



Statistical Indicators on the Labour Market in the eEconomy (STILE)

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Special Project Progress Report

STILE-2000-IST-31099

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Special Project Progress Report

Part A: Identification

Project Title: Statistical Indicators on the Labour Market in the eEconomy
Project Number: IST-2000-31099 *Project Acronym:* STILE
Reporting period: 1 May 2003 – 30 April 2004

Project co-ordinator

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List of Partners

<i>Partner</i>	<i>Role</i>	<i>Country</i>	<i>Budget (KEURO)</i>	<i>Person – Months</i>
Higher Institute of Labour Studies (HIVA)	C	Belgium	835.979	102
Cork Teleworking Centre (CTC)	P	Ireland	101.947	20
Institute for Employment Studies (IES)	P	United Kingdom	199.320	43
CAMIRE Estadística y Análisis, S.L. (CAMIRE)	P	Luxembourg	131.412	25
Institut für Arbeitsmarkt- und Berufsforschung (IAB)	P	Germany	104.001	17
Istituto di Ricerche Economiche e Sociali (IRES)	P	Italy	204.181	37
Organisatie voor Strategisch Arbeidsmarktonderzoek (OSA)	P	The Netherlands	176.834	31
Institute of Sociology – Hungarian Academy of Sciences (ISB)	P	Hungary	197.862	28
Central Statistical Office (CSO)	P	Ireland	51.782	11
Joanne H. Pratt Associates	Subc	USA	136.680	19

Project co-ordinator: Monique Ramioul

Date: 01 / 05 / 2004

Signature:

Part B: Self Assessment form

B1. Assessment of work done during the reporting period.

1. Workpackage 1: Project co-ordination and assessment activities

- The fourth partner meeting was held on 9-10 October 2003 – Budapest, Hungary.
- According to plan, WP-related international workshops were linked to co-ordination and planning meetings where possible: for the Budapest partner meeting, this was the first international WP3 workshop on 'Coding and classifications', that was organised the day before the partner meeting on 8 October 2003.
- In addition some partners met also on specific project-related events: the WP3 meeting in London (4 June 2003), a meeting in preparation of the STILE book and conference (January 2004) and two WP6 meetings (27/08/03 and 25/02/04)

Project meetings planned:

- Leuven (B), 12 May 2004: International Workshop workpackage 3;
- Leuven (B), 13-14 May 2004: STILE partner meeting;
- Brussels (B), 30 September - 1 October 2004: STILE closing conference 'Measuring the Information Society';
- a final partner meeting will be held during the European conference (30/9-1/10/2004, Brussels (B)).

Assessment activities during the reporting period:

- D1.1 External assessment of WP5 (already approved);
- annual progress report (SPPR) in preparation to the second cost statement;
- annual progress report (SPPR) in preparation of the Panel Review Meeting 29/10/2003 (already approved);
- internal final assessment by the lead partners of the finished workpackages (WP2, WP4 and WP5) fully integrated in this report (mainly in part B of the Annual SPPR 03 – already approved);
- built-in assessment through systematic user involvement included the international workshop with external experts (WP3 'Coding and classification' – 8/10/2003), and the WP7 validation conferences for the occupational profiles of eEconomy occupations in Belgium, Italy, Hungary, the Netherlands and the US.

2. Workpackage 3: NACE rev. 1 and ISCO 88 (COM) classifications of eBusinesses and eWorkers

A list of 150 fictive descriptions of eWork establishments and a list of 150 fictive eWork occupations were designed. These descriptions were coded up, using NACE rev. 1, and ISCO 88 (COM) by the national statistical institutes in the Netherlands, UK, Ireland, Germany and Hungary. The coding process was observed and documented by the partners, with special reference to any problems or ambiguities.

The first results have been discussed in a workshop (8/10/2004) where also international experts on NACE and ISCO were present, as well as representatives from the NSI's involved. The list of participants and the minutes of this workshop are included in Annex 1 and 2.

Based on the discussions, it was decided that additional information on the coding practices would be helpful to explain the divergences in the codes assigned to the occupations and businesses. In order to do so, the partners had additional interviews with the coders at the NSI's involved.

In order to take into consideration the specific German situation (see further) a different approach for Germany was agreed upon. To meet the project's common goal to improve and converge the European labour market monitoring systems with special regard to the 'eEconomy', it seemed that taking into account the specific German situation would enhance the representativeness and applicability of the project outcome, even if this implied a delay and some changes to plan. That is why the team could not avoid a certain delay in the finalisation of the first workpackage deliverable.

The changes to plan resulted from difficulties in the empirical fieldwork, deriving from the special character of the German situation in observing the labour market, which shows some remarkable differences to that in other European countries. First, there is no instrument which is comparable to the Labour Force Surveys conducted in other countries. The functional place of the LFS is in Germany on the one hand filled by the 'Mikrozensus', an annual population survey by the Statistical Office, covering not only employment, but also various other themes like housing, family situation, education, social situation, health and others - with a necessary 'loss' in the deepness of investigation employment items. On the other hand there is a highly developed system of register data on employment, produced by the Labour Market and Social Security Administration, and administered and analysed by the Federal Labour Office. Second, there are two institutions, which play crucial roles in observing the labour market - the German Statistical Office (Statistisches Bundesamt) and the Federal Labour Office (Bundesanstalt für Arbeit). Both institutions not only keep up their own monitoring instruments, but also use similar, but nevertheless different classification systems for occupations and sectors. The differences in occupational classifications still exist, but the different sector coding is overcome by switching from different versions of WZ-1993 to the identical WZ-2003 in both institutions. Moreover, both German institutions practice an extremely decentralised system of data collection, being delegated to the statistical offices of the federal states as well as to the local bodies of the labour administration. Third, the German system of job classification is far away from any current or recent versions of ISCO. Due to translation problems and the - at that time - relatively large size and independence of the German labour market in the 1960s, Germany missed the connection to ISCO-1968, and faces now still a considerable distance between the present system and ISCO-88. The STILE WP3 conference at Budapest (8/10/2003) clearly showed that observable distances between ISCO-88 and the national job classification systems seem 'normal' to a certain extent. But the German example does exceed this level of distance widely.

Those special conditions in Germany, of which the STILE partners could know only partially when designing STILE WP3, gave a strong reason to involve Germany in the research work, but could not - due to the necessary openness of any research processes - be fully regarded in the design of the STILE project. This situation led to various additional and unforeseen analytical and conceptual tasks in the German part of WP3, as follows. At the STILE partner meeting in Rome, March 2003, the WP3 partners decided to include the Mikrozensus into the coding experiment, being the instrument coming most close to the concept of a labour force survey. At the same conference we presented a first analysis of the German system of occupational classification, showing a previously unexpected high distance to ISCO-88 as well as first suspicions for differences in the job

classification systems of the German institutions. Tracking down those differences in detail, starting negotiations with both institutions and translating the sector descriptions into German took the main part of summer and autumn 2003. In the same period discussions between the WP3 partners, following the results of the Rome meeting, led to the decision to drop the German part of the occupational coding exercise and replace it by a second sector coding exercise, thus covering both relevant institutions. This decision was confirmed by the WP3 workshop at Budapest in October 2003. Therefore the changed work programme for the German part of WP3 since then was to carry out two sector coding exercises: one on the Federal Labour Administration and its register data producing, and one on the Mikrozensus, and no occupational coding exercise. The data collection for the first one was completed on December 15th, including the interviews with the coding staff. Translation activities from WZ2003 into NACE took place during the Christmas season, while analysis and reporting was delivered by end of January. The second one, concerning the Statistical Office, needed additional negotiation effort, but was approved also. In April 2004, the Mikrozensus coders successfully finished their work on the 150 fictitious business (short) descriptions. This way, the result of this second coding exercise could not be included into the first deliverable with all national reports, but it will be included in the final workpackage report.

On 12 May 2004, the second international workshop will be organised in Leuven (Belgium) to discuss and assess the outcome of the coding exercises, the conclusions to draw on the classifications in the eEconomy and to discuss possible recommendations to include into the final report. A list of invited participants and the workshop programme are included in Annex 3 and 4.

At the May 2004 workshop in Leuven, an interim comparative report of the results of the coding exercise (with the exception of the latest German results) will be presented. This will be further discussed with the WP3 partners at a partner meeting with the aim of finalising a structure for the final WP3 report and integrating the German results fully into this process. This report will be completed for submission to the Commission in June.

3. Workpackage 6: Mobility in the eEconomy

The first milestone report - *Definitions and concepts, database development* - was completed and put on the STILE website. It provides an introduction to the issues and challenges confronted in the development of this workpackage with an overview of the various methodological questions that should be posed when developing indicators on mobility in the eEconomy, linking in these questions with the necessary reality of the available data and the structure and form in which it comes. As such, key themes are how to measure mobility, the eEconomy and knowledge. Following this methodological discussion, a summary of the steps taken in the database development is provided, underlining the necessary procedures in the database management process as well as the thematic organisation of the data for both partners.

The preliminary results of the exercise were presented at the last partner meeting, both as concerns the EU LFS data and the administrative data available for Belgium. A number of important comments and suggestions were offered by the other STILE partners following this presentation, which have since been taken on board in the project development and analysis.

In the context of the second milestone - *Preliminary analysis using the Datawarehouse and the EU LFS* - WP6 partners prepared a set of indicators and an overview per country to make it possible to compare the indicators. It also exploited the Datawarehouse as a data source, providing an introduction to general trends in ICT development in Belgium before looking in more detail at job-

mobility in the ICT sector and overall. The country reports were then sent to all the STILE partners for comments and suggestions.

Contact was also taken with another STILE partner in order to develop indicators comparable to those calculated via the Belgian administrative data, but for Germany. This additional work not anticipated in the contract was dependent on timing issues and resources and will be included in the final report for this workpackage should it have been possible to achieve.

A contribution was prepared for the fifth STILE newsletter, providing a SWOT analysis for both the use of LFS and administrative data for the measurement of mobility in general and for ICT in particular.

The structure of the labour market mobility section of the STILE book was prepared (by project coordinators and scientific committee) and agreed by WP6 partners. Contact has been taken with potential contributors and structure planning undertaken.

Two deliverables are currently being finalised and will be sent to the Commission before the end of April as anticipated in the technical annex to the contract. These two deliverables are:

- D6.1: Report on the use of the CLFS to indicate employee ICT sector mobility for EU members, EFTA and candidate members;
- D6.2: Report on the use of administrative data to indicate employee ICT sector mobility in Belgium, including the comparison with CLFS mobility and recommendations on better measurement of mobility in the CLFS.

The following main themes were identified for the final report:

- ICT, gender, age and education;
- ICT inflows and outflows by sector of activity;
- comparing the two sources and other quality issues.

4. Workpackage 7: ICT occupational profiles

The final objective of this workpackage is threefold. First of all to develop occupational profiles of two ICT-related occupations, including the identification of the required qualifications, training needs and the future developments. Second, making a regional comparison of the profiles in order to detect regional specific qualification and training needs. Third, to assess and update existing profiling methodologies.

The focus was on two sectors that reflect the tendencies and challenges of the eEconomy; the sector of ICT & multimedia, as an ICT-producing sector, and the sector of Travel & Tourism, as an ICT-using sector. On the basis of an extensive literature review and contacts within the field, the partners made an inventory of the composition of the sectors and sketched important socio-economic tendencies, challenges and expected future developments. Each participating country (Belgium, Hungary, Italy, the Netherlands and the US) made an overview of the organisations that compose both sectors. The analysis of the tendencies and challenges paid special attention to the blurring of boundaries in the sector of ICT & Multimedia. For the sector of Travel & Tourism, the discussion on the so-called 'desintermediation' as a result of the integration of ICT in the service delivering process was central to the analysis. The exploratory stage ended up with an overview of ICT occupations that are relevant within the sectors. A general concluding document was prepared

on both sectors as a major milestone in this workpackage, paying special attention to regional differences.

The consortium has made a strategic choice of occupations that are to be scrutinised into depth with the occupational profiling method. Insights into tendencies and challenges within both sectors have been at the basis for this selection. In addition to this, the consortium made an inventory of existing profiles in order to focus the STILE work on a gap in existing research on ICT occupations. The study of customer technical support and development and maintenance of 'advanced' web-sites will offer insights into tasks and qualification requirements for a group of labour market participants with a non-university degree. It will also illustrate the impact of tendencies and challenges within the eEconomy, such as the blurring of boundaries, fast evolving technological change, impact on the selected occupations, etc. These decisions were confirmed at the partner meeting in Budapest (9-10/10/2003).

In a following stage, the partners collected data on the content of these occupations and on the qualifications requirements. Based on the existing 'occupational profiling conference model', the researchers organised interviews with HR representatives or team leaders and with job tenants. In these interviews they collected information on the products and services, the organisation of work, career paths, training needs and initiatives, knowledge management, tasks, etc. Reports of these interviews are translated into comprehensive lists and overview of all tasks. These are also reflected into qualifications requirements. In the next stage of this workpackage, the team started fieldwork to collect additional information. The partners collected information on the content of the occupations, on the organisation of work in the enterprises involved, selection and recruitment policies, career opportunities, etc. These findings are finalised into a list of tasks and related qualification requirements. The experiences and provisional conclusions on the profiles were discussed at the partner meeting (Budapest, 9-10/10/2003). These provisional profiles have then been submitted for feedback to people having experience with the occupations and to future users of the profile.

The flexible interpretation of the methods for WP7 allowed to assess and adjust methods for developing occupational profiles. The consortium opted for a combination of two models for occupational profiling. The so-called conference model guarantees an extended analysis of tasks and user involvement for the validation of concept profiles. The job competence model, on the other hand, is very useful as a model for structuring the results of the field research. Both models are used as a point of reference. The experiences will facilitate suggestions for adjustments of the existing profiling methods to the current labour market context, as aimed in this workpackage.

In a next step the concept profiles have been assessed on their validity, relevance and usefulness in order to conclude on the profiles (i.e. the comprehensive list of tasks and skills) on which there is a broad consensus amongst different stakeholders. This validation stage is organised in each participating country (Belgium, Italy, Hungary, the Netherlands and the US). In most cases, this validation stage included as well 'bilateral' contacts with stakeholders as workshops and seminars, including typically possible 'future' users of such profiles and other interested experts: employers, employee representatives, labour market experts, vocational training experts, researchers, employment office officials, etc. The reports of the validation conferences are integrated in the deliverable D7.1 Profiling occupations in the eEconomy – a challenging international initiative.

In this deliverable first overall conclusions on both occupational profiles, 'customer technical support' and 'web developer', are included. Also a first assessment of the method was possible.

A contribution was prepared for the 5th STILE newsletter, illustrating an occupational profile.

The next steps of this workpackage include:

- an in depth international comparison of both profiles: a regional comparison of the outcome of the different occupational profiles in the countries and regions involved to benchmark and to detect analogies and differences in occupational shaping;
- a systematic assessment of the methods use and recommendations for the future: the experienced difficulties will facilitate suggestions for adjustments of the existing profiling methods to the current labour market context. An assessment on occupational profiling scheduled.

The results of these additional analyses will be reported in the next workpackage milestone and deliverables, as anticipated in the technical annex to the contract.

5. Workpackage 8: Dissemination activities

Newsletters. The fourth and fifth edition of the project's Newsletter were issued and distributed in September 2003 and April/May 2004. The fourth Newsletter has already been approved. The fifth edition of the Newsletter focused mainly on the intermediate results of the running workpackages (WP3, WP6 and WP7). In addition, the conference announcement was included as well as some additional contributions on the NACE review. There are currently 1,297 regular subscribers to the STILE Newsletter in addition to occasional visitors to the electronic pages.

The project website has been regularly updated in line with the work finished and ready to disseminate, including the announcement of the final conference. Links were included to relevant other research projects or related issues or institutes.

On average, the website has 1,600 visits per month, and 328,150 website hits per year. This actually represents 798 web page views per day on average. The most accessed pages are 'Newsletter', 'Toolkit' and 'Publications'. The daily average is still rising and is expected to increase considerably once the following Newsletter and conference website are launched.

All the consortium partners have been involved in several dissemination activities of very different nature (articles, presentations, chairing of debates at conferences, etc.). A comprehensive detailed list of dissemination and cluster activities for this reporting period is included under the heading C8 'Specific activities'.

Concrete preparations of the final conference, scheduled for 30 September and 1 October 2004 in Brussels, are now on cruising speed. The programme has preliminarily been finalised and will be updated based on the contacts with the suggested experts to be invited during the forthcoming weeks (see preliminarily programme in annex 5). The conference venue is booked and the organisation of relating practical arrangements is ongoing, guidelines for contributions are developed, a conference website with extensive information is developed and on-line (see www.stile.be). On-line registration will be made available before the summer. The consortium also agreed to publish a book with the main contributions from the conference.

The core themes of the conference are:

- labour market mobility in the old and the new economy: the hard figures;
- occupations in the Information Age: how to understand?;
- organisation panel surveys in Europe: towards more convergence;
- coding and classifications: the blind spots now mapped;

- eWork: common understandings and new realities.

Each topic will include:

- STILE results;
- theoretical and conceptual reflections;
- methodological contributions;
- policy views.

Presentations by as well consortium partners as experts and stakeholders.

B2. Current project status

<i>As at (end of reporting date)</i>	<i>Number</i>	<i>Comments, problems with deadlines</i>
Deliverables submitted during reporting period (<i>Details in F</i>)	D1.1 D8.2 D8.1.4 D8.1.5 D3.1 D6.1 D6.2 D7.1	<ul style="list-style-type: none"> • External assessment report WP5 • Project website, incl. partners' closed part for sharing documents (under continuous updating) • Fourth and fifth Newsletter widely distributed • Coding of sectors and occupations in the eEconomy. First results of five European countries • Report on the use of the CLFS to indicate employee ICT sector mobility for EU members, EFTA and candidate members • Report on the use of administrative data to indicate employee ICT sector mobility in Belgium, incl. the comparison with CLFS mobility and recommendations to Eurostat • National reports on 2 ICT occupational profiles: 'Profiling occupations in the eEconomy – a challenging international initiative'
Deliverables acknowledged by EUROSTAT	D1.1 D2.1; D2.2 D4.1; D4.2; D4.3 D5.1; D5.2; D5.3 D8.1.1; D8.1.2; D8.1.3; D8.1.4 SPPR03	Revised D2.1 is approved; Revised D2.2 is approved
Late deliverables - for reporting period	D3.1	In order to take into account the German situation and the additional data collection with coders, the report was delayed with 2 months

B3. Work done

Are project objectives being met? <i>Grade from 0 (not at all) to 4 (totally)</i>	Score	Comments
Innovative methodologies and content on the statistical monitoring of the labour market in the eEconomy to support the statistic requirements of the IST Programme	3	<ul style="list-style-type: none"> • Three WP's contributing to this general objective are finalised (ad hoc module, measuring eWork in the CLFS and organisational survey research) • Three other WP's (coding, mobility and occupational profiles) are ongoing
An extension of the coding of the Community Labour Force Survey (CLFS) to take into account eWork by generating data at a more disaggregated level for selected categories; to derive recommendations as to where extensions of the current coding processes can provide more detail and more information about eWork	4	<p><i>Work finalised</i></p> <ul style="list-style-type: none"> • 7 national reports completed • Initial synthesis report completed • Additional analysis carried out on 8 further national LFS • Illustrative data analysis on the French LFS completed • Final synthesis report completed
Best practice recommendations on how NACE rev. 1 and ISCO could be updated to better account for eBusiness and eWork	3	<p><i>Work in progress</i></p> <ul style="list-style-type: none"> • Discussion paper completed and delivered • Framework for case identification and analysis agreed • 300 fictive cases constructed • Coding procedures agreed • Coding exercises finalised in different NSI's • First international workshop 8/10/2003 • D3.1 with 5 national reports finalised and delivered • Second international workshop 12/5/2004 • Interaction with Dutch participant in NACE review process • Presentation of results in eSkills forum workshop
Benchmarks on the methods of existing organisational panel surveys in the way they take into account ICT-related indicators with reference to (internal) labour market issues. To generate the innovation process of monitoring systems by disseminating best practices and by designing and developing instruments for monitoring ICT-related labour market issues, thus maximising the effectiveness and cost-efficiency of short-term surveying of organisational changes related to the penetration of ICT	4	<p><i>Work finalised</i></p> <ul style="list-style-type: none"> • Benchmark of surveys reported • Digital toolkit constructed and recently updated. Changes to digital toolkit and modular instrument resulting from various feedbacks, both being 'living research instruments': Questionnaire and Survey Database included at the website • Survey module constructed • Study of stakeholders completed • Action plan formulated • Final report delivered • The project is presented at various conferences

Are project objectives being met? <i>Grade from 0 (not at all) to 4 (totally)</i>	Score	Comments
<p>An internationally standardised indicator to measure telework effectively, and a set of reliable and valid questions as a module to be added onto existing national and European Labour Force Surveys in order to maximise the effectiveness and cost-efficiency of short-term monitoring of the dissemination of telework as a key new work pattern in the Information Society</p>	4	<p><i>Work finalised</i></p> <ul style="list-style-type: none"> • The ad hoc module provides a set of questions for employee surveys • User involvement (user groups with statisticians and academics) has ensured the usefulness and the feasibility of the module • Recommendations of implementation possibilities are finalised and included in the final report • Final report on measuring telework is finalised • The project is presented at various conferences, and to relevant other EU funded projects. A special issue of the newsletter has been finalised and widely distributed. The consortium is prepared to assist future users for making a customised translation of the module (on request)
<p>Data on the sectoral mobility in ICT, using Eurostat LFS and, as a reference, administrative data</p>	3	<p><i>Work in progress</i></p> <ul style="list-style-type: none"> • Concepts and definitions agreed • Cluster activities carried out • Data extracted, cleaned, databases constructed • Milestone 6.1 completed • Milestone 6.2 completed • Analysis finalised • D6.1 (CLFS) and D6.2 (administrative data) finalised and delivered
<p>Occupational profiles of two ICT-related occupations, including the identification of required qualifications, training needs, type of contracts and the likely future developments in these areas. In order to reach standardised descriptions of these occupational profiles, a clear and effective methodology and process, involving directly the relevant stakeholders (employees, employers, training experts) is applied and renewed. A comparison of the occupational profiles of Belgium, Italy, Hungary, the Netherlands and the US allows to benchmark and to detect specific qualification and training needs, according to the differences in ICT penetration</p>	3	<p><i>Work in progress</i></p> <ul style="list-style-type: none"> • M7.1 is available. The exploration stage has been finalised • The concept profiles are finalised • All partners validated their national concept profiles • The results of the various validation processes are collected • D7.1 with the national reports is finalised and delivered, including a first conclusions on content and method • International comparison is ongoing afterwards and will be reported on at the end of month 33 • The collection of all partners' flexible interpretation of the existing profiling methodologies (combination of the 'conference' and the 'job competence' model) will allow the consortium to assess the methods and to adjust it to the eEconomic circumstances. This methodological question will be reported on at the end of month 34
<p>Widely distributed user-friendly reports, a project website and newsletter, and a concluding European conference on the statistical monitoring of the labour market in the eEconomy, targeted at policymakers, scientists, representatives of statistical bodies and all relevant users</p>	3	<p><i>Work in progress continuously</i></p> <ul style="list-style-type: none"> • Newsletters on schedule and widely distributed • Website regularly updated • Considerable cluster activities with relevant other projects and presentations or participation at various events have taken place with the available findings and end products • Preparations final conference on cruising speed
<p>Is work done within the project budget?</p>	<p>Yes <input checked="" type="checkbox"/></p> <p>No <input type="checkbox"/></p>	<p><i>Comments</i></p>

B4. Outline proposed changes to plan (*Details in D*)

1. Workpackage 1: Project co-ordination and assessment activities

No changes to plan have occurred in this reporting period.

2. Workpackage 3: NACE rev. 1 and ISCO 88 (COM) classifications of eBusinesses and eWorkers

At the classifications workshop and the STILE partner meeting held in Budapest on 8-10 October 2003 a first briefing and preliminary analysis of the coding exercises, as carried out in the UK, Ireland, the Netherlands and Hungary, was presented and discussed. It became clear that there are several reasons for the considerable international divergence of the codes assigned by the coders of the national statistics institutes. One of the reasons seemed to be the conclusion that often there are no clear and explicit guidelines available for the coders, and that they decide on the basis of implicit knowledge and experience. To get more precise insights into how the coders actually take their decisions in case of doubt about the right code, the consortium decided to go back to the coding units to interview the coders directly and to complement the observations with more detailed information on these formal and informal decision processes. Obviously the partners wish to include this additional information in their analyses. The organisation of this additional task implied however a delay of the finalisation of the national reports.

A second change to plan is the specific German situation re. the Microzensus and the classifications used. With regards to the occupational coding system, the comparison between the classification used in Germany and in the other countries was so problematic, that the consortium agreed that, instead, it was more relevant for the German partner to include in Germany two sectoral coding exercises, thus having a more comprehensive insight into the actual sectoral coding practices in this Member State. The coding exercise in the frame of the Microzensus required additional negotiation efforts and the institutions' timing had to be taken into account. Therefore, the results of this coding exercise could not be included in the first workpackage deliverable (on the different national coding exercises).

During April 2004, the Mikrozensus coders successfully finished their work on the 150 fictitious enterprise (short) descriptions. A short briefing of this exercise will be given at the STILE partner meeting of May 2004. The supplementary report on German sector coding is scheduled for end May 2004 and this will be included in the final report of WP3, D3.2 that is planned for June 2004.

The delay of D3.1 will have no impact on the use of partners' resources for this workpackage, nor is it to be expected that this will affect the delivery of the final report of this workpackage.

3. Workpackage 6: Mobility in the eEconomy

In the context of the second milestone — *Preliminary analysis using the Datawarehouse and the EULFS* — WP6 partners prepared a set of indicators and an overview per country to make it possible to compare the indicators. Contact was taken with another STILE partner in order to develop indicators comparable to those calculated via the Belgian administrative data, but for Germany. This additional work not anticipated in the contract is however dependent on timing issues and resources and will be included in the final report for this workpackage, should it have been possible to achieve.

4. Workpackage 7: ICT occupational profiles

No changes to plan.

5. Workpackage 8: Dissemination

No changes to plan.

B5. Plans for Implementation and/or Exploitation (*Details in E*)

The final conference is the main dissemination activity during the project's period; it is scheduled for 30 September and 1 October 2004 in Brussels, and aims at attracting the different project audiences to inform them about the project's outcome and to ask international experts to reflect on this: statisticians, social scientist and policymakers. The consortium also agreed to publish a book with the main contributions from the conference.

In the frame of WP3 (coding and classification), the contacts with the Dutch NSI (CBS), also involved in the NACE review process, allows the STILE team to take into account the progress of the NACE review process and exchange information and views on the reform.

Not only has the work of WP3 attracted interest in a range of EU Member States; it has also gained attention outside the EU. The lead partner has been approached by Canadian statistical experts to carry out a similar coding exercise on the STILE fictional case studies using North American classification schemes. This will be discussed with the partners in Leuven in May 2004. If it is agreed to proceed with this exercise, the results should shed interesting light on the ongoing discussions about NACE revision and the comparison with NAICS.

The terminated workpackages on the 'Ad hoc eWork module for Labour Force Surveys' (WP5) and the 'Feasibility study and interactive website on organisation panel studies' (WP4) find their way through different dissemination initiatives with possible implementation opportunities, as well on initiative of the consortium, as well as a response on requests (for information, links on websites, presentations at conferences, etc.) from various stakeholders. Details are included in the list of dissemination and clustering initiatives under C8 'Specific activities'.

B6. Eurostat observations

(to be completed by Eurostat project officer)

Persons consulted:

Eurostat project officer:

Date: / /200_

Signature:

Part C. Synopsis of Work Undertaken

C1. Project activities

Workpackage	Within the reporting period (01/05/2003 – 30/04/2004)		Since the start of the project (01/11/2001 – 30/04/2004)	
	Manpower planned	Manpower used	Manpower planned	Manpower used
WP1	9	8	22.5	20.4
WP2	0	2.64	55	52.75
WP3	29.1	31.66	46.8	43.87
WP4	0	0	32	36.07
WP5	0	0.57	71	79.69
WP6	18	14.9	23.5	18.6
WP7	49.94	51.65	60.33	62.04
WP8	3	2.5	7.5	6.5

C2. Partners Contribution

Partner	Within the reporting period (01/05/2003 – 30/04/2004)		Since the start of the project (01/11/2001 – 30/04/2004)	
	Manpower planned	Manpower used	Manpower planned	Manpower used
Higher Institute for Labour Studies (HIVA)	39	37.8	92	93
Cork Teleworking Centre (CTC)	2	5.47	19.5	16.43
Institute for Employment Studies (IES)	7	9	48	56.8
CAMIRE Estadística y Análisis, S.L. (CAMIRE)	10	9.9	21.5	18.1
Institut für Arbeitsmarkt- und Berufsforschung (IAB)	4	3	17	16
Istituto di Ricerche Economiche e Sociali (IRES)	8.44	8.44	35.13	35.13
Organisatie voor Strategisch Arbeidsmarktonderzoek (OSA)	12	11.91	31	30.46
Institute of Sociology – Hungarian Academy of Sciences (ISB)	14.1	13.9	26.0	25.5
Central Statistical Office (CSO)	4.5	4.5	10.5	10.5
Joanne H. Pratt Associates (subcontractor)	8	8	18	18

C4. Work done

1. Workpackage 1: Project co-ordination and assessment activities
Project meetings held:

- Budapest (HU), 8 October 2003: International WP3;
- Budapest (HU), 9-10 October 2003, STILE partner meeting;
- specific project-related events: the WP3 meeting in London (June 2003), WP8 meeting in preparation of the STILE book and conference (January 2004); WP6 meetings on 27/08/2003 and on 25/02/2004.

Project meetings planned:

- Leuven (B), 12 May 2004: International Workshop WP3;

- Leuven (B), 13-14 May 2004: STILE partner meeting;
- Brussels (B), 30 September - 1 October 2004: STILE closing conference 'Measuring the Information Society';
- a final partner meeting will be organised during the European conference (30/9-1/10/2004, Brussels (B)).

Assessment activities to date:

- external assessment of WP5 (see D1.1) (delivered 30/05/2003 – already approved);
- annual progress report (SPPR) in preparation to the second cost statement;
- annual progress report (SPPR) in preparation of the Panel Review Meeting 29/10/2003 (already approved);
- internal final assessment by the lead partners of the finished workpackages (WP2, WP4 and WP5) fully integrated in this SPP report (mainly in part B);
- built-in assessment through systematic user involvement included the international workshop with external experts (WP3) and the validation conferences (WP7).

2. Workpackage 3: NACE rev. 1 and ISCO 88 (COM) classifications of eBusinesses and eWorkers to check/complement

- 150 occupations and 150 businesses are coded up, using NACE rev. 1 and ISCO 88 (COM), by national statistical bodies, including the Netherlands, UK, Ireland, Germany and Hungary.
- 8 October 2003: the WP3 workshop on 'Coding and classifications' with external experts and representatives of NSI involved discussed the first results (see participant list and minutes in annex 1 and 2).
- National partners produced interim reports included in D3.1 'Coding of sectors and occupations in the eEconomy: first results of five European countries', as anticipated in the technical annex to the contract.
- Next workshop scheduled on 12 May 2004 (Leuven – B) with first international comparison and feedback from international experts (see list of invited participants and programme in annex 3 and 4).
- A final synthesis report, which will draw out the lessons both for the current revision of NACE and future revisions of NACE, ISIC and ISCO, including the German report on the Microcensus, will be produced.
- Two contributions are prepared for the 5th STILE newsletter, one on the coding exercise, one from the Dutch NSI on the NACE review.

3. Workpackage 6: Mobility in the eEconomy

- The preliminary results of the exercise are presented at the last partner meeting, both as concerns the EU LFS data and the administrative data available for Belgium.
- WP6 partners prepared a set of indicators and an overview per country to make it possible to compare the indicators. It also exploited the Datawarehouse as a data source, providing an introduction to general trends in ICT development in Belgium before looking in more detail at job mobility in the ICT sector and overall.
- Contact was also taken with another STILE partner in order to develop indicators comparable to those calculated via the Belgian administrative data, but for Germany.

- A contribution was prepared for the 5th STILE newsletter, providing a SWOT analysis for both the use of LFS and administrative data for the measurement of mobility in general and for ICT in particular.
- Two deliverables are finalised and sent to the Commission before the end of April as anticipated in the technical annex to the contract.
- Two meetings have been held between the partners of WP6 to increase the synergies in the results. The first was held on 27/08/03 to finalise Milestone 6.1 and the second on 25/02/04 for preparation of the Newsletter contribution and other organisation/planning activities.
- Deliverables: D6.1: Report on the use of the CLFS to indicate employee ICT sector mobility for EU members, EFTA and candidate members; D6.2: Report on the use of administrative data to indicate employee ICT sector mobility in Belgium, including the comparison with CLFS mobility and recommendations on better measurement of mobility in the CLFS.

4. Workpackage 7: ICT occupational profiles

- The literature review, sector studies for ICT and Tourism are finalised; a selection of 2 relevant occupations was agreed upon.
- The decision on the occupational profiling method to use further in the workpackage has been taken based on an assessment of two methods.
- For each selected occupation, a review of existing studies and documentation describing elements of the profile is summarised in a concept profile, including detailed description of different required qualifications and competences.
- Conferences/seminars with relevant stakeholders from the sectors involved have been organised, including employers, employees and training experts.
- A consensus is reached on the selected profiles, that is validated on its consistency, completeness, up-to-dateness and usability.
- Deliverable D7.1: National reports on 2 ICT occupational profiles is delivered as anticipated in the technical annex to the contract.
- A contribution was prepared for the 5th STILE newsletter, illustrating an occupational profile.
- A regional comparison of the outcome of the different occupational profiles in the countries and regions involved to benchmark and to detect analogies and differences in occupational shaping is currently being prepared.
- The experienced difficulties will facilitate suggestions for adjustments of the existing profiling methods to the current labour market context. An assessment on occupational profiling is planned in the next steps.

5. Workpackage 8: Dissemination

- D8.1.4 fourth Newsletter (approved) and D8.1.5 fifth project newsletter widely distributed.
- The project website is updated including the conference website.
- European conference: the preliminary programme finalised, the conference venue is booked, the guidelines for participants finalised, the external participants are being contacted, journals are informed about conference announcement. On-line registration will be made available before the summer.
- An announcement of the conference is included in the Newsletter.
- A full list of all dissemination activities and results is included under C8.

C5. Problems encountered

Main problems met during the project's work

1. Workpackage 1: Project co-ordination and assessment activities

No particular problems were met.

2. Workpackage 3: NACE rev. 1 and ISCO 88 (COM) classifications of eBusinesses and eWorkers

- Partners and external experts agreed that there are several reasons for the considerable international divergence of the codes assigned by the coders of the national statistics institutes, that were worthwhile to investigate in detail in additional interviews. The organisation of this additional task implied a delay of the finalisation of the national reports, a delay that was further extended by the Christmas closure of most offices.
- The specific German situation re. the Microcensus and the classifications used implied that two separate sectoral coding exercises needed to be undertaken in Germany, in order to get a more complete view on how businesses are coded. It was further decided that a coding of the occupations was not relevant for the STILE exercise because of the incomparability of the German occupational classification system.

3. Workpackage 6: Mobility in the eEconomy

Other than the problem concerning the definition of ICT to use with the Labour Force Survey data, the main problem has been the accuracy or reliability of the results when specific sub-groups are selected, and especially when mobility in ICT is calculated. This is due to the size of the sector and the capacity of the LFS to measure such detail given the size of the sample in each country.

4. Workpackage 7: ICT occupational profiles

The integration of ICT throughout all aspects of economic activities makes it difficult to distinguish ICT occupations from occupations making intensively use of ICT. Because of the dynamic reality, it is not obvious to define a list of ICT occupations and to make a 'universal' overview of the tasks and skills of these occupations. These problems are of course identified in similar research projects as well (see for instance WWW-ICT). In answer to these problems, the consortium has opted for a rather qualitative approach for defining sectors and occupations. Instead of focussing the further research on a well-determined and rather fixed occupation, the partners felt the advantages and the relevance of making an inventory of 'activity clusters' as an alternative approach to 'occupations' sensu stricto. These activity clusters reflect the reality of the 'organisational varieties' in the fast evolving ICT sectors involved in the research.

The experiences from the different national profiling exercises obviously strongly confirms the problems of clear definitions and demarcations between sectors, organisations and occupations. For instance, even the demarcation between web developer and customer support, the two selected occupations for STILE, is blurring within specific organisations. It is however exactly these demarcation and definition problems that were at the core of the research question of the STILE

project: how can occupations, tasks and skills of the New Economy be listed and described in such a way that they allow relevant and effective labour market and vocational training policies, in particular to 'close the skills gap' in providing adequate vocational training and to promote labour market mobility? These questions, and an attempt to contribute to some answers to these complex issues, will be dealt with specifically in the next WP7 reports.

5. Workpackage 8: Dissemination

No particular problems to report.

C6. Changes to the project plan

1. Workpackage 3: NACE rev. 1 and ISCO 88 (COM) classifications of eBusinesses and eWorkers

- Additional interviews with coders were undertaken in order to get a better insight into their coding practices and decision-making procedures with the aim of better explaining the international divergence of the coding outcome.
- The specific German situation re. the Microcensus and the classifications used implied that two separate sectoral coding exercises need to be undertaken in Germany, in order to get a more complete view on how businesses are coded. On the other hand, the coding of the descriptions of the "e-occupations" was not found relevant due to the incomparability of the occupational classification used in Germany.
- These additional tasks caused a delay of the first workpackage deliverable with two months. In addition, the report of the second German coding exercise will be included into the final report.

C7. Impact of the previous review, if any

Three comments of the last review report (29/10/2003) were to be addressed explicitly.

- The Canadian classification of occupations: in addition to the website of the Canadian Statistics Office, more information was ordered, in particular the occupational classification handbook (beginning of February 2004). This handbook was not yet received to date. A reminder has been sent. However further contacts have been made with experts on the statistical monitoring of the New Economy in Canada and a request has been made to supply the fictional occupational and establishment descriptions developed in WP3 so that they can be independently coded by Canadian experts for purposes of comparison.
- Dissemination: a comprehensive list of statistics journals has been updated. A selection of the journals mostly relevant to the STILE project has been made. The conference announcement has been sent to these journals to include in their first upcoming edition.
- A comprehensive overview of dissemination activities is included in this report; they include implementation results in particular for WP4 (organisational surveys) and WP5 (module on eWork) in particular.
- In view of the organisation of the next WP3 workshop (12 May 2004, Leuven), all relevant Eurostat and EC officials have been contacted and invited (see list of participants in annex). They will also be invited explicitly at the European conference.

- The STILE co-ordinator has been invited at an expert workshop on ICT and eBusiness skills statistics in Europe, related to the eSkills Forum, organised by DG Enterprise. Presentations have been made about as well WP3 (coding and classification) as well as on WP7 (occupational profiles). In the frame of this workshop, the STILE consortium provided feedback to the eSkills module, Household and Enterprise model surveys.
- The announcement of the European conference is also included in the fifth project Newsletter distributed to the target audiences (1,297 regular subscribers).
- A specific conference website, including all relevant information for participants, is on-line. On-line registration will be made available before the summer.

C8. Specific activities

Validation activities

1. Workpackage 3: NACE rev. 1 and ISCO 88 (COM) classifications of eBusinesses and eWorkers

- Thanks to the close collaboration with several national statistics institutes (UK, Ireland, Hungary, Germany and the Netherlands), this workpackage team is regularly informed about the Eurostat discussions and work on the NACE and ISCO reviews. Input in these discussions are therefore more easily possible. A specific contribution on the ongoing NACE review is included in the 5th STILE Newsletter.
- A presentation about the STILE WP7 and WP3 was included as an input in the expert meeting on eSkills Statistics from the Commission's eSkills working group, organised by DG Enterprise. A draft of the WP3 interim report was made available to the participants.
- Close contact has been maintained with external experts including the OECD, the NSOs working with the project (in particular Hans Van Hooff from the Dutch CBS, who is participating in the NACE review) and professor Peter Elias from the University of Warwick, an acknowledged international expert on occupational classification.
- Some preliminary results from this workpackage were also presented to an expert workshop in Canada funded by the Social Sciences and Humanities Research Council jointly with Industry Canada under the New Economy initiative.
- The specifications of the eWork occupations were applied by the revision process of the Hungarian ISCO-based occupational classification started in 2003. The basis of the revision was the about 4 million occupational descriptions recorded by the 2001 census. But another important source of it was the occupation specifications regarding the eEconomy, which were worked out in the STILE project. The adaptation of these to the revised system is under process.

2. Workpackage 4: Organisation Panel Surveys

- Request to link the STILE Toolkit on the Open University's 'Teach and Learn' website in order to direct the Open University students and teachers to the interactive toolkit on organisation surveys.
- The STILE WP4 partners (organisational surveys) have been involved actively in the preparation of the Company Survey on Working Time, an organisation panel survey that will be set up by the European Foundation of the Improvement of Living and Working Conditions in Dublin.

The STILE involvement included first of all the participation at the Expert Group meeting (Dublin, 7/10/2003 M. Ramioul) in order to assess the preliminary design of this survey, based on the STILE project' outcome (assessment of panel surveys). Next the results and experiences from STILE WP4, especially concerning methodological questions, were communicated to the participants of the kick-off meeting of the Expert Advisory Group of the European Survey on Working Time and Work-Life-Balance (Dublin, 19-20/01/2004, M. Promberger).

- The WP4 partners are currently analysing data about a common theme (more specifically part-time work) from each organisation panel survey (PASO; IAB, OSA), with the aim of investigating the possibilities and limits of carrying out international comparative analysis on the data and of more convergence of these panels in the future.

3. Workpackage 5: eWork Module

- The Irish CSO arranged to include the STILE teleworking questions that we asked in 2002 again in 2004. Drawing up the specification of these questions was carried out in the period in question - the questions will be asked in the third quarter of 2004 and the results will not be available until after the STILE project is finished. Nonetheless they will be interesting.
- The WP5 work has also directly influenced US surveys of telework. We used the broader set of questions that inquire about all forms of distant work, not just work at home, for a baseline survey of the Los Angeles area for the Southern California Association of Governments. We have received several compliments on the questionnaire and it is being considered as a model for a redesign of a commuter survey that has been conducted for a number of years in the Washington, DC area.
- STILE project presentation at the statistical workshop in conjunction with the World Summit on Information Society 'Monitoring the Information Society: Data, Measurement and Methods', Geneva, 8-9/12/2003; organised by UNECE, UNCTAD, ITU, UNESCO Inst. of Statistics, OECD, Eurostat. Interventions are made on the use of ad hoc modules to measure eWork with reference to the STILE project by the Irish CSO representative and by the STILE co-ordinator.
- In Hungary, the experiences of the WP5 LFS ad hoc module on telework were taken into account by the adaptation of the LFS questionnaire for 2005.

4. Workpackage 7: ICT occupational profiles

- The assessment of the work of WP7 will be provided, on the one hand, by the US subcontractor, who will bring in the US developments as a supplementary benchmark. On the other hand, peer review is provided in this workpackage by the systematic involvement of stakeholders in 'conferences' (including employers, employee representatives, training experts, ...) that served as a validation mechanism for the developed profiles. These conferences are organised in all participating countries. An extensive reporting is included in D7.1 'Profiling occupations in the eEconomy – a challenging international initiative'.
- A specific reference should be made to the presentation of the STILE WP7 at the Flemish Socio-Economic Council (Sociaal-Economische Raad Vlaanderen - SERV), that co-ordinates all occupational profiling exercises in the Flemish Region and holds a database with these profiles. The SERV organises the formal approval of occupational profiles in specific consultation procedures with the social partners and with education and labour market policy officials.

Dissemination activities

1. General dissemination activities

a. General

- Distribution STILE Newsletters 4 and 5.
- STILE project presentation at the EPROS conference, Luxembourg, 30-31/10/2003.
- Information exchange on WP7 and WP3 with Luc Liessens of the Flemish Service for Employment and Vocational Training, focusing on the difficulties for coding and profiling occupations related to the New Economy.
- Information sent on request to Diane Gabrielle Tremblay of the Télé-Université Canada.
- Information sent on request from the Flemish minister of Economy Patricia Ceysens.
- Information sent on request to the project co-ordinator of CLAMOUR.
- Information sent on request to the project co-ordinator of REGIONAL-IST.
- Information sent on request to the project co-ordinator of SIGIS.
- Information on WP3 (coding and classifications) sent on request to Aloïs Van Bastelaer (Eurostat).
- Exchange information on WP3 + feedback on eSkills, Household and Enterprise Model Surveys to André Richier, DG Enterprise and Harmut Buchow from Eurostat.
- Information sent on request to Jean-Claude Burgelman, Project Leader ICT Unit, Directorate General JRC.
- Distribution of STILE Newsletter and update on progress of STILE project to the Labour Market Liaison Group (the Labour Market Liaison Group consists of members of the main government departments, FAS, the ESRI and academia).
- The specifications of the eWork occupations were applied by the revision process of the Hungarian ISCO-based occupational classification started in 2003. The basis of the revision was the about 4 million occupational descriptions recorded by the 2001 census. But another important source of it was the occupation specifications regarding the eEconomy, which were worked out in the STILE project. The adaptation of these to the revised system is under process.
- 23 July 2003: Interview with The Guardian newspaper re mobile working, also referred to Peter Bates for STILE statistics.
- 31 July 2003: Interview with Paul Gosling for Public Finance.

b. WP5: Ad hoc module on eWork

- CSO arranged to include the STILE teleworking questions that we asked in 2002 again in 2004. Drawing up the specification of these questions was carried out in the period in question - the questions will be asked in the third quarter of 2004 and the results will not be available until after the STILE project is finished. Nonetheless they will be interesting.
- The WP5 work has also directly influenced US surveys of telework. We used the broader set of questions that inquire about all forms of distant work, not just work at home, for a baseline survey of the Los Angeles area for the Southern California Association of Governments. We have received several compliments on the questionnaire and it is being considered as a model for a redesign of a commuter survey that has been conducted for a number of years in the Washington, DC area.

- Information on WP5 (eWork module) sent on request to Irena Svetin of the Statistical Office of the Republic of Slovenia.
- In Hungary, the experiences of the WP5 LFS ad hoc module on telework were taken into account by the adaptation of the LFS questionnaire for 2005.
- Stile methodology to detect teleworkers as developed in WP5 was presented by IRES during a lesson at University of Sociology “La Sapienza” of Rome about “Strategies for indicators construction” (16/4, seminar of data analysis organised by the professor L. Cannavo on “Methodology of Social Research”).

c. WP7: Occupational profiles

- Presentation of the STILE WP7 project on occupational profiling to the Flemish Socio-Economic Council, 18/2/2004, Brussels.
- Tot, É. (2003): Nemzeti Jelentés: Magyarország (IT szektor és a turizmus példája) (National report: Hungary – the IT sector and tourism), Budapest: Institute of Sociology – Hungarian Academy of Sciences, April.
- Csizmadia, P. – Makó, Cs. (2003): „Kisvállalkozások együttműködése az új médiaszektorban”, (Co-operation of small firms in the interactive media sector), STILE Project (WP7), Budapest, Institute of Sociology – Hungarian Academy of Sciences, April.
- Csizmadia, P. – Makó, Cs. (2003): „Gazdasági hálózatok működtetésének problémái: egy interaktív média projekt példája’ (Interactive media project: an example of networking), STILE Project (WP7), Budapest, Institute of Sociology – Hungarian Academy of Sciences.
- Informatikai Vállalkozók Országos Szövetsége (National Association of Hungarian Firms in the IT Sector) (www.ivsz.hu) discussed the national report (Éva Tot – Csaba Makó – Péter Tamási (2003). Occupational Profiling in an Orientation Stage – National Report for the Initial Exploration: Hungary), STILE Project, workpackage 7, Budapest, Institute of Sociology – Hungarian Academy of Sciences.
- The Hungarian National Report on the IT and Tourist Sectors is available – in Hungarian – on the website of the ‘Research Group of Sociology of Organisation and Work – Institute of Sociology, Hungarian Academy of Sciences: www.socio.mta.hu/sow.

d. WP4: Organisational panel surveys

- Request to link STILE Toolkit on the Open University's 'Teach and Learn' website in order to direct the Open University students and teachers to the interactive toolkit on organisation panel May.
- Presentations for the European Foundation for the Improvement of Living and Working Conditions in the frame of the planned European Survey on Working Time and Work-Life-Balance.

2. Articles

a. WP5: Ad hoc module on eWork

- Contribution in eWork 2003 Status Report: Ramioul M. (2003), ‘STILE develops methods to measure eWork’, in European Commission DG INFSO, *Collaboration @Work. The 2003 report on new working environments and practices*, p. 101-103.
- May 2003: article on teleworking for Smart Company magazine.
- July 2003: summary of project for dissemination to NSOs.

- June 2003: article for PC Live magazine (main consumer computer magazine published in Ireland) on current status of teleworking including description of the STILE project work.
- Article 'Measuring teleworking' in IST Results eBulletin, 06/10/2003.
- A Challenging but Uncertain Future. Beliefs of the Dutch population about the future of work, work relations, and ICT in the 21st century. *Journal of Future Studies* August, 2003 (met P. Ester en H. Vinken)
- *ICT en de Nederlandse arbeidsmarkt*. Amsterdam: Elsevier, 2003 (met P. Ester, D. Fouarge en M. Kerkhof, Red.).
- Nederlanders over de toekomst van ICT in een dynamische kennissamenleving: *resultaten van het OSA Toekomst van de Arbeid Survey*. In *ICT en de Nederlandse arbeidsmarkt*. Amsterdam: Elsevier, 2003.
- *Is Nederland klaar voor een ICT-gestuurde kenniseconomie?* Resultaten van het OSA Toekomst van de Arbeid Survey. In: M. Ramioul, G. Van Hootegem, Hans Verhoeven & Peter van der Hallen (Red.). *De wereld, onze arbeidsmarkt. De impact van ICT op arbeid en arbeidsorganisatie*. Jaarreeks 2002. De Arbeidsmarkt in Vlaanderen (pag: 33-56). Antwerpen: Garant Uitgevers (met P. Ester en H. Vinken).

3. Conference participation (including publication of papers)

a. General

- Real work in a virtual world: the human impact of organisational transformation in a digital global economy, Vienna, Austria, 12-13/05/2003.
- Conference 'Towards a Knowledge Society', Rotterdam, 27-29/08/2003.
- STILE project presentation at the eChallenges e-2003 conference, Bologna, 22-24/10/2003; Ramioul M. (2003), 'eWork challenges the eSociety. STILE: Innovative Methods to Measure the Impact of ICT on Work and Organization', in P. Cunningham, M. Cunningham & P. Fatelnig (red.), *Building the Knowledge Economy. Issues, Applications, Case Studies (part 2)*, IOS Press, Amsterdam, p. 1172-1179.
- Presentation at the Workshops at the European Foundation conference 'European Knowledge Society Foresight – the Missing Link between technology foresight and the Lisbon objectives', Brussels, 21-22/11/2003.
- STILE project presentation at the Statistical workshop in conjunction with the World Summit on Information Society 'Monitoring the Information Society: Data, Measurement and Methods', Geneva, 8-9/12/2003; organised by UNECE, UNCTAD, ITU, UNESCO Inst. of Statistics, OECD, Eurostat.
- 29-31 May 2003: Canberra, Australia – Australian-European Science & Technology Conference (Distributed STILE newsletters and gave a brief presentation).
- 6-27 September 2003: Vancouver, Canada – University of British Columbia (Distribution of newsletters and brief presentation).
- 31 October 2003: Amsterdam, Netherlands - POET conference on transportation (Distributed STILE newsletters).
- 13-14 November 2003: Copenhagen, Denmark – Call Centre workshop (Distributed STILE newsletters).
- 17-18 November 2003: Stockholm, Sweden – Workshop on spatial restructuring of employment in European cities (Distributed STILE newsletters).

- 4-7 December 2003: Toronto, Canada – CRWS York University workshop on restructuring work and labour in the new economy (Distributed STILE newsletters and brief presentation on the project).
- 21-26 April 2004: Toronto, Canada – Canadian EMERGENCE meeting (Presentation of STILE WP3 interim results and discussion with experts from the University of Quebec/Stats Canada about replication of STILE WP3 coding exercise using North American classification schemes).
- 27 April 2004: Ottawa, Canada – Carleton University Institute of Political Economy and Centre for the Study of Living Standards (Information seminar, distribution of STILE newsletters).

b. WP4: Organisational panel surveys

- STILE project presentation at the Congress 'Integrating Europe. Potential and Performance of the Social Sciences in the Process of EU Enlargement', Vienna, 23-26/11/2003: eWork challenges the eSociety: STILE: innovative methods to measure the impact of ICT on work and organization.
- Workshop on panels of organisation surveys, Brussels, 4 March 2004, organised by the Flemish administration for Employment and Economy together with Catholic University of Leuven. Paper and presentation: 'Het Panel Survey of Organisations in Flanders in een breder perspectief: resultaten van het STILE onderzoek (Panel Organisations in a broader perspective: the STILE results)'.

c. WP5: Ad hoc module on eWork

- Bollen A, Ramioul M., 2003, *Telewerk in beeld. Uitdagingen voor de statistische en de wetenschappelijke wereld*, Paper presented at the Labour Market Researchers' day, organised by Steunpunt Werkgelegenheid, Arbeid en Vorming, 26th May, Brussels.
- Presentation at the Conference 'New Planning Techniques for Mobility, Connectivity and Accessibility', Dublin, 27/11/2003; organised by the Irish Planning Institute.
- 'STILE WP5 presentation at the International Telework Association and Council (ITAC) annual conference, Baltimore, MD, September 2003.
- STILE WP5 presentation at the Association for Commuter Transportation (ACT) annual conference, Salt Lake City, NV September 2003.
- STILE WP5 presentation at the Third Annual Telework Conference, Dallas, TX February 2004.
- STILE WP5 presentation at the Transportation Research Board annual conference. More detailed presentation of STILE WP5 project and recommendations at two committee meetings, one on travel behaviour and the other on survey methodology.

d. WP7: Occupational profiles

- Participation at 'Workshop on eSkills industry certifications, eSkills forum', DG Enterprise, Brussels, 24/03/2004.
- International Seminar on the New Economy and Skill Development' co-organised by the *Institute of Sociology – Hungarian Academy of Sciences* and the *Scottish Centre for Employment Research – Strathclyde University, Department of Human Resource Management*. Topics discussed: 'IT Jobs', 11th September 2003; 'The New Economy: All High Skill?', 16th September 2003; 'Knowledge Work on the Periphery of the EU', 18th September 2003.

- Makó, Csaba: 'Uneven Development in the Hungarian 'eEconomy': Who are the Winners and Losers', Brussels, Janus Workshop on 'The Digital Divide: Opportunities and Threats', 23rd January 2004 (PPT presentation in English).
- Koltai, Tamás: 'Presentation of the STILE Project: Theoretical–methodological Foundations and the Empirical Evidences in Comparative Perspective'. Lecture at the Seminar organised by the 'The Hungarian eContent Industry Association', Budapest, 11th February 2004 (Presentation in Hungarian language).
- Tót, Éva: 'Foglalkozási Profilok' (Occupational Profiles) – Lessons from the STILE Project Occupational Profile workpackage (WP7). Workshop organised by the Institute of Sociology, Hungarian Academy of Sciences for the experts of educational and training institutions. Moderated by Prof. Csaba Makó, Co-ordinator of the STILE Project (PPT in Hungarian language), Budapest, 29th April 2004.
- Tót, Éva: 'On the Key Lessons Exploring the Occupational Profile' (in Hungarian), (see the brief description in English).

4. Clustering and networking

- E-Gap
 - Presentation by IRES and ISB and discussion with partners involved in European E-Gap project (<http://www.egap-eu.com>) during the last partner meeting (Tampere June 26-27, 2003). STILE Newsletters were distributed and the STILE workpackage 5 results were discussed in detail. For the E-Gap project our results were very interesting because the team have conducted some qualitative interviews in SME focused on telework opinions and telework diffusion. Similar difficulties were found with the description of the telework concept. So, the STILE way to measure telework was appreciated.
 - Exchange project results with Lars Schmidt (SUSTEL) via email.
 - Exchange project results with Marie-France Kouloumdjian, Laboratoire Interaction Collaborative, Téléformation, Téléactivités (ICTT) via email.
- Career Space
 - Participation in the Virtual Community for the validation of the Career Space occupational profiles and the Curriculum guidelines.
- WWW-ICT
 - Mid-term workshop and scientific committee, 29/09/2003.
 - The STILE co-ordinator is a member of the scientific advisory committee and acted as an external assessor of the 5 WWW-ICT project deliverables (2004).
- NESIS
 - Participation at the second Indicator Development Working Group, Brussels, 13-14/11/2003.
 - WP6 Mobility in the eEconomy: One important clustering activity has been with the IST programme funded NESIS project. Since, the most obvious collaboration was between workpackages, clustering has concentrated on this level, namely between STILE WP6 and NESIS WP5.6. Two meetings were held in order to discuss and agree upon definitions common to the two projects. In addition, both partners in WP6 have participated in a workshop hosted by NESIS concerning the measurement of stocks and flows in the new information economy, at which papers were presented.
- CLAMOUR
 - Invitation at the WP3 workshop in Budapest (8/10/2003) to give a presentation on the model developed within CLAMOUR to better classify business in the New Economy.

- The STILE co-ordinator has been asked to be a core member in the Conference Committee of the first International Conference on ICT and Work in The Netherlands, organised in the frame of the Dutch Research Programme NWO-MES, scheduled for June 2005 in Amsterdam.
- Expert meeting on ICT skills statistics in the frame of the eSkills forum – DG Enterprise Brussels, 17/11/2003.
- STILE project presentation at the Company Survey on Working Time - Expert Group meeting, European Foundation of the Improvement of Living and Working Conditions, Dublin, M. Ramioul 7/10/2003.
- Results and experiences from STILE WP4, especially concerning methodological questions, were communicated to the participants of the kick-off meeting of the Expert Advisory Group of the European Survey on Working Time and Work-Life-Balance. This project is funded by the European Foundation for the Improvement of Living and Working Conditions (EUROFOUND) in Dublin, where the meeting took place on January 19/20th, 2004 (M. Promberger, IAB, Germany).
- The STILE WP3 preliminary results on coding and data translation problems to and from ISCO-88 and the German national occupational classification system were presented to a delegation of the Ministry of Labour of the Czech Republic which visited the Federal Employment Agency of Germany in Nuernberg on April 22nd, 2004. The background of the visit was the Czech government's forthcoming decision on whether to use ISCO-88 as a national classification system, develop an own system, adopt the German or Austrian system or join efforts to develop a new European job classification system. The discussions led to the point that, whatever pragmatic decisions would be coming in the next future, the most desirable solution both for science and labour market administration would be to have a common European system, better matching the European needs than ISCO-88, but nevertheless transferable for international comparison purposes (M. Promberger, IAB, Germany).

Envisaged

- STILE presentations on the international conference organised by the Czech Statistical Office on 'Statistics: Investment in the Future', 6-7 September 2004.

Announcement closing STILE conference distributed in/on:

- STILE Newsletter 5
- Conference website online on 1 May 2004
- Statistical and other journals a.o. Journal of Official Statistics, ISI Newsletter, IST events on Cordis, INFOS Newsletter
- HIVA Newsletter
- Various conferences/workshops/...
- ...

Part D - Future project plans

D1. For those projects whose contracts extend into next year please follow the following guidelines.

D1. 1 Summary

1. Workpackage 1: Project co-ordination and assessment activities

A next partner meeting is planned for 13-14 May 2004, to discuss the draft reports and milestones at hand and to prepare the final projects' conference, scheduled for 30/9 – 1/10/2004.

A last partner meeting will be scheduled on the occasion of the final European conference, 30/9 – 1/10/2004 in Brussels.

Further, the planned assessment activities for the running workpackages (WP3, WP4, WP7) will be organised.

2. Workpackage 3: NACE rev. 1 and ISCO 88 (COM) classifications of eBusinesses and eWorkers

At the May 2004 workshop in Leuven, an interim comparative report of the results of the coding exercise (with the exception of the latest German results) will be presented. This will be further discussed with the WP3 partners at a partners meeting with the aim of finalising a structure for the final WP3 report and integrating the German results fully into this process. This report will be completed for submission to the Commission in June.

A chapter will be prepared for the STILE book and also another Newsletter contribution summarising the main results of the workpackage.

3. Workpackage 6: Mobility in the eEconomy

The final report for this workpackage will be provided in June 2004. The two deliverables have been finalised and sent to the Commission before the end of April. Specific focus for the analysis is given to the various different socio-economic themes of interest to reveal determinants of the mobility of ICT workers (flows within and between the ICT sector / other branches, the skills base of the inflows, links to more general measurements of the ICT sector by gender, age or type of occupation). A variety of measurements are being used to gain insight into these movements (both direct flow and proxy measurements).

A chapter will be prepared for the STILE book and also another Newsletter contribution summarising the main results of the workpackage.

4. Workpackage 7: ICT occupational profiles

Currently the comparative analysis of the national reports is carried out in view of a regional comparison of the outcome of the different occupational profiles in the countries and regions involved to

benchmark and to detect analogies and differences in occupational shaping (M7.4: International comparison). Further, feedback to the existing occupational profiling methodology is provided based on the assessment of the partners of the methodology used in the project (M7.5: Recommendations for updating the existing occupational profiling methodology to take into account the specificity of jobs in the knowledge economy).

The next deliverables are:

- D7.2: Report on international comparison and benchmarking: July 2004;
- D7.3: Final report on the international comparison of the two profiles, including conclusions on possibilities of certification of competences: August 2004.

A chapter will be prepared for the STILE book and also another Newsletter contribution summarising the main results of the workpackage.

5. Workpackage 8: Dissemination

At the short term, some presentations on the project's outcome are envisaged (see list under dissemination activities).

One last edition of the Newsletter will be issued, reporting on the results at hand.

The project website will continuously be updated.

The major event of the last project periods is of course the European conference on the Statistics and Indicators on the Labour Market in the eEconomy. The main findings of all the different workpackages will be presented to a wide range of national, European and international stakeholders. A first discussion on the concept of the conference was held at the partner meeting of October 2003. At the next partner meeting (13-14 May 2004, Leuven) the programme will be finalised and preparations will proceed during the next months. On-line registration to the conference will be possible before the summer.

Part E - Plans for Demonstration, Exploitation, Implementation and expected achievements

E7.1 Final Deliverable Description Sheet

Reference number	Title	Date due	Date submitted	Target date if overdue
D3.1	Coding of sectors and occupations in the eEconomy- First results from five countries	31/12/2003	28/02/2004	

Executive summary of the deliverables, description of its purpose

The report includes the results of the coding in NACE of 150 fictitious descriptions of eBusinesses and the coding in ISCO of 150 fictitious descriptions of occupations related to the eEconomy as it was carried out in the Statistics Institutes of five European Member States: The Netherlands, The UK, Ireland, Germany and Hungary. The report of this coding process includes the observation of the coding practices in these institutes and the analysis of existing schemes for classifying industrial sectors and occupations in order to investigate the extent to which they match the new realities.

When available: available

Type: Report

Client(s)/User(s)

National statistics bodies, ESS, international statistics bodies, Eurostat, scientific community, other researchers focused on the labour market

Benefits

Recommendations for the review of sectoral and occupational classification systems in view of their matching with the eEconomy.

Recommendations for the improvement of coding processes at statistical bodies (guidelines, coding practices) in view of more valid coding processes and a better international comparability.

Other Comments

E7.1 Final Deliverable Description Sheet				
Reference number	Title	Date due	Date submitted	Target date if overdue
D6.1	Report on the use of the EU LFS to indicate ICT sector mobility for EU Members, EFTA and Candidate members	April 2004	April 2004	

Executive summary of the deliverables, description of its purpose

A report on using the EU LFS for measuring mobility in the ICT sector and on the methodological considerations of such an approach. This research provides results for the European Union, EFTA and the Candidate Countries for which data is available. In addition, it looks at the effect gender, age and educational background have on the ICT jobs being created, comparing this to other sectors of importance and the economy as whole.

When available: End April 2004

Type: Report

Client(s)/User(s): Scientific community, national statistics bodies, other researchers focused on the labour market, ESS, international statistics bodies, Eurostat, labour market policy analysts.

Benefits: Recommendations concerning the use of the EU LFS for the measurement of mobility in the ICT sector. Information concerning the growth of the ICT sector and the characteristics of its workers.

Other Comments

E7.1 Final Deliverable Description Sheet				
Reference number	Title	Date due	Date submitted	Target date if overdue
D 6.2	Report on the use of administrative data to indicate ICT sector mobility in Belgium, including the comparison with LFS mobility and recommendations on better measurement of mobility in the EU LFS	April 2004	April 2004	

Executive summary of the deliverables, description of its purpose

A report on using administrative data in Belgium for measuring national mobility rates in the ICT sector and on the methodological considerations of such an approach. This source allows a detailed analysis of mobility in, between and within the ICT sector in Belgium. It also compares results from the administrative data with LFS and formulates recommendations for better measurement of mobility using the EU LFS.

When available: End April 2004

Type: Report

Client(s)/User(s): Scientific community, National Statistics Bodies, other researchers focused on the labour market, ESS, international statistics bodies, Eurostat, labour market policy analysts.

Benefits: Recommendations for the future use of register data for measuring mobility and, linked to this, the use of LFS. Information concerning the growth of the ICT sector at a detailed level in Belgium.

Other Comments

E7.1 Final Deliverable Description Sheet				
Reference number	Title	Date due	Date submitted	Target date if overdue
D7.1	Profiling occupations in the eEconomy. A challenging International initiative	February 2004	February 2004	

Executive summary of the deliverables, description of its purpose

The report gives a description of the process of profiling occupations in the e Economy in five countries (Belgium, Hungary, Italy, The Netherlands and the US). More precisely two ICT-related occupations, and their tasks and required skills and competences, are analysed: Customer Technical Support and Website Development. Attention is paid to the method used and process set up to construct such profiles and to validate them in close consultation with relevant stakeholders such as the social partners and labour market and vocational training officials.

When available: available

Type: report

Client(s)/User(s): Scientific community, labour market policy analysts, employer organisations, employee organisations, vocational training institutes, labour market intermediaries, other researchers focused on the labour market

Benefits

Other Comments

Annexes

Annex 1 / List of WP3 workshop participants (8/10/2003)

STILE consortium

Ursula Huws, Institute for Employment Studies, UK
Monique Ramioul, HIVA, Belgium
Csaba Makó, ISB, Hungary
Peter Tamási, ISB, Hungary
Alex Stimpson, CAMIRE, Luxembourg
Judit Lakatos, Central Statistics Office, Hungary
Tamás Koltai, Central Statistics Office, Hungary
Nicola Tickner, Central Statistical Office, Ireland
Imogen Bertin, Cork Teleworking, Ireland
Markus Promberger, IAB, Germany
Joanne Pratt, Joanne Pratt Associates, USA
Peter van de Hallen, HIVA, Belgium
Roel Verlindan, HIVA, Belgium
An Bollen, HIVA, Belgium
Sandra Volders, HIVA, Belgium

External invitees

Peter Elias, University of Warwick, UK
Desirée van Welsum, OECD, Paris
Cathy Gibbins, ONS, UK
Hans van Hooff, CBS, Holland
Mies Bernelot Moens, CBS, Holland
Marcus Breathnach, Forfás, Ireland
Roshin Sen, FÁS, Ireland

Annex 2 / Minutes of the STILE WP3 workshop meeting (8/10/2003)

These notes are intended to complement the Powerpoint presentations available on the STILE website <http://www.stile.be> and to record the main points of the discussions which took place.

Tamás Mellár, Director of the Hungarian Central Statistics Office, welcomed the participants and gave a brief overview of the institution which employs 800 people, and supports two research institutions and a library as well as continuing to operate some activities from the original, purpose-built nineteenth century building. He said that labour market statistics had a social dimension as well as an economic one.

Occupational coding

Ursula Huws introduced the morning session by giving a brief background to STILE WP3. The STILE project arose from an examination of some of the problems encountered by the EMERGENCE project in trying to measure the 'death of distance' hype. At the time there was no occupational code for many 'new economy' occupations including call centre agents. In the activity area, they found a great deal of mixed coding, with only about 15% of software suppliers coded as such. She categorised the main problems for occupational and activity coding.

- the emergence of new occupations
- the convergence of old skill sets (e.g. managers being generic or specific)
- outsourcing – with three overlapping dimensions of the problem identifiable, legal, geographical and functional
- new sectors emerging or disappearing through convergence e.g. multimedia being formed from broadcasting, publishing, games software and developments in hardware and software

Ursula said the purpose of the workshop was to listen to external experts, relate our work to broader debates, and present the work in progress on WP3.

Peter Elias gave the keynote presentation on occupational coding. Peter has been deeply involved in creating the SOC90 and SOC2000 classifications for the UK and has also been involved in the development of systems for some 50 countries in the EU, in the applicant countries, in the former USSR and in a number of developing countries.

He described a 'mess of language and cultural differences, but a series of common problems in classification'. Some of his recent research efforts have included a software package and project on classification of highly qualified people involved in ICT.

Peter feels there are three change factors at work:

- scientific and technological development
- the growth of disposable income
- organisational change

There is a conflict between the dual purposes of occupational classification

- to provide guidance on change for policy makers
- to provide a means of systematic analysis for e.g. job search offices

To satisfy these two purposes, change must be captured but time comparability must also be maintained.

To classify a job, a set of tasks for one person must be defined. The question: is defined by whom? The employer, the professional association or the individual? Typically, there are two main elements combining to create the classification, skill level and skill specialisation. Usually it is a job title that is classified.

In the UK there is a 10-year cycle of revision of occupational classification. The ICT sector in the UK represents approximately 1 million of the 24 million employed. SOC 2000 introduced some new titles but raised the perennial problem of how to backcast or reprocess the historical data to show continuity.

It's possible but expensive to recode historical data according to the new classification. Alternatively, convertor matrices can be used, but these tend to be inaccurate. An important point is to preserve text descriptions of occupations for future processing.

Research involving coding and recording indicates the data are not that reliable, with a replication rate of about 75%. Automated processing of textual data improves reliability but there are questions about the validity, since this can depend on the job description and tasks as well as on the sector. For example, 'project manager', a frequently occurring job title, has a particular coding where it occurs within the ICT sector.

Using automatic text processing about 2/3 of the results are correct. Peter is now working on an activity version of the software which carries out the automatic text processing.

Roshin Sen works for the Irish training agency FÁS in the skills and labour market research unit, providing information for the government's Expert Group on Future Skills Needs. The purpose of the expert group is to assist government planning to match skill supply and demand.

In addition to carrying out annual reports on specific areas and specific sectoral studies (including forecasts), Roshin's unit runs a national skills database which collects data from a number of sources including public sector employment, third-level education enrolment, emigration, vacancy rates, CSO figures and which also codes up job advertisements appearing in the Irish Times newspaper. All of these sources are converted to SOC90 3-digit as used by the CSO.

The main difficulties Roshin finds with SOC90 are:

- multiple occupations included within one code (too broad – can only be separated where activity data are also available)
- some occupations not specified at all
- irrelevant occupations included.

The underlying point is that occupational classifications which do not include skills are not useful.

A recent report by Roshin's unit covered the financial sector. However, it was found difficult to quantify the gaps and make recommendations on likely replacement rates. For example, occupations such as fund managers and compliance officers were missing from SOC90. It was found that taxation includes revenue officers, who in reality are usually solicitors or accountants by training. Credit controllers in fact do not usually require any specific skills or organisations and are not considered of importance from the skills point of view by the industry.

When a report on the digital content sector was requested, Roshin's unit felt that SOC would be inadequate from the start, so instead of using this route, they chose to interview companies instead, especially as there were no professional organisations to contact.

Peter Elias commented that SOC90 was originally designed some 16 years ago so it was bound to be out of date. He wondered if there was any possibility to go back to the original text sources via the CSO. He felt Roshin's presentation illustrated the continuity problems. In addition words can change meaning, particularly in relation to abbreviations for job titles.

Roel Verlinden – see presentation.

Cathy Gibbins explained that in the UK, births and deaths are registered by occupation (occupation of parents in the case of births). This can be mapped to ISCO with varying degrees of success. The method used is via a job titles index which uses information from the LFS, the census and the business register. The ONS issues regular copies of the index and its mapping to the classification (SOC2000 at the moment).

Other information is used apart from job title in the UK coding systems such as how many people they manage (if they have managerial duties), whether employed or self-employed, and if self-employed, how many employees, if any, they have.

The ONS uses its interviewers to carry out coding, due to the problems of agreement between skilled coders already mentioned by Peter Elias. The ONS felt that the difference in quality resulting from the use of interviewers was insignificant compared to the improvement in speed and cost which resulted. The period from the end of coding of an LFS period to the production of a weighted database was now down to just four days.

The interviewers make computer-assisted coding decisions. They are trained through distance learning using 15 example cases. A further 30 of their coding decisions are then checked. The ONS system prefers the use of job title information, but if no match is found to the job description, then other information such as the activity or industry is also used.

The known problems with the occupational coding system are:

- that new occupations are not separately identified (e.g. call centre operative – even after this was included in SOC2000 was found to be under-represented since this is not how the agents describe themselves).
- The time delay for revisions to the job title index
- The 30% proxy interview rate for the LFS, which results in poorer quality occupation data
- Continuity – the ONS carries out backcasting e.g. to show matrices; some one quarter of the LFS codes for 1990 and 2000 were recoded according to the new classification
- Case validity – there is a need to use supplementary information such as sector.

The STILE WP3 coding exercise used an expert coding unit within the ONS which manually coded the examples. This unit usually works from job titles and they found the STILE long descriptions longer than their normal data, while the short titles were often uncodeable (such as Information Architect – not enough information).

The ISCO conversion process also proved problematic as some of the codes do not transfer. It is abnormal for these coders to use supplementary data as they had to in this exercise. It would have

been interesting to repeat this exercise with labour force survey interviewers, but this would not have been possible without recasting the descriptions in LFS format.

Mies Bernelot Moens – the CBS has just started a pilot project on computer assisted occupational coding (September 03). However, Mies carried out the STILE WP3 exercise by hand rather than using this system due to resource limitations.

She first gave each case a provisional code, and then batch converted the codes to ISCO. Her process was to begin from the job title, then look at the main tasks, then consider any management tasks, and finally to consider any industry information which was given.

Some 10% of the short descriptions were uncodeable. About 60% of the long and short codes provide to be different. A higher proportion of the codes were in the residual groups than would normally be experienced.

Holland expects to update its occupational classification next year, so the system is currently rather out of date. There were also problems with the language differences between Flemish and Dutch. Some of the English words used (such as 'inventory') often had more than one meaning. Some of the software packages mentioned were unfamiliar to Mies. Other terms which caused problems included shared services centre, language localisation and QA as an abbreviation (quality assurance?; question and answer?).

In many cases the level of the job was not clear especially in relation to help desks and call centres. No educational qualifications were given in the majority of the descriptions. Another issue related to the ICT content of the description – should it be coded on the ICT used or the subject matter on which the ICT was used? Mies usually chose the latter.

Nicola Tickner – the CSO in Ireland captures occupational data in the following surveys – the Quarterly National Household Survey (QNHS), the Household Budget Survey, the EU-SILC (survey of income and living conditions) and the National Employment Survey. At present occupation coding is coded to SOC 90. The office standard is under review, both SOC 2000 and ISCO 88 are being considered for the new standard. However, any change will have resource issues and hence it's unlikely that any change in classification system will be swift.

The occupational data captured in the QNHS is limited to a 60 character response field; also 30% of the data is collect in proxy interviews. For theses reasons there is insufficient information to code to a level of greater detail that 3 digit SOC 90.

Four dedicated coders and an expert overseer who scrutinises their work carry out the QNHS occupation coding. In the case of the STILE work it was coded by hand directly by the overseer. The STILE codes were then mapped to ISCO 88 in the same fashion as QNHS data is mapped to ISCO 88 for Eurostat purposes.

Nicola was also asked to check into the disparities in the occupational results between the UK and Ireland. As the UK coding exercise was coded to SOC 2000, and the Irish coding exercise to SOC 90 and then the codes were concorded to ISCO 88 it was stressed that the codes are not directly comparable. Although some 76 cases were different (out of a total of 154) there were lots of repeats – only 42 were different. In the main the repeats were:

- 122 v 123. These codes are comparable at two-digit level and the descriptions are very similar.

- 213 v 312. Computer professionals v. computer associate professionals – while different even at a 1 digit level, the descriptions are similar
- 422 v 419. Client information clerks v. other office clerks – again, these are comparable and two digit level and the descriptions were similar.

Markus Promberger – the German system is very different from most European countries. There is a double structure where the Mikrozensus is run by the statistical office and uses a four-digit system while the labour administration uses a system which is operated at both four-digit and seven-digit levels. The two systems are derived differently and although they are identical at the two-digit level, there is only some overlap at 3-digit level and they are completely different at four-digit level. This means there is a major loss of detail in any translation attempt. As a result, it was decided not to carry out the occupational exercise in Germany, but instead to carry out two sectoral exercises, one by the statistical office, and one by the labour administration.

Discussion – occupational issues

Ursula said it was interesting to see the level of difference and the key point now would be to try to identify where it arises

- coder variation?
- National systems?
- Different formal or tacit rules on coding?
- ISCO conversion problems?
- Real issues caused by attempting to code new occupations?

Peter Elias believes that ISCO-88 is a major problem. This is not a 'real' classification, but a desktop classification arising from the ILO consulting with the UK and Australia. Both were in the process of revising their classifications at the time. The language used was very English, as well as being rather old-fashioned and 1970s. It was not a good vehicle for a cross-national comparison, but it's the 'only car on the road'.

He also disputed Ana Franco's answer to Nicola. While the EU might not code directly to ISCO-88, many other countries do including most of Eastern Europe. Direct coding does give good comparability, but it's still no good for studying ICT occupations.

The big problem is 'what is a manager?' This is well-defined in Germany, but a complete mess in the UK. It should mean someone who manages resources, but it often means managing different parts of one job. Additionally, the French don't recognise the idea of a 'professional'.

The belt and braces solution to these problems is to use extra information when making the coding decisions such as establishment size or industry sector. Instead what is needed is a new occupational classification for Europe. Eurostat has starved this idea when compared to the resources it is pouring into NACE. 'We need something truly European which helps us to understand the world of work.'

Ursula commented that deciding on the relative weight of generic vs. specific skills (e.g. in deciding at what point someone is defined as a 'manager' rather than a senior specialist) will be a major challenge.

Markus wanted the analysis of the STILE WP3 occupational coding to concentrate on extracting the causes of coding discrepancies. Translation had caused major difficulties. An engineer could

mean both a mechanic or an academic. A designer might be a developer or a concept designer. When we talk of expert coders, we need to establish how they achieved their expertise – learning by doing? In what institutional settings. Also, the effect of different economic structures can affect coding accuracies (for example there are very few marine engineers in southern Germany, so coders in that area are likely to be less familiar with the relevant codes than those in regions bordering the North Sea. It was important to understand how additional information such as size or sector was being used – what are the ‘rules’ in each country?. Inexact self-description was also an issue. In Germany a comparison of the business register with LFS data indicated only about 60% agreement on industry descriptions between employees and employers.

Ursula said this issue of self-description was behind the disparity in UK call centre figures where the LFS only showed about 100,000 call centre agents but industry sources placed employment in the sector at over 1.2 million.

Imogen clarified the reason for the short descriptions included in the STILE coding exercise. This was to look at whether shortening the descriptions affected accuracy and was based on the Irish LFS 60-character field response.

Peter van der Hallen felt the key was to find out how to ask the right questions to get a valid job description, including any additional information. One output of the STILE project might be interviewer and coder guidance on these topics.

Ursula pointed out that criticism of the ISCO-88 standard often came from countries where occupation is defined by qualification

Mies felt the educational level must be included and this was underestimated in ISCO. For example, all nurses fell into one group in ISCO, but it was clear that in estimated skill gaps in the labour market a more detailed classification of nurses was required.

Peter Elias responded that in ISCO88 nurses and teachers actually appear in both the professional and associated professional categories. Countries are supposed to decide to put all of each profession on either one or the other categories depending on their economic and social structure. However, some countries coded nurses and teachers differently according to their educational level. He also pointed out that a difficulty with including education was that people can be over-qualified for their job – such as someone with a degree who prefers fixing fridges. Peter felt using educational level as a key to coding occupations was dangerous.

Desirée drew everyone’s attention to the recent George le Maitre paper on the relation between ISCO and ISCED (she later send copies of this paper to the participants).

Hans van Hooff supported Peter Elias on activity, pointing out that company self-descriptions were usually only about 50% codeable.

Ursula tried to elucidate the underlying philosophy of countries who have an ‘ideal model’ of the labour market where all job descriptions are matched by qualifications and it is possible to qualify people to match the gaps. Unfortunately the more you do this, the more you make it hard to measure new occupations – because they don’t have relevant qualifications.

Tamás agreed that increasingly, by the time a qualification had been developed, the job demand had passed.

Imogen felt as an outsider to labour market theories and statistics, the point which most jumped out at her in looking at job advertisements in Ireland was the employers are defining jobs by foreign language and software skills – these are what you need to get the job – yet neither of these aspects were recognised by the current coding systems. She also agree with Tamás, citing the PLC teleservices courses in Ireland aimed at providing call centre training to second level school leavers, which had become outdated within a year or so of their launch and were now undersubscribed.

Sectoral coding issues

Desirée van Welsum – see presentation

Discussion: Hans van Hooff felt that the ICT sector is only part of what people mean by the ‘new economy’. Peter Elias thought that the ICT sector should be defined by whether an activity can be carried out without ICT. Thus economists and statisticians are NOT in the ICT sector even though they use ICT 90% of the time.

Marcus Breathnach – Marcus described himself as both a user and a producer of sectoral statistics. He felt that the difficulties of sectoral coding were not the worst issue facing econometrics. In Ireland, the prevalence of multinational companies (MNCs) created particular difficulties. Often these had several different plants and subsidiaries and it was difficult to know when to treat these units at enterprise level, and when at establishment level. There was often trade between subsidiaries within Ireland dependent on the flow of product.

In his job he would like to be able to find out:

- the real significance of different sectors in the economy
- the true growth sectors in the economy
- true export performances

There were further problems in measuring these things in Ireland due to its small size. If the coding system were perfect, there would still be problems because disaggregating the data for research purposes would compromise confidentiality.

Overall the biggest difficulty with the current figures were that they lacked data on foreign or indigenous ownership. Many companies would be considered indigenous in their own countries. A lot of primary activity in Ireland would be ancillary activity if carried out in the ‘home’ country.

Web hosting was a particular issue as to whether it should fall into telecoms or data processing.

Hans van Hooff – see presentation on CLAMOUR project for metacoding of sector based on input, output and process.

Monique asked Hans how his system could work for services. Ursula wondered how it could be used to differentiate business services. Desirée reported that a similar discussion was taking place at the OECD and that Bill Pattinson had written a paper on measuring the digital content industry.

Joanne Pratt – see presentation. The NAICS coding system groups industries by process, and from its inception was intended to allow for new industries to be added while maintaining continuity. It has better comparability with ISIC than NACE.

Joanne showed a concordance table between NACE and NAICS. Hans van Hooff wondered how this could be useful in fixing classes which don't fit between one system and the other.

Joanne mentioned problems with convergence – digital radio, website factsheets, online editions of existing publications.

Ursula felt that the new information sector in NAICS covered commercial or commodified information but seemed to exclude information that was produced simply for its use value such as public education.

Peter Elias felt that neither system had a sufficiently clear rationale for what was being classified or the classification principles. The structure was of an input and output modified by a process which was a historical construct.

Hans felt there were two schools of thought – that the structure should be based on user needs, or that it should be based on input-process-output.

Ursula felt the current proposals for revision to NACE were a 'post-hoc' rationalisation exercise with no underlying logic and was almost just a list of delivery media.

Imogen Bertin – see presentation.

Tamás Koltai – see presentation, especially comparison between the two Hungarian coders and their level of agreement. Tamás also commented that translation is a kind of coding in itself, and that he discovered some fundamental translation errors in the way in which the English version of NACE has been translated into the Hungarian version, let alone difficulties with the STILE descriptions.

Ursula suggested a systematic analysis of the causes was required which would need a protocol designed for going back and interviewing the coders again.

Hans felt the information from the STILE project could be used before the implementation of NACE revisions such as improved guidance on coding call centres (the scope of 74.86) and contact centres/shared services centres. He also urged STILE to make inputs to the NACE and TSG meetings.

Tamás felt globalisation was bound to cause convergence of the different industry coding systems.

Imogen wondered about speed of change and how such cumbersome international systems could ever keep up with it. For example, most of the fulfilment centres described in the STILE exercise had been described as uncodeable due to their multiple activities. Shared services centres also tended to be uncodeable especially where it was impossible to clearly distinguish a primary economic activity or value added contribution.

Peter Elias concluded the meeting by congratulating the STILE project on its work and saying he hoped that Eurostat would list and take responsibility for producing a system which encompassed different languages, cultures and traditions. This was a project which required co-ordination at a European level.

Annex 3 / Invited participants of the WP3 workshop (12/05/2004)

- Bernelot Moens Mies, CBS, Netherlands
- Breathnach Marcus, Forfás, Ireland
- Buchow Hartmut, Eurostat
- Detlef Gerhardt, EC, DG Employment
- Dixon Matthew, SCOPE, Oxford UK
- Elias Peter, Univ. of Warkwick, UK
- Franco Ana, Eurostat
- Gibbins Cathy, ONS, UK
- Götzfried August, Eurostat
- Kauppinen Timo, European Foundation, Ireland
- Keinänen Päivi, Statistics Finland
- Luhtio Arto, Eurostat
- Mietzner Michael, Eurostat
- Nielsen Peter, EC DG Enterprise
- Richier Andre, EC DG Enterprise
- Sen Roshin, FÁS, Ireland
- Seybert Heidi, EC DG Info Soc
- Strack Guido, Eurostat
- Utvik Knut, Eurostat
- Van Bastelaer Aloïs, Eurostat
- Van Hooff Hans, CBS, Netherlands
- Van Welsum Desiré, OECD, France
- Vickery Graham, OECD
- Zoppè Alice, Eurostat

Annex 4 / WP3 workshop programme (12/05/2004)

09.30 – 10.30	<p><i>Chair: Ursula Huws - IES</i></p> <p>Introduction</p> <ul style="list-style-type: none"> ▪ <i>Monique Ramioul</i> Welcome to participants and practical arrangements for the day <p>Occupational coding issues</p> <ul style="list-style-type: none"> ▪ <i>Monique Ramioul - HIVA</i> Introduction to the morning session ▪ <i>Peter van der Hallen – HIVA</i> Results of the STILE occupational coding exercise and lessons to draw out of these
10.30 – 11.00	Coffee break
11.00 – 12.30	<p>Occupational coding issues (continued)</p> <ul style="list-style-type: none"> ▪ Presentations experts: Peter Elias ▪ General discussion and feedback from discussants and invited experts
12.30 – 14.00	Lunch
14.00 – 15.00	<p><i>Chair: Monique Ramioul - HIVA</i></p> <p>Sector (industry) coding issues</p> <ul style="list-style-type: none"> ▪ <i>Ursula Huws - IES</i> Introduction to the afternoon session ▪ <i>Imogen Bertin – CTC</i> Results of the STILE sectoral coding exercise and lessons to draw out of these
15.00 – 15.30	Coffee break
15.30 – 17.00	<p>Sector (industry) coding issues (continued)</p> <ul style="list-style-type: none"> ▪ <i>Hans van Hooff - CBS</i> The EU perspective – some issues considered by the Eurostat advisory group on sectoral coding ▪ Other presentations experts ▪ General discussion and feedback from discussants and invited experts
19.00 - ...	Evening dinner offered by IES

Annex 5 / Preliminary programme STILE conference

0. Introduction

General overview of the relevance of the different topics and their links

1. Labour Market Mobility: co-ordination Peter van der Hallen (SWAV-K.U.Leuven)

- Labour market mobility in the old and the new economy: findings from the EU LFS and from the Belgian and German datawarehouses - *Alex Stimpson, Maarten Tielens*
- A cost benefit assessment of administrative databases and surveys in measuring labour market mobility - *Mikael Akerblom* (Statistics Finland)
- Reflections on mobility in the New Economy - *Ebbe Graverson*, ENMOB-network (alternatives: *Sveva Avveduto* or *Lars Nerdrum*)

2. Occupational profiles in the eEconomy: co-ordination Monique Ramioul (HIVA-K.U.Leuven)

- New occupations in a new economic environment: European similarities and diversity - *An Bollen, Monique Ramioul*
- The emergence of occupations and professions in the New Economy - *suggested authors: Andries de Grip**, *Researchcentrum voor Onderwijs en Arbeidsmarkt (ROA)*, *Universiteit Maastricht* or *Ben Hövels*
- New methods of occupational profiling in view of the new economy – *CEREQ (ROMA methodology)*
- The relevance for occupational profiling for employment and labour market related policies: an evaluation - *Social Economic Council Flanders*

3. Organisation Panel Surveys in Europe: co-ordination Lutz Bellmann (IAB)

- Towards more convergence of organisation surveys in Europe - *Lutz Bellmann, Markus Promberger*
- Innovation in organisations: dimensions and measurements - *Geert Van Hootegem*
- The Dutch, German and Flemish panels: comparative analysis on the data of one common theme (flexibility, innovation, qualification structures, the lower skilled in organisations): *HIVA-OSA-IAB*

4. Coding and classifications of sectors and occupations: co-ordination Ursula Huws (IES)

- What is a 'sector' in the New Economy. Off shore outsourcing: myths and realities, measurement and indicators - *Ursula Huws*
- Opening the black box of coding practices in Europe: findings from the STILE experiment - *Peter van der Hallen*
- Principles of occupational classification systems - *Peter Elias, University of Warwick*
- Towards global convergence in classification principles - *Bill Pattinson, Australian Bureau of Statistics* Or: *The responsible for ISCO at the ILO: Adriana Mata*

5. eWork in Europe: co-ordination Giovanna Altieri (IRES)

- How to measure eWork in social surveys - *IRES*
- eWork: the latest figures, including The Netherlands, Ireland, the UK, the US
- eWork in the Accession States: *Csaba Mako* – *ISB*
- eWork and offshore outsourcing from a EU policy perspective: *Detlef Gerhard* – *DG employment*

6. Conclusions: editors: Ursula Huws, Csaba Makó, Peter Ester, Monique Ramioul

The conclusions will focus on the relevance of the findings for economic and employment policies in Europe.