



Thomas L. Lederer

Tiny advances

Thomas L. Lederer, Patent Attorney, Dennemeyer & Associates, explores the evolution of patentability of computer-implemented inventions.

The quote “*Everything that can be invented has been invented*” is often attributed to Charles H. Duell, who was the Commissioner of the US patent office in 1899.

Recently Gene Quinn (of ipwatchdog.com) commented on the time span taken to issue the nine millionth US patent on April 7, 2015. During the time Mr Duell (and others of course) were in office, it took the US Patent and Trademark Office 75 years to issue the first million patents. The time span to issue the ninth million patents was only three and a half years. I guess Mr Duell was wrong.

The world of intellectual property rights is not always easy to understand for laymen – and sometimes even for lawyers. In particular, when it comes to popular inventions like Amazon’s “1 click” patent and Apple’s “slide to unlock” patent. With technologies like these, which are very visible to everyone on the internet or on handheld or personal devices, an opinion about how worthy they are of being a granted patent is quickly made. Sometimes, even if the underlying principles are novel and inventive according to legal standards, the public might consider them to be obvious or at least to be only tiny advances in the technology according to the prior art known to them, and thus not worth a patent.

However, for the companies involved – either as applicants, as possible infringers or as competitors deprived of a feature to include in their products – a lot of money is at stake. Sometimes also pride and prestige are endangered by the fate of patent applications.

Consequently, fierce battles can arise from patent applications, regardless of whether the inventions are seemingly small and even more so if the protected subject-matters are exposed to the public in everyday life.

Amazon’s “1 click” patent and Apple’s “slide to unlock” patent

Amazon’s patent (EP 1 134 680) was much discussed in 2011 after the Board of Appeal decided on January 27, 2011 in T1244/07 that the claims were lacking an inventive step, such that the European patent was never granted in the first place (unlike, for example, in the United States and Canada).

More recently, the German part of Apple’s “slide to unlock” European patent (EP 1 964 022) was revoked by the Federal Court of Justice of Germany on August 25, 2015 (decision X ZR 110/13). According to the corresponding local databases, the legal status regarding this patent or patent application is not consistent. In Finland opposition procedures are pending, while the patent is in force in the United Kingdom, France, Spain, the Czech Republic, Ireland, the Netherlands, and – of all countries – Sweden. After all, it was the phone (called N1) of Swedish company Neonode that the Federal Court of Justice of Germany considered to be the piece of prior art most relevant to the “slide to unlock” technique of Apple.

Not surprisingly, however, the Federal Court has seemingly not discussed general patentability of technologies like this, since allowability was denied on the ground of lack of inventiveness over the N1 phone. So with the patent being in force in some countries and revoked in other countries, deciding the questions of patentability and allowability – mostly inventiveness – is obviously not an easy task, even if the public might consider these questions to be straightforward from their gut instinct.

Current developments in Germany and Europe

In search of guidelines, on what gestures might be patentable, one can turn to the collection of decisions of the Boards of Appeal of the European Patent Office. Therein two decisions can be found from this year which deal with gesture control of electronic devices, although with different outcomes.

In T1911/10 (decision of June 3, 2015) the Board of Appeal confirmed inventiveness of the invention “*Gesture recognition simulation system and method*”.

This application is directed towards gesture recognition with the camera system and as such has not the simplicity

Résumé

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of a “slide to unlock” application. Therefore, we learn nothing about the patentability of gestures as such, because the camera system utilized in the claims of this application contributes to the inventive step too. The Board rather notes: “[...] that the gesture recognition performed in D3 is therefore more limited than the gesture recognition performed in D1. Since the camera-based system of D3 cannot provide the full functionality of the glove-based system of D1, it would not be obvious to the skilled person to replace the gloves and EM sensors of D1 by the camera-based system of D3.” Thus the combination of prior art documents D1 and D3 does not render the application obvious.

Further, in decision T 1958/13 from June 12, 2015, the Board of Appeal denied the presence of an inventive step of a “single drag gesture” based on the prior art available.

The claimed subject-matter in that case is directed to recognize a drag gesture on a touch screen over text and to cut or delete the corresponding text. However, with the prior art available, the Board concludes that “applying two operations (e.g. text selection and text deletion) with one stroke on a touch-screen device was well within the reach of the skilled person at the application’s priority date.”

Another interesting decision (X ZB 1/15 – “Flugzeugzustand”) was recently issued by the Federal Court of Justice of Germany on June 30, 2015. The application under judgment deals with mathematical methods, which are excluded from patentability in Germany by law (very similar to the corresponding Art. 52 of the European Patent Convention). In particular, German law does not consider mathematical methods as inventions, but allows patents on them as long as the mathematical methods are not claimed “as such”. The “as such” or “per se” clause is also well known under the EPC, but the recent decision gives a further insight into the interpretation of the Federal Court.

In the official head notes, the Federal Court says that mathematical methods are regarded as inventions only if they contribute to solving a specific technical problem by technical means. Further, a mathematical method is only considered to be *non-technical* if – in connection with the claimed teaching – it does *not* relate to the specific application of natural forces. A sufficient relationship to a specific application of natural forces is only present if the mathematical method is used to determine – based on the available measured values – more reliable findings on the status of a plane, and if thereby an influence is exercised on the operation mode of the system that was used to determine this status.

With this decision, the Federal Court seems to allow patents on mathematical methods, if the operation of a technical system is involved. Thereby, this decision seems to be in line with the Federal Court decision in X ZB 11/98 (“Logikverifikation”) and similar to the EPO Board of Appeal decision T1173/97 (“Computerprogrammprodukt/IBM”).

In the latter, a computer program product is not excluded from patentability if it produces a further technical effect which goes beyond the “normal” physical interactions between program (software) and computer (hardware), when it is run on a computer.

Current developments in India

Also very recently, the Indian Patent Office has published updated guidelines on patentability of computer related inventions, showing a broad interpretation of section 3(k) of the Indian Patents Act, which relates to software patents and computer related inventions.

Similar to other jurisdictions, this section 3(k) states that “a mathematical or business method or a computer program per se or algorithms” is excluded from patentability, and previously the interpretation of the term “per se” regarding computer programs has been very narrow. Consequently the patentability of programs was connected to an involvement of new hardware. Thus a computer program was only available for patenting when the hardware showed features that made it different from a commonplace apparatus, in other words a general-purpose machine.

According to the new guidelines and its broader interpretation:

“For being considered patentable, the subject matter should involve either

- a novel hardware, or
- a novel hardware with a novel computer program, or
- a novel computer program with a known hardware which goes beyond the normal interaction with such hardware and affects a change in the functionality and/or performance of the existing hardware.

A computer program, when running on or loaded into a computer, going beyond the “normal” physical interactions between the software and the hardware on which it is run, and is capable of bringing further technical effect may not be considered as exclusion under these provisions.” (Citation of the guidelines).

The guidelines continue with listing certain indicators, of which only one needs to be positively answered in order to negate the exclusion from patentability.

These indicator questions should be used by the Examiner to determine technical advancement:

- Does the claimed technical feature have a technical contribution on a process which is carried on outside the computer?
- Does the claimed technical feature operate at the level of the architecture of the computer?
- Does the technical contribution work by way of change in the hardware or the functionality of hardware?
- Does the claimed technical contribution result in the computer being made to operate in a new way?
- In case of a computer program linked with hardware, does the program make the computer a better computer in the sense of running more efficiently and effectively as a computer?
- Does the change in the hardware or the functionality of hardware amount to technical advancement?

The guidelines also contain illustrative examples for claims considered to be excluded from patentability and for claims considered to be not excluded from patentability.

All in all, getting a patent in India for a computer implemented invention does seem to become easier under the new guidelines. However, there are no empirical values regarding the application of the guidelines by the Examiners, yet.

Conclusion

In summary, even if a patent on a gesture – like “slide to unlock” – might seem trivial to users of handheld devices, the underlying technical principals might very well be patentable in general. With the proliferation and ubiquity of handheld devices and touch screens, patents on such technologies might recede but other areas of intellectual property might rise, like mathematical methods and algorithms, which are often the foundation of computer-implemented inventions. And so in summary, there are still a lot of inventions that can be invented and patented.