



DDE Intellectual Property Rights (IPR) Policy (2021)

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1. Purpose and effectiveness

1.1 Deep Time Digital Earth (DDE) is a global scientific program open to international organisations, geological surveys, research institutes and industry. The program has been approved by the International Union of Geological Sciences (IUGS) as its first "Big Science Program". DDE's mission is to harmonise global Deep-time Digital Earth data and share global geoscience knowledge. With the aid of digital tools, technologies and applications DDE will enhance data-driven discoveries and knowledge production that will generate new insights into the understanding of the earth's evolution, transform earth sciences, contribute to reaching UN sustainable development goals and enhance socio-economic wellbeing of communities. DDE aims to maintain respect for and openness of both data and any resulting products. For Intellectual Property Rights of Ownership (IPRO) efforts will be made to assure access and legal protection, in preliminary procedures described below. DDE will be eligible to receive support and contributions from institutions, industries, businesses, government departments and individuals. Therefore, it is important that DDE conducts its business and operations in an open, transparent, and ethical manner. In carrying out its research and duties, vast amounts of existing and new geoscience data and information will be shared, and knowledge generated with the help of big data analytics and internet cloud computing. While the information will be shared, all IPR will be protected. Much of this work, will have significant importance, value and utility to DDE, Members, contributors, and society in general.

1.2 Intellectual property rights (IPR) as defined by the World Trade Organization (WTO)

Intellectual property rights are the rights given to persons over the creations of their minds. They usually give the creator an exclusive right over the use of his/her creation for a certain period of time

Other types of industrial property are protected primarily to stimulate innovation, design, and the creation of technology. In this category fall inventions (protected by patents), industrial designs and trade secrets.

The social purpose is to provide protection for the results of investment in the development of new technology, thus giving the incentive and means to finance research and development activities.

A functioning intellectual property regime should also facilitate the transfer of technology in the form of foreign direct investment, joint ventures, and licensing.

The protection is usually given for a finite term (typically 20 years in the case of patents).

While the basic social objectives of intellectual property protection are as outlined above, it should also be noted that the exclusive rights given are generally subject to a number of limitations and exceptions, aimed at fine-tuning the balance that has to be found between the legitimate interests of right holders and of users.

Adopting measures to protect IP should be part of all legal agreements for the use and sharing of data. For projects that involve use and sharing of data with Chinese institutions and businesses registering IP in China is highly recommended.

- 1.3 This policy document provides an overview of intellectual property rights (IPR) as related to DDE activities as well as risks and benefits associated with access to and use of such intellectual property (IP). The document outlines guidelines for DDE team members and contributors to ensure IP value and utility are understood, respected, and effectively administered. The guidelines will inform people accessing DDE data systems and scientific knowledge about their obligations regarding the use and application of the information. Application of the guidelines outlined in this document will support the ongoing mission of DDE without IP related issues being a hindrance or obstacle to progress by means of research, development, use of and the global access to deep-time earth sciences knowledge.
- 1.4 The overview of IPR as related to DDE activities will assist responsible DDE team members and owners to identify and be aware of valuable information, its scope and ensure it is properly categorised, managed and maintained in accordance with this policy document. Such valuable IP, which will be developed in many forms, carries significant rights, liabilities, and responsibilities. This policy document will help responsible DDE team members to identify, access, assess and appropriately manage IP rights, liabilities, and responsibilities. In addition, this document also outlines requirements and responsibilities for potential contributors to the DDE Projects and Users of DDE related data, systems, and information. The policy document will provide guidelines for DDE team members to

recognise new and ongoing IPR related risks, liabilities, and responsibilities in a diverse global environment.

2. Data Contributors

2.1 DDE team members

2.1.1 The spirit of IUGS and DDE is open data access and open innovation, within a framework of respect for intellectual property rights and data integrity / privacy. Data and information obtained or formed by DDE and its Members during the implementation of projects, studies and initiatives and products generated that contain data or information in, but not limited to papers, diagrams, models, algorithms, databases, computer software, audio-visual products etc. shall be protected legally in multiple countries, which may include China and the country or countries where the team members reside.

2.1.2 Attribution, as well as other rights of team members of the DDE should be fully respected and guaranteed. Users of DDE data or information shall not use relevant data or information and its carriers in a way that would potentially damage the reputation of DDE and/or its Members. In the future, where appropriate, steps will be taken to incorporate Creative Commons licensing (<http://creativecommons.org>) for products such as maps, diagrams, and designs.

2.1.3 For any income generated through the use of DDE data and information, each team member has the right to claim the corresponding share agreed upon by DDE and the team in the original project agreement signed by DDE and the team. Issues related to sharing of income generated between DDE and teams shall in no way hinder the DDE administrator's rights to process and/or utilize data and information on a continuing basis.

2.2 Data Collaborators and Volunteers

2.2.1 For the data or information contributed by institutions or individuals other than DDE team members, their intellectual property rights of such data or information will be retained by them. Data obtained by DDE will be registered and the origins recorded and mirrored on multiple servers in multiple countries where privacy, data access, and ownership are protected. Data from DDE sources must be requested before download, and all downloads will be registered. Use or publication of the data must be requested, and permission granted in advance by all owners.

The overall intent of IUGS and DDE is to develop a repository of Open Data access and Open Innovation, within a framework of respect for intellectual property rights

and data integrity / privacy. The DDE is an IUGS initiative, and thus an international group with operations in many countries. All DDE Subgroups should file copyrights, patents, and trademarks in their country of operation and affiliation for the protection of the individuals. The individuals who developed the intellectual property should be recognized. For work done in the China Research Centre of Excellence (hereafter referred to as RCE), DDE subgroups should file copyrights, patents, and trademarks in at least one other country and China, and include the names of the researchers and their affiliations in order to assure formal protection in all locations. Work generated in the China RCE should, when possible, be covered by Open Innovation policies and Open Access to Data. At the same time, if companies are working in China, they may wish to consider registering eligible IP in China as early as possible. Companies should also understand the full range of IP for which they might file, including multiple types of patents (utility model, design, and invention), as well as trademarks and copyrights. These policies are intended to avoid the problem of open resources, innovation, or science being appropriated by a for-profit entity and then sold in the market, cutting out the original innovators and destroying the spirit of open innovation.

- **Patents** All parties should file applications with their appropriate country's State Intellectual Property Office (SIPO) for IP that they view as valuable to their business for both core and fringe technologies. They should also file and register with Open Innovation offices as well, where applicable. Companies should ensure that their patents are properly translated before filing. Filing can be done directly with SIPO or via international patent arrangements such as the Patent Cooperation Treaty.
- **Trademarks** Entities should register their trademarks in the countries where they are working. Since much work is being done in the China RCE, all parties may wish to broadly register their core trademarks with the China Trademark Office, including the English name, Chinese character name, and Chinese pinyin name for core brands with the China Trademark Office. When filing, companies should carefully select the product categories and sub-categories in which to file, and check China's online trademark database for similar trademarks filed by competitors and infringers, including marks filed in categories outside a company's core products. Many companies have experienced challenges in which a local competitor registers a very similar trademark in a different product category, a practice allowed under the Trademark Law.

- **Copyrights** Entities should register copyrights in the countries where they are working. Though registration is not required, entities should consider registering their works with the National Copyright Administration, since registration provides a public record and can serve as useful evidence in copyright disputes.
- **Register technology** licensing contracts when involved with China as required under the Ministry of Commerce's Technology Import and Export Administrative Regulations.

In collaborative activities that involve incorporating or building on existing foreign-owned IP, the following steps should be followed:

- **Compartmentalize** critical steps in the design and production processes for IP-intensive products—and the equipment used to manufacture these products—to limit the likelihood that any one employee has access to all the information needed to copy IP.
- **Mirror Servers** Make sure that all intellectual property is housed on more than one server across multiple countries, all of which have rules that protect privacy and access, and that the servers may be in the home countries of the entities developing the IP.

Attributions and acknowledgement of the original source of data and information of individuals and institutions cooperating with DDE and its Members shall be fully respected.

2.2.2 In some cases, the intellectual property rights of products and services generated by DDE and/or its Member with the use of the data or information contributed by the aforementioned institutions or individuals may be co-owned by DDE and the developer, and shall be registered in both China and the country where the developer resides.

2.2.3 If DDE Members and its administrator are compelled to face legal responsibility for breach of contract or infringement for the use of data or information owned by institutions or individuals due to erroneous or incomplete information provided by the aforementioned institutions or individuals to DDE, then DDE has

the right to claim compensation from the same institutions and individuals.

2.2.4 If any right or interest of institutions or individuals that contribute data or information to DDE is damaged due to the fault of DDE or DDE operators, DDE or DDE operators shall compensate aforementioned institutions or individuals as defined in the agreement established between DDE and the said institutions and individuals.

2.2.5 In the event that DDE or its administrator and the institutions or individuals that contribute the data or information to DDE have disagreements concerning the IPR of data, information, products and/or services generated through joint efforts, both DDE and the aforementioned institutions and individuals will do their utmost to resolve such disagreements in a mutually acceptable manner and will use formal legal procedures against each other only as a last resort.

2.3 Third-party Contributors

2.3.1 DDE shall abide by the laws of relevant countries or regions of origins of third-party contributors to obtain, disseminate, and use data or information and shall not exceed the scope, methods and purposes permitted by the third party for the use of such data.

2.3.2 Data or information derived from the aforementioned third parties shall be clearly acknowledged and attributed to when managed, used, or disseminated by DDE administrator or Members. Unless agreed upon otherwise by DDE and the concerned third party, no IPR, fees or remuneration should be claimed by the said third party from DDE; nor should the third party restrict DDE and its Members from disseminating or using data or information.

3. Data Administrators

3.1 While respecting fully the legal and regulatory compliance expectations of the contributor(s) of data to DDE, the DDE Administrator has the right to define the scope, method, and conditions of use of the data or information under its possession or management for Users. The DDE Administrator, however, shall refrain from setting any unreasonable restrictions or discrimination on the acquisition and use of data.

- 3.2 The DDE administrator reserves the right, on behalf of the data or information providers, to withhold access to data by any User who, in the view of the DDE Administrator, has infringed or violated the agreement for use of data established between the said User and DDE.
- 3.3 The DDE Administrator shall establish an appropriate mechanism that is transparent and allow the data or information contributor to have full knowledge of the use of their data or information provided to DDE, and obtain fair and reasonable remuneration in accordance with the agreement established between DDE and the data or information provider.

4. Data Users

4.1 DDE Contributors

- 4.1.1 Regardless of whether or not they have contributed data to DDE, DDE team members have the right to obtain and use all data managed by DDE in the process of implementing DDE originated and sponsored research. DDE team members shall fully respect the authorship as well as other rights and obligations they owe to data contributors.
- 4.1.2 DDE administrator has the right to set service priorities and permissions for DDE team members based on their contributions.

4.2 Signed (registered) Users

- 4.2.1 Data Users who have signed a data use contract with DDE have the right to use the data managed by DDE within the scope of the provisions of the contract.
- 4.2.2 When the aforementioned Users obtain data from data carriers owned or managed by DDE, they shall abide by the data contributor's requirements and conditions for data use, and respect the contributor's intellectual property rights as well as other related rights and interests.
- 4.2.3 DDE reserves the right to claim the corresponding share of revenue or other benefits generated by the use of the aforementioned data in accordance with the share agreed between DDE and the data contributors in the signed contract.

4.3 Non-signed (unregistered) Users

4.3.1 Data Users who have not signed a data use contract with DDE shall comply with the requirements and conditions set by DDE and data contributors when obtaining data from DDE-owned or managed data carriers, and respect DDE and data contributor's intellectual property rights and interests.

4.3.2 The DDE Administrator reserves the right to limit the scope of the data that can be obtained by the aforementioned Users, and to check the identity and the nature of use of the data by the aforementioned Users when necessary.

4.4 Special Requirements for Commercial uses

4.4.1 Anyone (including DDE team members) shall inform the DDE Administrator of any intended commercial use of the data under the management of DDE at least three months in advance of the expected beginning of such use. DDE reserves the right to check all relevant information pertaining to the intended commercial use and refuse the granting of the right for commercial use in case DDE concludes that such use shall violate the DDE agreement with the data provider.

4.4.2 DDE shall not be liable for any personal or property damage to a third party due to the use of data or information obtained from DDE. In the event the third party directly claims compensation from DDE through judicial, regulatory, or other appropriate administrative or arbitration support, DDE reserves the right to claim compensation from the User of the data whose actions caused damage to the concerned third party.

5. Definition of terms

DDE – Deep-time Digital Earth

DDE team members – DDE employees

DDE Administrator – The DDE official responsible for legal and administrative affairs and signatory to all DDE sponsored legal documents such as contract, agreements, MOUs, and others.

Contributors – a subscriber/provider of funds and/or data to DDE

IP – Intellectual Property

DDE Intellectual Property Rights 2021

IPR – Intellectual Property Rights

Member – An individual, institution or a company registered as a member of DDE

Third Party IPR – Intellectual Property owned by an external (neither DDE nor its Members/contributors) institution or individual.

User – An individual, institution or company accessing DDE data bases, systems, or publications