworking for one's career are questioned. From empirical investigations into telework arrangements, however, no negative conclusions were drawn in this respect.

In *U.K.* also, teleworking often has resulted in workers having a great deal of autonomy and control over when they carry out their work. The Employment Department survey (1992) found that difficulty in managing workers was the largest drawback to teleworking perceived by employers with the potential to employ teleworkers.

Although control over work is generally linked to a reduction in stress and other benefits for the worker, many workers report that lack of motivation is a major problem caused by the

increased control. Teleworkers may find it hard to begin working, to continue working once they have started and to avoid procrastination. Ingham (1995) suggests that teleworkers with a lack of motivation should attempt to isolate the causes of the problem. These may be based in a poor office environment or a lack of balance between the persons working life and their social or family life, rather than anything more fundamental involved in the work content itself. Lack of motivation may also be associated with a fear of failure. However, the Employment Department survey found that the most frequently cited way in which managers considered teleworkers to be superior to other employees was self-motivation.

### 3.6. Training and retraining possibilities

In *Austria* one of the key issues to be improved is training possibilities of teleworkers.

In most cases described in the *Finnish* report, teleworkers work at home from one to three days per week, having normal possibilities to take part in training and weekly and monthly meetings in the office. In some cases, teleworkers doing the same tasks worked in pairs, and the periods of working at home and in the office alternated by turns. A special training is proposed for supervisors in insurance company to help them to organize telework conditions.

According to the *French* rapporteurs, distance work has been a culture shock in France whatever the changes it caused and advantages that may be drawn from it. This is why, especially homebased telework, must be preceded by training to help teleworkers acquire new attitudes relating to autonomy, judgement and decision-making in keeping with their personal and familial projects and those of the company. New type of organizational behaviour is recommended: teleworkers should be given the opportunity to be more autonomous in their work and in managing it and to establish new rapports with the management.

Apart from team work, teleworkers are alone and isolated. They have to cope with the physical requirements inherent to their situations, with technical limitations such as breakdowns and obligation to answer all outside calls, and with having to satisfy customers' requests as soon as possible - and therefore to know the array of resources that can help them. This is a strange situation for workers who were used to obeying orders and being submissive, since it makes them change in terms of actions, behaviour and forces them to become autonomous managers with a recognized professional position. In a certain way, they become freelance workers, whether it is inside or outside the framework of the company which employs them.

Telework training must therefore stress the new type of behaviour that teleworkers will have to cope with. Trainees must acquire new attitudes such as autonomously solving problems, decision-making, managing private and professional matters in the same place, etc. In addition, training must help future teleworkers acquire technical skills, learn the basics of communication theory in order to maximise exchanges, and trainees should know how to organize their work and everything that goes on around it.

In *Germany*, the same training and retraining opportunities available to company-based employees may also be enjoyed by teleworkers, at least by those working under a permanent contract. Very often it is precisely the staff members who are well-organized, who can manage time well and who have abundant experience and expertise that are chosen as teleworkers in the first place. No guidelines on training exist however for the freelance home workers e.g. in the printing industry case.

In *Greece*, training is not adequate for all employees/workers in general and it is estimated that training and/or retraining for teleworkers will be even more inadequate.

In **Ireland**, all workers are entitled to the information, knowledge and training that is required in order to carry out their work in a safe manner. The employer is required to have a training programme in place and to recognise and provide the necessary retraining so that his employees are kept up-to-date on health and safety matters. The self-employed person has to review his own training needs. As stated earlier the state training agency FAS is piloting training modules for teleworkers.

The **Italian** report stresses that teleworkers' education may not be exclusively focused on professional aspects (such as software management); it must include a sufficient knowledge of safety and health protection at work. The information must be provided by the employer and must be periodically repeated according to the evolution of knowledge on occupational risks (in any case every 5 years). A personal training including safety and prevention may play an important role in aiding teleworkers to avoid or reduce the negative effects also due to repetitive tasks and social isolation.

In **Portugal**, due to the rapid technological development of the work performed by teleworkers, it is very important to retrain them so that they can keep up with technological advances. A special point of view in the Portuguese report are the people working in companies with plans to reduce the workforce. These workers must be motivated and prepared so that they can, in future, become good teleworkers.

The training of managers and supervisors is emphasized in the **Swedish** report, on matters relating to the rules of labour law, the effect of different working conditions on people's experiences, interaction and conflict risks and skills for rapid response to people in situations of stress and crisis.

By virtue of article 6 of the **Dutch** Working Environment Act employers are obliged to instruct teleworkers on, e.g., the posture at work and a well-considered daily work routine. Besides, in Dutch law, there are no regulations concerning training and retraining possibilities of teleworkers. Such regulations may be included in a collective labour contract or in a company regulation. Whether or not a teleworker is entitled to (re)training possibilities depends on the circumstances of the case.

In **U.K.**, the results of the Employment Department survey suggest that non-employees are less likely to be incorporated into any employer appraisal or training schemes than employees. Overall, a third of the employers surveyed provided some form of training or counselling to prepare new teleworkers for working from home. For most of the routine clerical workers, the counselling consisted of an informal chat with the manager about what teleworking involves or how to handle boredom.

Only a minority of the employers surveyed provided induction programmes, workshops, shadowing schemes or written guidance on teleworking. Common complaints among teleworkers in the UK are that they were not given clear information about what to expect from teleworking or advice on how to deal with working conditions which are more isolated and demand much more self-management than a typical office job.

The Employment Department survey also found that less than 20% of telework managers were trained on how to prepare employees for telework. However, four out of five of the employers reported that some form of staff needs monitoring was necessary.

Of the teleworkers that are trained, the majority of the employees are trained on an in-house course, and most of the non-employees are self-trained. In the majority of cases the training provided to teleworking employees was very similar to that provided to office-based employees doing the similar work, especially for professional or management level teleworkers. Correct training for the task is also very important. Teleworkers questioned in the IPMS survey (Huws, 1994) believed that the fact that they had been given inadequate advice and training in word processing skills was a major possible reason behind their health problems.

### 3.7. Privacy

One of the key issues of home-based telework is privacy and separation of work and family life. This issue was partly discussed also in chapter 2.

In a *Finnish* insurance company, telephone operators and co-workers are always informed when the teleworker is contactable, and children are not allowed to answer the phone at home. In assurance business, the information on customers is highly confidential and must be kept from outsiders.

In *France* telework specialists are unanimous in recommending a room set aside. For women the risks are greater as they are very quickly caught up in everyday home life. Therefore the danger is to see "machines invade the home". Intel France has attempted to bypass this problem by paying teleworkers 1000 Francs per month (in 1993) housing subsidy supposed to allow teleworkers to convert the designated work room and to equip.

According to the French report, the lack of a real separation between professional and private life is remains one of the major problems of telework. Teleworkers must be able to cut themselves off from family during work just as they should not have to suffer intrusive telephone calls. The inter-relationship between professional connections and family/friend ties can be difficult to organize, because, teleworkers are mostly in a hazy, changing and destabilizing spatio-temporal interface. This is also connect with the impossibility to set out boundaries of behaviour in their minds or in the minds of the members of their affective environment. For D. Ettighoffer, for teleworkers the danger of 'being the last human link of a networked society where time flies between private and professional lives that are devoid of boundaries' is great.

Also *German* report points out that by its very nature, home-based teleworking leads to the problem of the boundary between work and leisure becoming blurred. Although Godehardt (1994) states that "the undisturbed working atmosphere at home can be suited to jobs which demand high levels of concentration...", what cannot be assumed without further study is whether "undisturbed" really describes the atmosphere at telework places. In connection with the case of female teleworkers in the printing industry, special attention should also be given to the division of labour within the family. Although teleworking gave the women in the study much more freedom to arrange their work schedules as they wished, it brought some serious disadvantages as well: "Flexible working hours represent (...) both the greatest blessing and the greatest curse of home-based teleworking. Stress is often brought on because in practice companies assign jobs in such a way that teleworkers are left very little leeway in planning their private lives. They often have to perform their job duties very early or very late in the day so as not to conflict with the times set aside for domestic chores which they cannot influence. The women must therefore be able to continuously adjust to the ceaselessly changing demands placed upon them (...)." (Goldmann and Richter, 1991).

In *Greece*, if the teleworker works at home there is a privacy problem, especially for the other members of the family, due to telephone calls, fax messages, or because they are not able to do whatever they want. For teleworkers, undesired calls and loosing the boundaries between work and family or personal life are risks.

There is nothing in *Irish* occupational health and safety laws covering the privacy issue. Where other family members and in particular children are using the same rooms as the teleworker privacy would be a problem and could also affect output.

In *Italy*, whatever established by the worker's statute (Act 300/70) regarding the workers' privacy is also valid for homeworkers, including teleworkers.

*Portuguese* law ensures people's privacy and only permits the authorities to legally enter the home of any individual with a court order, except for the performance of work done at home without a binding contract, where an inspection may be made by the Inspeção Geral do Trabalho. However, the confidentiality of the work performed may also be guaranteed either in the interest of the teleworker or of the company. Some technical safeguards are presented.

The *Dutch* report points out that since the house can be considered as the tangible demarcation of one's private life, working at home seems to provide utmost privacy. However, house visits may be made by the employer and the Inspection of the Department of Social Affairs and Employment.

Furthermore the employer may use quantitative or qualitative checking facilities to check the teleworker's behaviour and work achievements. Such checking facilities usually cannot be noticed by the teleworker at home, whereas these facilities enable the employer to collect, store and use rather detailed data on individual teleworkers. Therefore, these facilities are considered to pose a threat to the teleworker's privacy. By virtue of the annex to the Decree on work with display screen equipment the employer may not secretly use a checking facility. At least the teleworkers must know about its use. Furthermore, according to the announced amendment of the Act on works councils the employees will be entitled to co-decision as to the introduction of checking facilities as well as to regulations regarding the employees' privacy. When using a checking facility the employer must comply with the Dutch Data Protection Act and the regulations pursuant thereof. Furthermore, the employer must do and refrain from doing anything that a good employer should do or refrain from doing (Civil Code).

A different perspective to privacy issues is presented in the *U.K.* report. According to Huws (1995) the ability to make telephone calls from a home environment is one of the major advantages of teleworking because the problems such as noise and the possibility of being overheard that are present, in an open plan office, are eliminated. An area of concern to some teleworkers is the fact that they can be contacted 24 hours a day and the intrusion of teleworking into private family life. However, many teleworkers interviewed in the British Telecommunications plc report on clerical teleworking and the family actually viewed being on 24 hour call as a selling point for their services, or at least as a trade-off for the benefit of staying at home. Nevertheless, contactability was sometimes felt to be an intrusion into their lives.

Haddon (1991) states that teleworkers are generally more available to managers, colleagues and clients than office workers, even if some would prefer to keep evenings and weekends free. Therefore, many teleworkers attempt to control contact, for example, by intercepting calls on answerphones or by arranging visits from outsiders related to work in advance to make them more predicable. Like the issue of interruptions from the family (see chapter 2.4.), it is necessary to clarify the rules of contactability at the outset.

## 4. RISK ASSESSMENT, SURVEILLANCE AND CONTROL OF THE APPLICATION OF HEALTH AND SAFETY AT WORK PROVISIONS

- 4.1. Risk assessment
- 4.2. Responsibility for the provision and maintenance of equipment safety
- 4.3. Health surveillance

According to *Austrian* report, the precondition of telework at home is to have appropriate standards. The equipment of a workplace at home is not on the responsibility of the employee and risk exists that employee protection law could be undermined.

In *Belgium* the industrial medical services and the safety managers are important in the risk assessment. However, the missions of the CVGV are difficult to realize in the framework of telehomework. The trade unions and the National Labour Council are pleading for an equalization of telehomeworkers with the regular employers; it is desirable that the persons responsible for health and safety take domestic workers into account in creating a prevention policy.

As regards the condition of a minimal working time to be proven in the regulation concerning insurable medical care, there are no longer conditions which are less favourable for the telehomeworker. Concerning disability a distinction should be made between disability to travel and disability to travel and to work. When a telehomeworker who only works part-time at home is only unfit to travel and therefore works full-time at home, an adaptation of the allowance for e.g. heating can be provided. According to the National Labour Council there are in this sector no problems with benefits from the health insurance, except possibly the problem of the guaranteed wage.

The Belgian report states that attention to safety and health risks of the applied material already starts in the stage of purchase and teleworkers can be consulted. The safety officer and the company doctor can also often provide useful information. Possibly the opportunity can be added to test "prototypes" or demonstration material by the personnel during a sufficient period of time. The bottleneck is who may or can purchase and who is controlling the ergonomic character of the purchase. The telematics apparatus paid by the employer, which is put at the disposal of the tele(home)workers, can be the following: visual display, printer, modem, fax and a second telephone line. Teleworkers who are often on the road to their clients could also use a GSM. The telematics apparatus is noted in an inventory as property of the enterprise (ABB, IBM, Janssen Pharmaceutica) and may be used for private but not for commercial purpose. The office equipment which is put at disposal contains a cupboard, a desk and a chair. This is also noted as property of the employer. The employees of ABB have to take care of a desk themselves, ABB on its turn provides for the purchase of an ergonomically sufficient office chair. (Druyts, A., 1994)

In **Denmark**, like in (most) other countries, the Working Environment Act states that it is the responsibility of the employer that work is carried out safely. When occupational work is carried out in the home of the employee there are no governmental working environment regulations concerning provision or maintenance of computer equipment. No special health surveillance of telework employees or employees carrying out occupational computer home work takes place.

In **Finland**, the same rules and health and safety recommendations apply in general to teleworkers as to others. In most cases, equipment are provided by the employer who also take the responsibility of the technical maintenance of the equipment. As for teleworkers, it is very difficult to know the ambient level of a person's workroom, without careful field measurements which usually are not taken in private homes. In addition, the use of old, non-tested models of personal computers, in surroundings including also domestic electrical appliances and communications equipment, may result in higher electromagnetic exposures than in typical office environments.

Occupational health services have a wide coverage in Finland. Teleworkers are have normal rights and possibilities to use these services. The situation is, however, quite different among self-employed and persons working in small enterprises.

The **French** opinion is that telework in itself does not increase health and safety risks. In the case of an accident, the major problem is to prove that the damage was really connected to the teleworker's activity. In practice, the employer-employee insurance policies will combine to cover all the damages.

If the teleworker is not employed, Health Authorities have no role to play. If the teleworker is employed as a homebased teleworker, there is still a grey area in relation with Health Authorities. The Work Code stipulates that a public administration regulation based on reports from relevant ministries will determine conditions under which health surveillance can be made applicable to homebased workers. To the knowledge of the French rapporteurs, the public administration regulation foreseen has still not been published.

Telework falls into the category of work which requires special medical surveillance in line with regulations concerning VDU work.

In **Germany**, most of the service and works agreements do not explicitly provide for an assessment of the hazards of teleworking. Current European legislation covering workers who work with a VDU apply to the permanent employees involved in the case studies. This directive does not however apply to employees who perform mobile telework (field service staff). It does not cover data processing performed in any mode of transport or on any portable piece of data processing equipment not regularly used at one's place of work. In order to ensure that occupational safety and health guidelines are being followed, the issue of access to the teleworker's home workstation must be settled. The Federal Ministry of Labour and Social Affairs, for example, offers to certify the ergonomic suitability of a workstation when it is set up. The extent to which inspections of ergonomic standards have been done is unknown.

In only one reported German case (that of INTEGRATA) are the employees personally responsible for designing their own workstations and supplying hardware. The suitability of space used for telework is not checked by the company. In all other cases where permanent employees are involved, the employer supplies the employee with the telework station and consequently should be responsible for its safety and maintenance. It is stressed that truly problematic and in need of regulation is the situation involving teleworkers who are legally classified as self-employed, like the women working in the printing industry discussed in the report.

Occupational health and safety should be organized along fundamentally the same lines for both company-based and teleworking employees. But up to now only some companies

require that every employee who joins a teleworking scheme to first undergo a medical examination.

The literature available on teleworking in Germany has shown that the health aspects of this form of labour have not been a topic of research. There is therefore no evidence to support the claims made by some (international) studies that a lower rate of illness-related absenteeism can be expected among teleworkers. The German rapporteurs find remarkable that in a survey of IBM employees, whose rating of telework is on the whole portrayed as very positive in the literature, 40% said that their workload was "excessive".

Until the results of such research are available, the report considers at least plausible that teleworkers suffer from similar ailments as are common among many office workers. Research data witnesses that those employees whose work consisted of monotonous, repetitive tasks, such as data entry, steadily showed the highest rate of illness-related absenteeism. One conclusion which may be drawn from the case studies is that the ergonomic conditions of the workplace are a "critical factor" in home-based teleworking.

German report concludes that teleworking can have a positive impact on both employee well-being and performance as long as the teleworker is granted a high degree of job autonomy and is guaranteed sufficient break time. A perceived quantitative work overload proved to be a crucial factor connected with the development of health complaints.

The *Greek* rapporteur fears that teleworkers will remain out of sights of occupational health units of the companies. A higher degree of health surveillance is needed also for self-employed teleworkers in the future.

As in other countries, also in *Ireland* the responsibility for carrying out a risk assessment of any workplace rests with the employer. Equipment used by the teleworker and the general work environment must be assessed by the teleworker's employer or by himself if the teleworker is self-employed. They have to make their own arrangements also as regards eye testing.

In *Italy*, working ability criteria adopted in tasks requiring a VDU use may be assumed valid also in the case of teleworkers. Teleworkers operating on vehicles should be periodically examined to assess their auditory and vestibular function.

Given the psychosocial dimension of telework, occupational medicine must pay a particular attention to stress and disaffection originating from the modification of social and professional relationships of teleworkers. In this concern, a crucial role is thought to be played by the occupational psychology, especially regarding:

- 1) the identification of subjects "more susceptible" to a psychological impact of teleworking activities;
- 2) the early detection of disaffection signs in teleworkers.

The administration of psychological questionnaires is thought to be important to assess the ability to carry out telecontrolling. Moreover, as for the telecontrollers, is important to ascertain both preventively and periodically the use or the abuse of drugs and psychotropic substances in general. In addition a protocol on the organization of work is regarded as suitable, especially to optimize the distribution and duration of pauses within the working time, also suggesting how to fulfil them.

In *Portugal*, in order to assess the possible health hazards inherent in telework workplace, a duly qualified technician must be allowed to make inspections. It will also be useful for occupational health medicine, an ergonomist, safety official and any other qualified technician to inspect the respective work site.

The provision, maintenance and safety of the equipment shall be the exclusive responsibility of the company to which the worker is bound by contract. However, if the worker is self-employed, he/she shall be solely responsible for the provision, maintenance and safety of that equipment. If the worker is a full-time employee of the company, he/she must be under the same medical supervision available to all of the other employees of the company. If the worker is self-employed, the promotion and supervision of his/her health, according to Portuguese legislation, must be provided by institutions and services belonging to the National Health Service or others occupational health services.

The *Spanish* Labour Law determines that the labour authority knows the place where the work is done in order to demand measures of safety and hygiene. According to the definition of Labour Contracts Law, teleworking cannot be considered as homeworking. Specific legal regulation is needed. A list of suggested items for the agreement or contract of teleworking is given.

The *Swedish* rapporteur emphasizes that in order for different legal provisions to achieve their purpose, health and safety aspects have to be dealt with in the course of day-to-day activities by persons in the line organisation, combining economic and production-related viewpoints.

The employer shall ensure that internal control can be carried out conjointly with the employees. In teleworking, co-operation is especially important for drawing up action plans and charting risks. The Ordinance on internal control applies both to ongoing planning measures and to the special measures needed for new and modified activities, e.g. when applying telework.

It is essential for the employer to keep pace with social and technical developments in the community at large and with the employees' need and opportunities for personal and vocational development.

Clear allocation of duties is particularly necessary when the work is done by inexperienced personnel, e.g. on account of illness, holidays and recent recruitment, or when work to a great deal is to be performed outside the principal worksite, as is the case in teleworking.

It is important for the employees, especially for teleworkers, to be informed of changes planned to the scope, direction and organisation of activities and concerning injuries and incidents occurring at work.

Further, the Swedish rapporteur suggests that teleworking can be a measure in the rehabilitation process. At the same time it is necessary to apply the work adjustment and rehabilitation process to teleworkers in need of it. It has been shown that rapid, regular contact between the sicklisted employee, colleagues and management helps to shorten periods of sickness absence. Contacts of this kind should therefore be a natural part of management routines for rehabilitation. This is especially important in telework.

The employer shall adjust the work situation of the individual employees according to their aptitudes for the tasks. In telework special care and attention are needed in order for psychological and social aspects of the working environment to be provided for in these connections.

The employer shall make clear the internal rules and routines applying if an employee is under the influence of alcohol or other intoxicants at work. This is specially important in the case of teleworking, since alcohol or drug abuse may develop during teleworking without being discovered until it has been far reaching. In the case of telework the policy of the company should clearly apply to the employee's work at home. It is generally advisable for these routines to be put down in writing.

In *the Netherlands*, the Inspection of the Department of Social Affairs and Employment states that the obligation to analyze the risks involved in homework does not entail that an employer is expected to visit every single home before providing work. The point is that the

employer within reason forms an idea of the possible risks and appropriate remedies, e.g., whether a certain production process is fit for or can be made fit for a home. Information work does not in itself bear such risks for the safety, health and well being of the employees that the performance in a home should be discouraged right away. In order to be able to form a picture of the situation at home, the employer will ask for information from the teleworker, also survey data is possible e.g., pictures of the workplace at home.

In daily practice employers usually only inventory whether or not the teleworker has at his disposal the needed equipment, furniture and a suitable working room. Sometimes, the worker does not qualify for telework if he has not already got the needed equipment, furniture and a suitable working room. The acquisition of equipment and furniture is often determined by finance, rather than occupational health and safety at work.

Other companies provide the teleworker with equipment and furniture if the teleworker does not already dispose thereof. If the teleworker uses his own equipment sometimes expenses are paid by the employer. Also some employers grant their teleworkers a loan for necessary alterations in the working rooms.

According to the Dutch report, there is only one Dutch labour organisation (a banking corporation) known that very conscientiously complies with the obligations to assess and evaluate risks in telework situations. A survey was carried out in 1993 and was repeated in 1994 (n=58). The home workstations of 7 teleworkers were inspected. A reference group of 73 industrial organization experts was used. The bank issued a regulation concerning teleworking (approved by the works council), a telework contract which is annexed to the contract of employment and business rules concerning teleworking. The business rules include e.g. agreements on the times the teleworker can be reached at home, the times and days the teleworker must attend the office, the possible use of exchange working rooms, reporting illness, time registration, holidays etc.

Results of the inventory are summarized in the report. More than 50% of the teleworkers felt they were forced to start teleworking or that the employer highly appreciated their teleworking. The pace of work did increase (43%) and both the quality (30%) and the quantity (60%) of the work went up. Teleworkers more often than the reference group indicate to be frequently tired. The company doctor who carried out the investigation assumes that these complaints may be forced by high psychological pressure. Working long-term in the same position causes more complaints with the teleworkers than with the reference group. As to the perception of work the company doctor states that it is difficult to determine optimal conditions. The teleworkers found their work mentally very strenuous and stated that the work requires deep concentration and accuracy. Furthermore they frequently worked under time pressure. As to all these aspects the teleworkers score higher than the reference group. In 1994 20% (in 1993 26%) of the teleworkers indicated that management insufficiently took the teleworkers' contributions into account (reference group 8%).

By virtue of article 5 Decree on work with display screen equipment the employer must enable the teleworker to have his eyes and eyesight tested before the teleworker starts to work with display screen equipment for the first time. However, possible complaints caused by VDU-work cannot only be prevented by medical eye test and treatment, but need a comprehensive approach, including, e.g., an investigation into the workstation, adaptation of working and leisure time and prevention from unilateral workload.

In *U.K.*, regulation 3 of the Management of Health and Safety at Work Regulations (1992) covers risk assessment. This Regulation states that employers must make suitable and sufficient assessment of the risks to the health and safety of their employees to which they are exposed whilst they are at work. Self employed people have the same duty regarding themselves and any other people, not in their employment, who would be affected by their undertakings.

The MSF checklist for negotiating home-based teleworking includes main points relating to risk assessment. Employers should be responsible for the health and safety of teleworkers and

have specialist health and safety advisors to give advice and to regularly visit and monitor health and safety. Teleworkers should be represented through their own employee representatives on health and safety committees of the organisations that employ them.

The MSF are also campaigning for the strengthening of health and safety legislation to specifically cover all home based workers and for the HSE to have a homeworker inspectorate.

The handbook for insurance industry workers includes also guidelines for teleworking relating to risk assessment; health and safety advisors and trade union representatives should be able to visit teleworkers.

#### 4.4. Accessibility of the workplace and the role of the external control bodies

Accessibility is one of the main issues of this study. It has been partly discussed already in previous chapters.

In **Belgium**, labour inspectors can see to a number of regulations if in possession of a legitimization paper. In pursuance of their function they are free to enter at any moment of day or night, without previous warning all working spaces or other places under the condition that these places are submitted to their supervision and that the people working there are falling under the legislation which they are supervising. They only can enter occupied rooms (telehomeworkers) with the previous permission of the police court or when the engaged agree with the domiciliary visit. This permission has to be voluntary and unambiguous.

Under this heading, the **Danish** report states that the governmental regulation of telework and occupational computer home work comprises the execution of work. The Danish Working Environment Service can therefore enforce the regulations concerning varied work and breaks when working at a screen terminal but they can not enforce the regulations concerning the workplace and the design of the screen terminal.

The Constitution prohibits the disturbing of domestic peace in **Finland**. Home search is allowed only with specific reasons. The occupational safety inspector and the employer can get acquainted with the work conditions at the employee's home with the consent of the employee.

The report of **France** starts discussing accessibility issue by emphasizing that telework disturbs the hierarchical structure of the company. Department managers are no longer in charge of overseeing that the work be done correctly. Only the results can be checked. This in turn implies that teleworkers master their tasks perfectly and be autonomous and responsible. Critics of telework claim that there is a trap: progressively, the idea of result-based payment will spread and push aside the notion of a guaranteed salary. In the end, according to them, employees will become service-providers.

The whole philosophy of the Work Code in France is based on the notion of the employees' time spent in the company. Lawyers agree that evaluating working hours is the thorniest question posed by telework. Generally speaking, they consider it reasonable to refer to the standard amount of time needed to carry out a similar task in the company. This is current practice for secretarial work, keyboarding or any type of quantifiable work.

Information Technology has rocked traditional criteria of subordination, namely overseeing physical presence and working hours. However teleworkers may still be watched over: telesubordination coexists with regular control. Managerial control is legitimate, though, since subordination is at the core of the work contract. The novelty comes from three factors connected to new technology: control is made easier - and so more widespread; the

synthesizing capacity of computer memory high enormous could ever hope for; these control methods have become increasingly discreet, almost invisible.

In France, home being a private place, the employer can only visit with the employee's agreement. Checks by Work Inspectors also seem to be complicated because of trespassing laws and the simple problem of the time taken controlling one person at a time.

One of the company director's duties will include the legal setting up or modification of control techniques. In recent rulings, jurisprudence has clearly confirmed its disapproval of unfair practices and dissimulation, that is to say of probationary opacity. Even in cases of disloyal behaviour from the employee, the employer cannot obtain proof by using unfair means. For homebased telework employees, stub books are planned to be used in the company to keep track of the tasks set, when and who set them as well as when they were delivered. This book can be consulted at the company by the work inspector and allows a certain amount of control.

Differing positions have been taken in *Germany*, as regards the question, whether and to what extent company or subcompany officials are granted access rights to employed teleworkers' homes to verify and ensure that statutory occupational and health regulations on the number of hours worked, are complied with. (see also chapter 2.3.) Basically the state is bound to safeguard the basic right to privacy in the home deriving from Article 13 of the German Basic Law and may not invade that privacy, even if part of a home is being used for commercial purposes. Exceptions to this may be justified if such access is used to contain an acute threat or if the public safety is violated. As the employer is duty-bound to provide for the welfare of his employees independent of where they work, he should be obliged to provide instruction and guidance concerning occupational safety and ergonomic regulations and the requirement to abide by them.

In *Ireland*, external control bodies including the Health and Safety Authority Inspectors can get access to a home workplace if required. Under Section 40 of the 1989 Act an Inspector can enter, inspect etc. any place where work is being carried out and would include the worker's home. In practice the Inspector would only enter a home work station if he feels there is a risk of danger to a teleworker. To date Health and Safety Inspectors have only inspected home work places occupied by self-employed farmers or to speak to workers who have had accidents at work. The inspection of the home workstation of teleworkers would not be on the Health and Safety Authorities annual inspection programme and in practice would only be visited as a result of a complaint or by invitation. The possible reasons for this are listed in the report.

Because of accessibility difficulties other channels have to be used in order to get the health and safety message across to self-employed workers. These include participating in seminars on health and safety, publications in trade journals (e.g. Telecottage Ireland Newsletter) and requests to the Health and Safety Authority for advice and information on health and safety matters.

Other external control bodies (e.g. Fire Inspectors, Tax Inspectors, environmental control, planning officials) can have access to the teleworkers homes to enforce various laws. These agents have the same identification and accessibility problems as Health and Safety Inspectors.

In *Italy*, of a particular importance is the Central Commission for the Homework set up by the Ministry of Labour, having the duty to coordinate, at national level, the activities of provincial commissions for homework control and to ascertain conditions in which homework is carried out. By December 31st of every year, the Commission prepares a general report on homework, pointing out some peculiar aspects and suggesting any possible intervention. The application of regulations on homework is supervised by the labour inspectors, who are appointed by the Ministry of Labour.

The *Portuguese* Constitution and law institutionalise the inviolability of a person's dwelling. However, article 12 (inspection) of Decree-Law 440/91 which governs work at home (this law excludes intellectual work), creates inspection standards entrusted to the Inspeção Geral do Trabalho. At any rate, technical inspections must be made in order to identify and/or quantify possible health hazard factors and propose improvements in the work conditions. It is stressed that access should be free for the employer, occupational health team and Inspeccao Geral do Trabalho, although prior notice should be given and visits should be made during normal working hours.

According to the *Swedish* Work Environment Ordinance, in the case of work done in the employee's home inspection visits by the Labour Inspectorate are only to be paid at the request of the employee or if there is some other reason for them. The same shall apply concerning work done by a person carrying on business without employees or employing only a member or members of his family. The Swedish rapporteur mentions, like some others, that for most cases, however, inspections normally are in the interest of the employee performing telework, as a means to get the employer to conform with the work environment provisions. A special reason for inspection may also be that a work accident need to be investigated.

In *the Netherlands*, since the amendment of the Working Environment Act as regards homework, the Inspection of the Department of Social Affairs and Employment (including the former Labour Inspectorate) is authorized to enter the home in order to supervise the working conditions. Before the Labour Inspectorate had to respect the constitutional right to inviolability of the home and could only enter the home with the occupant's consent. Now the Inspection can also enter the home against the occupant's will. The employer is obliged to keep a register of the names and addresses of the homeworkers as well as the kind of work performed and the material used at home (article 3 Decree on homework). The Inspection intends to visit at random, as it is used to, the workstations of teleworkers to investigate whether the workplaces comply with the requirements under the Working Environment Act, the Decree on homework and the Decree on work with display screen equipment. Of course, a practical problem is that the workstations in homes are so wide spread that supervision by the Inspection will relatively be very time consuming. An agreement between the employer and the teleworker may back up the employer if the teleworker repeatedly refuses to give entrance to the home.

In the Netherlands like in other countries, a house visit by the employer, e.g., to assess or evaluate the working conditions at home, touches the employee's privacy. By virtue of the Constitution, the employee has a right to inviolability of the home. Starting from the idea that the teleworker has an interest in fine working conditions, the teleworker won't put anything in the employer's way when he wants to evaluate the workplace. Regulation by contract seems to be the solution to the problem. The possibility to restrict constitutional rights by way of contract is still under discussion by legal experts. Nevertheless, an obligation to provide access to the home is also included in the general conditions imposed by the gas and electricity companies. For the time being there seems to be no objection to the assumption that an employer and a teleworker could agree on the employers' right to enter the home regularly in order to check the working conditions. Of course, such an agreement does not mean that the employer is free to do as he likes. It is advisable to formulate the agreement as a declaration of intent, that the employer and the teleworker will regularly make an appointment on the time of supervision in the home. In case the teleworker would repeatedly refuse to make an appointment, this could be considered as failure and as violation of his obligation to act as a 'good employee' (Civil Code).

In *U.K.* employers have to ensure that workstations comply with a set of minimum safety requirements laid down in a schedule to the DSE Regulations (1992). The Regulation applies to both DSE users and operators. However, because the place of work of teleworkers is not

under the control of the employer, they have no specific legal duties to maintain the place of work or access to it. Legally, teleworkers' homes cannot be inspected without their permission. However, this permission is unlikely to be withheld because their own well-being is at stake. Also, the Management of Health and Safety Regulations (1992) states that employees must co-operate with their employers to enable the employers to comply with statutory duties for health and safety.

The UK company Digital requires that a teleworker's manager should have reasonable pre-arranged access to the home in order to inspect health and safety standards. A checklist is provided for the inspection and this should be completed once a year by employees.

The Revenue Homeworker's Scheme in the London Borough of Enfield ensures that all homes are visited by the council before the employee is allowed to begin work to ensure that the proposed working arrangements meet health and safety requirements. The council provides homeworkers with a guide to good health and safety practice and also inspects the working area in the home from time to time.

## 5. CONCLUSIONS

- 5.1. Trends
- 5.2. Positions of social partners

The *Austrian* report lays special attention to the legal status of teleworkers. Now employees have to prove in court that they meet certain criteria to have employee status. The report suggests that in the future teleworkers should be automatically have employee status. If there is any question about this, it should be up to the employer to prove in a court of law that the employee does not meet the criteria for being an employee.

There should also be a regulation concerning telework in the employee protection law, so that committee members, safety consultants or labour inspectors are able to insure that safety regulations are adhered to in the home working area. Telework takes place in different places and there are no laws for health and safety of this nomadic staff, e.g. as regards hours when travelling long distances especially by car.

It is also stressed that telejobs should alternate between home and the office or telework should take place in satellite offices or neighbourhood offices. A home working area should be set up on a voluntary basis and teleworker should have the right to stop telework in their private homes and work exclusively at the office. Telework is considered to be flexible, but flexibility may exclude teleworkers from the welfare system. Flexibility should not mean stretching working hours beyond legal regulations and reasonable limits. To force teleworkers to get self-employed or freelancers would mean undoing all the social progress that has been made in the last decades.

The Austrian report suggests that there should be collective agreements dealing with working conditions induced stress and collective agreements about salaries of teleworkers. Also regulations to prohibit electronic forms of supervision are needed. It is difficult for committee members to represent teleworkers, to organize them and to include them to trade union activities. Committee members should be able to participate in more company decision making activities and telecommunication infrastructure should be made available to maintain contact with teleworkers and the unions. In addition international supported regulations are recommended.

The rapporteurs mention that in Austria important decisions concerning technology policies are considered mainly by economic factors; legal procedures have to be secured to guarantee also the public participation in technology policies decisions to consider social, ecological and ethical aspects.

In *Belgium*, the basic problem of the telehomeworker is the question whether the agreement with the telehomeworker falls under the domain of application of the Law on employment contract. It is necessary that some legislation and regulations should be adapted to the situation of the (tele)homeworker. The minimal legal regulations concerning telework create legal insecurity for employer and employee.

Telework and telehomework create great expectations among employers and employees. Certain conditions, however, have to be fulfilled: the policy culture has to adapt itself, the production techniques should be adapted, the human resources policy has to be tuned to these new forms of labour. The necessary telematics should already be present in the enterprise and sufficient thinking should already have been done about the consequences in the domain of the labour organisation.

In any case, telehomework is expected to still remain a marginal phenomenon in Belgium. The vision of the employers' organisations is a "yes, BUT". Although the employers' organisations confirm that the legal situation of domestic workers is not entirely regulated,

they do not want to change the situation. Concerning Sundays' rest and night work the employers are prepared, just like the employers' organisations, to include this in the statute of the telehomeworker under condition that exceptional situations are provided for. Concerning the laws in relation to the consultative bodies the employers are not inclined to realise an equal treatment of the situation of the domestic workers and the situation of other employees.

As regards the viewpoint of the employee (and the trade unions), there seems to be a great interest in telehomework. Of all employees who are potentially qualified for telehomework 68 % wants to work at home. Among this group 54.4 % thinks that the kind of work they do would also permit it and within this group 51.1 % is convinced that their superior would (partially) admit homework.

A clearer definition of the terms "telework" and "telehomework" is demanded. The consequences concerning terms of employment of this new group of employees should also be made clear. It would be e.g. useful to check whether women are explicitly wanted for such projects or whether they presented themselves. In contradiction to the employers' organisations, the united trade unions do want an adaptation of the law on employment contracts, aiming at a limitation of the phenomenon of domestic labour to a marginal phenomenon. Unions try to realise these aims by means of the structuring of the permission to do domestic work, the statute of the domestic worker and the supervision over the domestic labour. The permission given to employers to put domestic workers at work should fall under the control of the joint industrial committees.

The Belgian report further argues that telework as telehomework or telework in satellite offices is often used as a buffer to meet with the fluctuations of the labour volume. Telematics threatens to lead to a general relocation of the service industries on national and international level. Concerning the statute of the domestic worker the new initiatives are recommended, regarding the law on the employment contract protection concerning working time and working hours, safety and health measures. The employer apparently has no control over the time of exposure to risks. Besides meeting with the required standards of the used apparatus, the installation and place where it is set up needs more attention. The protection of the telehomeworker and the family against a working time which is too long, or abnormal and irregular working hours, is also important. Eventually there is the problem of industrial accidents. By intense social consultancy the needs and interests of enterprises and telehomeworkers and their families should be kept in balance.

In *Denmark*, data on the amount of occupational computer home work is very scarce. The fraction of employees in the 1990 Survey of Work Environment and Health carrying out such work was between 0.3% and 0.3% or 1,000 to 8,000 wage earners among the Danish work force. The number involves, however, large statistical uncertainty because it was based only on 16 persons out of a population of 5,940 persons. No data is available on the dissemination of occupational computer home work among self employed, and problems related to this group cannot be estimated.

Since 1990 when the figures of the report were collected, computers in private homes have increased explosively. No current figures for this type of work is available and knowledge is missing of specific exposures. It is also important to know how such type of work is organized, e.g. as regards working hours.

Most Danish unions and employers' associations have not articulated opinions on the question of telework. As far as the rapporteur knows, only the Union of Commercial and Clerical Employees in Denmark (HK) has adopted a Resolution on Telework, demanding in 1992 that telework should be voluntarily.

For employment management in the near future, the *Finnish* Government has adopted as its main goal the promotion of work life by introducing greater flexibility, special attention being paid to the job-creation potential offered by growing fields such as telecommunications and high tech production. According to the FET survey (Luukinen 1995), nearly 40% of

Finnish wage-earners are interested in doing most of their work as teleworkers at home. At least one day per week was selected by 54% of the respondents, and one third were interested in working in a satellite office near their home. These figures on the population level reflect positive attitude toward telework.

In general, no major mismatches between legal and real situation of teleworkers have been noticed in studies in Finland thus far. Health and safety of teleworkers depend on the companies' personnel policy. During the late 80ties, fear of lack of manpower raised interest in telework. During the long economic recession situation has changed. Interest in telework at home has decreased, partly due to the fear that during the recession, those working at home might have higher risk of loosing their job than those working under normal conditions.

As far as the terms and conditions of employment are concerned, teleworkers are in the same position as other employees. Most of the comments on the telework committee's report in 1990 stressed that at this stage, there is no need for separate legislative reforms concerning telework. However, research and statistics on telework was encouraged by partners.

In general, labour unions have taken a positive view of flexiwork if it is voluntary. If the flexiwork is part-time work, there can be problems with inadequate earnings. The Employers' Confederation of Service Industries has taken the stand that flexiwork is a matter of workplace-based arrangements between the employer and the individual employee.

Telework has not been used to draw on labour reserves to the labour market. However, the development of equality between men and women is in high priority in Finland. Depending on the employment situation and companies' personnel policy strategies, there is a risk that telework is one extra factor in polarising the labour market and work conditions by gender.

The nature of telework varies enormously from simple repetitive data entry tasks to independent creative tasks. As regards mobile types of telework, the health and safety issues have not been studied and are difficult to evaluate. From the Finnish labour market perspective, main focus in improving health and safety issues of telework should be directed on the psychosocial aspects of teleworking. A key question of successful implementation of telework is organizational and leadership culture: mutual trust of both supervisor and teleworker is basic precondition of telework arrangements.

As a conclusion, the *French* report states that paid distance work modifies the contractual relationship between the employee and the company. As a consequence, rules on a certain number of points can be subjected to modifications. This is the case with union law, work accidents, and working hours.

Especially the following must be taken into account from a Health and Safety viewpoint: isolation at work and the loss of a function in the company as a place of socialization; managing private and professional lives; new skills involved in telework; new type of management that telework entails.

The standpoint of the various social partners involved regarding telework, is complex. For the former French Employment Minister Mr Giraud, telework allows companies to generate harmony and employees to acquire full citizenship. The Delegation for Territory Planning and Regional Action, DATAR (Délégation à l'Aménagement du Territoire et à l'Action Régionale) and France Télécom have been very involved in the development of telework. Unions still show a great deal of reticence towards telework. They have a determining role to play, though, in the emergence of telework, by contributing to the introduction of safeguards against the dangers of legal grey areas or disappearing boundaries between professional and private lives. Also some counties and regions directly finance telework operations, as a tool for economic expansion. CATRAL, the regional agency for time management, is particularly interested in telework and its impact on transport conditions in large European cities.

The CGT (Confédération Générale du Travail, the General Confederation of Work) refuses to envisage telework as a new company organization, through fear of seeing employees marginalized. Other unions prefer not to oppose this evolution in order to control its conditions and keep dangers at bay. According to the CFDT, telework companies must be

made to respect certain codes of behaviour which are considered to be teleworkers' fundamental rights, e.g. as regards right of isolation, integration, union access to company's communication networks.

According to French rapporteurs, in all, telework must remain a management tool. Further thought and discussion - in terms of Personnel Management and not only immediate productivity - must take place between all social partners.

The report from *Germany* lists the minimal conditions of employment for teleworkers drawn up in 1993 - 1995 by the German Industrial Trade Union, IG Metall. Among these are: employee status, same work and pay terms as in-house employees, employees' freedom to choose site and times for work, reasonable work scheduling, right to further training, employee-friendly work organization, employer ensures and bears the costs of setting up workstations and environments which meet ergonomic standards, data and privacy protection, appropriate compensation for concessions in domestic quality of life, employees excluded from liability risks, and works council's voice in the planning and implementation of teleworking schemes.

The Federation of German Trade Unions (DGB) favours regulation in the form of teleworking legislation to protect teleworkers from discriminatory treatment. The DGB's position on telework includes e.g. the following additional points: Teleworking will not become a widespread phenomenon in the foreseeable future. Teleworking is effective in organizational decentralization and in redistributing work regionally, but it is not an effective tool in combating unemployment. Teleworking makes a more flexible structuring of work and private life possible as it can take into account the wishes of employees with regard to working hours; alternating telework/office work is the preferred option. The risks associated with teleworking demand socially-minded solutions. When setting up a telework station, compliance with the stipulations of the Workplace Ordinance as well as with the provisions of the currently applicable pay and works agreements is essential.

Also the Federal Confederation of German Employers' Associations (personal communication, 25/08/1995) states that despite both management's and workers' rising interest in teleworking as a method of organizing work, teleworkers continue to make up only a very small share of the German workforce. Employees who perform telework in the framework of a permanent employment relationship have full protection under labour law. Telework performed as outlined in the Home Workers' Act or by self-employed persons is relatively rare. Current labour laws and regulations are for the moment sufficient to cover teleworking activities, and no further action is pressing. Concerning the right of access to the home telework station, it is stated that the employer alone risks acting in breach of individual contractual agreements regulating such access. As the works council and the personnel committee represent the interests of the employee, it is generally not to be expected that employees would refuse these bodies such access.

"Rosy" predictions in Germany which foresee teleworking having swept the nation by the year 2000 are considered unrealistic by both management and labour. A recent study concludes "that teleworking as originally conceived will not win ground on any large scale in the near future either". Mobile teleworking (commercial and technical field service) is however expected to spread at a more rapid pace.

Those involved in occupational health and safety are called upon to act and conduct research aimed at (1) actively exploiting any health-promoting potentials which teleworking may supply and (2) averting possible health risks associated with teleworking as well as providing input on how to structure teleworking to best provide for the social welfare, and hence health, of the employees involved.

To the best of rapporteur's knowledge, teleworking has as yet not been subjected to occupational medical supervision, longitudinal studies or surveys comparing absenteeism rates due to illness of in-house employees with those of teleworkers who perform similar VDU-based work. It is furthermore of vital importance that the (long-term) effects of the

overlapping of individuals' working and private lives be investigated and ways sought to achieve a balance between the two spheres.

In **Greece**, it is inevitable that telework will increase. It is estimated that self-employed highly skilled professionals more and more will work from home or far from the city-centres. Companies will show a delayed rate of implementation of telework.

In Greece all parties feel very responsible for the implementation of telework and want to prepare the rules of the game very well. They believe that with telework new forms of industrial relations will be introduced. Telework must not be another example of failing implementation of new technologies, as it happened at the early stages of implementation of information technology when increasing of productivity was expected but the opposite was the result.

According to the Greek rapporteur, the majority of individual workers believe that isolation will be the most negative consequence of telework. Some workers' representatives interviewed agree with the implementation of telework on the conditions that workers' rights are maintained and teleworkers have the same employment conditions with other workers. Among other workers' representatives a fear exists that teleworkers will be the first to lose their jobs in case of recession or redundancy. Also the working conditions of female workforce is expected to deteriorate due to the fact that many women will accept to work from home in order to combine housekeeping and their job, as a consequence a higher workload and prolonged hours of work.

It is stated that employers know that only few workers or specialities can be selected for telework. One of their main concerns is the shortage of people with self-discipline, which is a prerequisite of telework. Another inhibiting factor is the not well developed technological infrastructure in Greece and especially the telecommunications. Employers interviewed believe that telework will be beneficiary for both parties, because of reduced commuting they believe also that health and safety conditions must be good in telework.

They know that implementation of telework requires new work organisation and company structure and philosophy. This change will have some extra cost, at least in the beginning. For telework to be cost-beneficiary its implementation must have better results than traditional system of work. Since they are not sure for these results they are afraid of implementing telework. Employers and managers are not trained to manage people from a distance, wanting to have all their subordinates near them. "With telework we must change our attitude, first of all", many managers told to the rapporteur, showing a significant resistance to change.

The Ministry of Labour believes that implementation of telework increases the need for new regulations as far as health and safety at work and industrial relations are concerned.

The number of *Irish* teleworkers is in the hundreds at the present. It is likely to increase with the increasing change from employer/employee relationships in a defined workplace to a client/self-employed/contract basis. A possible reason for the lower than average number of teleworkers in Ireland is that commuting to and from work is not a major problem.

The national development agency Forbairt has targeted telecommunications and telebusiness as a growth area for jobs, especially in the telemarketing and data inputting areas in central locations where health and safety protection is the same as for other industries. This should increase the number of home teleworking jobs as tele-services will be required by the telemarketing companies. This should ensure that Ireland meets the E.U. target of 20% of white collar workers to be teleworkers.

The employer organisations have taken on board the employer/employee responsibilities under the relevant health and safety legislation where the teleworker is employed by an employer under a contract of service. From a practical perspective the control which an employer can exercise over the domestic work environment is limited.

The trade unions/employee representative organisations have similar problems. Because most teleworkers are self-employed and home based they are difficult to organise and might be

open to exploitation, not having much bargaining power. Also V.D.U. workstation compliance with the V.D.U. Regulations is difficult and ergonomic assessments are rarely carried out. Trade unions have also concerns about remote measurement of activity levels via the computer. There might be exploitation for low market type data processing work. It is stated that the forthcoming I.L.O. Convention on Homework will have a provision in relation to equal treatment for homeworkers in the field of occupational safety, health protection and according to the Irish rapporteur, this should help the teleworker.

In summary of the *Italian* report it is mentioned that three levels of telework-related questions do exist. The first level may be solved with reference to the present EU directives and Italian legislation such as the legal status of teleworkers and the employer's obligation to carry out risk assessment and health surveillance for the subordinate teleworkers. The second level is referred to issues related to the adequacy of the work environment, which may be solved by applying the existing national and international guidelines and standards on safety and ergonomics (especially those concerning work with a VDU).

The third level deals with a heterogeneous set of questions which is peculiar of telework, such as teleworking on vehicles, health and safety of family members, and the psychological impact of teleworking activities. In Italy a specific legislation concerning telework does not exist. Besides, reliable statistical data are not available and all considerations made in the report should be regarded as proposals. However, teleworking is now remarkably spreading and some new pilot companies are mentioned in the report. The main risk, according to the Italian rapporteurs, is the loneliness. This could only in part be lightened by a video telephone. The following issues are also addressed: contracts of employment providing for the teleworker to be obliged to work at least two days a week in office; equal salary with those in the office; information and training on work prospects and new technology; prohibition of excessive control; provision of furniture and equipment.

Finally, the labour inspectorates or similar organizations should be in a position to carry out controls, even if informing teleworkers in advance. Also the importance of trade-union contacts is stressed, e.g. through computer links, and by means of periodical consultations.

By virtue of the fact that telework does not yet exist in *Portugal*, and, as there are no specific laws governing it, it is not possible for management and labour to have a position. However, it is stated, telework is already a job of the present and will in all likelihood be a job of the future for many people. It has many advantages in relation to traditional work such as the decentralisation of workers, and does not require them to travel long distances to go to work, reducing time, money and pollution, bringing families closer together and making it easier for them to raise their children. In order for this new kind of work to grow in the country, the rapporteur sees necessary to make carefully studied laws for telework.

In *Spain*, it is not possible to provide punctual data about how many companies and employees are teleworking nowadays. However, it is really a new form of work being introduced and an important growth is expected. Each company has given partial solutions to the current problems of teleworking development, generally stressed on only technical concerns.

Any kind of regulation of this new situation is seen necessary, because Spanish legislation does not consider teleworking in an specific way and legislation about homeworking does not include teleworking. Either homeworking legislation had to be extended in order to cover the concept of telework, or specific teleworking legislation had to be created. Normal contracts of employment could be completed with extra clauses. In a "contract of teleworking" between the employer and employee, the terms and conditions of work should be specified, and these should be included also in collective agreements. All this should ensure the maximum rights and protection for employees, clarifying the responsibility of employers and employees and providing companies with rules for managing the staff.

As regards the position of social partners in *Sweden*, the earlier prognoses from the trade unions have been that teleworking also in the future will be rather limited, for a variety of reasons, e.g. the employer will not be able to obtain the means for control he finds necessary, it will be more difficult to obtain secrecy in a home than at a principal workplace, and it will take longer than expected before the new technology will be prized in order to make it commonplace.

The employer's association (SAF) feels that teleworking will continue to increase since technology makes it possible and the need of flexibility is getting more pronounced. This promotes distance work, and more teleworking employees as well as self-employed teleworkers are therefore expected.

As regards long term effects of telework, some conclusions have been drawn from a case study of insurance inspectors. All the inspectors were men with an average age of 45. No one had small children. Most had their own houses. The Occupational Health Service has evaluated the situation from a work environment point of view two years after the telework started. The evaluation was made by semi structured interviews and health control of the inspectors. The main disadvantages with telework expressed were increased work load, less social contact, lack of backup on holidays and sickness leaves, telephone and fax disturbing free-time. The advantages noted are better disposal over work time and work without external disturbances. The inspectors find the social contacts with colleagues very important. The immediate supervisor declares that the teleworking sets new demands on the supervision: he has had to change his behaviour to be more considerate, listen more carefully, ask about the employees work and home situation, give room for small talk and social support and not only effective exchange of information.

Almost all inspectors express that the contact with other employees at the company has deteriorated, and they do not learn to know new-hired personnel. They also get less information about how things are going in general at the company. Many also feel that their professional skills have diminished, and that it is more difficult than before to keep updated. But even if there have been many problems to solve, few inspectors want to go back to the old work organization.

As yet very few people in Sweden are officially known as full time employed teleworkers. The expectation is that this group will grow, but the major part of the increase will most likely consist of telecommuters. What is also likely to increase is the number of self-employed teleworkers with several clients. Existing laws as well as collective agreements are not well suited to teleworking situations, but no new laws on teleworking are expected in the near future. Most likely, however, is an increase in collective agreements and individual contracts regulating the special problems of teleworking. In all, teleworking is still rather uncommon and only little interest has earlier been shown for the potential in this working structure and in the special problems that teleworking can rise in connection with the application of work environment legislation as well as in collective and individual agreements. A lot of research projects are on the way or are to be started on the subject. On March 1995, in Sweden a special commission started to find solutions to the labour law problems pointed out by the social partners.

In *the Netherlands* teleworking is becoming ever more popular, especially employees prefer to work (part-time) at home. Employers are not always convinced of the advantages of teleworking. Strict legal obligations concerning occupational health and safety, requiring investments to be made in workstations at home, are considered as drawbacks attached to teleworking. Taking into account the unwillingness of some employers to comply with the legal obligations under the Working Environment Act and the employees' eagerness to start teleworking, there is a risk of both parties compromising on not being so very particular when occupational health and safety is concerned. Therefore the possibility of supervision by the Inspection appears to be quite important and the fact that the Inspection is now authorized to enter the home regardless of whether the teleworker consents is to be welcomed. The

proposed policy of the Inspection is that workstations at home will only incidentally be visited. It is primarily left to the parties' responsibilities to take care of occupational health and safety in telework situations. The possibility of a house visit, however, is a sword of Damocles hanging over the parties involved.

The Trade Union Federation for Higher and Middle Staff (Vakcentrale voor middelbaar en hoger personeel, MHP) is an advocate of further growth in teleworking. Nevertheless MHP has not yet given so much importance to telework that it has aimed for including teleworking in collective labour agreements. Other federations of trade unions do not hold such strong views regarding telework, although the FNV ( ) stated that teleworking in a neighbourhood centre is to be preferred above teleworking at home. The FNV worries about teleworking becoming second-class labour, like traditional homeworking.

Furthermore attempts have been made to have homework (in particular traditional types of homework) regulated in collective labour agreements.

In the *U.K.* report, a research-based summary (Cox) of the hazards associated with telework is presented, including physical, psychosocial and contextual factors. Although the HSW Act and the DSE Regulations (1992) and guidelines may help to minimise some of the physical hazards of teleworking, they do little to address the problems caused by social isolation. This is seen to reflect the general situation, the employer rarely assesses *all* the work-related risks encountered by their employees. The Management of Health and Safety at Work Regulations (1992) specifically state that they should. To the rapporteurs it is clear from the literature that isolation is a reasonably foreseeable risk for teleworkers, the major other problems being low job security and poor pay.

The Employment Department survey (1992) found that managers were generally very optimistic about the future. The report concludes that it is difficult to draw many general conclusions about the health and safety of teleworkers because of the many different types of teleworking and some aspects of teleworking may be experienced differently by different people. In general, teleworkers with full employee status who are well integrated into the workplace culture and who spend some part of the week on their employers premises are more likely to have a positive experience of teleworking, whilst low-paid, low status teleworkers doing routine work exclusively from home, often on freelance contracts, are more likely to be isolated and dissatisfied.

According to the *U.K.* report, many of the aspects of teleworking can be both advantages *and* disadvantages. The *choice* whether or not to be a teleworker is emphasized. One worrying prospect is that organisations may begin to use teleworking as an easy option for people whom they wish to retain, but do not wish to invest much time, effort or money in. Teleworkers might become a group who is somewhere between employed and being self-employed. About 70% of teleworkers in the UK are women, and the Trades Unions Confederation (TUC) argue that this predominance is due to the weaker position of women in the labour market as well as to their family responsibilities.

As was mentioned in connection with the Finnish and Swedish Governments, the British Government is also keen for the trend towards telework to continue. In July 1994, the then employment secretary, David Hunt, gave his backing to telework, pledging to support research in the area, and asking to limit restrictions that might obstruct such working arrangements. Some of the HSW Act, DSE and Management of Health and Safety at Work requirements mentioned in the report are very difficult to comply with, when the work is being carried out at home, and is out of the direct control of the employer. A feasibility study has been commissioned by the Department for Education and Employment to identify the key policy issues relating to telework and to design specific projects to address these issues.

### 5.3. Key issues

Three additional questions were asked after the November meeting in Helsinki:

1. Are there key issues specific to telework?
2. Are there issues relevant to all forms of telework?
3. Are there specific measures to be taken?

The following answers (partly overlapping the previous chapters) were received from national experts:

#### ***Austria***

##### 1. Key issues

- Status of teleworkers
- Access of a homework office
- Workplace assessment of a homework office
- Working hours of teleworkers
- Costs of setting up and maintaining a homework office
- Training possibilities
- Isolation and stress.

2. All key issues found are relevant to telehomeworkers and more or less to nomadic staff. Existing social legislation applies to satellite offices and neighbourhood cottages, there are considered as work-sites.

3. There is no existing regulations regarding telework. Telework is a more or less blind spot in Austrian legislation. See Austrian conclusions for specific measures especially concerning legislation

#### ***Belgium***

##### 1. Key issues in health and safety of teleworkers.

First of all there are the health and safety matters related to the ergonomics of the visual display, the work station and the physical environment. Teleworkers do not work under the immediate control of an employer, and therefore some specific problems could arise:

- insufficient access to information on safe and healthy working conditions by the teleworkers themselves
- insufficient control or inspection of teleworkers' working conditions by an employer or the labour inspectorate
- insufficient preventive measures to improve working conditions of teleworkers.

In the second place studies on mental workload should take into account two specific aspects of the work situation of teleworkers: the need for self-discipline in organising work and working time (e.g. total duration, breaks) and the need to manage overlaps of work, family life (e.g. child care, household) and leisure time.

Thirdly, special attention should be paid to the social integration of teleworkers. In Belgium a telework project for handicapped people failed due to lack of social contacts and social support. A similar project in another region was a success up to now because the teleworkers were supported and looked after by neighbours, a social worker, etc.

We should not forget that for most people social contacts at work are very important, not only to tackle work related problems but also to communicate on life events and get social support to handle them. On the other hand we should not react in a way that the traditional workplace is heaven and the teleworkers' situation is hell.

## 2. Relevance to different forms of work.

At the present we do not have enough empirical data about different forms of telework in Belgium (type of contract, location, job demands, technology and qualifications involved). Therefore it is difficult to specify which problems will affect what kind of telework. It is to be expected that low skilled teleworkers are more affected by musculoskeletal and stress problems as it is also the case with low skilled workers at the traditional workplace.

## 3. Measures

All health and safety regulations for employed workers in Belgium will progressively be put together in a so-called "Codex on the well-being at work". In the last chapter of this Codex a series of regulations for special categories of workers and work situations are introduced (e.g. students, pregnant women, minors, manual materials handling, etc.). Telework could be one of these special workers' categories and specific measures concerning type of contract, working conditions, information, inspection and prevention could be introduced. The above mentioned health and safety-regulations does not apply to self-employed people.

## *Denmark*

Further research is needed because of the lack of knowledge and because of the possible large number of employees in the field. Research should concentrate on specific job groups and should collect data on isolation, help, co-operation, job demands and other possible stressors, on ergonomic exposures, and on related health effects such as cardiovascular and musculoskeletal diseases.

## *Germany*

1. A representative statistical picture of teleworking in Germany is not yet available. Estimates of the current number of German teleworkers or tele-employees range from ca. 2000 up to 150000. Up to now, supervisory authorities responsible for occupational safety and health regulations have only minimal experience with the field of teleworking.

Generally, the German labour law fully applies to employed teleworkers. New forms of employment and work are ambivalent: on the one hand, workers will be able to arrange their working time more freely; on the other hand, the new work arrangements will increase risks including less attention for occupational health and safety issues.

2. The situation involving teleworkers who are legally classified as self-employed needs additional health and safety regulations. A tentative suggestion for offer of special health-check-ups for teleworker is presented by the German rapporteur. Generally, with regard to occupational health and safety, employee status of teleworkers is preferable.

3. With the aim of actively exploiting any health promoting potentials and averting possible health risks associated with teleworking, following suggestions are made: Investigation of long-term effects of overlapping of individual's working and private lives. Follow-up studies comparing absenteeism rates due to illness of in-house employees with those of teleworkers. Workload-studies (total workload, occurrence of stress symptoms, health complaints, musculo-skeletal disorders etc.). Continuous training and retraining of existing and future teleworkers should be stressed as an urgent need. Specific guidelines should be worked out with regard to the ergonomic design of workplaces, work rhythms, and health issues (health

and safety aspects). Examples of good practice of (tele-) work place analyses according to Art. 3 of the E.U. VDU Directive (1990) are needed.

4. Despite both management's and workers' rising interest in teleworking, teleworkers continue to make up only a very small share of the German workforce. Mobile teleworking (especially commercial and technical field service) is expected to increase continually. Generally, teleworking will get stimulated by the rapid developments in the field of telecommunication and multimedia. However, telework arrangements will be determined by organizational factors which are difficult to predict.

### ***Ireland***

Of special concern, as regards health and safety conditions, are teleworkers who are self-employed and working for many clients. Generally the self-employed teleworker who is home-based is not aware of health and safety laws and is unlikely to look for information. The key issues of concern to self-employed teleworkers are:

- non-compliance with E.U. VDU Directive
- lack of health surveillance including eye-testing
- worker isolation and lack of social contacts outside family
- work patterns/long hours of work
- training/re-training possibilities
- lack of carrying out risk assessment on the home work-stations.

According to the Irish rapporteur, extending the E.U. Directives to cover the self-employed home-based teleworkers would not change their health and safety conditions much. What is needed is specific guidance to cover these workers and attempt to disseminate it as wide as possible. Various national teleworking agencies need to be contacted in order to help with dissemination.

### ***Portugal***

Specific problems related to the various types of telework

- Workplace abroad: verifying conditions of Safety, Hygiene and Health will take place at the expense of the employer, by anybody providing such service, and which is located in the region. The file containing information as to the fitness of and all corrections to be made in the respective workplace would later be sent to the company's main office.
- Workplace at home: should enable access of an Occupational Health team and the Inspeção Geral do Trabalho (Labour Inspection).

Profile and contents of the work (specific problems)

In order to prevent psychosocial problems, the work should be varied, creative and permit a certain degree of personal initiative and freedom of action. This means that not all types of work can be adapted to this kind of organisation.

Specific problems related to telework

Isolation - seems to me to be a problem which can be overcome providing the worker takes part in various kinds of company meetings and his/her prior consent is obtained to go there on a reasonably frequent basis.

Access to workplace - homework - should be free for the employer, occupational health team and Inspeção Geral do Trabalho, although it is advisable that prior notice should be given in respect thereof. Visits should be made during normal working hours.

Mental load, time patterns, ergonomic problems - may be overcome with a programme of continuous training either by means of classes, questionnaires, practical exercises or information leaflets.

It is further stressed that problems vary according to the type of work performed and the individual characteristics of the teleworkers. The specific measures to be taken fit the framework of continuous training/information (in safety, hygiene and health), and in the care taken in assessing risks and the work environment. Clinical fitness tests should give special emphasis to psychosocial issues. These workers should be covered by the employer against industrial accidents, work-related illnesses and make social security deductions.

Those who are self-employed should also have insurance against industrial accidents and work-related illnesses and be covered by Occupational Health supervision.

### *The Netherlands*

#### 1. Key issues identified

Telework may involve complaints such as stress, RSI, head ache, fatigue and tension. Teleworkers seem to complain more often than the reference group of persons working inside the company building (however, only one risk assessment and evaluation!). The cause for this is unclear and needs to be investigated.

Generally speaking it appears from investigations that:

1. in particular ergonomics at the teleworkplace is important, both as regards equipment and furniture and lighting;
2. arrangements regarding working time need attention, especially as regards monotonous, short-cyclic movements in the course of which teleworkers are seated in front of the VDU permanently;
3. the working pressure should be given attention, both as regards working hours and psychological pressure.

Telework is a new type of working relationship differing from the classic contract of employment dating back to the beginning of this century that labour law is tailored to. New characteristics are:

- location where the work is done (outside the 'factory gates', and outside the employer's range of vision);
- technology used (computers and telecommunications, bridging the distance between the employer and the teleworker);
- content of the work (information work).

These characteristics may hamper the application of traditional labour law even if telework is done under a 'normal' contract of employment.

Moreover, telework may be performed in the course of a flexible working relationship, which firstly raises the question of whether a contract of employment exists and secondly may lead to even more complicated questions concerning the application of labour law. In this respect the extension of the scope of the law to other types of workers (quasi independent workers) and an adaption of the law to modern types of working relations deserves consideration.

In the Netherlands the scope of the Working Environment Act was extended to homeworkers as a specific category of quasi independent workers. Consequently all teleworkers working at home (except for the really self employed) fall within the scope of the Act. However, the provisions are not tailored to telework. Especially the location where the work is done creates problems: especially when work is done at home, in the teleworker's private sphere. Then a clear division of the responsibilities between the parties is necessary.

2. Are these issues relevant to all forms of telework?  
Yes, but the questions are ever more weighty if telework is done at home, because of the constitutional right to inviolability of the home.
3. Is there a need for special measures?  
More investigation should be done into the occupational health and safety of teleworkers.

Since in the Netherlands no conflicts came into the open and no cases were brought before court yet, the legal questions regarding the occupational health and safety of teleworkers, and especially the division of the responsibilities between the parties, appear rather theoretical. It may be too early to take measures already. At least the developments in practice should be monitored closely.

#### 5.4. Conclusions by chapters

Adequacy of the work environment (chapter 2.1.)

Adequacy including safety of equipment (chapter 2.2.)

##### **A. Issues presented in the country reports**

- VDU- and other EU-directives not specific for telework and in some countries, not applicable if work is done at home
- scope and content differences in directives and regulations between member countries
- in general, applies to employees, not self-employed
- while directives apply only to employed, practically in a number of countries the scope has been expanded to self-employed, and includes, in principle, all teleworkers
- even if regulations exist, difficulties in applying them in practice
- also some resistance by labour inspectors exists to make effort to specific groups
- basic knowledge on ergonomics and criteria of health and safety lacking or limited
- also awareness of these issues, attitudes, nonchalance of both teleworkers and employers (more than in normal buildings)
- health risks, mainly in the area of musculoskeletal area (RSI-syndrome)
- accident risks (electricity, materials, mobile work)
- arranging separate rooms, costs, and housing standards might be difficult
- in some countries, technical problems with communication technologies (e.g. telephone lines)
- possibility to adapt home environment for physically handicapped, before starting teleworking

##### **B. Further information needed/ to be discussed/ open**

- few research data on actual working conditions
- need for specific insurances

### **C. Solutions of the problems, some ways out**

- the application of VDU directives outside normal office environment
- clearer definition of telework
- clarification of responsibilities
- instruction and training, especially concerning mobile telework, small enterprises, self-employed

Legal status (chapter 2.3.)

#### **A. Issues presented in the country reports**

- scope, applicability of legislation: if employee, employer has the responsibility
- in general, there is no specific legislation as regards telework in EU -member countries
- regulations on homework mainly fit for blue-collar homework
- the concept of telework is not defined in legislation
- the minimal legal regulations create legal insecurity for employer and employee
- situation of self-employed problematic
- the compensation of industrial accidents problematic, especially as regards on the trips to hand in work and return home
- definition of working hours (who defines, controls)
- insurance coverage. e.g. insured period (24 hours/ less)
- proof of the injury: who's responsibility, causal relationship between work and reported injury
- control over the enforcement of regulations (e.g. VDU recommendations) is difficult
- supervisory authorities and occupational health personnel have too little experience with the field of teleworking
- when telework is voluntary, employees have the option to evaluate the advantages or disadvantages of telework according to his/her own interests
- employees with homebased worker status benefit from the legislation and rules applicable to employees
- telehomeworkers who spend part of their working hours at the office have few problems as regards legal status

#### **B. Further information needed/ to be discussed/ open**

- starting point to be discussed: is telework new way of doing, organising work or new category of workers
- application of different laws and regulations, e.g. concerning "traditional" home work
- definition of when an employment relationship exists between the employer and the employee
- reliable data on freelance teleworkers lacking
- accessibility issue (see 4.4.)
- situation when homeworker is helped by other persons
- the coverage of health and safety regulations based on intensity of VDU work (DSE 'users', 'operators')

### **C. Solutions of the problems, some ways out**

- to secure legal status
- the workplace as legal entity should be defined not merely by its location but also by its function
- collective and detailed firm-individual agreements
- obligation to training before starting telework
- enlargement of existing domestic insurance policy
- "licence of self-employed" by training and retraining, where health and safety aspects are strongly included
- collective negotiation process within the company, instead of one-to-one individual contracts
- guidance on how to cover H & S in contracts

Health and safety of persons other than workers (chapter 2.4.)

#### **A. Issues presented in the country reports**

- noise from incoming calls, printer, fax disturbing e.g. sleeping children, sick, elderly people
- danger of computing equipment
- emotional damage
- the duty of employers and self-employed to ensure, as far as is reasonably practicable, that other people are not exposed to risks, is difficult to secure
- children assisting teleworkers
- on the other hand, parent at home positive for H & S of other family members

#### **B. Further information needed/ to be discussed/ open**

- telework on moving vehicles (e.g. when using phone), possible risk for others

### **C. Solutions of the problems, some ways out**

- separate, locked space and additional room for teleworking
- information and training for others as regards potential dangers and managing emergency situations; warning light, door bell
- rules regarding the moments and reasons of access (i.e. cleaning)
- ABB in Belgium, for quality and productivity reasons: during the working hours it is obliged to bring children to school or to a day care centre; also the partner should work outside the house
- discussion with the family a moral precondition for homework

Appropriate use of equipment (chapter 3.1.)

Work rhythms (chapter 3.2.)

Duration of work and time patterns (chapter 3.3.)

#### **A. Issues presented in the country reports**

- many issues like in 2.1.-2.2. before
- in general, the situation of highly-skilled teleworkers better than that of unskilled or semi-skilled
- also differences by gender, as regards work arrangements

- directives and legislation are not covering the psycho-social aspects of different kind of telework -protective measures as regards working hours difficult to carry out
- overwork, tight time schedules
- musculoskeletal disorders if suitable work rhythms and pauses are not organized
- no specific regulations and requirements for pregnant women, e.g. regarding extra working hours
- stress due to management by results, typical in repetitive office tasks
- the amount of work fluctuates and is difficult to predict
- time keeping, "learning time" and "thinking time" can be omitted by teleworkers
- in extreme cases, teleworker can be called up any time of the day or night, "labour on call"
- "voluntary" extra work, fear of being perceived as not working hard enough
- lack of trust from supervisors
- risk of "moonlighting"
- workaholism because no external control of time patterns
- problems with technical linkages, delayed response times
- technical possibilities well developed for appropriate use
- not too long travelling from home to work, saves time, energy and reduces risks
- flexibility, independence, self-determination and individual choices possible, with natural interruptions, breaks
- productivity gains (how in the long term?)

### **B. Further information needed/ to be discussed/ open**

- in only some countries, some survey and case study data is available of how work stations actually are used and time spent
- long hours might have different meaning and impacts for women and men
- comparative studies on productivity of telework and of office-based VDU-work

### **C. Solutions of the problems, some ways out**

- training on, how to organise time, take breaks, vary activities, ergonomics (see also 2.1.-2.2.)
- telework should not consists only of simple repetitive tasks
- detailed collective agreements and written contracts dealing with work rhythms and time patterns
- agreements on monitoring between parties
- registers of employers and teleworkers, control cards with specifications
- reimbursement of expenses
- suitable personal characteristics needed, selection by immediate managers
- clinical fitness tests, for knowing how to teach basic things of health for teleworkers

Work isolation (chapter 3.4.)

### **A. Issues presented in the country reports**

- regarded often as the largest potential problem of teleworking
- gap in the legislation
- many forms of isolation ("isolation", "disconnected"), not to be simplified
- informal information lacking
- problems with contacts with union representatives and participation to union and management meetings
- feelings of being forgotten

- lack of communication can lead to paranoid thoughts and together with availability of food and drinks, risk of behavioural disorders, when social control is lacking (e.g., in drug use, alcohol)
- health risks in process control work
- other workers may not take the problems of teleworkers as seriously as those of others
- managerial bullying possible
- one office day per week maybe not enough
- too much trust on phones
- disappearance of collective work
- not all teleworkers are suffering from isolation; depends on both person, occupation and telework arrangements (e.g. full/part-time, how consultancy is organised)
- in mentally complex tasks, isolation is needed for concentration; in simple tasks, on the contrary, with others may help keeping level of activation high enough
- with supervisors, teleworkers may have more "real" contacts, more intense
- more attention is also given by the employer
- teleworkers are less involved in unpleasant internal politics
- no need to integrate themselves with their employers

### **B. Further information needed/ to be discussed/ open**

- teleworkers may start to be less tied to the company and more to the clients

### **C. Solutions of the problems, some ways out**

- sufficient education and instruction to carry out the work alone
- regular meetings and social events should be organized
- feeling that teleworker has a 'home' in the office, without being in anyone's way
- to find ways to help worker representatives to play their role
- team-building activities
- cultural barriers to social integration need to be taken into account (e.g. age groups, different family commitments)
- use of electronic communication
- discussions beforehand how practical issues are to be handled
- research about the type of communication in normal offices, to know what is missing in telework

Job content, autonomy and job control (chapter 3.5.)

### **A. Issues presented in the country reports**

- in general, the situation of highly-skilled teleworkers much better than that of unskilled or semi-skilled; also by gender (see also earlier chapters)
- feeling of being "under-managed"
- new type of management, no control over the presence of the employee, can lead to resistance to change by middle managers
- new skills acquired for teleworking have not been recognized by the managers or colleagues, and consequently, the status and power of teleworkers in the company has not changed
- gives room for independence and autonomy; many positive characteristics, if arranged on the real voluntary basis, with possibility to return
- possibility to concentrate, organise one's work and timing on the basis of personal criteria

## **B. Further information needed/ to be discussed/ open**

- depends heavily on organisational culture, management strategies, and on trust from the supervisors
- consequences for career opportunities compared with those in the office
- the nature of feedback one important factor
- different ways and motives (for control vs. support) of using electronic monitoring need to be explored

## **C. Solutions of the problems, some ways out**

- high motivation, skills, and mastery of tasks by training and support of teleworkers
- better matching of task demands and skills, abilities and needs of the employee
- clear definition of objectives of work, formulation of tasks and job content
- clear definition of roles of different groups inside the company
- more psychological research on the relationship between different kind of control, commitment and motivation
- training of managers
- jobs should include various tasks

Training and retraining possibilities (chapter 3.6.)

## **A. Issues presented in the country reports**

- retraining for teleworkers might be inadequate
- non-employees less likely to be incorporated into training schemes

## **C. Solutions of the problems, some ways out**

- health promotion aspect should be included in organising telework
- training on both self-discipline and technical skills; components which are crucial in each situation should be clearly defined
- need to find out how to facilitate and encourage access to information and training of self-employed
- especially homebased telework should be preceded by training to help teleworkers to acquire new attitudes relating to autonomy, judgement and decision-making, both in keeping with the personal and familial projects and those of the company
- sufficient knowledge on safety and health protection and risks at work needed and should be periodically repeated
- to learn the basics of communication theory in order to maximise exchanges
- training for supervisors to help them to organise telework
- guidelines on training for the freelance home workers
- the self-employed has to review his/her own training needs
- training of possible future teleworkers in companies
- regulations concerning training and retraining possibilities may be included collective or individual contracts
- to help building network organisation especially among self-employed
- money and time for training of also low-paid workers
- the role of the government in supporting training
- if legal status is an essential issue as regards H & S, training of lawyers, trade union representatives and other groups outside should be organized

## Privacy (chapter 3.7.)

### **A. Issues presented in the country reports**

- lack of real separation between work and private life is one of the major problems of telework
- for women, the problems of separating work and family life more common than for men- hazy, changing and destabilizing spatio-temporal interface is connected also with problems in setting out boundaries in the mind (see also 3.1.-3.3)
- some teleworkers need to be contacted 24 hours a day
- no problem of noise and the possibility of being overheard at home like in an open plan

### **B. Further information needed/ to be discussed/ open**

- what is meant by privacy (see also isolation); psychological level (mind); social level (group); external intrusion to personal area
- physical and electronic intrusion
- complex issue, depends on cultural and contextual factors
- psychosocial environment, role of inspectors
- if part of the home is used as a workplace, does it remain totally a private home anymore

### **C. Solutions of the problems, some ways out**

- health and safety emphasis of privacy important here
- reaching the balance between privacy and accessibility important
- separate room needed
- to guarantee this, housing subsidy sometimes needed
- more studies on the social atmosphere at telework places and on the division of labour within the family
- more leeway in planning the private lives for women
- technical arrangements
- rules of contactability at the onset of telework
- entrance to home
- in this area especially, country by country explorations are needed

## Risk assessment (chapter 4.1.)

### **A. Issues presented in the country reports**

- the responsibility for carrying out risk assessment of any workplace rests with the employer
- a grey area as regards homebased telework
- the employer within reason forms an idea of possible risks and appropriate remedies
- difficult to know the ambient risk levels at home or in mobile work places
- in case of non-employed, health authorities have no role to play
- no possibility to visit every single home before providing and starting telework
- insufficient or lacking governmental regulations
- ergonomic quality of old VDU's might be poor and non-tested models of personal computers may result in higher electromagnetic exposures at home than in typical office environments

### **C. Solutions of the problems, some ways out**

- attention to health and safety risks of the applied material, equipment and work environment should start in the stage of purchase, consulting teleworkers
- agreement on the appropriate use of facilities to check teleworker's behaviour and work achievements
- internal control in the course of daily activities should be organized
- clear allocation of duties between different parties
- testing time with prototypes
- overall picture of the situation at home, based on interviews, survey data, pictures
- a protocol on the organisation of work
- the issue of access to the teleworker's home workstation should be settled
- application of Display Equipment Directive
- collection of examples of good practice

Responsibility for the provision and maintenance of equipment safety  
(chapter 4.2.)

#### **A. Issues presented in the country reports**

- in most cases, both the provision and maintenance of equipment and software on the employer's responsibility
- in assessing of the risks, self-employed have the same duty regarding themselves and any other people, not in their employment
- here again, most problematic and in need of regulation is the situation of self-employed teleworkers
- the acquisition of equipment and furniture often determined by finance rather than occupational health and safety at work

### **C. Solutions of the problems, some ways out**

- overall risk assessment policy for the company (how is done, by whom, when, what is the outcome etc.)
- contracts and agreements on costs, suitable insurance policies

Health surveillance (chapter 4.3.)

#### **A. Issues presented in the country reports**

- special health surveillance of telework employees lacking
- too little research on this topic
- surveillance and support of employees in small enterprises and self-employed most problematic
- musculoskeletal problems main topic

#### **B. Further information needed/ to be discussed/ open**

- "absence" -concept is changing (from work, workplace, physically, mentally); research is needed also on sick-leaves and risks when working at home while being sick
- specific needs of ageing society and ageing workers should be foreseen

### **C. Solutions of the problems, some ways out**

- comprehensive approach needed, including an investigation into the workstation and environment, adaptation of working and leisure time and prevention of harmful physical and mental work load
- in principle, regarding needs and measures of health surveillance and risk assessment, what applies to all, applies to teleworkers also
- more means of communication should be developed
- identification of subjects more susceptible to psychological impacts of teleworking activities
- eye-checks and vision tests, the early detection of disaffection signs
- periodic assessment of auditory and other functions of teleworkers operating on vehicles
- when using tests and screening methods, clear distinction should be made between health surveillance and personal selection
- the use of teleworking as one measure in the rehabilitation process
- surveillance and clear internal rules and routines regarding the use of alcohol or other intoxicants, especially among full-time teleworkers and telecontrollers, in writing in employment contract
- to guarantee that teleworkers can be represented through their own employee representatives on health and safety committees

Accessibility of the workplace and the role of the external control bodies (chapter 4.4.)

### **A. Issues presented in the country reports**

- starting point: employers have absolute duty to take care of health and safety at workplaces
- employer has right to decide where work is done
- directives are not tuned to this new kind of work
- by virtue of Constitutions, the employee has a right to inviolability of the home
- labour and health and safety inspectors have access to any work place under the condition that these places are submitted to their supervision and that people working there are falling under the legislation which they are supervising
- in general, accessibility possible when a risk of danger or public safety exists
- otherwise, with the consent and at the request of the employee and with the permission of court
- however, in the Netherlands the inspectors are authorized to enter the homes of teleworkers in order to supervise the working conditions, regardless of whether the occupants consent
- for the most cases in practice, accessibility is not a major problem, because teleworker has an interest in good and safety working conditions; permission is unlikely to be withheld because teleworker's own well-being is at stake
- as regards telecontrol and telesubordination, the novelty in telework comes from three factors connected to new technology: control is made easier - and so more widespread; the enormous synthesizing capacity of computer memory; control methods have become almost invisible

### **C. Solutions of the problems, some ways out**

- definition of "work place" essential
- country-based solutions to look at accessibility issue are important
- the role of labour inspectors is different in member states e.g. regarding their traditional interest in inspection versus also giving advice and guidance to teleworkers
- teleworkers need support from inspectors to change the working environment
- stub books, check lists to get information on how teleworkers are working, where workplaces are
- information on how was dealt in traditional homework might be useful

- more regulation by contracts, formal agreements on the ways, time of appointments etc.
- the shift of emphasis from detailed control of health and safety issues to "systems" inspection
- in the future, possibilities to "virtual access" a new vision

## 5.5. Concluding remarks

For further discussion and preparation of final conclusions for the consolidated report, following tentative conclusions and suggestions are made:

### *Characteristics of telework*

- in its newest form, telework should be seen in the context of change of organizational culture and management strategies
- this together with enormous technological development will increase flexibility as regards time, place and control of work
- time, place and different control mechanisms are the core dimensions to be analyzed, also in relation to 'traditional' home work
- recommendations and the frame of reference when analyzing telework should be up-dated, from individual VDU-workstation level to societal technology policy level

### *Research*

- research data is very limited, in many countries totally lacking, as regards health and safety issues of telework; especially as regards self-employed teleworkers and nomadic staff
- when describing equipment, work station and working environment, majority of reports are referring to EU-directives and practical guidelines, without specific data on telework as such
- also long-term follow up studies are lacking
- this means that the relation of exposure time and intensity in telework with stress reactions, strain and health is unknown
- some research data, however, gives basis for tentative hypothesis, that especially in telework time factor is essential, as regards different health outcomes

### *Definition*

- the usefulness and relevance of definitions of telework used depends on the issues to be discussed; e.g. part-time telework hardly can lead to health risks due to isolation, but some safety, privacy and accident risks are potential even during the shortest possible time
- clearer definition(s) of telework and teleworkers is needed both for research, statistics, legal and prevention measures

### *Job content and control*

- the difference between low and high-skilled teleworkers is very important as regards health and well-being
- more research is needed on the interrelations of different factors, e.g. possible combination of low-skilled teleworkers, no autonomy but no quantitative overload vs. high-skilled teleworkers, high autonomy, high strain level
- leadership strategies and the role of supervisors is of crucial importance

*New risks regarding, e.g.*

- privacy
- risk of marginalization of labour by skills, gender
- mobile environment
- radiation and emission risks in home environment

*New policy measures*

- problems are not caused by telework itself but how work, supervision and support is organized
- new ways of risk assessment, surveillance and inspection, based e.g. on the concept of internal control and continuous training should be developed

## Selected bibliography

*Annex 1: Technical Annex*

*Annex 2: Cases by Korte (Empirica)*