

THE INVENTOR



Agenda

15:00 – 15:30 What is inventorship? (And does it matter?)

Peter Koefoed and Anna Löqvist, Inspicos P/S

15:30 – 16:00 Rights and duties from being an inventor – a Danish perspective

Jens H. Schovsbo, LL.D., Ph.D, Professor, University of Copenhagen

16:00 – 16:10 Break

16:10 – 16:40 The U.S. – what you need to know

Logan Buck, Partner at Womble Bond Dickinson LLP

16:40 – 17:00 Inventorship in practice (*Peter, Anna, Logan*)

17:00 - Mingle and snacks

What is inventorship?

And does it matter?



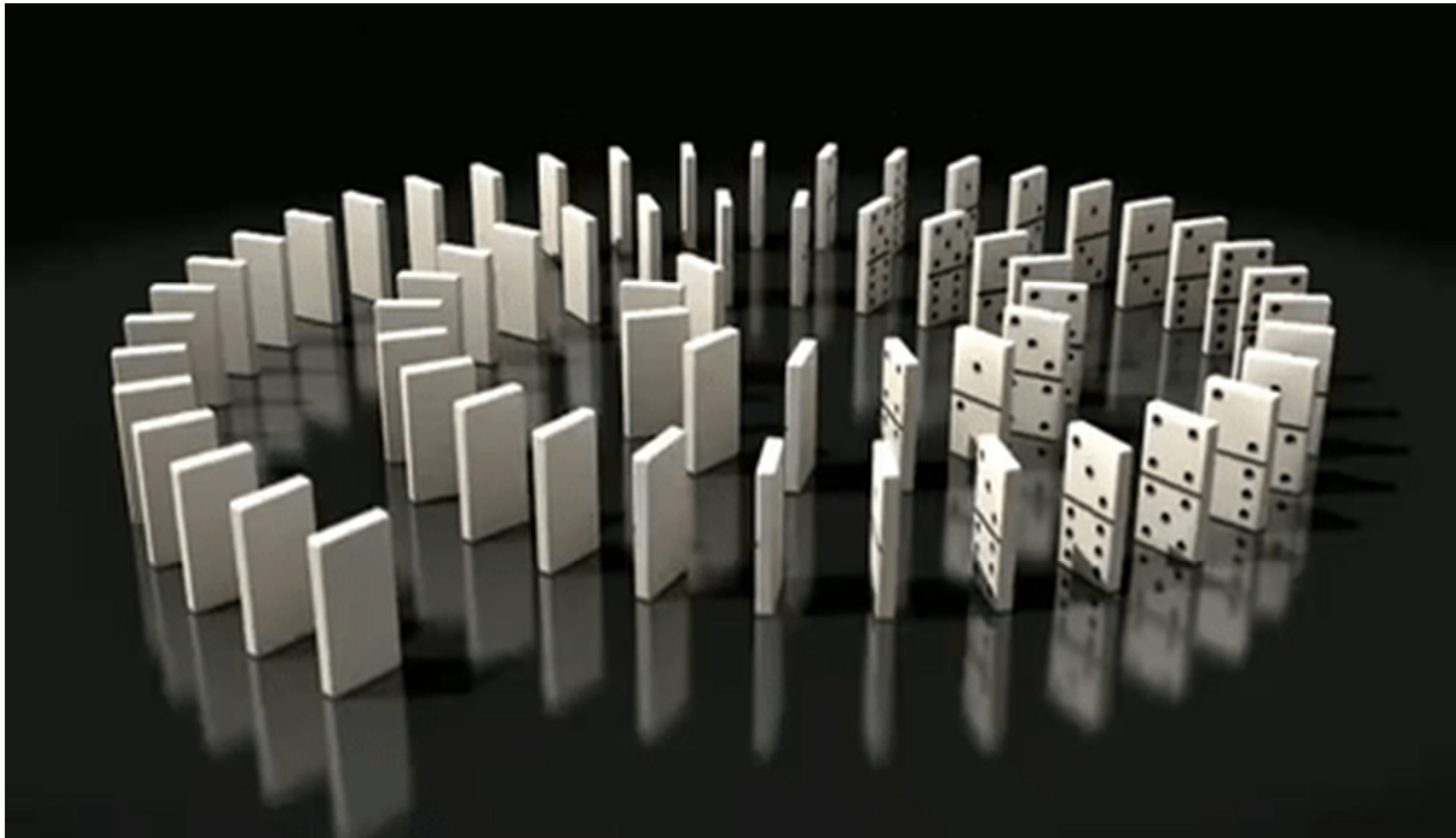
Inventors rights and obligations (and their consequences)

- Requirement to designate/name inventors
- Legal determination
 - No 'picking and choosing'
 - No problem if only one person is involved
(= the inventor)
- *Correct inventors → correct applicants*
- *Correct inventors → correct owners*

Does inventorship matter? (I)

- Oh yes... *in particular* in relation to transfer of rights
- Incorrect/incomplete inventorship can cause numerous downstream problems for applicant
 - M&A involving patent rights made impossible
 - Licensing and transfer of patent rights made impossible
 - Ownership disputes - Interruption of EP proceedings
 - Enforcement of patent rights made impossible
 - Remuneration agreements flawed
 - Foreign filing license problems
 - Associated agreements null and void

Does inventorship matter? (I)



Inventorship and applicantship

- Non-entitled applicant
 - Does the 'non-inventor' assignee have the right to file?
 - Reverse problem: Applicant with "right" transferred from a 'non-inventor'?
- Problem sources: collaborations and out-sourcing
 - Has the subcontractor or collaboration partner obtained rights from "their" inventors?
 - Is an omitted inventor under an obligation to assign to a 3rd party?

Inventors *as* applicants

- Particular dangers if not all (inventor) applicant(s) in priority application are also applicants in the later *priority-claiming* (EP) application
 - Transfer of rights *must be in place* prior to filing of priority claiming EP application
 - Preferably by written, unambiguous agreement

Inventors as applicants: A cautionary tale

- EP Patent 2 771 468 (Broad Institute etc.) for CRISPR/CAS9 technology
- Revoked in opposition; appeal T 0844/18 is pending

- 12 U.S. priority applications with the inventors as applicants (pre-AIA)
- Mr. Maraffini at Rockefeller University among them on the earliest ones
- PCT application filed with Broad Institute, MIT and 4 inventors - none of which were Maraffini - as applicants
- Established EPO practice: a valid priority claim requires that all applicants of the priority application, or their successor in title (e.g., employer), are among the applicants of the later application
- The Broad Institute argued – to no avail - that Marraffini did not have the right to the invention claimed in the PCT application
- Priority to the earliest U.S. provisional application was lost
- Intervening prior art had published during the priority year → patent revoked for lack of novelty

Does inventorship matter in itself? (I)

- AIPPI Question 244* (43 countries):
 - What are the possible consequences of an error in the stated inventorship on a patent application / patent in your country?
 - Does it matter whether the error was intentional or unintentional?

* AIPPI Q244 (2015): <https://aippi.org/committee-publications/?committee-id=27501> 10

Does inventorship matter in itself? (II)

- 38%: A patent application or issued patent may be refused, revoked or transferred upon action by *the true inventor*
- In a few countries, a patent application can be refused (14%) or a patent revoked (12%) upon action by *a 3rd party*
- Not decisive whether the error is intentional or unintentional
 - Unless misappropriation or fraud

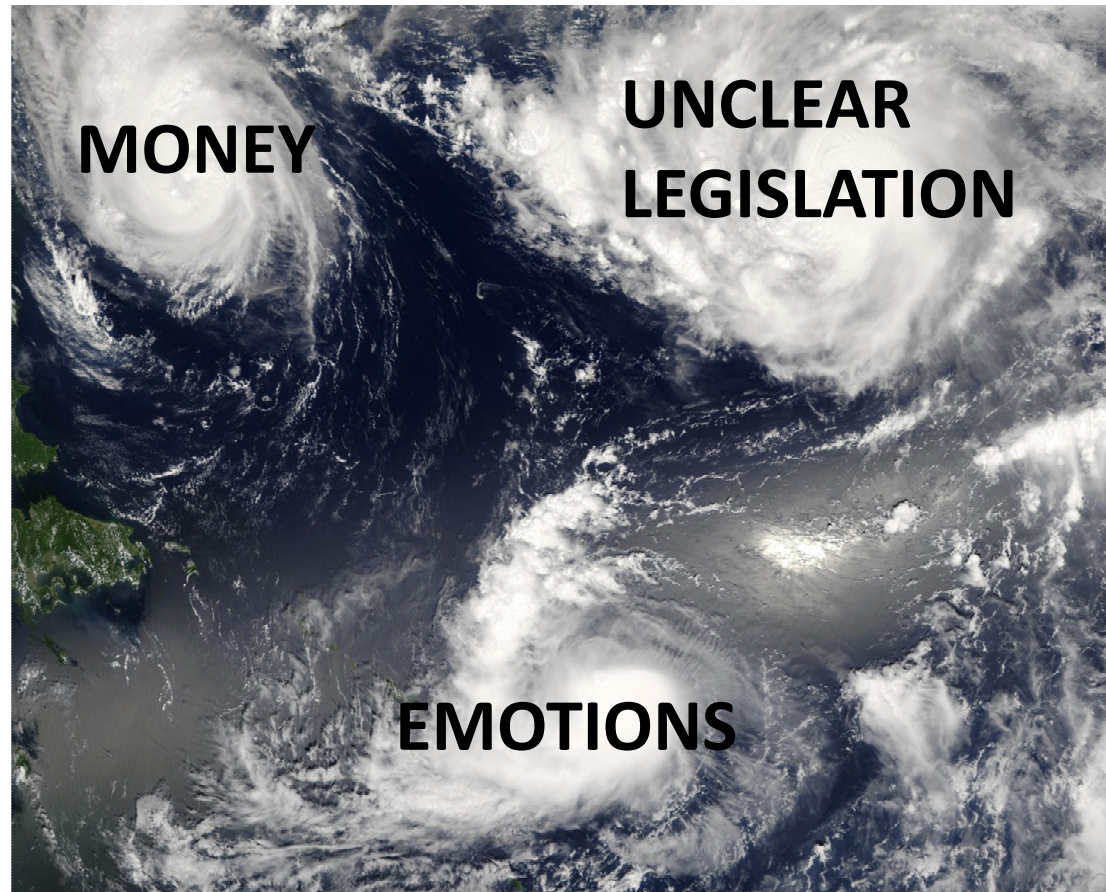
Correcting the inventor designation

- AIPPI Q244 again:
 - In your country, can the inventorship of a patent application be corrected after the filing date?
 - Yes: 42/43 countries (No: Greece)
 - Court action may be needed to correct inventorship after grant
- PCT? Simply record the change (Rule 92bis)
- EPO? *Removing* an inventor requires his/her consent (R 21(1) EPC)





What defines an inventor?

- No definition in international agreements (PCT, EPC, TRIPS, Paris Convention)
- Statutory definitions in national laws are rare
 - UK ("*the actual deviser*"; s. 7(3) PA 1977)
 - China ("*creative contributions to the substantive features of an invention*"; Rule 13)
 - Russia ("*creative contribution*"; Art. 1347-1348 CC)
- *No defined universal standard!*

The Perfect Storm



National case law / practice*

	An inventor	<u>Not</u> an inventor
	<i><u>Intellectual, autonomous and creative</u> (but not necessarily inventive) contribution to the <u>solution of the problem</u></i>	<i>Insignificant contribution <u>Provides tools</u> (e.g. employer) Only <u>follows instructions</u></i>
	<i>Whoever <u>conceives</u> and makes the invention. An invention consists of means for achieving a result. The inventor is the person who <u>discovers the means</u></i>	<i>Expresses the desire for a result to be achieved but <u>leaves for others to find the means</u></i>
	<i>The actual <u>deviser</u> of the invention. Whoever contributes to the <u>inventive concept</u></i>	<i>Someone who merely uses <u>common general knowledge</u></i>
	<i><u>Independently and intellectually</u> contributed to the <u>finalized invention</u> ... <u>innovative technical problem-solving</u></i>	<i>Assistance in research process which lacks independence <u>Performing routine tasks</u></i>

* AIPPI Q244 (2015): <https://aippi.org/committee-publications/?committee-id=27501> 15

What *should* define a (co-)inventor then? (I)

AIPPI Resolution Q244:
Someone who made an
intellectual
contribution to the
inventive concept

What *should* define a (co-)inventor then? (II)

Someone who made an intellectual contribution to the inventive concept

- Intellectual
 - Not just following someone else's instructions
 - Not just being the sponsor or head of the research group
- Contribution
 - No real consensus (Not insignificant? Not merely common general knowledge? Problem-solving? Creative? Innovative?)
- Inventive concept
 - "Determined on the basis of the entire content of a patent application or patent, including the description, claims and drawings"
- BUT: So far still a question for national law / case law

Which country matters? (I)

- For inventorship determination?
 - Different national definitions
- For rights and obligations?
 - The one in which the invention was made
 - First filing requirement or secrecy review? (e.g. US, China, Spain)
 - The one in which an inventor is a citizen
 - First filing requirement? (Greece...)
- Source of problems
 - Multinational inventions

Which country matters?(II)

- Ultimately: The one in which the patent is filed/issued
 - PCT: Possible to designate different inventors for different states where the national laws are not the same (PCT Rule 4.6(c))
- European (EP) patents:
 - Since inventorship determination ultimately decides ownership status, the Protocol of Recognition is of relevance
 - The inventorship determination can be a crucial part of a dispute over ownership
 - Art 60 EPC regulates ownership of employee inventions

EP: Entitlement Proceedings

- When lawsuit concerning ownership to a European patent application is brought before a court having jurisdiction and competence under the Protocol of Recognition, the claimant can request Stay of Proceedings under Rule 14 EPC
 - Many scenarios: lawsuit filed by an omitted inventor or by third-party successor in title of such an omitted inventor
- The omitted inventor can file for a declaratory judgment of inventorship
 - If successful, Rule 20 EPC enters into force and the inventor has to be mentioned
- Ownership suit can be a consequence of the declaratory judgment...
- Ultimate risk: Provisions of Art. 61 EPC come into effect
 - the true owner decides the fate of (parts of) application

Extra slides



Article 60 EPC

Article 60 - Right to a European patent

(1) The right to a European patent shall belong to the inventor or his successor in title. If the inventor is an employee, the right to a European patent shall be determined in accordance with the law of the State in which the employee is mainly employed; if the State in which the employee is mainly employed cannot be determined, the law to be applied shall be that of the State in which the employer has the place of business to which the employee is attached.

(2) If two or more persons have made an invention independently of each other, the right to a European patent therefor shall belong to the person whose European patent application has the earliest date of filing, provided that this first application has been published.

(3) In proceedings before the European Patent Office, the applicant shall be deemed to be entitled to exercise the right to a European patent.

Protocol on Recognition

...

Article 2

Subject to Articles 4 and 5, if an applicant for a European patent has his residence or principal place of business within one of the Contracting States, proceedings shall be brought against him in the courts of that Contracting State.

Article 3

Subject to Articles 4 and 5, if an applicant for a European patent has his residence or principal place of business outside the Contracting States, and if the party claiming the right to the grant of the European patent has his residence or principal place of business within one of the Contracting States, the courts of the latter State shall have exclusive jurisdiction.

Protocol on Recognition

Article 4

Subject to Article 5, if the subject-matter of a European patent application is the invention of an employee, the courts of the Contracting State, if any, whose law determines the right to the European patent pursuant to Article 60, paragraph 1, second sentence, of the Convention, shall have exclusive jurisdiction over proceedings between the employee and the employer.

Article 5

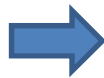
(1) If the parties to a dispute concerning the right to the grant of a European patent have concluded an agreement, either in writing or verbally with written confirmation, to the effect that a court or the courts of a particular Contracting State shall decide on such a dispute, the court or courts of that State shall have exclusive jurisdiction.

(2) However, if the parties are an employee and his employer, paragraph 1 shall only apply in so far as the national law governing the contract of employment allows the agreement in question.

The invention disclosure

- Standard forms
 - Typically focused on the invention
 - Inventor name(s)
 - Info on collaborations and agreements
- *Consider adding a section where each person describes their contribution*
- *"Contributor name(s)" instead of "Inventor name(s)"?*
- Sanity check #1: Potential inventorship (and ownership) issues?

INVENTION
DISCLOSURE



The assignment

- What is assigned is the right to the invention
 - This entails the related patents and applications
- *Optimally* assigned before or on the date of filing of a patent application
- Later assignments may confirm or expand the first
 - Typically when new aspects are added to a later application
- Remember:
 - Assignee should *accept* transfer of rights, otherwise the assignment may be defective → ownership issue!
 - Assignments for applications to be filed in U.S. must have active/present assignment language (“I hereby assign ...”)



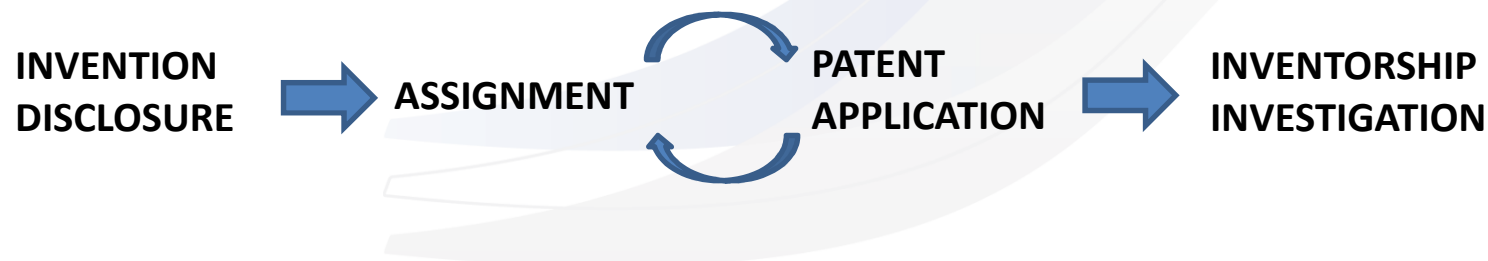
The patent application

- Designating inventors on the priority application?
- Designating inventors on the priority-claiming application
 - *Before* the 12-month deadline: Sanity check #2
 - Has the invention / inventorship changed?
 - Are all inventor assignments in place?
 - 16-mo deadline



Inventorship investigation (I)

- Usually instigated
 - when a collaborator claims co-inventorship / co-ownership
 - when an employee believes they ought to have been named a co-inventor
 - as part of a due diligence
 - at the beginning of litigation



Inventorship investigation (II)

- Typical procedure
 - Define the invention (U.S.: claim construction)
 - Study the history of the invention
 - Study any collaboration agreements
 - Ask for corroborating evidence (documents; lab notebooks; correspondence between involved parties at the time of the invention)
 - Conduct interviews, issue questionnaires
 - Assess link between data/knowledge and the invention (use “skilled person” standard?)
 - Were any problems overcome?



Inventorship investigation (III)

- Be prepared to handle undesirable outcome
- Obtain independent statements from the parties
- Make sure the input is unbiased (do not share information from one party with another)
- Avoid *ex post facto* traps
- In some situations, it may be better to use a 'neutral' patent counsel for the investigation



Non-human inventors

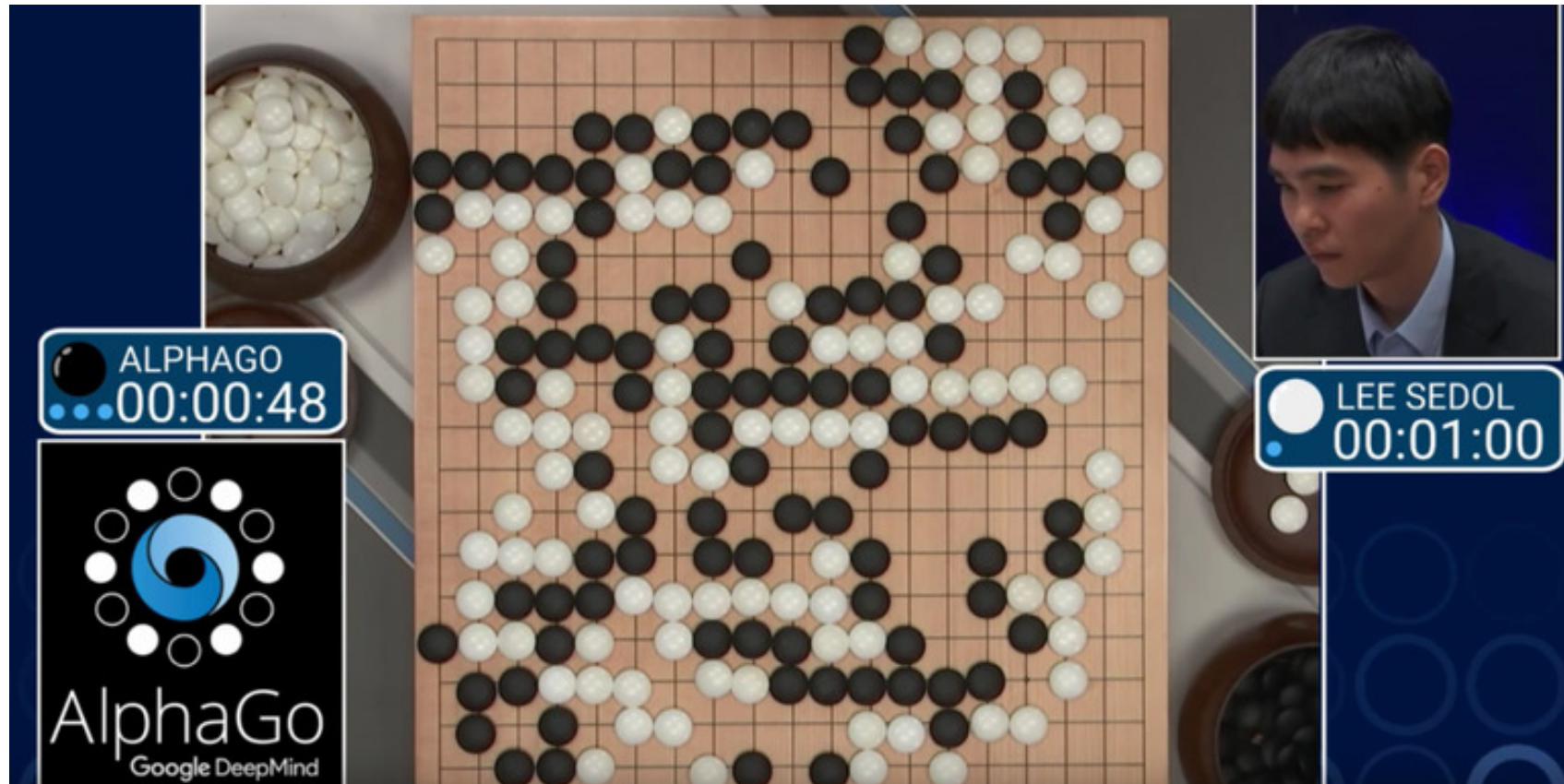
The use of Artificial Intelligence (AI)



AI - The "Artificial Inventor"

- How do we handle ownership of rights to an inventive contribution (or a full invention) made entirely by artificial intelligence (AI)?
- The link between the inventor and invention is clear, but currently, an AI does not appear to qualify as an inventor
 - Follows indirectly from the right and obligations of an inventor and the fact that IP is treated as other types of property

Far fetched question?



AI - The "Artificial Inventor" (II)

- Today, many inventions are already made with the assistance of AI...
- If a neural network can today beat the best human player in a "game of intuition" (go), we are very few steps from neural networks coming up with novel, non-obvious, technical solutions to a technical problems.
 - Patentable inventions
 - Which are only defined in terms of their technical nature and their relation to the prior art
- The neural network will arguably be an inventor
- The EPO has created rules for *patenting* of AI as, but since determination of inventorship is made on a national level, we face some interesting scenarios derived from inventorship considerations

AI - The "Artificial Inventor" (III)

- Scenarios
 - No named inventor but only an assignee/owner
 - the creator(?) or owner(?) of the AI..
 - Acknowledgment of the AI as inventor coupled with automatic transfer of rights
 - Acknowledgment of AI as an alternative to current natural and legal persons
 - Realistic???
 - The owner(?) or creator(?) of the AI is named inventor by legal fiction
 - Close to today's reality