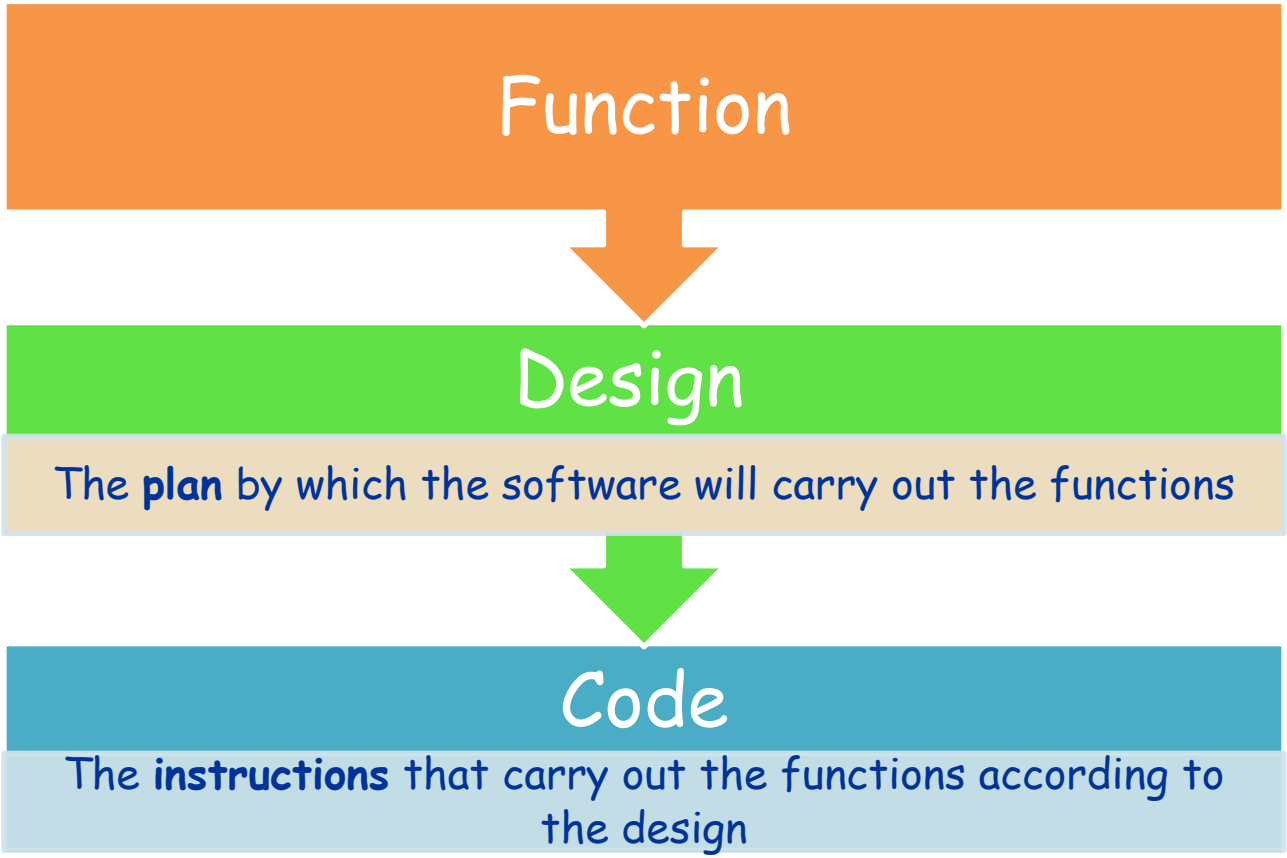
POLITECNICO
MILANO 1863

An Introduction to Computer Implemented Inventions: How to Protect Mobile Apps

(Camera di Commercio di Milano – 7 febbraio 2019)

Massimo Barbieri

Milestones in software development



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Types of Intellectual Property Rights

Patent	• A legal document that specifies a **technical invention**
Trademark	• **Words, sentences, symbols** that identify and distinguish the source of the goods of one party from those of others (it protects the commercial name of the program)
Industrial Design	• It covers the **aesthetic features** of an object that has a practical utility (e.g. a new shape for a coffee machine)
Copyright	• It extends to **expressions** and it is formality free in countries party to the Berne Convention

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Patents

A patent is a legal title and is:

- **Time-limited** (it expires after 20 years);

- **Space-limited** (it can be enforced within a country or those countries in which it was filed).

The technical features expressed in the claims define the invention for which has been granted an exclusive right to an applicant with respect to use, production and sale.

Is it easy to get a patent?

No, it takes time and money to argue against patent examiners' rejections, especially to obtain broad and commercially useful claims.

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Copyright vs Patent

Copyright

- it only protects the code itself
- it is free
- it subsists automatically – there is no need to register or apply for it from any organization
- no need to disclose what software does
- copyright protection lasts for the life of the author plus an additional 70 years

Patent

- it protects functionality
- it is more expensive
- a patent application must be filed and the grant procedure requires more time
- a detailed description must be given
- patent protection lasts for 20 years

Mark Kenrick – Whose software is it, anyway? **Engineering & Technology** 10 -23 July 2010. p. 53 - 55

Is software patentable in Europe? (1)

EPC (art. 52)

(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:

(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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Is software patentable in Europe? (2)

A computer implemented invention must have:

- a technical character

- it must be able to produce a **further technical effect** (going beyond the «normal» physical interactions between the program and the computer)

The technical effect may be:

- **external** (when the program controls an industrial process or the working of another device or apparatus) or

- **internal** (when the program causes a different working of computer)

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Mobile apps (1)

- Are mobile apps patentable? Yes and trey are referred to method or process claims

- Is the invention an **abstract idea**? (USA) or does the invention show a **technical effect**? (Europe)

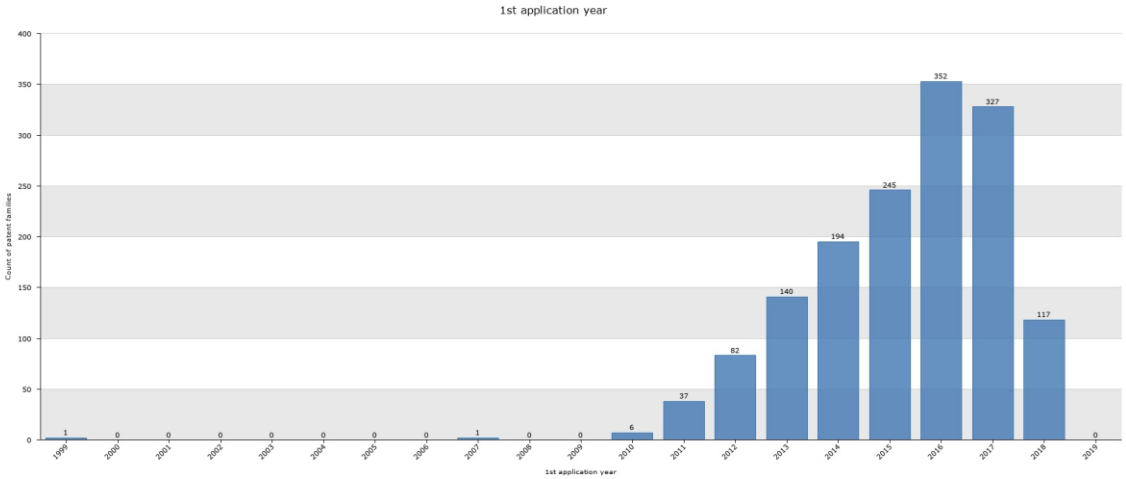
- Are patentability requirements satisfied?

  - **Novelty**: has the method already been published or used? Make a list of the new technical features

  - **Inventive step**: Would somebody who is skilled in your field would still view it as an unexpected development? (your mobile app invention must be sufficiently different from the prior art that those of ordinary technical skill would not have found the invention to be obvious)

Mobile apps (2)

Search Field (kw: mobile app)	No. Of Patent Families	Publication Countries	Granted patents (%)
Title	187	CN, US, KR, EP, GB	29.95%
Title/Abstract	727	CN, US, KR, IN, EP	24.6%
Title/Abstract/Claims	1,503	CN, US, EP, KR, IN	28,7%



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Mobile apps (3)

Other ways of protecting mobile apps:

1. Industrial Design (icons and GUI)

2. Trademarks

TSDR | ASSIGN Status | TTAB Status (Use the "Back" button of the Internet Browser to return to TESS)

Goods and Services	IC 009. US 021 023 026 036 038. G & S: Computer software for managing user system settings and preferences sold as a feature of computers and hand-held mobile digital devices comprised of mobile phones, digital audio and video players, hand-held computers, tablet computers, and personal digital assistants. FIRST USE: 20130610. FIRST USE IN COMMERCE: 20130918
Mark Drawing Code	(2) DESIGN ONLY
Design Search Code	15.07.01 - Cog wheels; Gears 26.01.21 - Circles that are totally or partially shaded. 26.09.21 - Squares that are completely or partially shaded
Serial Number	85971613
Filing Date	June 27, 2013
Current Basis	1A
Original Filing Basis	1B;44D
Published for Opposition	January 21, 2014
Registration Number	**4557343**
International Registration Number	1175030
Registration Date	June 24, 2014
Owner	(REGISTRANT) Apple Inc. CORPORATION CALIFORNIA One Apple Park Way Cupertino CALIFORNIA 95014
Attorney of Record	Irene K. Chong
Priority Date	April 3, 2013
Prior Registrations	3470983;3586577;3889685
Description of Mark	The color(s) gray is/are claimed as a feature of the mark. The mark consists of a square with rounded corners depicting two concentric circles with jagged edges evoking the image of gears, all in varying shades of gray.
Type of Mark	TRADEMARK
Register	PRINCIPAL
Live/Dead Indicator	LIVE

TESS HOME | NEW USER | STRUCTURED | FREE FORM | Browse Dict | SEARCH OG | Top | HELP

US00D780802S

(12) **United States Design Patent** (10) **Patent No.: US D780,802 S**
Anzures et al. (45) **Date of Patent: ** Mar. 7, 2017**

(54) **DISPLAY SCREEN OR PORTION THEREOF WITH ICON**

(71) Applicant: **Apple Inc.**, Cupertino, CA (US)

(72) Inventors: **Freddy Anzures**, San Francisco, CA (US); **Greg Apodaca**, Mountain View, CA (US); **Ismael Basso**, San Francisco, CA (US); **Imran Chaudhri**, San Francisco, CA (US); **Alan C. Dye**, San Francisco, CA (US); **Jonathan P. Ive**, San Francisco, CA (US); **Matthew Dean Rohrbach**, San Francisco, CA (US); **Christopher Wilson**, San Francisco, CA (US); **Eric Lance Wilson**, San Jose, CA (US)

(73) Assignee: **Apple Inc.**, Cupertino, CA (US)

(**) Term: **14 Years**

(21) Appl. No.: **29/478,839**

(22) Filed: **Jan. 9, 2014**

Related U.S. Application Data

(63) Continuation of application No. 29/457,317, filed on Jun. 9, 2013, now Pat. No. Des. 744,529.

(51) **LOC (10) Cl.** **14-04**

(52) **U.S. Cl.**
USPC **D14/489**

(58) **Field of Classification Search**
USPC D14/485–95; D18/24–33; D19/6, 52; D20/11; D21/324–33; 715/700–867, 715/973–77
CPC G06F 3/048–3/04897; G06F 8/34
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D395,645	S *	6/1998	Cappa	D14/489
D396,457	S *	7/1998	Cappa	D14/489
D398,000	S *	9/1998	Cappa	D14/489
D597,101	S	7/2009	Chaudhri et al.	
D604,305	S	11/2009	Anzures et al.	
D640,264	S *	6/2011	Fujii	D14/486
D641,763	S *	7/2011	Jones	D14/486
D642,588	S *	8/2011	Anzures	D14/486
D644,239	S *	8/2011	Anzures	D14/486

(Continued)

OTHER PUBLICATIONS

U.S. Trademark Application No. 85971631, filed Jun. 27, 2013 (priority filing date of May 21, 2013).

(Continued)

Primary Examiner — Melanie H Tung
(74) *Attorney, Agent, or Firm* — Sterne, Kessler, Goldstein & Fox P.L.L.C.

(57) **CLAIM**

The ornamental design for a display screen or portion thereof with icon, as shown and described.

DESCRIPTION

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.
FIG. **1** is a front view of a display screen or portion thereof with icon showing our new design; and,
FIG. **2** is a front view of a second embodiment thereof.
The broken lines in the Figures show a display screen or portion thereof, and form no part of the claimed design.

1 Claim, 1 Drawing Sheet
(1 of 1 Drawing Sheet(s) Filed in Color)

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Mobile apps (4)

Some concluding remarks:

- **Evaluate the patentability requirements** with a prior art search (incomplete databases, keyword search is not always effective, the source code is secret; some software innovations are incorporated in products and not easily detectable, others are discussed in documents not easily available);

- If you proceed with the filing of a patent application, you will have to **describe in detail** how your mobile app works and to write **clear claims** (so the public can understand what is protected);

- Keep in mind that **provisional applications** may be useful and cheap;

- Take **other IPR's** into consideration;

- To patent or not is a **business decision** (evaluate costs/advantages, time to grant, territorial coverage).

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Contacts

massimo.barbieri@polimi.it

@maxbpv9

https://it.linkedin.com/in/massimo-barbieri-1783677a

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