Matteo Mozzi

PATENTS AND DESIGNS OVERVIEW

Interactive workshop: How to protect an ICT invention?

October 6th, 2020

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What is an ICT invention?

(ICT, **I**nformation and **C**ommunications **T**echnology)

Electronic device/apparatus/system

hardware + software/APP + GUI

Patents

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What is a patent?

A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem.

Patent protection means that the invention cannot be commercially made, used, distributed, imported or sold by others without the patent owner's consent.

(https://www.wipo.int/patents/en/)

PATENTABLE INVENTIONS – Art. 52(1)(2) 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.

PATENTABLE INVENTIONS – Art. 52(1)(2) EPC

"Hardware" of an ICT invention -> **patentable** invention according to Art. 52(1) EPC -> "product claim"

"Software/APP" and "GUI" of an ICT invention should be considered as **excluded from patentability** as indicated in Art. 52(2)(c) and/or (d) EPC:

(2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1:

(c) schemes, rules and methods for performing mental acts, playing games or doing business, and **programs for computers**;

(d) **presentations of information**.

PATENTABLE INVENTIONS – Art. 52(3) EPC

(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**.

Software/APP of an ICT invention -> method claim

EPO: method claim **with technical character** -> **patentable invention**

EPO approach about examination of method claims (1)

Method claim: list of operating steps

The method claim has technical features?

NO -> not patentable

YES -> “theoretically” patentable

Method claim -> cannot have technical character, e.g. in the case it is drafted in an inappropriate mode

e.g. indicating the entity performing each step of a method claims may improve the technical character of a claim

Product claim -> always technical character

EPO approach about examination of method claims (2)

In the case the method claim comprises technical features:

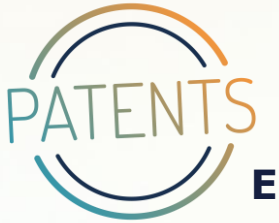
- Method claim – state of the art = 0 - > **not novel** (Art. 54 EPC)
- Method claim – state of the art = Δ -> **novel** (Art. 54 EPC)

Δ is a technical contribution, then the invention solves a technical problem?

The solution of a technical problem is the technical contribution of the invention over the state of the art.

EPO approach about examination of method claims (3)

- Δ is a technical contribution?
- **NO -> not inventive (Art. 56 EPC)**
- Δ = pure mathematical operation, business model, presentation of information, and so on …
- **YES -> inventive step to be evaluated**
- Δ = electronic calculator + keyboard + display is not sufficient to justify the presence of an inventive step
- A **<u>further technical effect</u>** (external or internal to the electronic calculator on which the software is running) is needed!



EPO approach about examination of method claims (4)

Further technical effect in an electronic device

- improvement of the performance;
- saving memory;
- increasing security;
- saving computational time;
- signal transformation;

Examples of SOFTWARE PATENTS

EP 2169428 B1

- **EP 2169428 B1** – *"Method for processing a radar echo signal ...".*

- The fundamental idea of the invention is the technical application of a mathematical method: **PATENTABLE!**

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Example of SOFTWARE PATENTS

Claim 1 of EP 2169428 B1

A processing method of a radar echo signal, which is provided by a target, in order to compensate for degradation effects introduced in said signal by target motion, the method comprising the following steps:

determining the value of at least one target motion parameter, by selecting among a plurality of possible test values one value, which maximizes a functional defined over the radar echo signal;

performing a correction of radar echo signal, based on said value, which is determined by the at least one motion parameter, ***characterised in that***

said functional is the time derivative of the radar echo signal, or a function dependent from said derivative.

Example of SOFTWARE PATENTS

EP 1566957 B1

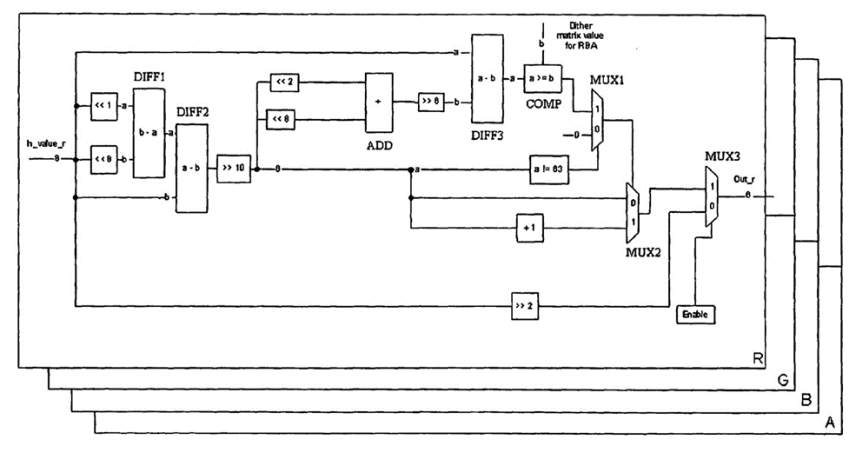

FIG. 7

EP 1 566 957 B1 – “Method of processing a digital image by means of ordered dithering technique”.

The fundamental idea of the invention is a specific algorithm: **patentable!**

Example of SOFTWARE PATENTS

Claim 1 of EP 1566957 B1

*A **method of processing** a high-resolution image formed by NxM pixels to reduce by means of ordered dithering the chromatic resolution of said image thus producing a low-resolution image, said method comprising the following operations:*

predisposing a dither matrix comprising a multiplicity of threshold values ordered in j rows and j columns, where j is smaller than both N and M,

repeatedly applying the dither matrix to the high-resolution image to compare the value of each of the pixels that compose it with a threshold value of the matrix and to obtain an output value of the matrix from each comparison, ***applying the algorithm represented by the schematic layout of Figure 7*** *to every pixel value of the high-resolution image to obtain the pixel values of the low-resolution image, where …*

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PATENTS

- Filing requirements: description, **claims**, drawings

- Filing strategy

First filing: national (e.g. IT) in order to obtain a prior art search performed by the EPO, saving costs.

Second filing: abroad, e.g. EPO, PCT, US within the end of the priority period (12 months from the first filing)

- Granting procedure: EPO vs USA

Other protection for software (source code): **Copyright** (with or without registration)

DESIGNS

What is a design?

(Art. 3 Council Regulation (EC) n. 6/2002 on Community designs)

(a) "design" means the appearance of the whole or a part of a **product** resulting from the features of, in particular, the **lines, contours, colours, shape, texture and/or materials of the product itself and/or its ornamentation**;

(b) "**product**" means any industrial or handicraft item, including inter alia parts intended to be assembled into a complex product, packaging, get-up, graphic symbols and typographic typefaces, but ***excluding computer programs***;

(c) "complex product" means a product which is composed of multiple components which can be replaced permitting disassembly and re-assembly of the product.

No technical function of a product can be protected with a design.

Requirements for protection

(Art. 4.1 Council Regulation (EC) n. 6/2002 on Community designs)

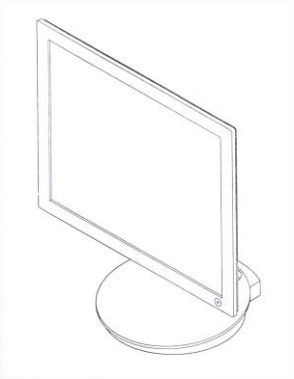
A design shall be protected by a Community design to the extent that it is **new** and has **individual character**.

ICT Invention - Product

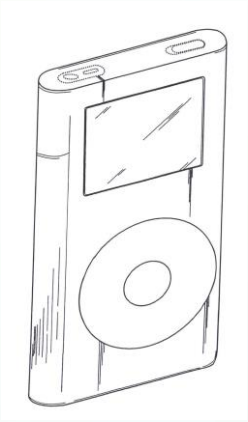
Electronic device is a product

The shape of an electronic device can be protected by a design

Examples of product design



RCD 000224829-0001



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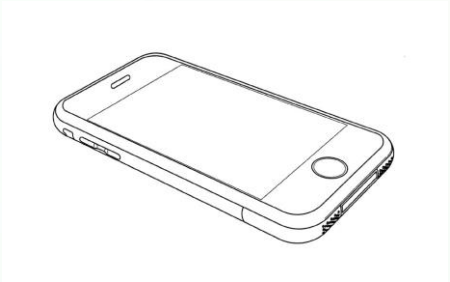

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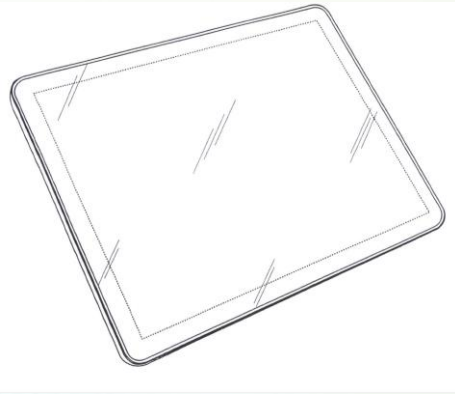


ICT Invention - GUI

(Art. 3(b) Council Regulation (EC) n. 6/2002 on Community designs)

(b) "**product**" means any industrial or handicraft item, including inter alia parts intended to be assembled into a complex product, packaging, get-up, graphic symbols and typographic typefaces, but ***excluding computer program***

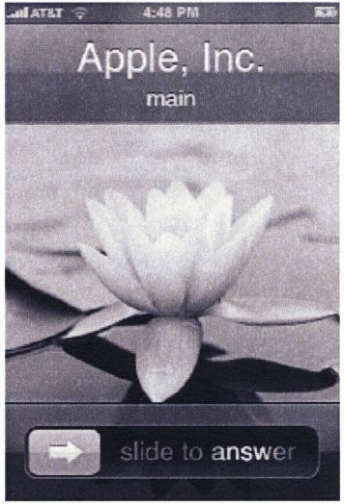
A design registration protects **the graphical aspect/s which can be obtained by a software**, e.g. **icons, website/webpage, graphic interfaces, user graphics, graphical user interfaces, menu display, animated display, an so on**

ICT Invention – GUI

Locarno Classification – Class 14.04

N4205 14 4 3D Characters
N7248 14 4 Animated characters
N2052 14 4 Animated displays
N2053 14 4 Animated icons
N7638 14 4 Animated logos
N7249 14 4 Animated screen displays
7412 14 4 Computer interfaces
N2428 14 4 Computer screen displays
N2565 14 4 Detailed parts of graphic interfaces
N6403 14 4 Display screen with animated image
N7720 14 4 Display screens with animated user interface
N7721 14 4 Display screens with user interface
N6405 14 4 Display templates
N2743 14 4 Extracts of web designs
N6580 14 4 Graphic user interfaces for TV
A8543 14 4 Graphical user interfaces
N6634 14 4 Homepages
N3054 14 4 Icons
A8545 14 4 Icons [for computers]
N7757 14 4 Icons for display screens
N5136 14 4 Interfaces
N3107 14 4 Interfaces for a display screen
N3286 14 4 Menu displays for mobile phones
N5457 14 4 Pictograms for remote controls
N3732 14 4 Screen displays
N5663 14 4 Screen displays (part of -)
N6975 14 4 Screen displays and icons
H0166 14 4 Screen displays and icons
N7554 14 4 Screen graphics
N3733 14 4 Screen savers
N6005 14 4 Video images
N7201 14 4 Websites

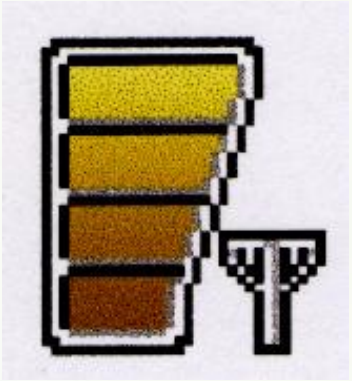
Examples of GUI designs



RCD 000967427-0041

RCD 000461231-0144

RCD 001928045-0001



RCD 000171582-0021

DESIGNS

- Filing requirements: drawings, classification, single design vs multiple design, description (optional)

- Filing strategy

First filing: national (e.g. IT), regional (e.g. EU), International Design (WIPO)

Second filing: national (e.g. US, CN), regional (e.g. U.E.), International Design (WIPO) within the end of the priority period (6 months from the first filing)

- Registration procedure (IT, EU, WIPO)

Other type of protection for software (GUI): **Copyright** (with or without registration) or **Unregistered community design**

THANK YOU FOR YOUR ATTENTION!

Matteo Mozzi
Italian and European Patent Attorney
Professional Representative before the EUIPO
mmozzi@jacobacci.com

Jacobacci & Partners S.p.A.
Milan Office
www.jacobacci.com