A contribution to the topic of AI and Inventorship from a group of interested Member States.

Assessing the flexibility of national regimes governing joint inventorship to accommodate the involvement of AI in the inventive process

1. Background and Aims of This Work

The AI Breakfast Club Technical Experts Group (TEG) Workstream 3 examined jurisdictional approaches to joint inventorship and accommodations to joint inventorship including artificial intelligence (AI). This paper focuses on jurisdictional practices around identifying contributions to the inventive process, and flexibilities to adjust inventorship. It considers the legal status of an inventor, the assessment of joint inventorship, examination practices, relevant evidence, dispute-resolution mechanisms and procedures for correcting inventor information.

This paper does not assess the merits of the different national approaches or propose harmonisation or policy reform. Instead, this paper aims to present a descriptive comparison of responses and to identify areas of commonality.

To inform this work, participating TEG members were asked to provide information on the following questions:

- Whether the jurisdiction applies a strict human-inventor model, or permits flexibility in AI inventorship.
- How joint inventorship is assessed, including any legal criteria or tests.
- Whether inventorship is substantively examined at filing, during prosecution, or principally considered when contested.
- What evidence may establish contribution to an invention.
- What administrative, judicial or other mechanisms resolve inventorship disputes, including applicable burdens or standards of proof.
- How inventors may be added, removed, or corrected after initial filing.

2. Participating Jurisdictions

Responses were received from the following jurisdictions:

- Australia
- Morocco

- Chile
- Germany
- Israel
- Japan
- Singapore
- Switzerland
- United Arab Emirates (UAE)
- United Kingdom (UK)

3. Summary of Findings

3.1. Inventors must be human

All responding jurisdictions agree that an inventor of a patent must be a natural person and that AI cannot be named as an inventor. The legal basis for this varies across jurisdictions – from statutory interpretation, domestic case law, or personal rights associated with being an inventor.

Australia, Germany, Israel, Japan, Singapore, Switzerland and the UK have all reported the *Thaler* (or DABUS) case as a determination of the human-as-inventor model.

Chile's legal instruments do not expressly state that an inventor must be a natural person or that AI cannot be an inventor. However, requirements to report an inventor's name, nationality, and domicile effectively require the inventor to be a natural person.

Morocco's legislation does not expressly address AI inventorship but grants inventors legal rights, including the right to object to being named in a patent, supporting the interpretation that an inventor must be a natural person.

Existing frameworks appear to be flexible enough to accommodate AI assisting inventorship while maintaining the requirement to list a human inventor. The use of AI as a tool does not necessarily prevent patent protection, the key issue is whether a human contribution of the kind required by the relevant national law can be identified. Jurisdictions such as Australia, Germany, Singapore, Switzerland, the UAE and the UK all reported a focus on the significance, creativity or substantive nature of a human's contribution rather than the tools used to arrive at the invention. The resulting commonality between responding jurisdictions is a human-centred model of inventorship that can accommodate the use of AI as a tool.

3.2. Joint Inventorship

Across responding jurisdictions, joint inventorship generally requires a meaningful contribution to the substance or conception of the invention, rather than routine assistance, or providing resources for the purposes thereof. However, the degree of contribution required for inventorship varies across jurisdictions.

For joint inventorship, Australia, Israel, Singapore, the UAE and the UK consider the inventive concept and the contribution made to it by each individual. Australia, Chile, Israel, Germany,

Morocco, Switzerland and the UK do not have statutory tests for determining joint inventorship in their jurisdictions.

3.3. Examination of Inventorship

Across responding jurisdictions, applicants are formally required to name an inventor, although the basis for inventorship is not routinely examined as part of the ordinary patent examination process.

Substantive consideration of inventorship generally only arises when the designation of inventor is contested or an entitlement dispute is commenced. Some jurisdictions refer principally to courts or judicial proceedings (Chile, Japan, Morocco, Switzerland) and others to patent offices (Australia, Singapore, UAE, UK) to settle the dispute.

Australia reports that lack of entitlement is a ground available during examination, although an objection will lack an evidentiary basis unless the notice of entitlement is prima facie deficient (where no inventor is listed, or the named inventor is not a natural person).

3.4. Evidence of Inventorship

The majority of responding jurisdictions do not prescribe mandatory forms of evidence to demonstrate a contribution to the inventive concept or to establish inventorship and instead present a non-exhaustive list of options for evidence that may be accepted.

Australia, Israel, Singapore, Switzerland, Japan, the UAE and the UK provide examples of tangible evidence such as laboratory or research notebooks, invention disclosures, technical reports, design materials, drawings, project proposals, experimental data, correspondence, emails, and witness evidence. Employment and contractual records may also be relevant.

An example from Israel's case law includes behavioural actions as evidence, such as participation in meetings with patent attorneys, involvement in prior art searches, "acting as an interested party", and the absence of confidentiality agreements suggesting a partnership.

Morocco's employee-invention provisions require information about the circumstances in which an invention was made, including directions received, company experience used and collaborations obtained, but the response does not describe these requirements as a general or exhaustive inventorship test.

Uniquely among respondents, Switzerland reported that documenting human contributions to the inventive process is becoming increasingly important as AI plays a greater role in invention. Relevant human contributions may include the selection of the AI model and training, curation of input data, prompt design, evaluation and recognition of the output.

Overall, jurisdictions appear to take a non-prescriptive approach to evidence, with a common emphasis on demonstrating contribution to the inventive concept.

3.5. Mechanisms to resolve inventorship disputes

While some responding jurisdictions rely principally on courts to determine inventorship and entitlement questions, others use a combination of both administrative and judicial mechanisms to address contested inventorship.

Chile, Germany, Japan and Morocco indicated that questions of inventorship and entitlement are typically resolved through court proceedings rather than routine patent-office examination. Australia, Israel, Singapore, Switzerland and the UAE reported that inventorship or entitlement issues may be considered by their patent offices or other administrative bodies, while also permitting subsequent judicial review or court proceedings where necessary.

The UK response identifies statutory mechanisms under the UK Patents Act for challenging entitlement but does not specify whether these are administrative or judicial in nature.

3.6. Adding or amending listed inventors post-filing

The responding jurisdictions all provide mechanisms to add or amend listed inventors post-filing, although these differed in timing and consent requirements. Further, some jurisdictions permit inventors to be added, removed or corrected, while others provide more general procedures for correcting errors or addressing entitlement.

Japan and Morocco allow inventor information to only be corrected before grant, registration or another final determination of the patent application. Several jurisdictions, including Australia, Singapore, Switzerland, the UAE and the UK, allow correction after grant as well.

Australia, Israel and Switzerland permit correction of information that is recorded in an official register.

Applicants in both Switzerland and the UAE can request to correct, add, or remove an inventor given written consent from wrongly designated inventors, including after grant of the patent. If the written consent cannot be obtained, an enforceable court decision to amend the inventorship must be obtained, before the patent office will make the change. Similarly, Japan, requires written declarations from all inventors added or removed through an amendment.

Israel and Singapore have evidentiary requirements to correct inventorship post-filing. Singapore reported that, once the timeframe for filing a new statement of inventorship had expired, supporting documents must be provided to demonstrate that an error occurred and explain how it arose.

4. Conclusion

The responses from participating TEG members indicate a consistent position that AI cannot be named as an inventor, with the nature and extent of human contribution being a central consideration in determining inventorship.

Responding jurisdictions do not prescribe exclusive categories of evidence of inventive contribution but recognise the importance of records documenting such contributions in the event of a dispute. The responses suggest that existing inventorship frameworks already provide sufficient flexibility to recognise the role of AI in the inventive process. In particular, national regimes appear capable of assessing substantial human contributions while recognising AI's growing role as a tool to support innovation.

There are differences in evidentiary standards, dispute resolution mechanisms and procedures for correcting listed inventors of the responding jurisdictions.

Should the TEG wish to look at other issues around inventorship and AI in a future workstream, further consideration of how existing human-centred inventorship principles apply to AI-assisted invention, rather than developing AI-specific inventorship frameworks, may be an appropriate focus.