Patentability of Computer Implemented Inventions in Europe

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Overview

• A quick primer on the European approach

• Illustrative examples from the areas of electronic trading and gaming

• Practical tips
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Requirements for patentability

The EPC contains two sets of requirements for patentability:

- **Basic** requirements, e.g. novelty etc.
  - Set out in Article 52(1) EPC which includes the requirement that there must be an “invention”
  - What is **not** an invention is set out in Article 52(2) EPC
  - Non-inventions include **abstract** concepts
  - Boards of Appeal have interpreted Article 52 EPC as to what is and what is not an invention in **specific** cases

- **Further** requirements

http://www.epo.org/law-practice/legal-texts/html/guidelines/e/g_i.htm
Further requirements are contained in Article 83 and Rules 42 & 43 EPC:

- Invention must be such that it can be carried out by the skilled person
- Invention must have “technical character”, i.e.:
  - relate to a technical field
  - be concerned with a technical problem
  - have technical features

Examining Divisions and Boards of Appeal often look at computer-implemented inventions by considering the technical problem (or technical purpose) of the invention.

Technical character

• No definition of the term “technical”
• Determined on a case-by-case basis
• Examples of what is technical include:
  • processing physical data, e.g.:
    • image data, control values for an industrial process
  • processing which affects the way in which a computer operates, e.g.:
    • changing the OS, saving memory, increasing speed, improving security or reliability, reducing use of communication resources etc.
  • physical features of a physical entity, e.g.:
    • memory, port, etc.
Computer-implemented inventions

Case law of the Boards of Appeal which has shaped the approach to how computer-implemented inventions are examined:

• T 208/84 (Computer-related invention/ VICOM)
• T 26/86 (X-ray apparatus/Koch & Sterzel)
• T 1173/97 (Computer program product/IBM)
• T 931/95 (Pension Benefit Systems Partnership)
• T 641/00 (Two identities/COMVIK)
• T 258/03 (Auction method/ Hitachi)
• T 154/04 (Estimating sales activity/Duns Licensing)
• T 1227/05 (Circuit simulation/Infineon Technologies)
T 641/00 (Two identities/COMVIK)

1. Method in a digital mobile telephone system of the GSM type, in which subscriber units (MS) are controlled by a subscriber identity module (SIM), characterised in that the subscriber identity module (SIM) is allocated at least two identities (IMSI 1, IMSI 2), information thereon being stored in a home database of the system, said at least two identities being selectively usable, wherein only one identity (IMSI 1 or IMSI 2) can be activated at a time, the user when using a subscriber unit (MS) selectively activating the desired identity in said home database from the subscriber unit, wherein the selective activation is used for distributing the costs for service and private calls or among different users.

- Granted, but revoked during opposition
- Appeal dismissed
T 641/00 (Two identities/COMVIK)

From the headnote of the decision:

“An invention consisting of a mixture of technical and non-technical features and having technical character as a whole is to be assessed with respect to the requirement of inventive step by taking account of all those features which contribute to said technical character whereas features making no such contribution cannot support the presence of inventive step”

- Non-technical features can interact with technical features to change how the technical aspects of the claim technically function

COMVIK sets out an approach which boils down to:

• Does the invention have technical character?
  ➢ Easy hurdle to overcome
  ➢ Why? Because the invention is implemented on a computer

• Does the invention involve an inventive step?
  ➢ Harder to overcome
  ➢ Why? Novelty usually resides in “non-technical” features

➢ Whether or not an invention involves an inventive step depends on whether or not there is an interaction between technical and non-technical features
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1. A trading system processing messages in at least one of a data- and telecommunication network, characterized in that said system comprises: a **consolidation point** for said messages in a server layer, whereby said messages are collected in multiple concatenated predetermined hold-back time-frames; and a **transmitter application**, transmitting said messages consolidated in said time-frames as single transaction for central matching processing when a time-frame has lapsed in time, **thus eliminating transactional overhead and achieving a substantial gain in message processing throughput time** in said trading system.

So why did this application succeed?

✓ Technical problem:
   How to improve processing of messages in a trading system to reduce processing throughput time

✓ Technical features:
   Consolidation point
   Transmitter application

➢ Even though the invention is used in trading, it solves a technical problem, i.e. processing throughput time
1. A gaming system comprising:
   a plurality of game outcome servers (210), each game outcome server having stored thereon a plurality of selectable wagering games, each game outcome server (201) having a communication interface for allowing, in use, the game outcome server (201) to communicate with both a plurality of remote client devices (210, 216-228) and a physically separate and remotely located player management server (200, 202), each game outcome server (201) comprising:

   ➢ Refused by examining division
   ➢ Appealed (T 1769/10) and decision set aside

EP 2 005 400 B1 - Internet remote game server

So why did this application succeed?

✓ Technical problem:
  • How to modify the prior art system (US 2006/0025207 A) so as to improve the player's access to games while maintaining confidentiality of the player's data in the player database

✓ Technical features:
  • Game links which allow a user to navigate game outcome servers through a game access interface supported by a player management server and displayable by an identified client device and without the player having to register or log-on into the game outcome servers
  • Player management server and game outcome servers are separate

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Description

• Strongly recommended to focus on *technical* aspects

• Strongly recommended, when describing prior art, to describe *technical* aspects and *technical* drawbacks of the prior art

• Avoid discussing non-technical drawbacks of the prior art

• Recommended to cite EP prior art which has proceeded to grant

• Strongly recommended to specify the *technical problem* and/or *technical effect* of the invention and preferred features

• Strongly recommended, when describing embodiments of the invention, to describe *technical features*
Claims

• Many forms of claim are allowable:
  
  ✓ A device comprising an encryption module configured to...

  ✓ A method of encrypting data, the method comprising applying a hash function...

  ✓ A computer program comprising instructions which, when executed by data processing apparatus, causes the apparatus to perform a method according to any one of claims X to Y.

  ✓ A computer readable medium storing a computer program according to claim Z.
Claims

• Claim features:
  • Concentrate on technical features
  • Means-plus-function language is acceptable and interpreted broadly
  • Unless defined otherwise, words are given meaning and scope they normally have in the relevant art
  • Wording such as “configured to” and “adapted to” is allowable and is recommended
  • No requirement to specify processor and memory
  • “Traditional” wording such as “terminal”, “server”, “host” tends to be safer than more commercial terminology such as “app store”, “dashboard”, “point-of-sale” etc.
Strategy

- For borderline cases, consider drafting or modifying a specification specifically for Europe – particularly important due to ‘added matter’ restrictions

- Identify the likely IPC code for an application and adapt the language of claim 1 and abstract to help steer the application to more sympathetic Examining Divisions and Boards of Appeal

- Cite “helpful” technical prior art which might help to steer the application towards more sympathetic Examining Divisions

- For borderline cases, avoid UK applications
Conclusions

• The approach to examining computer-implemented inventions at the EPO is pretty well established

• The issue tends not to be excluded subject matter (i.e. ineligible subject matter)

• Business methods and other abstract or non-technical processes will be refused on the grounds of lack of inventive step

• It is highly recommended to draft a patent specification for filing in Europe with the European approach in mind
Thank you