



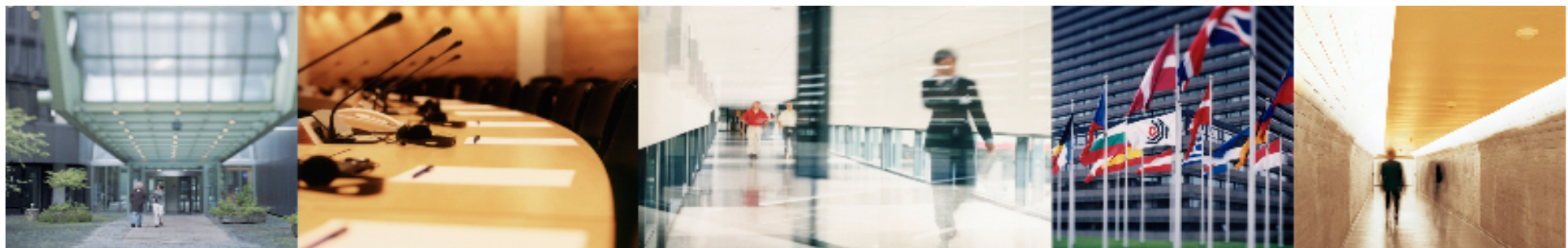
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# Computer Implemented Inventions

## Some examples

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# 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**.

# 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!

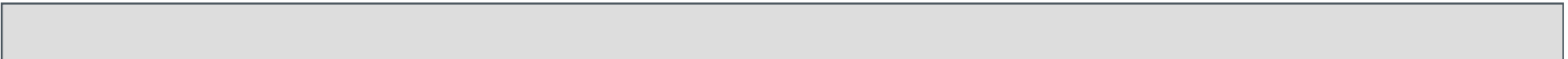
## Computer implemented inventions, OK... and?

- A piece of software ALWAYS does something - but 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

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## Let us assume that a computer is necessarily present

- If so, technical character is present – we should consider Inventive step
- Who is the technically skilled person?
- Is the data processed functional or cognitive?
- Is a machine controlled?

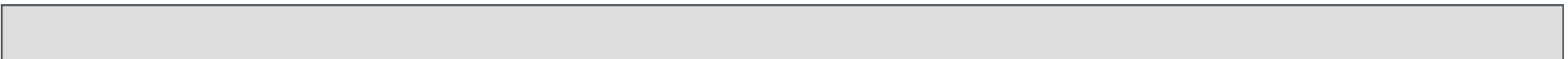


# CII Example 1

- concept for a handheld computer
- data (a geography quiz, questions-answers)
- clicking with the touch-pen
- clicking with the same touch-pen
- graphical or audio feedback signals
- a predefined time interval
  - It is better to take the computer as being present as it is clearly implied by the necessary use of its parts
  - The data is cognitive
  - Any control of the device is related only to the administrative idea behind the game

# Prior art for Inventive Step?

- Three levels
  - Completely banal even to the man in the street
    - Notoriously known, no document necessary
  - Generally known to the skilled person
    - May be necessary to show text books to demonstrate the technical information level considered normal
  - Obvious in light of prior art
    - A search for documentary prior art is necessary



## First Step - Technical Character

- Exclusion under Art. 52(2)(3) EPC
  - computer programs have always *a certain* technical character since there are physical interactions (flow of electrical current) in the computer; a **further technical effect** is necessary which is more than the normal technical effect (T1173/97)
  - *general* technical considerations are not sufficient (T914/02- nuclear reactor fuel bundles)
  - no technical character if there are no technical means (T0388/04- undeliverable mail)
  - cannot be considered to be fulfilled by an invention, as claimed, which, although *possibly encompassing* technical embodiments, also encompasses ways of implementing it that do not qualify as technical (T0619/02 - odour selection)



## Notorious? What about the 'other bits'?

- 'Notorious' is a very basic level of knowledge.
- **If** a division is challenged they **may** refer to examples of text books or general patent literature to support their allegation.
- If a division considers it necessary it can at any time carry out an additional search to provide appropriate prior art at no additional cost to the applicant.
- Although the features which **do not lend any technical character** to the claimed invention cannot lend an inventive step **they do not preclude** an inventive step being present in the **other** defined matter.
  - Article 52(3) EPC; the exclusions only to extend to such subject-matter as such
- The applicant would have to argue successfully that **such features do lend technical character** for them to be included in the assessment of **inventive step**.

## CII Example 2

- Computer assisted
- an interactive globe
- the interactive globe being connectable to a remote Internet server for updating data
- switching to a computer-implemented globe for detailed views of smaller regions
- selecting regions of interest via the computer user interface
- receiving map data on the computer from a remote server
- rendering a three-dimensional view of an area of interest
- displaying the resulting view on the computer display
- representing real-time data can on graphical layers of the computer display
- providing an application programmer interface (API) for integrating any kind of further web-based teaching material

## CII Example 3

- A control mechanism for an electrically powered two wheeled vehicle, whereby the vehicle is provided with a waterproof housing incorporating a connector to provide electrical power to a hand portable communications device such as a smart-phone,
- the vehicle being further provided with control electronics linked to a short range wireless communications port
- all control functions other than steering, signalling and speed control being performed by the user via the hand portable communications device once inserted in the said housing, which is suitably programmed to allow control functions including
  - locking and unlocking and start or use control
  - and
  - one or more of diagnostics, service control, error reporting and vehicle operation conditions
  - and
  - one or more of navigation, road taxation information, traffic announcements or warnings
  - and
  - one or more of audio or video entertainment services, parking payment
- and whereby the hand portable communications device communicates via the short range wireless communications port initially to automatically unlock the said waterproof housing as the user approaches the vehicle.

## ...on simulation and modelling of things

- T0049/99 object-oriented model of a physical system  
Information modelling is an **intellectual activity** is, as such, not an invention for the purposes of Article 52(1) EPC. Only the **purposive use** of information modelling **in the context of a solution to a technical problem may** contribute to the technical character of an invention.
- T0471/05 - design of an optical system  
series of **mathematical** and optical **abstract** concepts **without properly requiring a physical, technical implementation - excluded** under 52(2)(3) EPC
- T1227/05 - **computer implemented simulation** of an integrated circuit is now a **step in the production** of an integrated circuit
  - no mental act, no mathematical method as such
  - **in-depth knowledge of technical functioning required**

## ...on the computer program 'as such'

- T1173/97

A computer program which is a mere abstract creation which does not provide a further technical effect

- T0424/03 Microsoft, clipboard

The claim category 'computer implemented method' cannot relate to a computer program as such.

A method implemented in a computer system represents a sequence of steps actually performed and achieving an effect, and not a sequence of computer-executable instructions (i.e. a computer program) which just have the potential of achieving such an effect when loaded into, and run on, a computer.

## ...on presentations of Information

different positions of different Boards of Appeal

- T0049/04 Walker text processor  
improved text which **increases readability of text** contributes to **a technical** solution to a technical problem
- T0125/04 designing diagrams for comparative visual assessment, non-technical image features do not contribute to inventive step
- T 1194/97 Philips, data structure  
distinction between **cognitive** and **functional** data;  
functional data includes *data structure defined in terms (here coded picture line synchronisations, line numbers, and addresses) which inherently comprise the technical features of the system (here read device plus record carrier) in which the record carrier is operative*
- T0928/03, Konami, visibility of football game on a display  
computer game

## ...but it can be a LOT worse...

- Next, some more information on one particular set of CII
  - Computer programs or systems which are directed to implementation of methods of doing business

