Who (or what) is an “inventor” under patent law

WIPO – Getting the Innovation Ecosystem Ready for AI: An IP policy toolkit Webinar Launch

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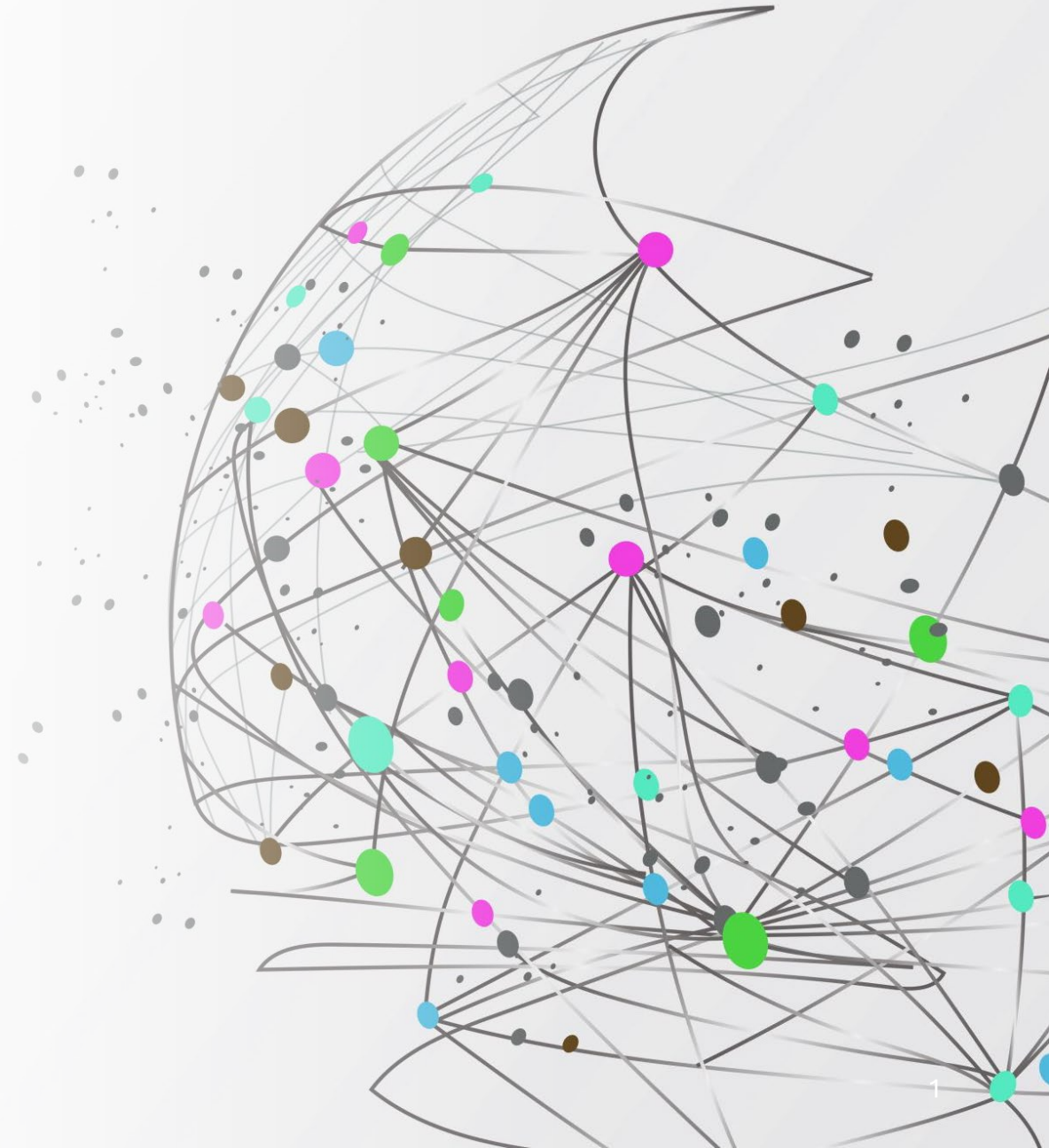

Outline, Section 3 in the policy toolkit

1. The “human inventor” requirement
2. Understanding “inventorship” through patent law
3. AI challenges to the inventor in patent law

Introduction: The “human inventor” requirement

- Technical advances in AI indicate a potential capacity to operate as an autonomous inventor
- The “inventor” requirement in patent law will need to respond to these advancing AI capabilities
- Understanding the “inventor” framework allows policymakers to establish conditions for AI-generated inventions and level set the IP innovation ecosystem

The inventor

- Patent laws globally require a patent to name an inventor.
  - Inventors are generally the only ones who can apply for a patent
- The “inventor” remains conceptually ambiguous in many national frameworks; these do not specify who the inventor is or how the inventor should be determined
  - National laws define “**inventor**” as:
    - The person who contributed to the claims (ie. USA)
    - The actual deviser of the invention (ie. UK)
    - Many others have have no explicit requirements

The **human** inventor

- Patent systems presume the “inventor” is a natural (**human**) person
- The inventor as human as its roots in long-standing cultural and legal traditions
- Invention is intrinsically tied to human ingenuity & creativity
- Historically, the inventor was the “true and first inventor” of new creations and “inventorship” was established only when the invention was publicly disclosed
  - An individual was not considered an inventor if they made an invention but did not disclose it.
  - Patent laws encouraged the disclosure of such invention to avoid inventors keeping them secret and out of the public domain
  - Patent rights were thus awarded for bringing an invention to life and for disclosing it to the public so that others could benefit.

The “human inventor” requirement

- Patent systems were established in the absence of alternative entities that could possess a “fire of genius” and capacity for innovation
- National patent laws therefore assume the inventor is **human**
- The inventor has **exclusive rights** to exploit and monopolize their inventions in exchange for a public disclosure
- The inventor concept is conceptually ambiguous in many national frameworks

Defining “inventorship” through patent case law

- “Inventor” remains conceptually ambiguous within national legal frameworks and generally carries an assumption that the inventor is human
- Themes & principles from caselaw on inventorship disputes help clarify the definition of “inventor” which is relevant to policymakers, ie **what is the sufficient contribution to allow an inventorship claim**

Understanding inventorship through patent disputes

- Considerations that arise during patent disputes provides a framework for who or what is an invention
- Guidance can be found generally in the following examples, and countries may take differing approaches, based on established doctrines:
  - Patent entitlement disputes
  - Disputes between co-inventors
  - Patent revocation proceedings
  - Employee inventorship compensation claims

Canada: global perspectives on inventorship

- The Canadian Supreme Court decided the best question to ask on inventorship is "**who** is responsible for the **inventive concept**?"
  - The basis for inventorship is thus tied to its **conception** such that a person is not an inventor if they only contribute in helping an invention to completion
- For example, a court ruled that merely verifying a drug's effectiveness, despite requiring significant skills, does not qualify one as a (co)-inventor

United States of America: global perspectives on inventorship

- US case law similarly defines inventorship as the inventor must “conceptualize” the idea
  - The “touchstone of inventorship” is “the formation **in the mind of the inventor**, of a definite and permanent idea of the complete and operative invention”
- This doctrine has barred non-human persons from being inventors
  - Corporations have been denied inventorship status as **people conceive, not companies**

People's Republic of China: global perspectives on inventorship

- The law says inventor is:
  - "**any person** who makes **creative contributions to the substantive features** of an invention-creation"
  - The 'substantive feature' requirement refers to "**key points** of design of invention-creation or key technical features, **reflecting technical differences** between invention-creation and **known achievements**"
- This excludes those "responsible **only** for organizational work, or who only offer facilities for making use of material and technical means, or who only take part in other auxiliary functions"
- Thus, in China, a human inventor must have contributed to features that distinguish the invention from existing patents and are non-obvious to a person skilled in the art

Japan: global perspectives on inventorship

- In Japan, to qualify as an inventor a person must be **creatively involved** and contribute to the technical **concept behind the invention**
- The case law has two methods to recognize inventors:
  1. Apply a two-step test that establishes
     a) who formulated the idea for an invention; and
     b) who turned the idea into a practical application
  2. Establish who contributed to the “key component” of the invention by
     a) Determining the characteristic part of the invention that is fundamental to the invention (ie. what distinguishes it from prior art?); and
     b) Considering the technical field of invention (ie. whether the invention produces a desired effect?)

Conclusion: defining “inventorship” through patent case law

- Inventorship is consistently tied to:
  - The creative or intelligent conception of the invention; or
  - An implicit or explicit contribution to its development
- Creative contribution beyond abstract ideas is a foundational principle for inventorship
- Inventorship does not need to be a conscious effort, the “inventive spark” can originate through sheer luck

AI challenges to the inventor in patent law

- Can and should an AI “invent” for the purposes of patent law?
  - The current patent system may be insufficient as AI challenges the very notion of inventorship
- Consideration should be given to the broader economic and social implications of AI and IP and the entire innovation ecosystem of IP

Thank you!

Stay in touch

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