AI as inventor

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Recently, South Africa obtained notoriety in its patent office being the first in the world to grant a patent in which an artificial intelligence (AI) is identified as the

inventor (the South African Patent).

As is widely known, the South African patent office does not examine patent applications substantively. Patent applications are only examined for compliance with formality requirements.

The South African Patent is derived from an International PCT application and is the South African PCT national phase of the earlier International PCT application. As has been reported, it appears that, in examining the formal aspects of the application for the South African Patent, the Registrar was precluded both by international treaty and by earlier patent office directives, from requesting any documentary evidence of the identity of the inventor or of the chain of transfer of the entitlement to apply. Thus, the Registrar had to accept the application as formally compliant, resulting in its publication and grant.

Australian Federal decision

Interestingly, within weeks of the grant of the South African Patent, the Australian Federal Court in Australia upheld an appeal to overturn the Australian patent office's decision to disallow an Australian counterpart of the South African Patent (the Australian Application). In so doing, the Australian Federal Court accepted the argument that an AI can be cited as an inventor. In reaching this decision the Australian Federal Court reasoned that the patent office erred in conflating the identification of an inventor with the owner of the right to apply for a patent, and went on to describe two primary bases for accepting an AI as inventor.

The first, is that nothing explicit in the Australian Patent Act or the Patent Cooperation Treaty, through which the Australian Application was filed in Australia, expressly requires an inventor to be human. The Australian Federal Court was in favour of a reflexive definition of "inventor" and should be the bare minimum which is that the use of the "-or" or "-er" suffix in a noun merely describes an agent that does an act. The Court used the examples that the terms "computer", "dishwasher" and "lawnmower" can be used to describe both a human or machine, with the development of technology over time having broadened these definitions.

The second, relates to the ability of an inventor to vest or hold ownership in an invention. The patent office pointed out that, currently, AI is not recognised as having legal personality and therefore cannot hold ownership or assign rights in respect of an invention.

The Australian Federal Court noted that the Australian Patents Act does not, however, explicitly require an owner of an invention to have acquired the invention through assignment. Instead, the Australian Patents Act uses the word "derive". The Australian Federal Court referred to Australian tax laws to support a definition of "derive" to mean "receive or obtain from a source". In this regard, the Australian Federal Court accepted that there are other means of deriving ownership in property law than "acquiring" it, including the acquisition of the fruits derived from a tree on land which someone occupies.

In this, the Australian Federal Court found support for a conclusion of automatic possession of an invention created by an AI by the owner and controller of the AI, and submitted that there is a prima facie assumption that a person who possesses an invention is the owner of the invention, and therefore of the right to seek patent protection for it. In this way, the owner and controller of the AI becomes the owner of the invention by possessing the invention which is derived from the AI.

Application to South African law

This article will consider whether a similar line of reasoning could be ascribed to the granting of the South African Patent.

In South Africa, one of the prescribed forms to be submitted in support of a patent application, Form P.3, includes a declaration (i) that the inventor of the invention is the person named therein, and (ii) that the applicant has acquired the right to apply from the inventor in in a manner that must be set out by the applicant on the Form P.3, e.g. assignment or employment.

Interestingly, the patentee in the South African Patent struck through the latter part of this declaration, possibly appreciating the problematic nature of the requirement in South African law that a non-inventor applicant must have acquired the right to apply for patent protection for an invention from the inventor, which in this case was an AI.

Since the Registrar did not object to the omission of the latter part of the above mentioned declaration from the Form P.3, it would appear that the Registrar accepted that the relevant part of the declaration can be struck through, or that the Registrar believed that the declaration, or rather the absence thereof, was not material in reaching her decision to accept the application for the South African Patent as formally complete.

Importantly, the South African Patents Act does not define an "inventor". The applicant's entitlement to apply is believed to be a matter central to the debate around the Registrar's acceptance of the application for the South African Patent. Such entitlement can only have been obtained by the applicant under Section 27 of the South African Patents Act, which provides that a patent application may be filed by:

i. the inventor; or

ii. any other person acquiring from him ("the inventor") the right to apply; or

iii. by both such inventor and such other person.

It can be argued that since the AI does not have legal personality, it cannot apply for a patent in its own name, and thus cannot apply as "inventor". This arguably removes the above mentioned aspect (i) of Section 27 from consideration.

This does not, however, necessarily prevent an AI from being an "inventor" per se, if one considers an argument along the lines of that which was accepted by the Australian Federal Court, i.e. we should not collapse the meaning of "inventor" into the more limited meaning of having to be capable of being an "applicant". Nevertheless, for the same reason for which aspect (i) of Section 27 is not helpful, the above mentioned aspect (iii) is not helpful either.

Turning to the above mentioned aspect (ii) of Section 27, the use of the pronoun "him", in reference to the inventor, on the face of it would imply that it is expected that the inventor would be a natural person.

From the above, it should be apparent that in order for reasoning similar to that as applied in the Australian Federal Court to apply in South Africa, two hurdles would need to be overcome. First, the use of problematic language such as "him" and "person" in describing an inventor, which appear to implicitly limit an inventor to being a natural person, of which an AI is not currently recognised as being equivalent to and would invariably require legislation to promulgate. Secondly, the use of "acquire" as opposed to "derive", with the latter a seemingly lower threshold, as the former may imply a positive act, such as assignment, or at least some underlying willful means of acquisition

Natural person?

As mentioned previously, the South African Patents Act does not define an inventor. Furthermore, the South African Interpretation Act defines a "person" as not being limited to natural persons and can include juristic entities, such as a company or body corporate, and even some non-juristic entities such as a divisional council, municipal council, village management board and body of persons unincorporated.

The use of "him" in Section 27 seemingly implies the inventor must be a natural person. The South African Patents Act does make reference to "him" and "his" elsewhere in the Act and in some instances will use it to describe an applicant, patentee or third party (see sections 26, 41, 49, 67, 70 and 80), all of which can also mean a juristic person, and thus it cannot conclusively be said that the use of "him" in Section 27 unambiguously implies the inventor is a natural person.

Acquire?

"Acquire" is not defined in the South African Patent Act. The legislature has given some guidance in The Agricultural Pests Act 36 of 1983 which refers to "controlled goods" as including, amongst other things, a plant or exotic animal. This Act goes on to define "acquired goods" as being those descended from an owner or person in possession or in charge of "controlled goods" which includes being produced or acquired through such controlled goods. This seems to indicate that the legislature is in favour of a broad definition of the term "acquire" which could include acquisitive ownership of the product of a thing through being in possession or control of said thing, by operation of law. This could support a similar argument put forward in the Australian Federal Court which extended the common law principles of acquisition of ownership to AI-derived inventions.

There is some debate as to whether the above common law principle of acquisition of ownership by operation of law, which is traditionally related to corporeal, moveable property should be extended to incorporeal, intellectual property, with the argument being that a patent differs as it is a statutorily-derived form of property. It is possible, however, that this conflates the creation and ownership of an invention with the limited monopoly provided by statute over a patent related to said invention. Consider that at a rudimentary level, inventions are a trade secret at the time of creation and could remain as such if an application for a patent is not subsequently filed. Trade secrets are not typically governed by legislation, and thus often common law principles will then apply to trade secrets, as a form of incorporeal property. As such, it is arguable that common law principles can, and perhaps should apply at the creation and acquisition of ownership in an invention, as it is unrelated to the statutory application for registration of a patent related to said invention.

Conclusion

Importantly, South African patent law does not currently conduct substantive examination, and thus the Registrar has not considered whether the granted South African Patent satisfies the other substantive requirements, such as novelty and inventiveness of a valid patent. The Registrar may, however, have pronounced on the validity of asserting an AI as inventor in South African law.

As the debate rages on across the globe, it is the writer's observation that the above legal arguments, appear to be supported by a minority of the legal profession, often further delineated across generational divides. This is in the writer's opinion perhaps more indicative of a profession naturally adverse to change and acutely aware of the separation of powers afforded to different branches of government. In the Registrar accepting the South African Patent, presumably through applying some, if not all the above reasoning, it is perhaps an indication that the executive branch is willing to accept that the fast-changing realities of technology can be adequately encompassed in our existing legal framework. That is until AI obtains sentience, at which point the machines will invariably decide our way forward themselves, hopefully with mercy.

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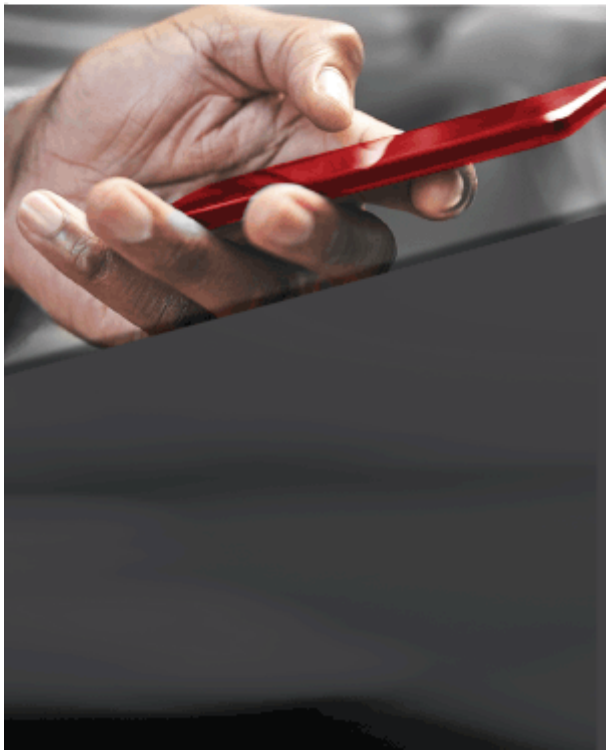

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