WOMEN PROFESSIONALS IN THE MEDIA IN THE CONTEXT OF NEW TECHNOLOGICAL DEVELOPMENTS

Final Study

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Women Professionals in the Media

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PART A: POLICY OPTIONS

The EU action in the field of women rights has been based on art.119 establishing the right to equal wages. Equal opportunities became a Community objective under the Amsterdam Treaty: Art. 2 and 3 declare that equality between men and women is a specific task of the Community as well as a horizontal task affecting all Community policies. Art. 13 enables appropriate measures to be taken against discrimination. Art. 137 provides the Commission can support and complement relevant Member States activities concerning labour market opportunities and treatment at work. Art. 141 substantially emend Art.119: first, it allows the Council to adopt measures to ensure the application of the principle of equal treatment and pay for equal work. Secondly, it imparts to Member States the task of taking positive action in order to allow the underrepresented sex to pursue a vocational activity and to prevent from disadvantages in professional carriers.

The upheavals media sector is facing are part of a more general process of change in the labour market, due to the introduction of the new ICT1 and, therefore, most of the measures that can be taken should be designed considering this general process and choosing an approach coherent with it. Efforts are needed to ensure that the potential benefits for women of the ongoing changes in the media sector are exploited and the risks are neutralised. While the promotion of gender equality in media professions as such could be considered a very narrow scope for undertaking major initiatives, on the contrary there is ground for new political action concerning the Information Society, where media are a central element.

Measures to overcome the actual gender gaps in media professions should be designed in consideration of the framework in which media are starting to operate and of their future prospects within the Information Society. In the light of the latter, it is not possible to separate:

(i) women professionals working within the media sector, i.e. for the media

(ii) women professionals working with the media, i.e. making use of the new communication technologies.

As we will see later in this study, the present changes in the media sector can offer great opportunities for the improvement of women professional situation, but to this end it is essential that some public initiatives are launched. What follows is a range of possible options replying to the question: what the European Parliament can do – directly or indirectly - to promote gender equality in media professions?2

1 Information and Communication Technologies
2 It is obvious that whereas gender equality is not considered as an aim or it is estimated that the EP should not intervene on that issue, policy options should simply not be suggested.
Mainstreaming

The idea of fostering the integration of equal opportunities in all the relevant policies ("mainstreaming") is taken into theoretic consideration within the EU policies (see, for example, the Fourth Action Program on Equal Opportunities for 1996-2000 and the Communication “Incorporating equal opportunities for women and men into all Community policies and activities”1). In practice, it is normally not the case. The majority of measures undertaken in the field of equal opportunities have been isolated, while an integrated approach is required.

Gender mainstreaming is generally not taken into account in the design of media policies, nor for the new media and IS policies. Even the Green Paper on Leaving and Working in the Information Society, the work of the Information Society Forum, the High Level Expert Group on Building the Information Society for us all, despite their stress on the social impact of the IS, very seldom mention the question of women inclusion and do not even devote a paragraph to this issue. This proves that even at reflection level, gender mainstreaming is not given much consideration. At the implementation level, the recent directives concerning the fields of convergence2 do not take into account the integration of equal opportunities. In the meanwhile, women exclusion not only carries economic and social costs, but also causes the waste of an enormous potential.

A resolution of the EP could focus on gender mainstreaming in media policies and draw the attention on the generalised “nonchalance” on mainstreaming when designing EU policies.

In doing this, the EP should consider the reasons of the relative lack of mainstreaming efforts as defined by the Commission3:

- lack of awareness on gender issues at the decision making levels
- lack of human and budgetary resources allocated to these tasks
- lack of gender expertise.

Introducing a gender impact assessment of European policies, in particular media and related policies, should also be considered (this is done at present only for the research policies, under the 5th framework program).

Social dialogue

It is clear that the new media and technologies require a new legislation

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1 COM(98)122
2 Audiovisual, telecoms, IT
concerning the labour: working time is going to become individualised, time-based remuneration may in some cases be replaced by task-specific remuneration, the location of work is diversifying. As we will see later in this study, those changes seems to especially influence women employment, often affected by a blurring of the boundaries between wage employment and self-employment. Regulations on welfare and work organisation necessitate to be reviewed. New regulations need to be designed on issues such as the new systems of remuneration, the safeguard of a private life and space in the home, the conciliation of family and professional life, etc. It makes very much sense that a coherent European approach is decided on a sector of the labour bypassing national frontiers such as the media sector. An EP resolution can focus this coherent European approach.

In order to guarantee the equality of legislative measures on labour, gender proofing should be introduced.

More binding legislative measures are needed to prevent from discrimination in work. The directive on the burden of proof in case of sex discrimination in the workplace could be reinforced by other measures, also focusing on discrimination based on gender in carrier advancement.

Most of the social agreements and collective contracts have been conceived for full-time, permanent, dependent work. Those characters are going to become unusual among the newly created jobs in the media sector. Within the new flexible firms, jobs tend to become part-time, temporary, independent, and often performed outside companies (this is the case for telework, in particular when it takes the form of homework). Social security and taxation systems need to be completely reviewed in the Information Society: the changes regard women working for the media as well as women working with the media. It is largely recognised that the actual social security and taxation policies often constitute disincentives for female employment. A gender perspective should be integrated in the new policies and in social provisions. In particular, the individualisation of rights as regards the social protection systems has been identified in this study as potentially beneficial to women.

A new dialogue between European institutions and specialised agencies (EFILWC, CEDEFOP) on one hand, and social parts, including trade unions, on the other, concerning the new forms of work created by the new technologies, needs to be developed. The agenda should include the aim to harmonise the changes introduced by the new ICT and media with the needs of:

- conciliating family and professional life not to preclude carrier opportunities for women; a labour legislation allowing women and men to share family responsibilities should be promoted in all the Member States (while at present the situation on this point is far from being homogeneous in the EU),

\[1\] 97/89/EC
promoting women knowledge of the mechanisms of the dialogue among the social parts,

developing the new systems of pay in a way that is equal for men and women: the new systems within the new media need to give an end to the outrageous continuation of women lower pays practices.

**Women participation in trade unions and other bodies** where decisions are taken concerning the labour in the media sector is urged. In the framework of this dialogue between European Institutions and social parts, the EP could insist on this point.

After a consultation process with the social parts, the EP can vote a resolution on the issues just mentioned. During this consultation process, a **hearing** could be organised to examine the social partners' views on how they are prepared to contribute to the promotion of **gender equality in the new labour framework**, determined by the introduction of the ICTs.

**Luxembourg process**

Despite Equal Opportunities were considered as the fourth pillar at Luxembourg Employment Summit in 1997, the National Action Plans (NAP) in several cases do not sufficiently focus on gender. Member States should do more efforts, as the Ministerial Conference on “Gender Equality and Employment Policy”1 has recognised. A **Group for Monitoring Equal Opportunities** could be established to monitor the effectiveness of the measures proposed in the NAPs. This Group would also give a special attention to strategic sectors such as the media.

While it seems unrealistic to include gender equality in the media sector within the **EU guidelines**, it could be possible to ask the **NAPs to give a special evidence to gender equality within the Information Society**.

**Budgetary transparency**

It has been calculated2 that only 0,036% of the EU 2000 budget is dedicated to women-related issues and programs. This represents a reduction of 4,4% in comparison with 1999 budget. Such a reduction may have been compensated by other spending under the new mainstreaming policies3. But this may also not be the case. Some budget lines make specific allocations to women, others include

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1 Helsinki 30 September 1999
2 by the EWL (European Women Lobby), an information service on women issues established in Brussels.
3 In fact, it is since 1996 that the Commission main approach to equal opportunities consists in integrating this issue into all major policy areas, see the Communication “Incorporating Equal Opportunities for Women and Men into all Community Policies and Activities”, COM(98)122.
references to women’s issues in the comments but do not provide further specifications on the amount or percentage allocated to it. More transparency on this point should be requested for the next budget projects, as well as a clarification of the actual expenses for gender mainstreaming when the budget discharge procedure takes place.

The European Parliament should monitor the effectiveness of some existing EU programs in consideration of the objective of promoting gender equality in the media. This concerns:

- NOW, which is the largest EU program for women. It is mainly made of projects on training in business creation and schemes to break down gender segregation of the labour market. Many projects aim at training women to take advantage of new and emerging businesses, especially as regards the services. **NOW could pay a special attention to the media sector**, since forecasts state that multimedia is an especially fertile ground for the creation of small companies. Gender equality in media professions implies women take part to all kind of decision-making within the existing companies and as entrepreneurs of their own companies. In this sense NOW has a particularly important role to play.

- The new program **EQUAL**: financed by the ESF for an amount of 2847 millions EUROS for the period 2000-2006, it aims at trans-national co-operation “to promote new means of combating all forms of discriminations and inequalities in connection with the labour market”. Under this program, a particular attention could be given to the challenges women face within the Information Society.

- the education and training programs (see the paragraph on this issue).

- **Promoting gender equality and women participation to decision-making in media**

Equality between women and men in decision-making has been considered as an aim in the Third Action Program for community action on equal opportunities (1991-1995), and this is still the case for the Fourth Program (1996-2000). In 1996 a Council Recommendation on women and men participation to decision-making considers the media as responsible for the production of information, images and programs having a strong influence on social behaviours. For this reason, the Commission included in its proposal suggestions concerning the need media adopt measures aiming at an equal participation of women in the top positions, especially as regards the decision-making positions in program production. But this point has not been retained in the actual Council Decision.

1 NOW total budget is 900 millions EURO, where 496 million EURO come from the EU budget
2 European Social Fund
3 An experts network, “women and decision-making”, has been created within this program; it focused on gathering data on women in decision-making position within Governments, Parliaments, administrations and advisory bodies. Other fields considered were finance, health, justice, education. Media were not considered.
4 96/694/EC
Generally speaking, this Action Program should be more concrete and focused on precise objectives. It should also take in a major consideration the dramatic changes the new technologies are bringing to the society.

Attention should be given to women professionals in the media: because of the media role in shaping cultures and knowledge, it is crucial both genders have an equal participation. The enhancement of women media professionals chances to take part in the new media decision-making, could be considered among the objectives of the next Action Program for Equal Opportunities.

- **Promoting women networking:** women networking has been identified in this study as a fundamental mean for the advancement of women in their careers and for their participation to decision-making. The Internet provides an excellent opportunity to overcome the isolation women may experience. There are a number of **networks on-line** which can provide precisely this sort of support and mentoring service: their use can be encouraged by the next Action Program on Equal Opportunities.

Among others, the latter can uphold the creation of:

- **databanks on women professionals in the media**, including experts and women working on the basis of the new flexible forms of agreements

- **sites where companies and women professionals** in the media can meet.

- Given the strategic importance of the media sector, the idea of creating a **Forum of Women in Media** – as it is the case for Women in Science – could be considered.

- Fostering women education in the new ITC remains an essential measure to ensure female participation in decision making in media sector (see later in this study).

- **Communication and awareness rising initiatives**

  The EP can ask the Commission to launch awareness rising campaigns addressed to:

  - **Women:** the campaigns would aim at **developing a positive attitude to technology**, would stress on challenges and opportunities, as well as on the importance women can:

    - become new media entrepreneurs,

    - take part to decision-making at all levels in the new media
• participate to the design and implementation of new technologies.

Media: gender awareness campaigns and gender sensitive programs for media managers could be launched.

Public at large: campaigns would aim at barriers removal, particularly invisible barriers such as stereotypes concerning professions suitable or not suitable for women in media. These awareness raising initiatives would also attack stereotypes putting only men in top professional positions and in decision making.

Education professionals: promoting equal opportunities for both genders in the professional milieu implies that in education women are not represented as relegated to the household tasks, while men are represented as charged of public responsibilities.

Education and training

The new Regulations for the Structural Funds (2000-2006) mention the elimination of inequalities between women and men as a general objective: each fund will provide specific measures to promote equality. It is evident that more efforts should be done within the ESF framework towards female employment, since the percentage of unemployed women still largely overcomes that of unemployed men. In particular, the gender gap in new communication and information technologies’ skills is at present large, while most of the new jobs will be for ICT skilled people. Within the European Social Fund, resources should be devoted to:

• technical training, in order to give women access to the new ICTs, which is going to be essential to work in the and with the media. The program ADAPT aims mainly at improving the management of human resources by anticipating the changes the Information Society will bring, under Objective 4 of the Structural Funds. It can be reviewed in order to become more sensitive to gender inequalities and to draw special attention to ICT low-skilled women;

• training women in the so-called “core skills”, i.e. the skills to manage the digital environment, the capability to choose and select information, which will be needed in the new media professions where vertical divisions within the companies will tend to blur;

• training in the “transferable vocation skills”: within the new professional contexts, frequent and rapid technological transformations will make workers change often type of jobs, requiring new skills. While workers will be in the position of having to acquire them during all their working life, neither “formal education institutions” (schools and universities) or companies will provide this

1 this term only refers to people not having a job and looking for it
type of training (see later in this study). Public initiatives and funds are needed, at least for people in a disadvantaged economic position, as it may be the case for women:

- specific training should be devoted to the objective of enabling women to take top-level positions in the new media, both as managers and as entrepreneurs;

- training for women-tutors: at present their number is very limited in ICT areas and the more technical a subject is, the harder it is to find women tutors.

Under Socrates and Leonardo programs, more support can be provided for the creation of women-friendly learning materials, teaching modules, teachers curricula, including those for vocational training in media professions. These programs should launch research projects on women learning needs. They could also undertake initiatives aiming at promoting women representation in quality testing of learning tools.

Scholarships can be created to allow women:

1. to study technical issues
2. to acquire a high level of education enabling them to be promoted to the decision-making positions within the media professions.1

One of MEDIA II program (1996-2000) sections is dedicated to professionals training. The aim is to improve vocational training for audio-visual professions. In the design of the next MEDIA program, the EP could recommend to take into account and set aside a percentage of the program total budget for women training, particularly as regards:

1. the use and mastering of the new technologies
2. the management of audio-visual companies.

The CEDEFOP could be asked to develop researches on women technical training modules. Furthermore,

- researches on women-friendly learning materials could be launched also by CEDEFOP
- the Electronic Training Village, a CEDEFOP site dedicated to bringing together vocational training experts to share the latest information available, is the right framework to raise education experts awareness on the relative lack of women-tutor in the media sector and could be the place to get suggestions on new initiatives to be launched to overcome this lack.

1 the idea of using scholarships as a mean to promote women education and, therefore, to advance their professional positions, has been also launched in Germany where 720 million DM have been allocated to scholarships to enable women to acquire the necessary qualifications to be appointed as professors (for the period 1996-2000).
Research

Studies could be requested to EP D.G.IV and to the Commission on adaptations of the educational systems to women needs, particularly as regards distant learning.

The European Foundation for the Improvement of Living and Working Conditions (EFILWC) could be asked:

- to conduct researches on the impact of the information society and the new media in particular, on women professionals
- to foster the exchange of information¹ on this issue among all the interested parties, especially women organisations.

The IST program (see 5th framework program) should consider women participation in the design of the new media. Technologies are currently designed and developed in male-dominated contexts: the resulting applications are inevitably unconcerned about women needs and inclinations.

A strong basis for this request resides on the fact that, when launching the Fifth Framework Program (1998-2002), the Commission considered the gender balance issue. The preamble states that “… the Community equal opportunities policy must be taken into account in implementing the Fifth Framework Program and therefore participation of women in the field of RDT should be encouraged”.

¹ The exchange of information and documentation is part of the EFILWC mission, that is also asked to treat problems peculiar to certain categories of workers (which includes women in the media)
PART B: ARGUMENTS AND EVIDENCE

1. The changing context

1.1. Traditional media framework and culture

It cannot be denied that the position of women in working places as well as in education is still disadvantaged. According to global UN data, the majority of women earn on average about three-fourths of the pay of males for the same work in both developed and developing countries. In most countries, women work approximately twice the unpaid time men do. Of the world’s nearly one billion illiterate adults, two-thirds are women. Two-thirds of the 130 million children worldwide who are not in school are girls.

Nevertheless, a women relative success characterises the media sector. Women are more represented in the media professions than they are in other sectors. Recently, they have also started to create alternative communication outside the mainstream media to counteract discrimination and stereotyping. Media controlled by women include print media, video, films, radio broadcasting and, increasingly, the new media. Nevertheless, the latter is still a very limited phenomenon.

Concerning the employment within traditional media, women represent 36.2% of the broadcasting workforce. The area in broadcasting companies where women are best represented is certainly Administration (69% of all the posts), while in Technical professions they only occupy 7% of the posts. The vast majority of women in Administration are in low-level secretarial and clerical posts, and the job of secretary is an almost exclusively female domain in European radio and television. Women are reasonably well represented in Production with 35% of permanent full-time jobs. In 1990, 33% of program producers and 29% of program directors were female. Women account for 26% of journalists, reporters, editors.

Women share 28% of the jobs related to content production, where they have editing and craft tasks (scenic construction, studio supervision, property buying and setting, make-up and wardrobe, scenic design and scenic decoration, graphic design).

As regards technical occupations, 3% of camera operators, 10% of sound operators, 1% of people in TV lightening and 22% in vision mixing, are women.

1 The data given in this section derive from a research of the European Commission D.G.V “Employment patterns in European Broadcasting: prospects for equality” and relate to 1990
2 This and the following data come from the same D.G. V research and have been collected among European TV and Radio broadcasters.
On-air presence of women on radio and TV is increasing: there are constantly more women as program hosts, presenters, announcers, newsreaders.

The salary gap between men and women is still wide in the media sector. One reason is women occupy lower level positions. Women’s share of job decreases with each step of the salary ladder: at the very bottom they occupy almost half of the posts, while at the top they account for 10%.

Factors such as lower qualifications and age (due to a more recent entrance in the sector) are influential but do not explain satisfactorily this gap, that is mainly caused by the type of assignments offered to women within each occupational category, and by the valuation given to their work through additional payments and merit awards.

The current trend is towards an increase of women presence in broadcasting companies. This is not only due to the general increase in the number of working women, but also to some new trends specific for those companies. Since more and more programs are bought or commissioned from independent production companies, a significant part of the technical work is accomplished outside the broadcasting companies, where a wider percentage of the human resources is occupied in administration. The increasing importance of commercial operations (an occupational category where women are relatively strong) for broadcasters, can be a further reason for the augmenting presence of women in this sector.

Data do not show relevant differences between the established broadcasters and the newly created companies in terms of women employment, salary or decision making. In both the new and the traditional broadcasters the top positions are still almost a male preserve. The progressive introduction of short-term contract staff - particularly diffused in the newly created broadcasting organisations – seems to give an advantage to women that are more likely to be employed on these precarious terms.

1.2. Invisible obstacles

1.2.1. Attitudes

The gender differences within the working place find a major source in preconceived ideas of women and men roles. This is reflected in the task allocation also in the media sector. Gender stereotypes in the labour arena seems to survive to the current upheavals due to technological changes.

According to the ILO, half the world’s workers are in sex-stereotyped occupations. Men dominate managerial, as well as technical and manual tasks, while women work mainly in caring and nurturing occupations and in support roles.
A Survey by "The Economist" on Women and Work1 found that “Women work in a far narrower range of occupations than men. A recent OECD study of seven member countries found that sales, clerical work, nursing and teaching together accounted for around half the women employed in all those countries. (...) Figures from the EU show a similar picture: the ten occupations where women are most concentrated – sales, clerical, personal services and so on – account for 53% of all women’s jobs in EU Member countries”.

The trend might be towards a diminishing of those preconceived ideas and stereotypes. The Internet tends to neutralise social status indicators such as appearance, organisational hierarchy and often sex. This may improve the gender balance in media professions in the future since gender is likely to become less relevant in the appraisal of a person work. Tele-mediated professional interactions hide the physical appearances (body and voice) and, therefore, the perception of interacting with a woman or with a man becomes weaker.

The most effective initiatives to overcome gender stereotypes are in the field of education, at school level, but also at family level. Because women play a central role in education, as mothers and as representing a large number of teachers, it is important to raise their awareness on this issue. The SOCRATES program draws the attention on the need to develop projects to mobilise parents and teachers with the aim of promoting a not sexist education. But, avoiding the continuation of gender stereotypes transmission in education aims at the long term and at the future entrants in the labour market. For the short term, actions aiming at raising the management sensibility on the gender stereotypes problem should be undertaken.

The second problem is “technophobia”, which seems to be widespread among women, as some researches have pointed out. For example, a research carried out for the UN division on Advancement of Women found that women were initially less present on the electronic networks, less willing or less motivated to use technology, in comparison with men, and that certain circles on the Internet are characterised by a male-dominated on-line culture which discriminates against women. In fact it is difficult to determine if this technophobia is real or if women just have less opportunities to access technologies. The latter thesis is sustained by several studies showing that women have unequal access to ICTs, and this particularly as regards women at the lower end of the social strata. It has been estimated that only 15-30% of the total net-surfers in the world is a woman2.

Such a gender imbalance might indicate that women’s interests are not clearly reflected in the way the new media and services have been designed. To counteract this apparent or actual “technophobia”, new technologies and media need to convey a women-friendly approach.

1 July 18th-24th 1998
2 Those data are in contrast with data in the USA according to a research made by Nielsen/Commerce net saying that 42% of the Internet users in North America are women. The study found that women are the driving force in the growth of e-commerce, as the percentage of women among online buyers is 38% (9% plus in one year).
1.2.2. Work organisation, taxation and social protection

Despite the unemployment rate continues to be higher for women than it is for men, most of the new jobs created during the last years have been taken by women. Between 1975 and 1994 women’s economic activity rate grew from 46% to 56%1. But quantitative increases in women participation to the labour market have not been matched with qualitative improvements. Women weaker position in media professions is proved by figures concerning unequal economic treatment, access to training, participation in decision-making, and greater vulnerability to unemployment.

The truth is that if women are catching up with men in terms of employment rates, it is because temporary, low-paid jobs are growing faster. ILO2 data show that women are going increasingly into atypical forms of work. This category includes part-time and temporary work, as well as the new forms of work, e.g. teleworking. Within the EU, five temporary workers on ten and eight part-time workers on ten are women. The point here is that atypical employment is associated with a weaker position in the labour market, since in the majority of countries most of the collective bargaining by social parts does not concern atypical work.

According to the OECD, the increase in women employment in the recent years is largely due to the growth and spread of part-time employment3. This has often been the only choice instead of not working at all. In all countries, 60-90%4 of part-time work is performed by women. In 1998, women share of part-time work within the EU was 81.8%, whereas the figure for the total OECD was 73.6% and for the USA 68%. Part-time work is undertaken by women in all countries, but the share in the total women employment largely varies. In Finland, it counts for 13% while in The Netherlands it is 54.8%; the general figure for the European Union was 28.1% in 1998.

Part-time work does not usually comprise good jobs, high wage, good career prospects, high status. “Part-time workers tend to have lower jobs tenure than full-timers and they are also more likely to hold temporary jobs”5. Nevertheless, it is not necessarily synonymous of segregation and can not be considered as an impediment for women.

The first point is to determine when part-time is voluntary, i.e. if it has been chosen by the employer or by the worker to leave time for family life and other aspirations

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1 Eurostat data quoted in “Employment in Europe” Office for Official Publications of the EC, 1995
2 International Labour Organisation
3 this definition applies when weekly working time is inferior to 30 hours
4 Source: OECD, Employment Outlook, 1998
5 as reported in “Gender Equality and Employment Policy”, Background document to the Ministerial Conference of Helsinki, 29 September-1 October 1999
and needs. The second point is to verify if it allows to have sufficient incomes or if implies poverty.

A new phenomenon, the "feminisation of poverty", is emerging in Europe. Poverty in rich countries is now influenced by the increasing number of female-headed and female-maintained households. The UN Commission on Status of Women affirms that of the world's 1.3 billion poor people, nearly 70% are women. The increased poverty among women in Europe is related to the increase in the number of single and divorced women with badly secured and low paid jobs.

As we said earlier concerning the media sector, women employment is largely concentrated in the low-paid jobs and even when women are in typical working positions and full-time workers, they earn on average in the EU1 a quarter less than men in the same type of position. The EWL2 found evidences showing that often women ask for full-time, but they are only offered part-time occupations. As the EWL affirms, "women face a greater risk of becoming an insufficiently secured reserve of labour force". This risk becomes severe within the Information Society and the new media, if action is not taken "to improve the security and working conditions of so called atypical workers"3.

Often the new forms of work that are in a phase of increase in the media sector, do not entitle to sufficient social protection (pension, paid leaves, unemployment benefits), since many new jobs are on a free-lance or self-employed basis, while the bargaining of those rights and benefits is collective bargaining.

This is the case for home-based telework. As the report of the High Level Expert Group has pointed out, "the changes in social relationships associated with a shift of the work place back to the home could be substantial. Such changes have clearly both positive and negative dimensions. (...) With home-based teleworking, traditional remuneration methods based on time at work need to be adjusted. It is essential for the social partners to negotiate new systems of remuneration which can avoid a return to some of the injustices associated with piecemeal wages"4. Remuneration systems of home-based teleworkers need to be reviewed because of the shift:

- from a salary system in constant growth to the new income systems based on work availability and on results
- from an evaluation of work on the basis of time spent to an evaluation of the results reached.

Collective contracts for teleworkers would reinforce their position in facing these

1 Source: EUROSTAT, Structure of earning Survey (SES), 1995
2 European Women Lobby
3 EWL, “Position concerning the European Conference on Women’s Employability and Childcare”, Belfast May 1998
shifts and would stand out against the trend towards individualisation of work, workers isolation and loose of the sense of solidarity.

To adapt the social protection systems in Europe to the new forms and types of work, the individualisation of rights as regards to social protection systems is required. There is a conflict between the unit in the labour market, i.e. the individual, and the unit in tax and social security systems, i.e. the household. As outlined in the Background Paper for the Ministerial Conference on Gender Equality and Employment Policy1, “individualised rather than household assessment for social security benefits assist women in being independent labour market participants”. It has to be ensured that social security systems do not hamper women’s profitable employment.

The same for taxation, where individualisation seems to benefit women and motivate them to access employment. “There appears to be a link between the high employment rate of women and individual taxation, over which the family pattern has no influence. The joint taxation of spouses works relatively well from the point of view of the income distribution between families, and at the same time it lowers the marginal tax rate of the spouse with higher income (in general that of man). On the other hand, this takes place at the cost of raising the marginal tax rate of the spouse who earns less (typically wife). This deviation weakens the incentives to work of the spouse who earns less”2. In the EU Employment Guidelines of 1999, the Member States are asked to reduce tax disincentives having negative effects on women labour supply. Almost nothing has been done and a monitoring of Member States policies under the Luxembourg process is needed to ensure that measures to promote gender equality in the labour are effectively taken, regarding both taxation and social protection.

1.2.3. The difficult conciliation between work and family life

A further factor against equality in working conditions is women still remain generally responsible for house and family duties and have to conciliate work with household and childcare. Women entering in the labour market has not been accompanied by a corresponding increase of men house and child care. This not only largely discriminates women in the labour market (where they are more unlikely to be hired because of their family duties), but also strongly affects the chances of women to advance in their professional carriers (because they have less time at their disposal to devote to their work). The so-called “double burden” is the first deterrent for companies in promoting women at high posts.

Concerning the new organisation of work, a research conducted in the U.K.3 has demonstrated that gender is a significant variable in performance and conditions of teleworking, since in general women are less likely to have access to a private

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1 Helsinki, 29 September-1 October 1999
2 ibidem
3 Haddon L., Tucknutt D., Clerical Teleworking – How it affects family life, BT Laboratories, 21 May 1991
space than men: this increases the chances of conflict between the demands of work and of the rest of the household.

Nevertheless, the likely increase in the number of men working at home (because of teleworking) might encourage a sharing of home and childcare between genders.

An effective welfare model should be able to balance the unequal division of work by relocating part of the household work and childcare to public services and men.

The fact new ICT and media are going to bring work at home, could help to better integrate work and family life, but it could also lower the level of the working conditions and compromise the preservation of a private life. There are serious risks that:

- work can invade the space of the households
- an identification of time dedicated to private life will be not so clear, since home-workers may be constantly on call
- women will find themselves even more isolated.

Among the handicaps women find to enter and advance in professions, in general as well as in the media sector, the lack of the following public services and measures has been identified:

- provision of high quality childcare
- incentives for sharing family responsibilities
- arrangements on parental leave concerning social protection benefits during it, possibility of sharing it between parents, length and pay (that in some Member States is very low). The EU directive (96/34/EC) only ensures a three months parental leave but not the fact it is paid; longer and reasonably remunerated parental leaves are needed.

Those measures are essential to enable women to compete on equal basis in their work: in Member States where such measures are taken (for example, Finland) not only women have a larger share of the jobs in almost all sectors, but they advance in their carriers and often occupy top professional positions.\(^1\)

The European Commission has launched an initiative called “Family and Work” Network. It aims at researching, disseminating and exchanging innovative practices to reconcile work and family life. This particularly as regards the new

\(^1\) of course this is not only due to those measures, but also to the widespread culture of those countries.
forms of work organisation, working hour flexibility and professional mobility, childcare in the work place. This network could be effective in evaluating the impact of the Information Society on work and childcare, and in suggesting measures beneficial to this conciliation.

The EU recommendation on childcare1 has had little results and new initiatives are needed, particularly in view of the changes in the work organisation implied by the IS and the new media.

1 92/24/EEC
2. Changing models of work: challenges and opportunities for women

All kind of work is going to be restructured by the ICT and the new media. The new technologies are in the process of transforming the nature of work, making enterprises more flexible and work more decentralised. The products in the media sector tend to become diversified and personalised, while mass contents are likely to diminish their importance.

The organisation of work is turning out to be based on processes where workers perform a range of tasks, rather than on specialised functions. “Enterprises are being transformed from hierarchical and complex organisations with simple jobs, to less hierarchical, more decentralised and network-orientated organisations, with more complex jobs”1.

The demand for the new media professionals is high in several fields where online information becomes the business object, service and tool. These new professionals have to integrate technologies and contents knowledge. New media professionals could be devised in three groups:

1) people working in the core business of the new media (for example, professionals working for multimedia companies, producing CD-ROMs, etc.)

2) people working in the transformed media companies, such as broadcasting, print media, audio-visual production enterprises, that adapted to the technological changes

3) people working “in a broad range of very different sectors, such as tourism, trade, banking and insurance. We can foresee that sometimes in the future multimedia specialists will be needed in all these areas: there will be multimedia bankers, commercial workers and businessmen”2. This future is already in place and this kind of specialists are largely required.

2.1. Traditional professions in decline

The new modes of production and the centrality of information in the economies and, most of all in the media sector, require broader-based skills to respond to constantly changing market demands. Traditional or manual jobs will remain, but their relative importance will decline.

The trend is rather clear:

- low-technology, low-skills and low-wage jobs tend to be less requested. The new technologies have a propensity to render obsolete routine and repetitive work, which may be codified and programmed by machines. Spirit of initiative and adaptation capabilities are growingly called for. The point is to evaluate if there is a tendency to train the low-skilled workforce or to replace them with more suitably educated and trained people. In Europe, trade union pressure and existing collective contracts make difficult for companies to get rid of workers, pushing to retrain them. On the other end, for evident economic reasons, companies prefer to train young people, rather than older people already in workplace.

- The most important upheavals in the media sector concern technical jobs, rather than contents production or administrative occupations, where changes relate to work organisation or just to the use of working tools. Technical professions are restructured in depth. A part of creative work is now made by sophisticated software manipulated by technical professionals, while in the recent past this kind of work was performed by creative professionals (for example, part of the photographers work is now made by graphic designers).

- The majority of traditional jobs in the media sector, tend to be just adapted to the new technologies, while the demand for each profession is raising or declining, but normally does not disappear yet.

Major changes are still taking place and the labour panorama is not defined yet in a sector like media, where transformations have been more dramatic. No research on traditional professions in decline has been found during this study. When interviewed, the Human Resources/Personnel Department of companies in the media sector, replied they had no data on professions in decline, but only a general assessment: no profession disappeared, but all professionals need a technological update, while the new employed are asked to be trained in some aspects of the new ICTs relevant for their future work.

The general trend is towards an **assembling of traditional professions**, so that one professional performs tasks that where previously devised among several workers (for example, the work of a team composed by photo-reporters, directors, image technicians is often resumed by a single professional). “Technological advances, such as light-weight digital video, desk-top editing, better film stock may well serve to reduce the level of manpower required for audio-visual production through increased productivity and they may – as in the case of news-gathering – enable a journalist to take responsibility for almost the entire production process”1.

While thirty years ago most people working in media had a permanent job with a

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1 European Audiovisual Conference, British Screen Advisory Council Host Paper, Birmingham, April 1998
single employer, today we assist to a massive shift towards:

- **fuzzy work**: it has been calculated\(^1\) that on average 27% of people in the audio-visual sector change activity from one year to the next; of them, 61% change employer but remain in the same sector; a study by ANICA\(^2\) says “the sector seems to be driven by a continuous mobility of subjects and activities which tend to create a professional rupture between (...) permanent and part-time employment, between salaried and free-lance work”;

- **self-employment**: more and more people offer their skills to different employers on a self-employed basis.

What is certainly declining in the media sector is a way of working: the offer for secure, permanent, dependent, full-time jobs is dropping, while part-time, independent, temporary, sub-contracted work, homework and other forms of telework, are raising. Because women seem to be more prepared to accept these changes and, in some cases, they require these types of work settlements, the forecast is for a high positive impact of this trend on the quantity of women employment.

This positive impact is also expected due to the fact women do not occupy a large number of technical posts (only 7%), while their presence is larger in contents professions and it is strong in administrative occupations. Therefore, because of the distinctive features of women employment described earlier, the decline of some traditional professions in the media sector do not seriously affect women employment. Most of the trends in media job market seem to work in the direction of a conciliation with the characteristics of women labour.

### 2.2. The new professional opportunities

Employment growth within the EU is lead by the Information Society (IS). It has been calculated\(^3\) that IS employs over 4 million people. More than 300,000 IS related new jobs, i.e. one in every four net new jobs, have been created between 1995 and 1997. In this sector demand outweighs supply (in 1998 there were 500,000 unfilled vacancies for ITC professionals within the EU). This is also due to the fact that information and communication industries are growing more than 5 percentage points faster than other sectors. In telecommunications the EU market has increased by one third during the period 1995-1998. Internet use is exploding in the EU. Electronic commerce is quickly starting. The multimedia sector is growing dramatically. The growth of digital television, in parallel with the rapid uptaking of the Internet, will create more demand on the content and production side. In 1995

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\(^1\) see the Pre-Report of the Working Group 1 at the European Audiovisual Conference of Birmingham, April 1998
\(^2\) Associazione Nazionale Industria Cinematografica ed Audiovisiva, no date
\(^3\) In the European Commission Report to the European Council “Job opportunities in the Information Society” V/1875/98
there were 950,000 people employed in the audio-visual sector; they are expected to grow by 70% between 1995 and 2005.

Despite the positive forecasts on the impact of the Information Society on employment, it has to be said that opportunities will be for well-educated, computer literate workers, whose skills portfolio is continuously expanding. The large majority of the new jobs in the media will be for those able to acquire new skills and to adapt to the changing working organisation. High hopes for job creation remain in new high-skill, knowledge intensive occupations, and they particularly concern multimedia software and users training.

In the short term, the majority of the new posts will come from content production. This corresponds to the evaluation made in a study by IDATE: while “in the medium term the new communication performances will boost employment in all sphere of the economy”, in the short term a copyright industry, including software, audio-visual and electronic publishing, will be developed on a large scale. The demand for multimedia publishers, designers and programmers will grow as well as sales and marketing operators in this sector. “The most dynamic segments of the telecommunications market, in particular mobile telephony, and satellite communications, also offer great potential for new employment. In the medium term the entire European economy is expected to become more dynamic thanks to electronic publishing, which will lead to a multitude of new jobs in a large range of sectors”.

According to the Conclusion of the European Conference on Broadcasting held in Birmingham in April 1998, digital platforms can be attraction poles for the creation of new jobs in Europe.

It is not possible to clear-cut the new professions in media since they overlap and they are in a constant process of redefinition. The descriptions found for each type of new professions largely vary from study to study, and the same appears when reading the advertisements for personnel research: companies tend to define in a personal way the new professionals they are looking for.

The labour market rapidly changes in accordance with technologies. As a new tool appears, a new professional figure able to use and master it, emerges. For example, one can find advertisements for Unix Administrators, Oracle Applications Experts, DB2 DBA, ASP, COBOL/DN2/IEF Analysts/Programmers, Microsoft or IBM basic systems analysts. Skills become increasingly specific for each individual company and rapidly obsolescent.

Traditional vertical divisions are no valid anymore: to the people working on contents or in engineering it is requested to have marketing competencies in order to design appealing products; to technical workers it is often requested to perform creative tasks and also to work on contents, or sometimes even on specific aspects

1 ibidem
of engineering, and so on. There is a **general up-grading** of professions that on one side requires higher qualifications and on the other offers higher positions and horizontal jobs. For example, some large companies propound a single position for a creative director/graphic designer/copy developer.

Most of the media professionals are now wanted outside the traditional media sector (broadcasting and publishing). All kind of companies look for Web Designers, Web Managers, Media Planners, etc.

Despite each time companies search for new people, they tailor the definition of the professionals required on their punctual needs, similar positions are offered per each time period. This made possible to define the new professionals called for in the media sector as follows, on the basis of a very large sample of advertisements published online and on traditional media. The professions described below are those recurring more often among the ads made by media companies in the period August-December 1999.

**Content production**

- **Webmasters**

  Tasks: developing and implementing Web sites, creating an editorial vision for the site. This professional figure, very requested several months ago, is in the process of disappearing and being redefined by the jobs described below.
  
  Skills: experience in creating contents for the Internet, protocols management, html programming, Java programming, data bases design, bitmap design.

- **Web Developers**

  Tasks: developing and maintaining websites, insuring the integration of all their aspects; developing solutions for Intranet/Extranet.
  
  Skills: designing in html/dhtml, graphic production, understanding of compression and palette issues, knowledge of Unix, Java, Javascript, ASP, data access and control methods.

- **Web Designers**

  Tasks: design, coding and publishing contents for websites from conception to final production.
  
  Skills: using html, Java, Javascript, image editing software (e.g. Adobe, Photoshop Illustrator).

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1 in this and in the following sections, traditional professions adapted to the new media, for example multimedia project managers, are not considered when the tasks to perform and the skills required are not new

2 in this section only technological skills are listed, and traditional skills (e.g. communication, team work capabilities, etc.) or general requirements (e.g. University degrees, etc.) are not included
• **Web Content Managers**

Tasks: developing, planning and present web contents; ensuring that all web contents are regularly refreshed; building users’ interest in and loyalty to the web site.
Skills: expertise in using web- and PC-based presentation tools and packages; editorial and marketing skills; experience with streaming video content.

• **Web Watchers**

Tasks: searching in the Internet contents for multimedia productions.
Skills: IT technical knowledge, communication protocols, ability in using the browsers.

• **Interactive TV service Developers**

Tasks: using authoring software to develop interactive services.
Skills: ability to use authoring tools such as Director, Authorware, Icon Author; background in interactive TV, CD-Rom, Internet.

• **On-line Editors/Journalists**

Tasks: write articles for on-line magazines, using words, images, sounds and movies; writing stories, co-ordinating contributions, developing contents.
Skills: to the traditional journalists’ abilities, they are requested to add information technologies and graphic design knowledge.

• **On-line advertisers**

Tasks: implementing on-line campaigns; choosing contents, languages and targets; developing a strategy to highlight a client company on the Internet. Sub-categories are Multimedia Copy Writers, who work just on messages content (written and spoken), and Multimedia Art Directors (working on style and graphics).
Skills: training in marketing (including on-line marketing), advertising, media planning, digital technologies.

**Management**

• **Web Managers**

Tasks: managing web pages, hyperlinks supporting multimedia content, providing file mgmt of published media, providing support in the content, marketing and editorial areas of web environment.
Skills: knowledge of software development, ideas on how to capitalise on the rapid evolution of technologies such as XML, Java, and streaming media for enterprise scalable productions; experience in web leadership role and understanding of the web development process.

• **Media Planners**

Tasks: planning and/or buying network, spot, print, direct response and online media.
Skills: online planning experience, MS World, World Perfect, Excel.

• **Online Project Managers**

Tasks: developing business plans with clients; managing the interactive design and production process.
Skills: familiarity with all aspects of server side web application development and with web publishing.

• **Media Managers**

Tasks: production and placement of electronic and outdoor media.
Skills: understanding of Internet capabilities and key technology constraints, proficiency in Word and Excel.

• **Internet Strategy Managers**

Tasks: developing and driving online strategies, co-ordinating work with the technical staff to ensure that the developers understand the business objectives and are using the proper technical solutions.
Skills: ability to conceive and translate broad editorial, design and technical requirements into technically specific projects; experience in Internet development.

**Programming and engineering**

• **Web Programmers and Analysts**

Tasks: implementing several aspects of a web site, such as data automatic updating, programming protection systems and access safeguard.
Skills: combining in depth IT knowledge (on operating systems, communication protocols, animation techniques, databases development) with specific technologies education (Java, ActiveX, streaming technologies for the diffusion in real time of audio and video contents).

• **Usability Engineers/Interface Designers**
Tasks: determining users' needs, defining product functionality, developing users interfaces, usability requirements, metrics, and testing procedures.
Skills: experience designing and conducting usability tests, systems and software products, Internet streaming client server; overall view of the www marketplace.

- **Database Administrators**

Tasks: creation and administration of database technologies as related to web applications.
Skills: database designing, Unix, query optimising.

- **Systems Engineers**

Tasks: developing and upgrading hardware and software to support companies presence on the Internet and new applications to add to the site; supporting, testing, developing and maintaining high performance, innovative web-based applications.
Skills: hardware and software engineering, switching technologies, performance monitoring, capacity planning for enterprises websites, experience with Perl programming language, CGI/web based programming, Java, Javascript.

- **Failure Analysis Engineers**

Tasks: 1) provide failure analysis, 2) resolve overall system related issues with disk drives involving read channel, 3) develop experiments to isolate root cause of the yield impact, 4) provide proficient data modelling and analysis.
Skills: knowledge of magnetic reading, magnets resistive heads, media interface; programming skills in MATLAB and C/C++.

**Technical professions**

- **3D/Motion Graphics Designers**

Tasks: designing three-dimensional tables, animations, reconstruction of settings for Internet sites and CD-ROM.
Skills: combining graphic design with IT knowledge to use 3D software and Windows NT.

- **Html Programmers**

Tasks: achieve advanced design in html; creation of navigational web images. This figure tend now to be absorbed by multimedia graphic designers or Web programmers, since the latest technological developments facilitate the make up of contents.
Skills: technical training, in particular expertise in translation of web safe colours and numbers, PhotoShop.
• **Digital Photographers/QuickTime VR Photographers**

Tasks: taking pictures using QuickTime VR (Virtual Reality) techniques, suitable to be seen from different point of views and perspectives.

Skills: in general terms, the profession of photographers has been reduced by the introduction of software for image alteration and for “special effects”, that now graphic designers are able to perform. The most requested new skills for photographers are now the use of QuickTime VR, which allows to look into all the visual angles of an object or to show objects moving to display all sides.

• **Digital Sound Technicians**

Tasks: most of the audio production (voices, sounds, notes, melodies) is nowadays realised with digital technologies; these professionals use software for the production of sound tracks in multimedia.

Skills: use of Pro Tools, Sonic Solutions or other software for mixing and equalise sounds; use of Sabie or other software for audio and video digital synchronisation.

• **Multimedia Video Operators**

Tasks: filming for virtual contexts to be reconstructed by three-dimensional graphics.

Skills: the new digital standards for filming and for post-production.

• **Multimedia Film Editors**

Tasks: with digital editing, film editors are resuming several types of competence and duties; the main consists in transcribing frames from a player to a recorder, with the right sequence and visual rhythm.

Skills: technical knowledge, particularly as regards digital editing and formats compatibility; Bitmap graphics, 3D animation.

**Education**

• **Multimedia Tutors**

Tasks: guiding, motivating and helping distant learners in the framework of training through telematic networks. Distant learning can take place on videoconferencing (implying a direct contact with the trainers) or on request (open learning).

Skills: competence in the field of the course (it has to be observed that most of the multimedia courses are on ICT), and in the use of multimedia technologies.
Marketing and sales

- **Online Marketing Manager**

  Tasks: responsible for developing offers for subscription, identify appropriate marketing vehicles, managing online agencies, develop technology-based solutions to meet business and marketing objectives; capturing customers loyalty and increase the utilisation of the site.
  Skills: knowledge of systems, software product development lifecycle.

- **Interactive Marketing Managers**

  Tasks: increasing brand perceptions through the web site and related interactive media; linking sites, co-ordinating marketing and advertising campaigns, exploring Internet opportunities for company promotion.
  Skills: expertise in developing, managing and executing interactive marketing programs; understanding of interactive marketing and web technology.

- **Web Marketing Specialists**

  Tasks: responsible for developing, implementing and tracking Web marketing strategies; making decisions on which site to pursue for advertising; optimise online advertising and marketing directory.
  Skills: computer literacy, knowledge of web language, graphics (jpeg, GIF, etc.) and strategy; experience with web electronic marketing, media planning.

2.3. Organisational changes

Within the companies in media sector flexibility is going to be the keyword. Required by the faster technological cycles, flexibility means agile companies able to take the opportunities offered by the fast-moving information economy. Companies are going to be characterised by customer focus and long-term commitment building. Flatter hierarchies and slimmer managerial structures will be the rule: within the new media hierarchical structures will be challenged. In particular, we will soon assist to an increase of the high level qualified positions
among the new media professionals. A research conducted by Telecom Italia found that in the new integrated media and information services, the high qualified professionals accounted for 40% of the total in 1997 in the USA, while a trend to the increase in their number is also evident in Europe. In France, a rise from 10.3% to 12.4% took place between 1989 and 2000, and in Germany, the increase will be from 28% to 39% by the year 2010. According to this research, people in media will be required to blend into one the two distinct roles of professional and manager: integrating various corporate functions (including co-ordination and control), they will replace intermediate management. A functional flexibility will lead to a wider range of skills or roles.

From the workers point of view flexibility will mean:

- **Individual autonomy**: the externalisation of several activities from media companies leads to more contracts taking the form of free-lance, sub-contract, and self-employment. Individual independent work is going to largely increase in the media sector. At present, this phenomenon is particularly evident in journalism, where the trend towards free-lance work is strong. For example, a quarter of the members of the National Union of Journalists of Great Britain and Ireland, is now freelance.

  The impact of individual autonomy on women employment in the media sector may reveal to be problematic. Women propensity to become entrepreneurs was traditionally low and media companies, including SMEs, owned by women remain still rare. Self-employment presents some risks: the rapid growth of single person and micro-business, as pointed out by the HLGE, can “imply a form of self-employment in which employees are given a stark choice between redundancy and selling their labour back to the firm on a freelanced, piecwork or other casualised basis. (...) Some forms of home-based telework might fall into this pattern, where workers are denied the protection of the status of employee but are in effect on contract to only one client”2. The problem with freelance work is that the boundaries between genuine freelance work (normally undertaken for a variety of employers) and home-based work for a single employer (where the self-employed scheme was not a choice of the worker but a decision of the employer aiming at avoiding social charges) are often blurred.

- **New adaptable ways of working, and first of all teleworking.** Tele-working can in principle have a positive impact on the promotion of equal opportunities in the labour market, enabling women to co-ordinate family life with professional activities. Nevertheless, a study published by the European Commission shows that the occupational segregation found in the traditional work system was mirrored in tele-work: the high-level professional, technical and executive jobs

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3 “Teleworking and Gender”, EC D.G.V, V/641/96, carried out by Analytica
tend to be for men. For this kind of jobs (with a high bargaining power due to the scarcity of the skills required), working conditions were often good and wages relatively high. Women were more often occupied in specialist professions or technical work requiring a relatively high skill and education levels such as editing, indexing, translation, proof-reading, technical writing or computer programming. Women in this kind of positions were earning considerably below the rate for on-site work, and regarding tele-working not as their preferred form of work, but as an alternative to not working at all.

According to this study, traditional female work such as routine clerical work, answering the telephone, data entry etc. is still a woman preserve in teleworking. “It was not possible to draw a sharp line between ‘homeworking’ and ‘teleworking’ in this category. There was a continuum between tasks involving new technology such as packing cards, collecting documents, stuffing envelopes or typing using mechanical or electric typewriters and data entry, checking and updating databases and typing using a world processor or computer”.1

1 the above mentioned study, p.11
3. Changing training and education

Each year 2-3% of the labour force leaves work – due to age and other factors – and a newly educated, trained and skilled labour force enter into the market. In ten years, 80% of the technologies we use now will be obsolete and replaced with more advanced technologies1.

In a changing work environment, where new forms of employment are emerging and where part-time, temporary, fixed-term work and telework will be diffused, the concept of work security is changing. It is shifting from security based on the preservation of an individual workplace to a security based on employability.

What makes work secure is therefore education and training. A study by OCDE assessed that “labour force activity raises with educational attainment. The relationship is especially strong in the case of women, with those who have not completed upper secondary education being only three-fifth as likely to be in the labour force as those with university level education. (...) Women tend to enjoy larger relative earnings gains from higher levels of education than do men. (...) There appears to be a virtuous circle whereby participation in continuing education and training raises skills and competencies that enhance employment and earning prospects, which in turn increases the demand for learning opportunities”2.

ICT literacy becomes essential, since new technologies are both an object and a tool for learning. Learning technologies is not enough and learning to learn technologies, to use and select information is necessary.

The ICT draw up learning as well as production processes. According to the White Paper on “Education and training: teaching and Learning”3, working and learning contexts tend to become similar if not identical from the point of view of required capacities.

Traditional learning institutions and methods are not suitable to the continuously growing and diversified demand for new skills. Distance learning is booming: in the USA, the forecasts show an augmentation of 95% per year until 2002 of the online training. Education over the Internet is one of the hottest new investment targets on the stock market. Distant learning is largely preferred for training on the new ICTs. This success is due to:

1) the continuous improvements and updating of courses, which is certainly not

1 data published in “Living and Working in the Information Society: People first” p.17
3 COM(95)950
the case for traditional courses

2) the availability of courses according to learners’ time scheduling (with consequent time savings): improved accessibility is a key benefit of multimedia education and training, and an highly valuable quality from women point of view.

### 3.1. Skill mismatches in the media sector

Skill mismatches will occur at different levels and may have a varied impact on labour. In the media sector, a difference exists between:

a) traditional professions needing to be adapted to the new technologies, but not changing nature (e.g. journalists, who will just need to be trained to use the new ICTs)

b) new professions, where traditional workers have no chance to be employed: for example, this is the case for the older jobs within publishing companies and newspapers concerning printing tasks.

As a consequence of the rise in the media labour market of professional figures integrating various functions, a range of technical and interdisciplinary skills is required. To cope with the new media environment, women need to acquire:

- technology mastering
- work management, time management and self-organisation
- general skills, such as learning to learn, communication abilities, information selection.

Retraining and lifelong learning are made necessary by the frequent job changes as well as by the recurrent technological innovations, which will diminish the value of experience and enhance the value of fresh knowledge.

At present, the mismatch between the offer and the demand for jobs in the media sector is due:

1) to the lack of people trained in several specific ITC

2) to the lack of professionals able to combine technical and managerial skills: the new professional figures have to mix ITC knowledge, managerial capabilities and creativity.
3.2. Rethinking education and lifelong learning in view of the needs of women professionals in the media

Statistics1 show that throughout the European Union, more women than men choose medical sciences, humanities, applied arts, while they tend to be underrepresented in computer sciences, engineering, and mathematics. The proportion of women enrolling in courses on these subjects is relatively higher in Spain, Italy and Portugal than in other Member States. Within the EU 50% or more of the higher education students are women in the fields of Law, Social Sciences, Humanities, while in Computer Sciences/Mathematics they account for approximately 25% and in Engineering they are less than 20%. It is only in medical sciences that they largely overcome the half of the students (roughly 65%).

Experiments2 made with children of pre-school age show that, contrary to the norm for children aged 10 and upwards, where boys usually take the lead and are dominant when using the ICTs at school, girls of pre-school age take the initiative and occupy the computers. “By introducing ICTs at the pre-school age, we can encourage more girls to be as active and as interested as boys and perhaps to take more of a lead in the use of technology”3.

Concerning more specifically the training in new technologies, it is surprising to find that women take the initiative of starting to learn ICT more often than men. The Survey on “Learning in the Digital Culture” conducted at the LSE4 has shown that, while a large percentage of female respondents to the questionnaire had self-taught themselves (66%) using books, manuals and software, self-teaching men were 61%. Under this light, the supposed female “technophobia” seems to consist simply in the fact women are offered lesser opportunities to learn ICT.

In the new media environment women need to acquire three types of skills:

(i) the knowledge enabling to live in a social context characterised by a high level of technological penetration. The basic knowledge allowing to use a PC is not sufficient. It is not only matter of guaranteeing the equality of

1 see the data gathered by Eurostat and published by the European Commission in the Communication “Women and Science”, COM(99)76
access but also the type of access, where a series of skills for managing the
digital environment are requested. Knowing how programs function and
how to select information is essential. The knowledge to make the machines
think is a must.

(ii) The job specific skills, making women able to perform their work in the new
technological environment.

(iii) The “transferable vocational skills”\(^1\) making women able to adapt to a
continuously evolving professional environment, where new abilities are
required to make people “employable” in different situations.

(iv) The ability to master the Internet publishing tools and to develop media
contents edited and designed from women point of view.

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Since permanent and long-term employment in the media sector will tend to
diminish, companies would be reluctant to invest in training. Much of the
burden and expenses for transferable vocational skills will naturally fall on the
shoulders of individual workers, if public initiatives are not taken. The
Luxembourg Summit on Employment has recognised the need to encourage a
lifelong training also within companies, by the means of tax or other incentives
for the development of in-house training. But this can only regard job specific
skills (type ii), while a large part of type (i) education can be offered by schools
and universities. The problem of funding concerns the third type, i.e.
transferable vocational skills. A shift from institutions to individuals in spending
for education is expected\(^2\). Even though it is not possible to avoid that a part of
the costs for this training will be paid by the learners, nevertheless the EU funds
and programs can play a larger role than they do at present.

Typically countries spend about 6% GDP\(^3\) on formal education and training
and companies allocate 2% of their paybill to train their workers. New funding
models to sustain the delivery of education and lifelong learning to a fast
growing number of individuals, are needed.

The biggest group of new learners is women: women are the majority of the
new entrants in the labour market but remain underskilled in ITCs, while most of
the new jobs are arising precisely from these technologies. Not enough
attention is paid to this point by education and training institutions, within
companies, Member States and EU institutions.

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1 this definition is given by the Information Society Forum, in its First Annual Report (1996), Supplement
containing Working Groups Reports, p.58
3 source OCDE ibidem
The LEONARDO DA VINCI program draws the attention on the need to open new professional sectors to women and to encourage them to restart working after a carrier interruption. This program has an overall objective of equal opportunities promotion and devotes specific financial resources to projects aiming at adapting training contents and methodologies to women needs. Projects on the development of women carriers in sectors where they are underrepresented are included in LEONARDO strategy for life-long learning.

The idea of developing user-friendly multimedia education and training is often repeated. The idea of women-friendly education and training needs to be developed. In a context where it is very easy to tailor products and services on the users needs and on specific groups of users, it is just surprising to see how little is done in terms of women-friendly education and training. Experiences and studies on distant learning suggest that women and men have different learning needs (for example, women value face-to-face tutorials and are more likely to attend study centres despite obstacles of access and time; most women prefer a way of learning that is personal, interactive and acknowledges their experiences, etc.).

In particular, as a consequence of the fact parental leaves are still almost a women preserve within the European Union1, women have specific retraining needs, due to periods of absence from professional life.

Women-friendly learning materials and teaching methods would be much requested, while much of the software has been until now worked out by companies on the sheer basis of technological developments. In particular:

- researches on women learning needs have not been developed;
- women are normally not involved in the design of learning tools and contents.

Concerning the last point, new educational software starts to be created by teachers with the help of IT companies, and often these teachers are women. Associations for the professional advancement of women in multimedia or, broadly, in the new ICT, also produce training modules on new media and technologies aiming at helping women advance in their professions. But these remain just exceptional cases in a technological environment clearly determined by men.

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1 with the exception of few countries (e.g.: Finland) where fathers can take a parental leave
3. Changing women role in the media sector

3.1. Chances for women to participate in new media design and use

An equal opportunities perspective in media professions implies women participate not only in the creation of learning tools and materials on ITC, but also in the design and implementation of the technologies and media themselves.

As a research1 shows, female professionals in ICT are often performing routine jobs while men are more likely to be designing the new systems. It is therefore clear that new technologies and media, similarly to the traditional media, tend to have a male orientation, i.e. they tend to be designed according to male psychology and needs.

To have women-friendly technologies and media, it is of primary importance that women constitute a larger part of the users community: the trend towards the “customisation”2 of technologies implies that users will play a central role and will become the actual decision-makers in the new market places. As a consequence, if women would constitute the majority of the users, attention to their needs and point of views would be given. At present, women use of ICT is expanding. The Women’s Networking Support Program of APC3 recently conducted a survey on women’s experiences with electronic networking in 30 countries in all continents. Initial findings indicates that women are increasingly active in using electronic communications, and that many tools such as e-mail have become a part of their day-to-day communications.

Anyway, if the customers are becoming progressively influential in the contents and services definition, it is the culture shared by technology designers that still plays the essential role concerning technology shaping. To overcome the actual gender imbalance in the new technologies and media, it is necessary that women have a much more important role in technology design and management. To reach an effective gender balance, it is necessary that women do not simply adapt to the new technologies and media, but also become service providers, launch products tailored on their needs, use multimedia technologies to identify common concerns as well as job opportunities.

If women still participate very little in new media design, several initiatives have been taken by women organisations

- to foster the use of the new ICT by women,

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1 “Teleworking and Gender”, EC D.G.V, V/641/96, March 1996
2 it is a definition used by M.L. Thorsen Lind at the ILO (International Labour Organisation) Symposium on Multimedia Convergence (Geneva, 27/29 January 1997)
3 Association for Progressive Communications
• to provide contents of interest to women on the Internet,
• to train women on ITC
• to exploit the new tools for women networking
• to help women find a job in the new media sector.

In USA and, less frequently, in Europe and Australia, women writers, editors, news directors and lobbyists have become active in establishing numerous sites of special interest to women on the Internet. In several cases, these sites are a tool for networking and lobbying for female advancement in the new professions. Sites managed by women new media professionals' organisations also offer jobs advertisements and online training.

Many are the women’s organisations using on-line instruments, electronic conferences, bulletin boards, mailing lists, www pages, etc. There are several examples of online women advocacy organisations helping women gain access and training in new technologies and media. Among them are WON (Women’s Online Network), the sites of the Association for Women in Communication, of the Association for Women in Computing, of the Institute for Women and Technology. The Webgrrls site provides a forum for women in or interested on new media and technology to network, exchange jobs and business leads, form strategic alliances, mentor and teach, learn skills to help women succeed in an increasingly technical workplace and world. As it is the case for the majority of those sites, this initiative has been launched in the USA in the mid-90s.

An other interesting example is Netfemmes, an electronic network for women funded in the framework of the Canadian project “Internet au féminin”. It aims at endowing women with a strategy of appropriation, so that women will be in the condition of creating their own network. A feminist orientation has Virtual Sisterhood, a global electronic support network, dedicated to strengthening and magnifying the impact of feminist organisations through promotion of electronic communication use within the global women’s movement.

There is also a search engine – wwwomen – designed for women and bringing women related contents. It includes a “jobcentre”, where it is possible to search and offer posts.

BannerWomen is a banner network designed to help women-orientated websites with limited or no advertising budget earning free advertising for their websites to a target audience of women online.

4.2. Chances for women to participate in the decision-making
It is out of question that women participate for a very minor proportion to the
decision making within the traditional media. A research on women director
generals and TV programming directors in EU public broadcasting companies1
found that 5 of the 18 major public broadcasting companies in the EU have
women on top decision-making positions. They where ORF (Austria), YLE-TV1
(Finland), France 2, RTP (Portugal), and BBC 2 (U.K.). Of those public broadcasters
having women in a top decision-making position, 1 of the 19 Director Generals
identified were female (France 2); 4 of the 22 Directors for TV programming were
female (ORF, YLE-TV1, RTP, BBC 2)2. Only two women were director general or CEO
within the 71 media organisations included in a European Commission research3.
Just 0.1% of women in broadcasting was at the most senior level of management
in 1990, compared with 0.7% of men. Concerning management committees
(boards of management, boards of directors), women occupy 9% of places. Within
the external bodies which advise broadcasting organisations on policies or
financial matters, 12% of members are women (the majority of them is part of
advisory boards and only a minority participate to the more influential
administrative councils).

The European Parliament (Resolution of 11.2.1994)4 has already taken a position
on this issue when it invited the Commission to implement an equal opportunity
policy to remove the obstacles to women participation in decision-making. During
the Beijing Conference the EU insisted on the need for an equal sharing of
responsible, power and rights between women and men.

The Beijing and Toronto Platforms on Women and the Media have recognised
the under-representation of women in the media decision-making is both a
symptom and a cause of gender inequality, and new strategies are needed to
foster women participation to the decision-making in this sector, particularly as
regards the new media. In fact, given the women lower level of technological
literacy and their almost absence from the design of the new technologies, the
gender gap could become wider in decision making within the new media.

This is a crucial moment. The rules of the game are still in the process of being
formulated. The new ICTs introduce more flexible and diffused forms of
management and decision-making. The electronic information flows puzzle the
traditional hierarchical organisations.

Despite many existing organisations still reflect the stable operating conditions of
the recent past and their hierarchical structures, the new “flexible firms” can
reshape hierarchies and decision-making. Women can take profit or be further

1 this research was conducted among 18 major European public broadcasting companies by Ericarts under the Fourth
Action Program on Equal Opportunities; data concern the situation as in January 1999.
2 The public broadcasters not having women in top decision-making positions were: BRTN-TV and RTBF (Belgium),
TV2 (Denmark), France 3, ZDF (Germany), ERT (Greece), RTE (Ireland), RAI (Italy), CLT (Luxembourg), TVE
(Spain), SVT (Sweden), C 4 (U.K.)
3 “Employment Patterns in European Broadcasting: prospects for equality”, D.G. V, EC 1990
4 OJ C 61 of 28.2.1994 p.248
damaged by it. In order to enable women to take advantages from the new situation in the media sector, three types of issues should be considered.

The first is networking. This is generally recognised as a tool for women’s empowerment. Networks aiming at helping women overcome obstacles in access to the new media and technologies have been created. Examples include the APC (Association for Progressive Communications) which operates globally, ALAI (created in South America), FemNet (in Africa), Laneta (in Mexico), Network of East-West Women (Eastern and Central Europe).

Networking is essential to counter-balance one of the most important side effects of the introduction of new technologies: isolation. This occurs at private life level, but is reinforced at professional level, where women – as we have seen earlier – will tend to work more independently. Isolation and the lack of women solidarity in professions have been identified as the main obstacles to women carrier advancement.

The idea of network is the basis for a project undertaken in France (under the aegis of the European Social Fund) just to allow unemployed women to find a job. The project consisted in the creation of clubs where women could collaborate to find work, share problems and have a support structure to help coping with problems linked to being unemployed. The results1 seem rather impressive. In the first phase, one third of the participants succeeded in finding a job. In order to improve this success rate, and taking inspiration from a Canadian “jobclub” project, placing an important emphasis on networking, those groups expanded. 70% of participants now find a work commensurate with their qualifications.

The second point concerns women entrepreneurship: participating to decision making in media does not include only top management positions in established companies but also the setting up of women-headed companies. As said earlier, the changes introduced in the media sector by the new ICTs favour the creation of autonomous activities, self-employment and new business foundation. Multimedia is considered as the main sector for the creation of new companies, especially as regards SMEs. It is still difficult for women-entrepreneurs to obtain:

- funds and loans,
- training,
- trust and confidence.

Structures to advise and inform women, as well as financial instruments dedicated to women entrepreneurs at Community and at the Member States level, have to be developed.

The third problem relates to women participation to the decision-making concerning their own work in the media sector, i.e. their participation in trade

1 as described on the EC D.G. V Web pages “ESF Projects, example of good practice: equal opportunities”
unions and other bodies – also within the companies – where decisions are taken on the new arrangements concerning working conditions, time, contracts, parental leaves etc. in view of the adaptation of the present arrangements to the framework created in the media sector by the introduction of the new ICTs.

The problem is to match (1) the changes occurring in the media professions and (2) the changes in the society also concerning women, such as the changes in the family models and household typologies. A harmonisation has not been found in the working arrangements among diverging elements such as:

- the massive entrance of women in the labour market,
- the one-person households, the complex new family structures due to a vast diffusion in the number of divorces and the increasing number of families composed by mother and child/children
- the new forms of work.

Women are under-represented in labour negotiations. If a labour legislation harmonising the new features of the society and the technological environment is wanted, women participation at trade-unions and companies decision bodies has to be reinforced.
Technologies involved in new media

During the last decade, the digitalisation of all kind of communications made the technological innovation explosive. Digital technologies are bringing video, computer, telecommunications, publishing, and entertainment industries together. This phenomenon is commonly defined as “convergence”.

This convergence of formerly devised economic sectors implies the convergence of:

- companies: new integrated companies capable of activities in all media (publishing, TV, music, multimedia, film, software) are emerging

- material supports: not only it is possible to provide the same services on the TV screens and on the PC, but the last products allow to provide those services directly on the phone (supplemented with screens) and now on mobile phones (allowing to navigate and to use all the Internet capabilities, including broadcasting).

Analogic technologies consist of traces of light recorded on film, tape etc. Creating analogic products requires expensive production equipments and consuming them demands a different device for any type of service requested (TVs, record players, radios, cassette players, VCRs, etc.), since analogue media tend to be distinct and not compatible with each other. Digital technologies are made of “bits” (the number 0 and the number 1) that can describe anything. The information obtained can be mixed and matched using the same device: a computer.

The new multimedia networks make possible to access texts, data, images and sounds with the same medium. They diffuse and decentralise the possibility to publish and find information. Contents become flexible and unpredictable: interactive multimedia services allow users to intervene in the contents, in a wide range of interactivity levels, going from the simple choosing in a menu to the possibility to change the messages.

Digital media publishing is booming: electronic publishing largely expanded its initial scope, when it was limited to products such as the publication of scientific journals available online, and multimedia encyclopaedias on CD-Rom. Now it concerns also business information, real time financial information, internal
information provided via Intranets, virtual museums, etc. With “cross-publishing” contents can be published on several media: since costs for content production and royalties are high, companies creating digital contents tend to re-use them in as many media as possible without having to pay “first copy” costs again.

We can make a distinction between multimedia on-line, where contents are diffused through communication networks, and multimedia off-line, where contents are diffused through tangible supports, such as floppy disks, videocassettes, CD-ROM, CD-I etc.

A division of multimedia contents can consider:

• entertainment: it includes products for families, such as for example videogames.

• Educational contents: a range of products going from books and encyclopaedias, to courses for learning languages, virtual museums, science essays, tourist guides, etc. Concerning multimedia encyclopaedias, it has to be noted that they present several advantages compared to traditional encyclopaedias, since they are interactive, they contain animated images and videos, they can be updated through the Internet. Some encyclopaedias are available in the form of data-banks.

• Real-time information, including services requiring a continuous and quick update, such as financial information, news and electronic newspapers.

The multimedia market is growing at an unprecedented pace and the trend towards a quick expansion is continuing. Providing multimedia services require the co-operation of several economic actors:

• Content Providers: they can be publishers, press agencies, videogames producers, broadcasters, but also banks, insurance companies, etc.

• Service Providers: they offer on the networks packages of services; they operate by “service centres” or distribute directly videos, films, data banks, archives and other contents.

• Network Providers: they manage the networks to distribute multimedia services to the users; they are telecommunications companies, aerial and satellite broadcasters; they can be at the same time also service providers.

• Access Providers: they offer the access to the networks to the users.

• Technology Providers: they offer the software and hardware for the production and distribution of multimedia services.

The Internet is a global network of networks connecting millions of people worldwide using a simple standard and a protocol called TCP/IP (transmission control protocol/Internet protocol). The connections between the different networks are called gateways and they transfer electronic data worldwide. A message sent over the Internet is broken in small pieces, called packets. The resources on the Internet – information and services – are provided through host computers, the "servers". The access to the servers is done via “Client” programs (applications) using TCP/IP to deliver the information in the appropriate format.

The Internet Architecture Board (IAB) administers the Internet protocol development, agrees upon standards, allocation of resources, and defines the rules on how to assign addresses.

Created as a mean of communication within the academic community, the use of Internet has been continuously expanding both in terms of user typology and in terms of utilisation typology. Concerning the latter, at present the Internet is used as:

- source of information
- remote computer access
- e-mail
- mailing lists
- bulletin boards and news groups
- file transfer
- e-commerce
- electronic publishing
- video conferencing
- webcasting.

The WWW (World Wide Web) is a globally interconnected network on the Internet based on a uniform addressing scheme for locating resources, protocols for access to named resources, hypertexts for easy navigation (html), a set of servers responding to requests. It interfaces with other standard protocols.

The World Wide Web is based on a pull technology where the client browser must request a web page before it is sent. Broadcast media are push technologies because they send information out regardless of whether anyone is tuned. Increasingly companies are using the Internet to deliver information push-style. A perfect example of push technology is e-mail, because you receive mail whether you ask for it.

Internet is the new medium for broadcasting and a large number of broadcasters offer on the net not only the contents broadcasted by air, satellite and cable, but also propose specific contents for the Internet: 90% of the broadcasters provide databases, e-commerce and a variety of extra information unused at their stations. Through the Internet they also collect data on their
audiences interests, in order to predict viewers choices, to be able to better influence advertising on their programs and in some cases to directly sell products. A very large number of Internet-only broadcasters continue to come out.

Publishing on the Internet becomes very similar to broadcasting, since video and sounds are included in the published products.

The concept of broadcasting has been enriched: new technologies and services have appeared:

- packages of programs and theme channels
- pay TV
- interactive TV
- interactive multimedia products
- Near Video on Demand
- Video on Demand.

Digital television is not just analogic TV converted to digital technologies: it is a new medium bringing about interactivity, personal television, e-commerce, video-on-demand, subscription TV. The users have a wide choice of contents and more control over the way they access that content. It allows multicasting, i.e. sending contents to a select list of recipients. This term is used interchangeably with narrowcasting, which also permits to send contents to a specific list of recipients (an example is cable TV).

Webcasting refers to the use of the Internet to diffuse information. Unlike the typical surfing, which relies an a pull method, webcasting uses push technologies. The Internet uses both a broadcast and a narrowcast model. Most Web sites use a broadcast model since anyone with Internet access can view the sites, but sites requiring to log-in before viewing contents are based on narrowcasting. The best examples of narrowcasting are e-mail lists where messages are sent only to individuals who subscribe to the list.
Glossary

**ASP**: Application Service Providers are entities managing and distributing software-based services and solutions to customers across a wide area network from a data centre.

**ATM** (Asynchronous Transfer Mode): technology based on transferring data in cells or packets of a fixed size. The cell used with ATM is relatively small compared to units used with older technologies. This allows ATM equipment to transmit video, audio and computer data on the same network, and assure that no single type of data hogs the line.

**Bitmap**: a representation consisting of rows and columns of dots, of a graphic image in computer networks.

**Browser**: a software application used to locate and display web pages. The two most popular browsers are Netscape Navigator and Internet Explorer. Both display graphics as well as texts.

**Buffer**: area for data storage.

**Bulletin Board System (BBS)**: on-line service functioning as a centralised source of information for files, programs and messages; most BBS serve specific interest groups.

**C++**: a high level programming language, popular for graphic applications.

**CD-I** (compact disk interactive): is like a CD-ROM but the reader is connected to the TV set. It be registered only in specialised centres and not by the users.

**CD-ROM** (compact disk read only memory): is a CD able to memorise an enormous quantity of multimedia information. In a CD-ROM can be stored, for example, encyclopaedias or multilingual dictionaries, collections of texts, databanks or handbooks for language learning can be used with a remote control. CD-I are destined to the home use since hey do not need a PC. They often contain entertainment or educational programs. Both the CD-ROM and the CD-I are one-read-only-memories.

**CGI**: Common Gateway Interface is any program designed to accept and return data that conforms to its specifications. CGI programs are the most common way for web servers to interact dynamically with users.

**Computer networking technologies (CNTs)**: the various tools being developed for electronic dissemination of information.
**Domain:** a method of identifying computer addresses on the Internet.

**Electronic conference or bulletin board:** a collection of messages related to a particular topic.

**Electronic mailing list** (also called Listserv): a list of e-mail addresses of people who regularly communicate with each other. It is possible to subscribe to receive messages automatically by sending a request via e-mail to a specified address.

**E-mail** (electronic mail): a message sent and received almost instantaneously by someone anywhere in the world via computers and modems using telephone lines.

**GIF:** Graphic Interchange Format supports colours and includes data compression, making it especially effective for scanned photos.

**Gopher:** a menu system that organises and provides easy access to available on the Internet. The gopher can help you locate information, download files, and search databases.

**Home page:** a Web screen that acts as a starting point. A user can go from an homepage to multiple sites across the world’s computer networks.

**HTML:** Hypertext Mark-up Language is the foundation for most web pages. It is not really a language, but a way to format texts. For example, html allows to make a word bold or underlined.

**HTTP** (Hypertext Transfer Protocol): the Internet standard that enables information to be distributed across the Web using hypertext mark-up language (html) to upload information.

**Java:** a high level programming language used for general purposes: its features make it suitable for use on the www.

**Javascript:** a scripting language to enable web authors to design interactive sites.

**JPEG:** Joint Photographic Experts Groups is a technique for colour images.

**Internet** (the Net): a global network of computers that makes it possible to share information electronically. It offers both one-way communication and “virtual” interactive communication. It allows networking, conferencing, commercial transactions, shopping, banking and publishing.

**Intranet:** internal network of an organisation using Internet protocols and standards.
IRC (Internet Relay Chat): service enabling people connected on the Internet to join live discussions. It is not limited to two participants.

LAN (Local Network): a computer network that spans a relatively small area. Most LANs are confined to a building or a group of buildings. They can be connected one another through phone lines (becoming a WAN – wide-area network). Most LAN connect workstations and PC. Users can also utilise the LAN to communicate to each other, through e-mail or chat sessions.

Logging on: connecting to a computer network.

Mailing List: list of people receiving mail and other information on a subject of common interest.

Modem: either an internal or external attachment to a computer that allows receiving or transmitting data through telephone lines.

Multimedia: the use of computers to present texts, graphics, video, animation and sound in an integrated way. Because of the storage demands of multimedia applications, the most effective multimedia applications are CD-ROMs.

New Media: media that are based on computer technology, such as Internet, WWW, e-mail, Usenet (newsgroups), BBS (bulletin board system), CD-ROMs, and CD-Is.

Newsgroups: a single forum for discussion on Usenet. The contents consist of posting individual messages, submitted from anywhere on the Internet.

On line: actively connected to a computer network.

Photoshop: is a paint program enabling to draw pictures on the display screens which are represented as bit maps.

PointCast: it is an Internet news network that can be displayed as part of a computer desktop. Headlines move dynamically across the screen. Advertiser supported, it is free to both users and publishers.

Plug-in: a hardware or software module that adds a specific feature or service to a larger system. For example, there are plugs-ins for browsers enabling them to display different types of audio or video messages.

Protocol: a set of rules that lets computers agree how to communicate over the Internet.

Push: (1) in client/server applications, to send data to a client without the client requesting it. (2) In programming, to place a data item into a stack. The opposite of push is pop, which means to remove an object from a stack.
QuickTime VR: display multimedia contents on computers. It is an enhanced version of QuickTime since it adds the ability to display and rotate objects in three dimensions.

Unix: a multi-users, multitasking operating system, designed in the '70s to be used exclusively by programmers. Due to its portability, flexibility and power, UNIX has become the leading operating system for workstations.

URL (universal resource locators): on the World Wide Web, a URL can be thought of as a map for accessing a specific resource, such as Web pages or gopher site. URLs express the type of resource to be accessed, the specific site where the information is stored and where at the site the information is located.

Usenet: it is a worldwide BBS that can be accessed through the Internet or through many online services. It contains newsgroups that cover any imaginable interest.

Web browser: enables users of the Internet to discover, retrieve and display documents and data available on the WWW. Web browsers allow users to view selectively hypertexts documents, access powerful text-searching tools, listen to sound files, and view graphics, animation and videos across the Internet.

World Wide Web (www): originally a project developed by the CERN for sharing information within internationally dispersed teams over computer networks. It allows texts and graphics to be shared with anyone else on the network.

XML: it enables designers to create their own customised tags to provide functionality not available with html. XML supports links that point to multiple documents, while html links can reference only to one destination each.
SOME INTERESTING WOMEN SITES

Association for Women in Communication: www.womcom.org

Association for Women in Computing: www.awc-hq.org

Banner Women: www.bannerwomen.com

CCEO (Conference of Parliamentary Committees responsible for Equal Opportunities within the EU Member States): www.senate.be/CCEC

European Commission, D.G. V: europa.eu.int/comm/dg05/equ_opp/index_en.htm

European Women Lobby: www.womenlobby.org

Femina: www.femina.com

FinFo (Finnish Woman): www.vn.fi/vn/um/finfo/englishfinwoman.html

Il paese delle donne, Women from Italy: relay.isinet.iunet.it

Institute for Women and Technology: www.iwt.org

Laneta: laneta.apc.org

NetFemmes: www.netfemmes.org

Network of East-West Women: www.igc.apc.org/neww

Penelopes: www.mire.net/penelopes

Virtual Sisterhood: www.igc.org/vsister

Webgrrls: www.webgrrls.com

Women in Computer Science: www.ai.mit.edu/people/ellens/gender.html


Woman Search: www.womansearch.com

Women’s on-line media, Japan: tsuru.suehiro.nakano.tokyo.jp/WOM/index.html
Women Watch (UN): www.un.org/womenwatch

WomenzNet, Australia: www.womenz.net.au

Women Television Network: www.wtn.ca

WWWomen: www.wwwomen.com
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Executive Summary

This study, as well as the researches and statistics to which reference is made, demonstrates the gender imbalance is large in media professions, since not only women occupy fewer posts, but also:

- they receive lower remunerations: OECD and ILO data show the salary gap between men and women is still wide in the media sector. One reason is women occupy lower level positions: at the very bottom level they account for almost half of the posts, while their share of high level posts is 10%. Factors such as lower qualifications and age (due to a more recent entrance in the sector) are influential but do not explain satisfactorily this gap, that is mainly caused by the type of assignments given to women within each occupational category, and by the valuation given to their work through additional payments and merit awards.

- They are employed on precarious terms: the recent increase in women participation to the media labour market revealed to be brought about by the rapid diffusion of part-time, sub-contracted and temporary jobs.

- They occupy decision-making positions only in exceptional cases. This is true at the top levels of the established media companies (for example, a research conducted in 1999 revealed that out of 18 major European public broadcasters, only one had a women Director General and only 4 directors for TV programming were women). But this is also valid regarding women entrepreneurs in media companies (they are just a few) and concerning the bodies (trade unions and others) where decision are taken on the labour conditions in the media sector.

- They are suffering from “invisible obstacles” such as preconceived ideas on women-suitable jobs, and stereotypes proposing only men at top-positions: according to ILO data, half of the world’s workers are in sex-stereotyped occupations. Men dominate managerial, as well as technical and manual tasks, while women work mainly in caring and nurturing occupations, or in support roles. A survey by the Economist has found that women work in a narrower range of professions than men and that 53% of women’s jobs in the EU are concentrated in ten occupation types only.

- Finally, the fact women generally remain responsible for house and child care not only discriminates them in the labour market (where they are more unlikely to be hired), but also strongly affects the chances to advance in their carriers (because they have less time to devote to work). An effective welfare model should be able to balance the unequal division of work by relocating part of the house and child care to public services and men.

The impact of ongoing changes in media sector has been estimated in this study as positive for women. The increase in women participation to the media labour has started in broadcasting companies. This trend will be reinforced within the new media. The changes in the new media labour market seem to lean it in the direction of a conciliation with the characteristics of women labour:

- fuzzy work: the offer for secure, permanent, dependent, full-time jobs is dropping, while
part-time, independent, temporary, sub-contracted work, homework and other forms of telework, are raising; since women seem to be more prepared to accept these changes and, in some cases, they require these types of work settlements, the forecast is for a high positive impact of this trend on the quantity of women employment.

- **Self-employment**: more and more people offer their skills to different employers on a self-employed basis. As for the previous point, autonomous work is also a characteristic of women work and a reason of their recent entrance in the labour market: for example this is the case for journalists that are now more and more working on a free-lance basis.

- **The most important upheavals in the media sector concern technical jobs** (where people risk to be substituted by new ICT-skilled workforce), rather than contents production or administrative occupations, where changes relate to work organisation or just to the use of working tools. Since women share of technical jobs is particularly low, and their presence in content production and in administration is relatively high, these changes will not endanger women employment.

Media sector has excellent prospects. Multimedia is growing dramatically. The expansion of digital television, in parallel with the rapid uptaking of the Internet, will create more demand on the content and production side. In 1995 there were 950,000 people employed in the audio-visual sector; they are expected to grow by 70% between 1995 and 2005. Anyway, risks should not be ignored. To get the opportunities the new media can offer to the improvement of women professional situation, several measures need to be taken.

- **First**, it has to be said that opportunities will be for well-educated, computer literate workers, whose skills portfolio is continuously expanding. A survey made in this study demonstrated that the labour market rapidly changes in accordance with technologies: as a new tool appears, a professional figure able to use and master it, emerges. Women have been proved to be less trained in ICT, where a big gap exists with men in terms of number of computer literate individuals. If women will not catch up on education and training in new technologies, the impact on their employment will be disastrous.

- **Individual autonomy**: the externalisation of several activities from media companies leads to more contracts taking the form of free-lance, sub-contract, and self-employment. The individual independent work is going to largely increase in the media sector. The impact of individual autonomy on women employment in the media sector might reveal to be problematic. Women propensity to become entrepreneurs was traditionally low, while self-employment presents some risks: boundaries between genuine freelance work (normally undertaken for a variety of employers) and home-based work for a single employer (where the self-employed scheme is not a choice of the worker but a decision of the employer aiming at avoiding social charges) are often blurred. New social provisions and laws are required.

- **Tele-working**: in principle it can have a positive impact on the promotion of equal opportunities in the labour market, enabling women to co-ordinate family life with professional activities. Nevertheless, a study published by the European Commission has shown that the occupational segregation found in the traditional work system was mirrored in tele-work. It has to be assured that teleworking takes place in such a way that will be a women-friendly form of employment.
Among all the fields requiring the attention of policy makers concerning the issue under discussion here, the crucial ones are: 1) women education and training, 2) women participation to decision-making, 3) new social provisions, concerning work protection, taxation, remuneration.

1) As a consequence of the rise in the media labour market of professional figures integrating various functions, a range of technical and interdisciplinary skills is required. To cope with the new media environment, women need to acquire technological competencies as well as “core skills”, such as learning to learn, communication abilities, work/time management and self-organisation, information selection etc. In particular, the new media professions often require a combination of technology mastering, management, creativity. Women training in all these fields is needed.

Retraining and lifelong learning are made necessary by the frequent job changes. The rapid technological changes will diminish the value of experience and enhance the value of fresh knowledge. The concept of work security is changing. It is shifting from security based on the preservation of an individual workplace to a security based on employability. What makes work secure is education and training. Three are the types of skills requested:

- the knowledge enabling women to live in a social context characterised by a high level of technological penetration. The basic knowledge allowing them to use a PC is not sufficient. It is not only matter of guaranteeing the equality of access but also the type of access, where a series of skills for managing the digital environment are indispensable. Knowing how programs function and how to select information is essential. The knowledge to make the machines think is a must.

- job specific skills, making women able to perform their work in the new technology environment.

- transferable vocational skills, making women able to adapt to a continuously evolving professional environment, where new abilities are required to make people “employable” in different situations.

The idea of developing user-friendly multimedia education and training is often repeated. The concept of women-friendly education and training needs to be developed. Experiences and studies on distant learning suggest that women and men have different learning needs. In particular, as a consequence of the fact parental leaves are still almost a women preserve within the European Union, women have specific retraining needs, due to periods of absence from professional life. In a context where it is very easy to tailor products and services on the users needs and on specific groups of users, it is just surprising to see how little is done in terms of women-friendly education and training. Women are the majority of the new entrants in the labour market but remain underskilled in ITCs, while most of the new jobs are arising precisely from these technologies. Not enough attention is paid to this point by education and training institutions, companies, Member States and EU institutions.

2) To reach an effective gender balance it is necessary that women do not simply adapt to the new technologies and media, but become also service providers, launch products tailored on their needs, use multimedia technology to identify common concerns as well as job opportunities.
As recognised by Beijing and Toronto Platforms on Women and the Media, the under-representation of women in the media decision-making is both a symptom and a cause of gender inequality. New strategies are needed to foster women participation to the decision-making in this sector, particularly as regards the new media. Given the women lower level of technological literacy and their almost absence from the design of the new technologies, the gender gap could become wider in decision making within the new media.

This is a crucial moment. The rules of the game are still in the process of being formulated. The new ICTs introduce more flexible and diffused forms of management and decision-making. The electronic information flows puzzle the traditional hierarchical organisations.

Despite many existing organisations still reflect the stable operating conditions of the recent past and their hierarchical structures, the new “flexible firms” can reshape hierarchies and decision-making. In order to enable women to take advantages from the new situation in the media sector, two types of issues should be considered.

The first is networking. This is generally recognised as a tool for women’s empowerment. Networks aiming at helping women overcome obstacles in access to the new media and technologies have been created. Networking is essential to counter-balance one of the most important side effects of the introduction of new technologies: isolation. This occurs at private life level, but it is reinforced at professional level, where women will tend to work more independently. Isolation and the lack of women solidarity in professions have been identified as major obstacles to women carrier advancement.

The second type of measures to be promoted concerns entrepreneurship. The changes introduced in the media sector by the new ICTs favour the creation of autonomous activities, self-employment and new business foundation. It is still difficult for women-entrepreneurs to obtain funds and loans, training suitable for their specific needs, trust and confidence. Specific financial instruments dedicated to women entrepreneurs at Community (NOW) as well as at the Member States level and new structures to advise and inform them can be effective measures.

3) Most of the social agreements and collective contracts have been conceived for full-time, permanent, dependent work. These characters are going to become unusual among the newly created jobs in the media sector. Social security and taxation systems need to be completely reviewed. The integration of a gender-sensitive perspective should be taken into consideration. In particular, the individualisation of rights as regards the social protection systems has been identified as potentially beneficial to women.

Women participation to trade unions and other bodies – also within the companies – where negotiations are made and decisions are taken on the new arrangements concerning work, has to be encouraged. Major changes of the existing social provisions are required to adapt to the framework created in the media sector by the introduction of the new ICTs. An harmonisation has not been found yet in working arrangements among diverging elements such as the new forms of work and type of contracts, the massive entrance of women in the labour market, the increase in the number of families headed by a woman (due to a vast diffusion of divorce and to a raise of lonely mothers quantity). Women are under-represented in labour negotiations. If a labour legislation harmonising the new features of the society and the technological environment is wanted, women participation
at trade-unions and companies decision bodies has to be reinforced.
Options Brief

The upheavals media sector is facing are part of a more general process of change in the labour market, due to the introduction of the new ICT. Therefore, most of the legislative measures that could be taken should be designed considering this general process and choosing an approach coherent with it.

Legislation: the changes in new media professions, i.e. the introduction of flexible forms of work (part-time, temporary contracts, telework, etc.), particularly affect women employment (since women are more often employed on this basis). A new legislation concerning the labour is necessary. Regulations on welfare, work organisation, family concerns, safeguard of a private life and space in the home, need to be reviewed. It makes very much sense that a coherent European approach is decided on a sector of the labour bypassing national frontiers such as the media sector. An EP resolution can focus this coherent European approach. Gender proofing to guarantee the equality of legislative measures on labour should be introduced.

Mainstreaming: this study highlighted that gender mainstreaming constitute the exception in EU policies, and this also as far as media policies are concerned. The most effective mean to counter-act this fact could be introducing a gender impact assessment of EU policies (particularly media policies), as at present is done only for RDT policies.

More transparency in the budget actually allocated to women related issues is needed to measure the effectiveness of mainstreaming at EU programs level.

Luxemburg process: despite Equal Opportunities were considered as the fourth pillar at Luxembourg Employment Summit in 1997, the National Action Plans (NAP) in several cases do not sufficiently focus on gender. Member States should do more efforts: a Group for Monitoring Equal Opportunities could be established to examine the effectiveness of the measures proposed in the NAPs. This Group would also give a special attention to strategic sectors such as the media.

Promoting gender equality: because of the media role in shaping cultures and knowledge, it is crucial both genders have an equal participation in decision-making in this sector. The enhancement of women media professionals’ chances to take part in it, could be considered among the objectives of the next Action Program for Equal Opportunities.

Women’s networking has been identified in this study as a fundamental mean for the advancement of women in their carriers. The next Action Program on Equal Opportunities can uphold the creation of:

- databanks on women professionals in the media, including experts and women working on the basis of the new flexible forms of agreements;
- sites where companies and women professionals in the media can meet.
- the idea of creating a Forum of Women in Media – as it is the case for Women in Science – should be considered.

Communication and awareness rising: in order to eliminate cultural stereotypes concerning professions suitable for women and insisting to show only men in decision-making positions, it is crucial to launch campaigns to media managers, education professionals, the public at large. Campaigns specifically addressed to women would aim at developing a positive
attitude to technology and would stress on challenges and opportunities, as well as on the importance women can become new media entrepreneurs, take part to the decision-making at all levels, participate to the design of new technologies.

**Monitoring:** the EP should monitor – through the budget control procedures – the effectiveness of relevant EU programs in promoting gender equality in the media. This would concern NOW (that could give a special attention to the media sector since multimedia is an especially fertile ground for new companies – particularly SMEs – creation); EQUAL, and the education programs.

**Education and training:** the ESF should devote resources to provide women with three types of training: technical issues, the skills to manage the digital environment (a mix of technology, management and creativity), transferable vocational skills (useful in a professional context where women will often change jobs).

Leonardo and Socrates programs should give more support for the creation of women-friendly learning materials. Scholarships can be created to allow women to study ITC and to acquire the knowledge in media management enabling them to reach top-level positions. On these issues, the program MEDIA II can set aside a percentage of its budget for women training and CEDEFOP can provide researches on the type of training needed.

**Research:** the IST program – under the 5th FP – should consider women participation in the design of the new media and technologies as an aim. EFILWC (European Foundation for the Improvement of Living and Working Conditions) can be asked to conduct researches and to foster the exchange of information on the impact of new media on women professionals.

**Social dialogue:** a new dialogue between European institutions and specialised agencies (EFILWC, CEDEFOP) on one hand, and social parts, including trade unions, on the other, concerning the new forms of work developed by technologies, needs to be established. The agenda should include the aim to harmonise the changes introduced by the new technologies and media with the needs of:

- conciliating family and professional life not to preclude carrier opportunities for women; a labour legislation allowing women and men to share family responsibilities should be promoted in all the Member States (while at present the situation on this point is far from being homogeneous),
- developing the new systems of pay in a way that is equal for men and women: the new systems within the new media need to give an end to the outrageous continuation of women lower remuneration practices,
- promoting women participation in trade unions and other bodies where decisions are taken concerning labour in the media sector.

Social security and taxation systems need to be completely reviewed in the Information Society; it is largely recognised that the present social security and taxation policies often constitute disincentives for female employment. In the new policies and social dialogue on those issues, the integration of a gender perspective should be taken into consideration. In particular, the individualisation of rights as regards the social protection systems has been identified as potentially beneficial to women.
Abstract

This study, as well as the researches and statistics to which reference is made, demonstrate the gender imbalance is large in media professions. Not only women occupy fewer posts, but also they have lower pays, they are employed on precarious terms, they occupy decision-making positions only in exceptional cases. Moreover, they are suffering from “invisible obstacles” such as preconceived ideas on women-suitable jobs and stereotypes proposing only men at top-positions. Finally, the fact women generally remain responsible for the house and childcare not only discriminates them in the labour market, but also strongly affects the chances to advance in their carriers.

Most of the new jobs created during the last years in the media sector have been taken by women. The reason is the offer for part-time, independent, temporary, sub-contracted work, homework and other forms of telework, is raising. The new posts in media are mostly of this type and women seem to be more prepared to accept and, in some cases, even to require these types of work settlements.

The impact of the ongoing changes in media sector has been estimated in this study as positive for women. Some of the trends in new media labour market seem to lean it in the direction of a conciliation with the characteristics of women labour.

Anyway, risks should not be ignored. To get the opportunities the new media can offer to the improvement of women professional situation, several measures need to be taken. Among all the fields requiring the attention of policy makers, the crucial ones are:

1) women education and training: if women will not catch up on ICT skills, the impact on their employment risks to be disastrous;

2) women participation to decision-making: women need not only to adapt to new technologies, but also to participate in their design, become media managers and entrepreneurs;

3) new social provisions, concerning work protection, taxation, remuneration: the current upheavals in the media professions require a major revision of social provisions and labour laws. The integration of a gender-sensitive perspective should be taken into consideration.
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