Computer Implemented Inventions (CII): Their patentability under the EPC
Cluster Computers, EPO

• One of 14 main technical areas ‘Clusters’

• 11 directorates
  – 5 in The Hague
  – 5 in Munich
  – 1 in Berlin

• Approximately 350 examiners

• Specialist areas which have high overlap are
  – Cluster Telecoms
  – Cluster Audio-Video-Media
  – Cluster Electronics
‘The EPO grants everything!’ vs ‘The EPO grants nothing!’

- Cluster Computers: high % of EPO refusals, 10% of EPO examiners
- 2 directorates (which deal with ‘Business Method’ type applications) account for a large part of those refusals and grant >10% of applications received

- We grant patents for applications which we consider to meet the requirements of the EPC (Articles and Rules), in light of the decisions of the Board of Appeal, and refuse those which do not
- Sometimes the benefit of the doubt is given
- Sometimes granted patents are revoked if opposed
- No-one is perfect, everyone can try...
EPO Important Decisions

State Street Bank and Bilski are US decisions

2 Step Approach
1. Technical character
2. Technical contribution
Exclusion from being "an invention"

Article 52 EPC

1) European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.

2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1:
   - (a) discoveries, scientific theories and mathematical methods;
   - (b) aesthetic creations;
   - (c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;
   - (d) presentations of information.

3) Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.
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What do we mean by:  
Computer Implemented Invention?

• Most basic? A computer running a program

• Also integrated electronics solutions
  – Airbag control via programmed electronics
  – Smart-phone upgrades
  – Control of huge networks

• But – what is included?
  – A biochip
  – A brain
  – A network
  – A program on a CD
  – A program
Computer implemented inventions, OK

• A piece of software ALWAYS does something - we need more!
  – Computer programmes in isolation are excluded
  – What they may achieve MIGHT not be; the further technical effect

• Key Questions
  – What is done and how?
    • Is the operation of a machine controlled?
    • What is the outcome of that control?
  – Whose knowledge is necessitated?
    • The hardware specialist
    • The programmer with knowledge of the working of the computer
    • An accountant
    • A marketing specialist
**Exclusion from being "an invention"**

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Business Methods vs CII – What is the difference?

• claims directed to **pure business methods** are excluded from patentability Art. 52(2)(3)

• **computer-implemented business methods**, *like any other computer implemented inventions*, are allowed if there is a solution of a technical problem (not only a business problem) by technical means (T0258/03, Hitachi)

• **prior art** is art in the field of technology, *not* art in the fields of commerce and/or business methods (T 0172/03, RICOH, order processing)

• non-technical (business or other excluded) features cannot in themselves contribute to the solution of a technical problem

• Any inconsistency in EPO practice is a normal progression of case law (G3/08)
1. **Eligibility** to patent protection
   - **technical character** of the claimed invention
   - should not be mixed up with examination of **novelty and inventive step**
   - a search for prior art cannot be done for non-technical subject-matter
   - a low threshold; avoid 'throwing out the baby with the bathwater'

2. **Patentability - novelty, inventive step**
   - a technical problem is solved by technical means and a technical effect is achieved
   - rigorous and structured consideration of all patent applications without prejudice
The general EPO attitude

- **Technical character = Excluded?**
  - Needs either adequately specified presence of hardware or a possible further technical effect from software
  - Not financial data (cognitive content not technical)
  - Not administrative processing
- **Further technical effect = Possible Inventive step?**
  - What the program does and how
  - Control of industrial processes
  - Improved use of processor/memory/bandwidth resources
- **Technical contribution = Inventive?**
  - Is everything technical notoriously well known?
  - Is the technical implementation obvious to a technically skilled person?
  - Is the implementation obvious from written prior art?
Later examples

• 'Normal' CII
  – ABS control
  – Diesel engine injection control
  – Surround sound encoding
  – Modelling a technical system to optimise operation

• Business Method CII
  – Routing encrypted trade data without propagation disadvantage and increased security
  – Share portfolio calculator
  – System for rating people
  – Discussion organisation (tables with topic) - interactive example!
How we examine CII of any kind

- Identify definitely technical features
  - the computer system/network or parts thereof
- Identify definitely non-technical features which in no way effect the function of the system
  a) the naming of data processed
  b) rules applied being e.g. financial market modelling algorithms
- Identify those features which may directly or indirectly effect the function of the system
  c) the timing (in machine system terms) of data flowing
  d) the integrity of sequencing (in machine terms) to reflect specifics of integrity of sequencing (even e.g. in market terms)
- A computer program which exhibits a further technical effect (for example control of c) or d) above, but not normally a) or b)) is considered to possess technical character
How we examine CII of any kind - 2

- If there are **only non-technical features** which in no way effect the function of the system and no technical means adequately specified in the claim, this is considered **pure excluded matter**
  - Declaration that 'no meaningful search is possible' probable
  - **Article 52(2)&(3) exclusion from patentability** objection
- If there are a few notoriously **well known technical features**
  - Either the search report will contain a statement that no documentary evidence of the general knowledge of the skilled person was needed or will cite evidence of appropriate technical knowledge
  - **Inventive step** objection on basis of general knowledge of the notoriously known technical features
- If there are **technical features** and/or interaction between these and other **features indirectly or directly effecting the function** of the technical features
  - These form part of the basis of the search
  - **Article 54 or 56 EPC**
Next – some examples of CII applications