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TITLE: Occupations in Information and Communications Technology (presentation)

Occupations in Information and Communications Technology

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Statistics on ICT occupations – policy issues

- Strong demand for good data to inform policy debate and labour market planning
- Shortages (and occasional over supply) of skilled workers
- Rapid rate of occupational change
- Rapid employment growth.
- Globalisation, labour migration, 'offshoring'
- Emergence of new technologies requiring new skills and new ways of working.
- Convergence of information and telecommunications technologies

Statistics on ICT occupations – some data problems

- Inconsistent definitions, classifications and terminology for occupational structures within industry
- Keeping pace with change in the work force
- Differences between countries and within countries
- Differences in data derived from administrative records, household and employer surveys, and censuses.
- Inadequacies in International Standard Classification of Occupations (ISCO-88)

ISCO – What is it and what's it for?

- **International Standard Classification of Occupations**
 - international reporting, comparison and exchange of statistical and administrative data
 - a model for the development of national and regional classifications of occupations; and
 - used directly in countries that have not developed their own national classifications.
- **National Occupation Classifications are used for**
 - statistics from censuses, household surveys, employer surveys and other sources.
 - administrative and policy-related activities:
 - matching job seekers with job vacancies
 - educational planning,
 - management of employment related international migration.

Updating ISCO-88

- An update not a major revision
- Consultation with all countries through 2 questionnaires
- Consultation with relevant international agencies and interest groups
- Circulation of draft structures for comment
- Advice and support from expert groups in classification
- Definitions of new categories and update of old ones
- Completion by end 2007 to allow for implementation in Censuses from 2010

Conceptual framework – ISCO-08

- Occupations are organised into groups according to skill level and skill specialisation
- skill level is applied mainly at the top (major group) level of the classification.
- Within each major group occupations are arranged into unit groups, minor groups and sub-major groups, primarily on the basis of aspects of skill specialisation.

Skill – the ability to carry out the tasks and duties of a given job

- *Skill level*: the complexity and range of tasks and duties
 - measured operationally by:
 - the nature of the work performed
 - the level of formal education required for competent performance
 - the amount of informal on-the-job training and or previous experience required
- *Skill specialisation* is considered in terms of four concepts:
 - the field of knowledge required
 - the tools and machinery used
 - the materials worked on or with: and
 - the kinds of goods and services produced.

Proposed sub-major, minor and unit groups containing ICT occupations in ISCO-08

13 Production and operations managers

133 Information and communications technology services managers

25 Information and communications technology (ICT) professionals

251 Software and multimedia developers and analysts

2511 Systems analysts

2512 Software developers

2513 Web and multimedia developers

2519 Software and multimedia developers and analysts not elsewhere classified

252 Database specialists and systems administrators

2521 Database designers and administrators

2522 Systems administrators

253 ICT network and hardware professionals

2531 Computer network professionals

2532 Telecommunications engineering professionals

2529 ICT network and hardware professionals not elsewhere classified

Proposed sub-major, minor and unit groups containing ICT occupations in ISCO-08

35	Information and communications technicians
351	ICT operations and user support technicians
3511	ICT operations technicians
3512	ICT user support technicians
352	Web technicians
3520	Web technicians
353	Applications development and testing technicians
3531	Applications programmers
3532	Systems testing technicians
354	Communications Technicians
3541	Broadcasting and recording technicians
3542	Telecommunications engineering technicians
74	Electrotechnology trades workers
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742	Electronics and telecommunications installers and repairers
7421	Electronics fitters
7422	Electronics mechanics and servicers
7423	Information and communications technology installers and servicers

Issues for consideration and discussion

- Is the overall approach appropriate and useful?
- Is the level of detail provided for ICT occupations suitable
- Is it useful or appropriate to create a unit group for systems testing technicians?
- Is the approach taken towards the convergence between IT and telecommunications occupations useful?
- Is there a need for more or less detail with respect to occupations that deal mainly with communications technology?