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Innovation and IPR Protection

Outlook of IP Rights for Emerging Technologies

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1. Outlook of Protection for AI Inventions in Korea

○ Concept of AI Invention

- ✔ An “invention” invented by artificial intelligence (“AI Invention”)
- ✔ Patentability Issues:
 - Does AI Invention meet the definition of “invention” and “invention patentable”?
 - Can AI be an “inventor”?
 - What are the rights of the owner of the AI to the AI Invention?

1. Outlook of Protection for AI Inventions in Korea

○ Does AI Invention meet the definition of “invention”?

Korean Patent Act

Section 2, Paragraph 1 : “The term ‘invention’ means the highly advanced creation of a **technical idea** utilizing the laws of nature.”

- No limitation on “who” can create a technical idea.

○ Does AI Invention meet the definition of “invention patentable”?

Korean Patent Act

Section 29, Paragraph 1 : “An **invention** having industrial applicability, other than the following, **is patentable**.”

- Patentable does not depend on who made the invention.

1. Outlook of Protection for AI Inventions in Korea

○ Comparison of Other Definitions

U.S. Patent Act

- **35 U.S.C. § 100(a)** : "The term 'invention' means **invention** or **discovery**."
- **35 U.S.C. § 100(f)** : "The term 'inventor' means the **individual** or, if a joint invention, the **individuals** collectively **who** invented or discovered the subject matter of the invention."
- **35 U.S. Code § 101** : "**Whoever** invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may **obtain a patent therefor...**"

1. Outlook of Protection for AI Inventions in Korea

○ Can AI be an “Inventor”?

- ✓ U.S. patent law is clear that an “inventor” has to be a human being (i.e., “individual”).

Recent Decision

Fed. Circ. Rules AI Can't Be Named Inventor On Patents

By **Ryan Davis**

Law360 (August 5, 2022, 11:11 AM EDT) -- The Federal Circuit on Friday rejected a researcher's bid to name an artificial intelligence machine he created as an inventor on two patents, ruling that the Patent Act is unambiguous that only human beings qualify as inventors.

The precedential ruling by a three-judge panel was the latest in a string of decisions by courts and patent offices around the world that have held that Stephen Thaler's AI system, known as DABUS, cannot be listed as the inventor of a light beacon and a beverage container that Thaler says it created.

➤ *Thaler v. Vidal*, No. 21-2347 (Fed. Cir. 2022).

1. Outlook of Protection for AI Inventions in Korea

○ Can AI be an “Inventor”? (cont.)

- ✓ Korean patent law, however, is less clear about who can be an “inventor”.
 - Patentability is not dependent on who the inventor is.
 - Definition of “invention” does not reference a subject (i.e., “who”).
 - Compare with Korean Copyright Law:

Korean Copyright Act

- **Article 2, Paragraph 1** : The term “work” means a creative production that expresses **human** thoughts and emotions.
- **Article 2, Paragraph 2** : The term “author” means a **person** who creates a work.

1. Outlook of Protection for AI Inventions in Korea

○ Can AI Invention be patented?

- ✔ While Korean patent law is not clear on inventorship, it is relatively clear on patentability.
 - There is no definition of “inventor”.
 - As long as the invention meets novelty, inventive step, and industrial applicability, it is patentable.
- ✔ Compare to U.S. patent law:
 - Patent is granted “to” an individual “for” his/her invention.
 - Patentability is not disjunctive between inventor and invention.

1. Outlook of Protection for AI Inventions in Korea

○ Then, who owns the patent to an AI Invention?

Korean Patent Act

Section 33, Paragraph 1 : "Any person who **makes a new invention** or **his successor** shall be entitled to obtain a patent in accordance with this Act: Provided, That employees of the Korean Intellectual Property Office and the Intellectual Property Tribunal shall not obtain patents during their employment at the Office except in the case of inheritance or bequest."

- Under the Korean Patent Act, only a person who "makes" the invention or his/her "successor" is entitled to obtain a patent.
- There is a conflict in the law – no limitation on "patentability" of AI Invention but only a "person" who makes, or is a successor of, the invention can obtain the patent.

1. Outlook of Protection for AI Inventions in Korea

○ Then, who owns the patent to an AI Invention? (cont.)

☑ Owner of AI : Pros & Cons under Section 33 of the Patent Act

Pros

- Section 33 of the Patent Act is to confer ownership of a patent to someone.
- With AI Inventions, one who owns the AI is the natural owner of AI's creations.
- If owner of the AI applies and obtains a patent for the AI Invention, that patent cannot be invalidated under Korean patent law.



Cons

- Owner of the AI did not "make" the invention or is a "successor" of the AI.
- Even if an AI Invention is patentable, there is no one to file for a patent and therefore is an invention that cannot obtain a patent.

1. Outlook of Protection for AI Inventions in Korea

○ Conflicting Opinions on Patentability of AI Inventions in Korea

Positive Opinion

- No requirement that only human being can invent.
- AI Invention should be protected if it meets all the requirements for patent rights.

Negative Opinion

- "Creation" can only be done by a human being.
- Rights cannot be conferred on AI.

2. NFT and Copyright Implications

○ What is an “NFT”?

- ✔ Non-fungible Tokens (NFT) is the opposite of cryptocurrency, such as Bitcoin (which is fungible).
 - NFTs hold their unique identify and value.
 - This uniqueness and digital scarcity drives NFTs.
- ✔ Common misunderstandings of NFT
 - Content of the NFT (e.g., digital art) is not actually recorded on the blockchain but stored somewhere on the web.
 - NFT will have a weblink recorded on the blockchain pointing to the content of the NFT.
 - NFT also has “metadata” (e.g., year of creation, dimensions, edition quantity, etc.) of the content.

2. NFT and Copyright Implications

○ How does NFT work?

✔ NFT is “minted”.

- Information of the content (e.g., weblink, metadata, identity of the minting person, minting time stamp, etc.) are recorded in the NFT.

✔ The Blockchain

- Every time the NFT is traded, the key details of the transaction (e.g., seller, buyer, transaction date, etc.) is recorded on the blockchain.
- Because transactions on the blockchain cannot be altered or otherwise tampered with, the NFT qualifies as certificates of authenticity.

2. NFT and Copyright Implications

○ Ownership v. Copyright

✓ Ownership of the NFT

- Purchase of an NFT transfers **ownership** of the underlying work but not necessarily the **copyright** to the work.



Physical Realm



Digital Realm

2. NFT and Copyright Implications

○ NFT Copyright Landmines

- ✔ Minting of existing works
 - Risk of counterfeiting
- ✔ Exhibition of NFTs
 - “Exhibition” under Copyright Act is limited to display of **tangible** works.
 - Display of NFTs under the Copyright Act would be classified as “public performance” requiring permission.
- ✔ Resale royalty rights (“*Droit de Suite*”)
 - While Korea is a party to the Berne Convention, adoption of resale royalty rights were left to member counties.
 - Currently, Korea has not yet adopted the resale royalty rights.
 - Code as part of smart contract upon minting.

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Speaker Profile



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○ Profile

- Mr. Choi has advised and represented various U.S. and Korean companies, both big and small, with respect to intellectual property disputes filed before the U.S. district courts, U.S. International Trade Commission, and the U.S. Patent Trials and Appeals Board.

○ Professional Career

- 2019-Present, Shin & Kim LLC
- 2018-2019, Quinn Emanuel Urquhart & Sullivan, LLP, Associate, Washington D.C.
- 2015-2018, Baker McKenzie, LLP, Of Counsel, Washington D.C.
- 2013-2015, Baker McKenzie, LLP, Special Counsel, Seoul, Korea
- 2013, Baker McKenzie, LLP, Legal Manager, Hong Kong
- 2008-2013, Samsung Electronics, Co. Ltd., Senior Counsel, Suwon, Korea
- 2005-2008, Morgan Lewis, Associate, Washington D.C.
- 1999-2005, U.S Patent & Trademark Office, Quality Assurance Specialist/Primary Patent Examiner, Alexandria, VA
- 1997-1999, Fishman Stewart, LLC, Patent Agent, Bloomfield Hills, MI/Washington D.C.
- 1992-1997, U.S Patent & Trademark Office, Patent Examiner, Arlington, VA

Thank You

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