



QUESTIONNAIRE ON ARTIFICIAL INTELLIGENCE POLICIES

BACKGROUND

Artificial Intelligence (AI) has become a strategic priority for many governments across the globe. In addition, data are a critical component of AI since AI applications rely upon machine learning techniques that use data for training and validation.

As well as AI capacity building, education and regulatory measures, there is a question whether the established intellectual property (IP) system should be modified to in response to AI developments. WIPO has been requested by Member States to provide a forum for discussion of AI and IP Policy, which also includes data. WIPO has therefore started an open conversation on AI/data and IP, including a draft issues paper¹, and is planning to continue the conversation in Geneva on May 11-12, 2020.

REQUEST FOR INFORMATION

In order to aid this discussion, WIPO is seeking to collate country/regional information regarding strategies, frameworks and legislation of relevance to AI/data and IP.

This questionnaire aims at taking stock of the different national and regional landscapes of legislation and instruments applicable to AI/data and IP.

A summary of the answers provided in this questionnaire will be used to create a publically available resource to facilitate information sharing. Personal information provided, such as contact details of individual persons, will not be made publically available but may be used solely by the Division of AI Policy to share the results of the questionnaire and to gather further information in the future.

Please send the completed questionnaire, including null responses, to ai2ip@wipo.int.

¹ https://www.wipo.int/about-ip/en/artificial_intelligence/call_for_comments/index.html

NATIONAL AI STRATEGIES

1. Does your country have a national/regional AI strategy in place?

- No
 Yes
 Draft/proposed only
 Do not know

2. If so, does the AI strategy identified in Q1 consider IP?

- No
 Yes
 Draft/proposed only
 Do not know

3. Please provide details of the AI strategy identified in Q1 (name, short description, year, URL, responsible organization name and, if relevant, its relation to IP).

Name: National AI Strategy (NAIS).

Year: Issued in November 2019

Responsible organisation: National AI Office (within the Smart National and Digital Government Office of the Prime Minister's Office)

Description: The NAIS maps out how Singapore will develop and use AI to transform the economy and improve the lives of its citizens. The efforts by the Intellectual Property Office of Singapore (IPOS) to provide IP-related programmes and solutions to business for their AI solutions are part of the NAIS. These include IP strategy services by IPOS's enterprise engagement arm; the Accelerated Initiative for Artificial Intelligence, a patent acceleration programme that grants an AI patent in 6 months; and reviews of our IP laws to ensure they support the development and commercialisation of AI technologies.

URL: <https://www.smartnation.sg/why-Smart-Nation/NationalAIStrategy>

AI AND IP LEGISLATIVE MEASURES

4. Does your country have any measures/provisions in its IP framework that were specifically enacted for AI (an example would be a modification of copyright law for computer generated works)?

- No
 Yes
 Draft/proposed only
 Do not know

5. Please provide details of the relevant legislative measures/provisions identified in Q4 (name, section, short description, year and URL).

Name: Singapore Copyright Review Report, Proposal 8: Facilitating uses of Works for Text and Data Mining.

Year: Issued in January 2019

Description: To catalyse innovation and provide certainty, it is proposed to create an exception for the copyright of copyright-protected works solely for data analysis (regardless whether commercial or non-commercial) with safeguards for rights-holders' interests, such as requirements of the user to have lawful access to the works (e.g. a paid subscription); user may not distribute to those without lawful access; and rights-holders may implement security measures to maintain security and stability of the network or system. This proposal is part of Singapore's latest reform efforts in the field of copyright, which will culminate in a new Copyright Act (estimated to take effect in 2021).

URL: <https://www.mlaw.gov.sg/files/news/press-releases/2019/01/Annex%20A%20-%20Copyright%20Review%20Report%2016%20Jan%202019.pdf>

6. Is there any case law relevant to AI and IP in your country/region?

- No
 Yes
 Do not know

7. Please provide details of the decision(s) relating to Q6 (name, short description of subject matter, year and URL).

NIL

EXAMINATION GUIDELINES

8. Has your country's IP office (or other IP registration body) amended its examination guidelines and procedures due to AI-related inventions or works?

- No
 Yes
 Draft/proposed only
 Do not know

9. Please provide details of the relevant guidelines and sections identified in Q8 (name, short description, year and URL)

Name: Accelerated Initiative for Artificial Intelligence (AI²) at IPOS

Year: Launched in Apr 2019

Responsible organisation: IPOS

Description: To complement Singapore's shift towards a digital economy and support innovative enterprises looking to bring their AI products faster to global markets, this initiative expedites the application-to-grant process for AI patent applications to as fast as 6 months (terms & conditions apply).

URL: [https://www.ipos.gov.sg/docs/default-source/resources-library/patents/circulars/\(2019\)-circular-no-2---ai2-initiative_final.pdf](https://www.ipos.gov.sg/docs/default-source/resources-library/patents/circulars/(2019)-circular-no-2---ai2-initiative_final.pdf)

<https://www.ipos.gov.sg/docs/default-source/resources-library/patents/guidelines-and-useful-information/ai2-infographic.pdf>

Name: Examination Guidelines for Patent Applications at IPOS

Year: Revised in Apr 2019

Responsible organisation: IPOS

Description: Revisions to Chapters 8, Section A in relation to Patentable Subject Matter for Artificial Intelligence and machine learning methods.

URL: https://www.ipos.gov.sg/docs/default-source/resources-library/patents/guidelines-and-useful-information/examinationguidelines-for-patent-applications-at-ipos_2019-apr.pdf

DATA RIGHTS

10. Does your country/region have any legislative measures/provisions for database rights?

- No
 Yes - enacted law
 Draft/proposed law only
 Do not know

11. Please provide details of the relevant legislative measures/provisions identified in Q10 (name, short description, year and URL).

Database protection in Singapore is primarily offered through the copyright and patent regimes.

Copyright

Name: s7A of the Copyright Act (Chapter 63) (2006 Rev Ed)

Year: Enacted in 1987

Responsible organisation: IPOS

Description: s7A confers copyright protection on compilations in any form (including databases) and computer programs as literary works. Protection of a compilation is confined to the selection or arrangement of its contents, which constitutes an intellectual creation, i.e. there is a need for a human author to expend intellectual efforts in compiling databases (and not just the verification of facts). This position is buttressed by the fact that copyright law assumes there must be a natural person as a qualified person within the meaning of section 27 of the Copyright Act.

URL: <https://sso.agc.gov.sg/Act/CA1987>

Patent

Name: Patents Act (2005 Rev Ed)

Year: Enacted in 1994

Responsible Organisation: IPOS

Description: It is also possible to seek protection of aspects of electronic databases in the form of patents if they meet the criteria under the Patents Act.

In the traditional bespoke or commercial-off-the-shelves (“**COTS**”) database software analysis, organisations would design, develop and customise software that is capable of enabling “users to define, create, maintain and control access to the database”. Such inventions are capable of protection under the patent regime in the form of a software patent, with claims to protect the schema, structure of tables and relationships between tables. However, the scope of such patents are usually limited to the particular software in question, and do not extend to the protection of the database as a collection of data.

Nevertheless, the rise of artificial intelligence tools means that software designers could also explore new ways of designing electronic databases and the processes relating to the use of such databases. In this regard, while IPOS has noted that algorithms powering artificial intelligence tools are mathematical methods in and of themselves, and are not capable of protection under the Patents Act, IPOS has also clarified in its examination guidelines that if the subject matter is directed at solving a functional problem (e.g. using a specific algorithm), patent claims in this regard may be capable of protection.

Patent Examination Guidelines

Name: Examination Guidelines for Patent Applications at IPOS (see paras 8.22-8.27)

URL: https://www.ipos.gov.sg/docs/default-source/resources-library/patents/guidelines-and-use-ful-information/examination-guidelines-for-patent-applications-at-ipos_2019-apr.pdf

12. Does your country recognize any rights or ownership in data?

- No
 Yes
 Draft/proposed only
 Do not know

13. Please provide details of the relevant legislative measures/provisions identified in Q12 (name, short description, year and URL).

Personal Data Protection

Name: Personal Data Protection Act 2012

URL: <https://sso.agc.gov.sg/Act/PDPA2012>

Sector-specific guidelines on data protection (e.g. financial industry)

Name: Obligations of Financial Institutions under the Personal Data Protection Act 2012 – Amendments to Notices on Prevention of Money Laundering and Countering the Financing of Terrorism

URL: https://www.mas.gov.sg/-/media/MAS/News-and-Publications/Consultation-Papers/2-Jun-2014-CP-on-PDPA_Amendts-to-AMLCFT-Notices.pdf

Description: With regard to **personal data**, this is protected primarily in Singapore by the Personal Data Protection Act 2012 (“**PDPA**”), which applies to private individuals and entities. A number of other legislation and regulatory instruments in Singapore also protect personal data in specific sectors, Other pieces of sectoral legislation also apply to data in specific domains, such as the Banking Act, the Private Hospitals and Medical

Clinics Act, and regulatory instruments issued by the Monetary Authority of Singapore which apply to the financial sector.

The aim of the PDPA is “to govern the collection, use and disclosure of personal data by organisations in a manner that recognises both the right of individuals to protect their personal data and the need of organisations to collect, use or disclose personal data for purposes that a reasonable person would consider appropriate in the circumstances”.

With regard to **non-personal** data, the existing legal framework ensures that data owners retain sovereignty over non-personal data. The protection is afforded by a mix of common law and legislation, such as the tort-based common law of confidence, and sectoral legislations like the Official Secrets Act for state information.

14. Does any AI strategy identified in Q1 or other strategy consider data and any creation of a *sui generis* right for data and/or databases?

- No
 Yes
 Draft/proposed only
 Do not know

15. Please provide details of the data strategy identified in Q14 (name, short description, year, URL and responsible organization name).

Name: National AI Strategy (NAIS).

Year: Issued in November 2019

Responsible organisation: National AI Office (within the Smart National and Digital Government Office of the Prime Minister’s Office)

Description: While the National AI Strategy does not specifically deal with legal rights, such as the creation of a *sui generis* right for data and/or databases, Data Architecture has been identified as one of the critical ecosystem enablers under NAIS. This involves the creation of a trusted data sharing framework. Specifically, it sets out the need to: (a) establish frameworks for public-private data collaboration; and (b) establish trusted data intermediaries for public-private data exchange.

URL: <https://www.smartnation.sg/why-Smart-Nation/NationalAIStrategy>

OTHER AI AND IP RELATED INFORMATION

16. Please provide details of any other related processes related to AI/data and IP undertaken in your county/region, for example, public consultation processes, guidance notes for legislative interpretation, policy guidance, communications, working groups, etc. (name, short description, year and URL).

Name: Model Artificial Intelligence Governance Framework (“Model Framework”)

Year: First release Jan 2019; second release Jan 2020

Responsible organisation: Info-Comm Media Development Authority and the Personal Data Protection Commission

Description: A voluntary set of compliance, ethical principles and governance considerations and recommendations that can be adopted by organisations when deploying AI technologies at scale. The Model Framework, which is sector and technology-agnostic, is designed to achieve two high-level guiding principles: (1) decision-making should be explainable, transparent and fair; and (2) AI solutions should be human-centric and safe. The Model Framework translates these ethical principles into implementable practices. It is a living document, intended to be agile in evolving with the fast-paced changes in a digital economy and expected to continue to develop alongside adoptees.

The second edition includes additional governance considerations and industry examples, and refines the original Model Framework for greater relevance and usability. It was released with two other complementary initiatives, an Implementation and Self-Assessment Guide for Organisations (“ISAGO”) and the Compendium of Use Cases (“Compendium”).

While not directly related to IP per se, the Model Framework sets out a sector-agnostic approach to AI governance, upon which individual sectors (e.g. creative industry, financial industry, technology industry) can develop sector-specific approaches to AI governance through their respective sector regulators. The Model Framework also sets out recommendations relating to management of data and datasets, algorithm and model in AI systems

URL: <https://www.pdpc.gov.sg/-/media/Files/PDPC/PDF-Files/Resource-for-Organisation/AI/SGModelAIGovFramework2.pdf>

Name: Centre for AI and Data Governance (“CAIDG”)

Year: Established in September 2018

Responsible organisation: Singapore Management University School of Law

Description: CAIDG is a research centre set up in the Singapore Management University School of Law following the award of S\$4.5million grant from the National Research Foundation and the Infocomm Media Development Authority to set up a Research Programme on AI and Data Governance (“Research Programme”).

As part of its targets under the Research Programme, CAIDG is, among other things, working on policy recommendations in dealing with IP laws. These include working on

policy recommendations on whether and how AI's involvement could require changes in IP law, and policy recommendations on the impact of AI on specific creative industries.

URL: <https://caidg.smu.edu.sg>

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