A Comparative Study Of Electronic Database And Copyright Protection

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ABSTRACT

The overall characteristics and applications of databases, in particular those which are electronic, are described in the context of the protection of intellectual property rights. Although databases may contain vast quantities of highly important and useful data, and may in some cases be the result of hundreds of thousands of man-hours of work (data collection, database management systems…), copyright protection of this work is not always guaranteed. This study presents the main characteristics of several copyright protection directives, based in several different countries or regions, showing that under some circumstances a database can be granted copyright protection, whereas under different circumstances, or in different countries, the same database may not receive a similar legal protection.

Keywords: database, data, copyright protection, European Database Directive, WIPO, Berne Convention

I. Introduction

A database is an organized collection of data,[1] which may include collections of drawings, queries, reports, statistics, and many other types of object. This data is typically organized in such a way as to model several aspects of reality, and to support the electronic (or other) processes used to access and filter this information. As a simple example, a database containing information from all of the world's airlines should allow travelers to find all possible flight connections and prices, between a selected point of departure and a required destination, on any given date.

Databases can be classified according to the nature of their contents, for example: document-text, statistical, bibliographic or multimedia objects. Another approach is to classify databases according to their field of application area, such as: books, films, banking, musical compositions, manufacturing, or insurance. A third approach involves the identification of various technical aspects of the database, such as its structure or type of interface.

When combined with various other forms of digital technology, the internet provides the modern world with many different tools, allowing individuals, administrations and businesses to access enormous quantities of data that can be used for research and many other information-related requirements. In recent years, an increasing number of abstracting services have begun to publish information in electronic format only. This means that, instead of using a printed index, a user can now search for relevant information from his/her computer. The benefits of using electronic resources are that they provide us with vast amounts of information, which in many cases require further analysis in order for the most useful and pertinent details to be identified.

For decades, the question of how and whether databases should be protected by law has never been easy to answer, since it is necessary to find a balance between the needs of society and those of its business activities: the former can be satisfied by ensuring that the public has access to the information contained in databases, whereas the expectations of the database owners can be met by providing adequate incentives to keep companies profitable and lean. At different points in time, and in different societies, the balance has been struck in different ways and in different places.

The value of a database can be measured by the completeness and accuracy of the information it contains, as well as the efficiency with which it has been organized and its data can be searched. Considerable time, effort, expense, together with specific skills and specialized equipment, are needed to ensure the completeness of a database, whereas ingenious, creative design and excellent computer programs are

[1] Database – Definition of database by Merriam-Webster, https://www.merriam-webster.com/dictionary/database (last visited May 31,2017)

key requirements when it comes to ensuring its accuracy and efficiency. A well-known example of a fast and efficient database is given by the (almost) universally accessible Google search engine.

The purpose of this report is to provide an overall description of electronic databases, while focusing on various issues related to copyright legislation in the context of international treaties, as well as in the legal systems of some specific countries. In particular, the copyright legislation of two neighboring Asian countries is compared with that enacted by several different international conventions and treaties.

II. Database copyright protection in international treaties

A. The Berne Convention

The Berne Convention for the Protection of Literary and Artistic Works, usually known as the "Berne Convention", is the preeminent treaty in the field of copyright protection, which was first established in Bern, Switzerland, in 1886.[2] Countries bound by the Berne Convention are required to protect "Collections of literary or artistic works such as encyclopedias and anthologies which, by reason of the selection and arrangement of their contents, constitute intellectual creations."[3]

Although the Berne convention's reference to "literary and artistic works" and "intellectual creations" means that it may protect databases, which constitute a creative compilation, this does not extend to the protection of non-creative databases. In particular, the Berne Convention recognizes the following exclusive rights of authorization for authors: the right to translate, the right to make adaptations and arrangements of the work, the right to perform dramatic and musical works in public, the right to recite literary works in public, the right to communicate the performance of such works to the public, the right to broadcast (radio, television, etc.), and the right to make reproductions.[4]

Specific examples of protected collections are given by encyclopedias and anthologies, which consist in independently copyrightable contributions. The

[2] Berne Convention for the Protection of Literary and Artistic Works, September 9, 1886, as last revised at Paris, July 24, 1971 (admended 1979), [hereinafter Bern Convention], 25 U.S.T. 1341, 828 U.N.T.S 221

[3] Id, art.2(5)

[4] Summary of the Berne Convention (1886), http://www.wipo.int/treaties/en/ip/berne/summary_berne.html (last visited May 31, 2017)

convention's specific reference to "collections of literary and artistic works" may raise the question as to whether the copyright protection of databases can include that of non-copyrightable data elements. In fact, most valuable databases frequently comprise both copyrightable and non-copyrightable data elements that are selected and organized in a manner that creates economic and societal value.

B. The TRIPS Agreement

The TRIPS Agreement[5] requires its signatories to enact minimum substantive standards of protection in virtually all fields of intellectual property. With regard to databases, Article 10.2 of the TRIPS Agreement requires that "compilations of data or other material" shall be protected by copyright, only if the arrangement of the contents constitutes the author's own "intellectual creation".[6]

The TRIPS Agreement also improves the scope of protection with respect to that provided by the existing Berne Convention. The TRIPS Agreement clarifies that databases and other compilations of data or other material shall be protected under copyright, even where the databases include data that are not protected under copyright. The provision also confirms that databases are protected regardless of whether they are in machine readable or any other form. It is stated that copyright protection for compilations under the TRIPS Agreement "shall not extend to the data or material itself, and that it shall be without prejudice to any copyright subsisting in the data or material itself".[7]

In addition, the TRIPs Agreement contains another provision stating that "copyright protection shall extend to expressions and not to ideas, procedures, methods of operation or mathematical concepts as such."[8]

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[5]Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C; LEGAL INSTRUMENTS-RESULTS OF THE URUGUAY ROUND vol. 31, 33 I.L.M. 81 (1994) [hereinafter TRIPS Agreement].

[6] TRIPS Agreement, art 10(2]: "Compilations of data or other material, which in machine readable or other form, which by reason of the selection or arrangement of their contents constitute intellectual creations shall be protected as such. Such protection, which shall not extend to the data or material itself, shall be without prejudice to any copyright subsisting in the data or material itself. "

[7] Id.

[8] Id, art 9(2)

Consequently, under the TRIPS agreement, the compilation of copyright and non-copyright material is protected, provided the requisite level of originality in the selection or arrangement is satisfied.

C. The WIPO Copyright treaty

The WIPO Copyright Treaty originated in a WIPO work program, and was intended to update the Berne Convention. This work program, which began in 1989, was known as the "Berne Protocol" process. In February 1996, it was adopted by the member states of the World Intellectual Property Organization (WIPO).[9]

Concerning database protection, Article 5 of the WIPO Copyright Treaty is substantially similar to the provisions of Article 10.2 in the TRIPS Agreement. This new intellectual property treaty establishes a legal obligation to protect compilations of data which are a result of intellectual effort. It provides that "Compilations of data or other material, in any form, which by reason of the selection or arrangement of their contents constitute intellectual creations, are protected as such. This protection does not extend to the data or the material itself and is without prejudice to any copyright subsisting in the data or material contained in the compilation". In other words, the elements of data themselves are not subject to copyright protection, unless they already contain copyrighted materials; it is only the database itself (the way in which the data is collected and arranged) that is subject to the directive.

The 1996 Geneva Diplomatic Conference also adopted an "agreed statement," with the aim of interpreting the database protection obligations under the Berne Convention, the TRIPS Agreement, and the WIPO Copyright Treaty. This statement reads as follows:

"The scope of protection for compilations of data (databases) under Article 5 of this Treaty, read with Article 2, is consistent with Article 2 of the Berne Convention and on a par with the relevant provisions of the TRIPS Agreement."

[9] WIPO Copyright Treaty, December 20, 1996, 36 I.L.M. 65 (1997), http://www.wipo.int/treaties/en/text.jsp?file_id=295166 (last visited May 31, 2017).

III. Protection for databases in the European database directive

A. Background

The European directive concerning the legal protection of databases was adopted in February 1996.[10] There were a number of factors that led the European Union (EU) to harmonize the law concerning database protection. The rapid expansion of the Internet raised the EU's awareness of *"the exponential growth, in the Community and worldwide, in the amount of information generated and processed annually in all sectors of commerce and industry,"* and the important role of databases *"in the development of an information market within the community"*.[11] The EU also expressed concerns about the *"very great imbalance in the level of investment in the database sector both as between the Member States and between the Community and the world's largest database-producing third countries"*.[12]

As adopted, the directive establishes a dual system for database protection. One component is copyright protection for the "structure" of the database.[13] In other words, the Directive provides that databases shall be protected under copyright law, whenever the selection or arrangement of the contents constitutes the author's own intellectual creation. The other component is a *sui generis* intellectual property right with respect to the contents of the database. This right prohibits the extraction or reutilization of any database in which there has been a substantial investment in either obtaining, verifying, or presenting the data contents. Under this second right, there is no requirement for creativity or originality.[14]

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[10] Directive 96/9/EC of the European Parliament and of the Council of the European Union of 11 March 1996 on the legal protection of databases, 1996 O.J. (L 77/20) [hereinafter Database Directive].

[11] Database Directive, recitals (10), (9)

[12] Id. recitals (11)

[13] Id. recitals (15)

[14] Daniel A.Tysver, Database Legal Protection (2015), http://www.bitlaw.com/copyright/database.html (last visited May 31, 2017).

B. Copyright protection

Copyright protection for databases is regulated in Article 3.2 of the directive. Accordingly, databases, "*by reason of the selection or arrangement of their contents, constitute the author's own intellectual creation*", are protected by collections and "*shall not extend to their contents and shall be without prejudice to any rights subsisting in those contents themselves.*"[15] There is a slight difference between this article and the criterion for the protection of collections under the Berne Convention for the Protection of Literary and Artistic Works, which covers collections "of literary and artistic works" and requires creativity in the "selection and arrangement" of the contents.

The exclusive rights of the copyright owner ("restricted acts") under the directive are reproduction, adaptation, distribution, and communication, display or performance to the public.[16] Authorization is not required for a lawful user to engage in any restricted act "which is necessary for the purposes of access to the contents of the database and normal use of the contents."[17]

In addition, the directive permits member states to provide for limitations on restricted acts in the following cases:

(a) in the case of reproduction for private purposes of a non-electronic database;

(b) where there is use for the sole purpose of illustration for teaching or scientific research, as long as the source is indicated and to the extent justified by the non-commercial purpose to be achieved;

(c) where there is use for the purposes of public security or for the purposes of an administrative or judicial procedure;

(d) where other exceptions to copyright which are traditionally authorized under national law are involved, without prejudice to points (a), (b) and (c).[18]

[15] *Supra* note 11, art.3(2)
[16] Id. art.5
[17] Id. art.6(1)
[18] Id. art.6(2)

C. Sui Generis Protection

A *sui generis* database right is considered to be a property right, which is comparable to, but distinct from copyright. This right was introduced as a means to recognize the investment that is made in compiling a database, even when this does not involve the "creative" aspect that is reflected by copyright.[19]

Chapter 3 of the directive also specifically establishes a *sui generis* form of protection for database content. The stated justification for database protection is that *"in the absence of a harmonized system of unfair-competition legislation or of case-law, other measures are required in addition to prevent the unauthorized extraction and/or re-utilization of the contents of a database",* [20]and the making of the database *"requires the investment of considerable human, technical and financial resources while such databases can be copied or accessed at a fraction of the cost needed to design them independently*[21]".

Under this second right, there is no requirement for originality or creativity. In particular, it provides databases in Europe with "sweat of the brow" protection for their investments in terms of time, money and effort, irrespective of whether the database is itself an innovative, "non-original" database. The *sui generis* protection runs for fifteen years, starting from "*the date of completion of the making of the database."*[22]

The *sui generis* right granted under the Database Directive is applicable only to databases makers who are EU nationals or habitual residents.[23] For purpose of the directive, this would include companies and firms that have "registered office, central administration, principal place of business" or "ongoing operational link with the economy of a member state" in the Europea Union."[24] Therefore, European companies benefit from greater database protection than non-European companies.

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[19] The Copyright and and Rights in Databases Regulations (1997). UK Government: "A property right ("database right") subsists, in accordance with this Part, in a database if there has been a substantial investment in obtaining, verifying or presenting the contents of the database."

[20] *Supra* note 11, recitals (6)

[21] Id, recitals (7)

[22] Id, art.10 (1)

[23] Id, art.11 (1)

[24] Id, art.11 (2)

Today, "all Member States of the European Community have transposed the Directive into their national legislation and have acquired considerable positive experience with the functioning of the *sui generis* right."[25]

IV. Copyright protection for databases in the United States

A. Prior to the Feist Case

A compilation is defined under the copyright law of the United State of America as "a work formed by the collection and assembling of preexisting materials or of data that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship. The term "compilation" includes collective works".[26]

Prior to the Feist case, copyright protection for databases in the member states could be divided into two rationales. One rationale, which has come to be known as the "sweat of the brow" doctrine, focused on the effort and investment of the compiler. The other focused on the compiler's judgment and creativity in the selection and arrangement of the materials comprising the compilation.[27]

B. Feist Case

The Rural Telephone Service Company (Rural) (plaintiff) is a providing service in northwest Kansas. Under state regulations, Rural is required to issue an annually updated telephone directory comprising both white pages and yellow pages of northwest Kansas. The white pages contain the names and telephones numbers, in addition to the addresses, of the subscribers. The yellow pages contain names, addresses, and telephone numbers, and feature classified advertisements in various sizes, of business subscribers.

Feist Publications (Feist) (defendant) is a publishing company that specializes in the compilation of a telephone directory covering a large geographic area. The Feist directory covers 11 different telephone service areas in 15 counties, and contains 46,878 white pages listings, compared to Rural's approximately 7,700 listings. Similarly to the Rural directory, the Feist directory is distributed without charge and comprises both white pages and yellow pages.

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[25] Małgorzata Gajos &, The Legal Protection of Databases in European Union (2003)
[26] 17 U.S.C. § 101.
[27] U.S. Copyright Office, Report on Legal Protection for Databases (1997)

Since Rural is the sole provider of telephone services in its service area, it is easy for it to obtain subscriber-related information, whereas Feist lacks independent access to subscriber information, because it is not a telephone company. To obtain white pages listings for its area-wide directory, Feist offered to pay for the right to use the white pages listings of 11 telephone companies operating in northwest Kansas. Among these 11 telephone companies, only Rural refused to license its listings to Feist, because the two companies compete for advertising revenue. As Feist was unable to license Rural's white pages listings, it used them without Rural's permission. When Rural discovered this, it sued Feist for copyright infringement.

The issue here was to determine whether the white pages of Rural's telephone directory which were the result of "sweat of the brow" or "industrious collection" should have been protected by copyright law.

C. The Court's decision

In The District Court for the district of Kansas, Rural took the position that Feist, in compiling its own directory, could not use the information included in Rural's white pages. Rural asserted that Feist's employees should travel door-to-door or conduct a telephone survey to discover the same information for themselves. Feist responded that such efforts were economically impractical and, in any event, unnecessary because the information copied was beyond the scope of copyright protection.

The case concerns two well-established principles in United States copyright law. The first is that facts are not copyrightable; the other, that compilations of facts can be protected by copyright.

The District Court granted summary judgment to Rural, explaining that "*The issue of whether telephone directories are copyrightable is well-settled. Courts have consistently held that telephone directories are copyrightable"*.[28]

However, the United State Supreme Court reversed the District Court's decision, holding that "Rural's white pages telephone directory was not entitled to copyright protection; Rural's selection of listings was "obvious," and its arrangement was "*not only unoriginal, it was practically inevitable*", and that Feist's use of them therefore did not constitute an infringement.[29]

[28] Rural Tel. Service Co. v. Feist Publications, Inc., 663 F. Supp. 214, 218 (D. Kansas. 1987)

[29] Feist Publications, Inc. v. Rural Telephone Service Co., Inc., 499 U.S. 340, 111 S.Ct. 1282, 113

Rural claimed collection copyright for its directory. However, the court clarified that the primary objective of copyright is not to reward the labor of authors that could be described as "sweat of the brow", but "to promote the Progress of Science and useful Arts".[30] This means that it is designed to encourage creative expression.

Concerning the collection of facts, the court stated that a compilation, which is a collection of pre-existing material, facts, or data, is copyrightable only if it satisfies the requirement of being creative or original. However, there was nothing remotely creative about arranging names alphabetically in Rural's white pages directory: "it is an age-old practice, firmly rooted in tradition and so commonplace that it has come to be expected as a matter of course." The fact that Rural spent considerable time and money collecting the data was irrelevant to copyright law, and Rural's copyright claim was dismissed.

This represented a complete reversal of the earlier judicial approach, in which copyright was described as a means for protecting writings that were "*the fruits of intellectual labor*"[31], "*productions of intellect or genius*" [32], or "*original intellectual conceptions of the author*"[33], and that copying of any material from such a compilation could be considered as an infringement of copyright protection.

L.Ed.2d 358 (1991)

[30] Id at 349- 350. See also U.S. CONST. art. 1, § 8, cl. 8

[31] The Trademark Cases, 100 U.S. at 94. See also Higgins, 140 U.S. at 431.

[32] American Tobacco Co. v. Werckmeister, 207 U.S. 284, 291 (1907).

[33] Burrow-Giles, 111 U.S. at 59-60.

V. Copyright protection in Taiwan

A. Taiwan Copyright Act

The protection of databases is regulated under Article 7 of the Taiwan Copyright Act: "A compilation work is a work formed by the creative selection and arrangement of materials, and shall be protected as an independent work. Protection of a compilation work shall not affect the copyright in the work from which the material was selected and arranged".[34]

In addition, a summary judgment was granted by the Taiwan Supreme Court No. 940 (2002) for copyright protection in a civil case: compilation work that is based on the selection and arrangement of materials must present a certain level of creativity, and the individuality of the author, are eligible for copyright protection. If the compilation simply involves hard work for the collection of data, but the selection and arrangement of materials are lacking in creativity, then although the authors may have invested considerable time and expense, it is still difficult to claim copyright protection for their work.[35]

As described above, it can be seen that under Taiwanese law, copyright protection for compilation work is rather stringent. The Taiwan Copyright Act emphasizes the importance of creativity in the selection and arrangement of the compiled data. As a consequence, the concepts of "sweat of the brow" or "the fruits of intellectual labor", for those who invested a significant amount of time and energy in their work, but are lacking in creativity, are still not protected by copyright.

B. Case Study and Decision

The Angle publishing Co., Ltd (Angle) (defendant) illegally hired students at NTD$0.7 to NTD$0.8 per document, to copy, paste and save the new files which were retrieved from the legal online database of Lex Data Information Inc. (Lex) (plaintiff), in order to create a database for a legal system. Angle copied a total of 138.000 legal documents and also changed the name of the legal database from

[34] Taiwan Copyright Act, art. 7

[35] 最高法院 91 年台上字第 940 號民事判決: "著作權法第七條第一項規定，就資料之選擇及編排具有創作性者，為編輯 著作，以獨立之著作保護之。故編輯著作，必須就資料之選擇及編排，能表現一定程度之創意及作者之個性者，始足當之，若僅辛勤收集事實，而就資料之選擇、編排欠缺創作性時，即令投入相當時間、費用，自難謂係編輯著作享有著作權。"

"Source of legal information" to "Yuedan Knowledge of Law". Lex subsequently brought civil and criminal actions against Angle.[36]

The defendant claimed that in accordance with Article 9, Section 1, Clause 1 of the Copyright Act, "The constitution, acts, regulations, or official documents" shall not be "the subject matter of copyright"[37], and can therefore be freely used.

The Intellectual Property Court identified that the legal database of Lex is not a mere accumulation of databases, but is rather a selection of data, taken from different sources such as the website of The office of the Judiciary, which had then been classified and rewritten by legal professional employees of the company. It is thus different to other on-line legal databases, and is a form of "compilation works" or "literary works", such that it is protected by the Copyright Law. [38]

This case can be considered as the most important judgment on copyright disputes. By this judgment, the Court made an important statement to the effect that, although the existing law had not regulated specific *sui generis* protection for non-creative electronic databases, if the selection and arrangement of information in a database is creative, rather than a mere accumulation of information, it can still be protected by copyright law under the form of "compilation works". In addition, information that is originally owned by the public is still free to be used by everyone. It cannot be monopolized by the database owners, simply because it has been protected by copyright law.

VI. Copyright protection in Vietnam

A. International Conventions and Treaties on Copyright and Related Rights

On February 20, 1987, the Copyright Protection Agency, the predecessor of the Copyright Office of Vietnam (COV), was established. In order to ensure their integration into the international community, legal documents were enacted and amended in accordance with the new situation. More recently, Vietnam joined five international conventions and treaties concerning copyright and related rights, including: the Berne Convention for the protection of Literary and Artistic Works;

[36] 程平、王寓中，不當黨產處理委員 羅 承宗遭指控 曾違反著作權法(2016), https://udn.com/news/story/6656/1920888 (last visited May 31, 2017).

[37] Taiwan Copyright Act, art.9: "The following items shall not be the subject matter of copyright: 1.The constitution, acts, regulations, or official documents…."

[38] 臺灣臺北地方法院 95 年偵字第 22081 號 刑事、臺灣臺北地方法院 96 年訴字第 146 號 刑事判決、智慧財產法院 97 年刑智上訴字第 41 號 刑事判決.

the Rome convention (1961) - International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations; the Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of Their Phonograms; the Convention Relating to the Distribution of Program-Carrying Signals Transmitted by Satellite; and the Agreement on Trade-related Aspects of Intellectual Property Rights (The TRIPS Agreement).[39]

The first convention to take effect in Vietnam was the Berne Convention, which became applicable on 04 May 2004. The TRIP Agreement entered into force on 11 May 2007, simultaneously with Vietnam's membership in the World Trade Organization (WTO).[40]

Vietnam has also signed three bilateral agreements dealing with copyright and related rights: the Agreement between Vietnam and the United States of America on the establishment of copyright relations; the Agreement between Vietnam and the Swiss Federal Council on the Protection of Intellectual Property and on Co-operation in the field of Intellectual Property; and the Agreement of Trade Relations with the United State of America.[41]

B. Copyright protection for databases

Database copyright protection is regulated in Article 22.2 of the Vietnam Intellectual Property Law: "A compilation is a collection of data organized in a creative manner, as evidenced by the selection or arrangement of documents in electronic form or other".

"The copyright protection of compilations does not include the protection of documents themselves and must not prejudice the copyrights of these documents".[42]

Basically, database copyright protection under Vietnamese law meets the general principles of the TRIPS Agreement requirements, which are applicable to all WTO members. Accordingly, compilation works may receive copyright protection only if the selection and arrangement of the corresponding database clearly represents a reasonable level of creativity. This protection does not extend to the document or material itself, and does not prejudice the copyright protection of its

[39] The Copyright Office of Vietnam (2009), http://www.kenfoxlaw.com/ip-directory/ip-organizations/13356-the-copyright-office-of-vietnam.html (last visited May 31, 2017)
[40] Id.
[41] Id.
[42] Vietnam Intellectual Property Law, art .22(2)

materials. Database copyright protection does not include the protection of an individual item of material itself, however it grants protection for the work involved in selecting, coordinating, and arranging the data, which is the result of creative labor of the author, and has been provided in order to *help make database access more user-friendly*.

However, under Vietnamese law there are still many areas of overlapping and unclear regulations, concerning the protection of compilation work.

In practice, it can be difficult to distinguish between compilation work, which is a derived form of work (derivative work) under Clause 8, Article 4 of the Intellectual Property Law, and original work, since compilation work can also be original.

Here, "derivative work" is defined as "a work translated from one language to another, adapted, modified, transformed, compiled, annotated and selected work"[43]. However, Article 14 of the same law regulates that protected works (including compilations of data) *"must be created directly by the author's intelligence without reproducing others' works."*[44]. This means that compilation work is defined as the creation of work that is entirely new, and is not based on any existing work. As a result, collections of documents are not works, as defined under Article 14 of the Intellectual Property law.

This regulation is therefore contrary to the definition of a compilation, which is considered to be: *"the action or process of producing something, especially a list or book, by assembling information collected from other sources"* or "*a thing, especially a book, record, or broadcast programme, that is put together by assembling previously separate items*." [45]

[43] Id, art. 4(8)

[44] Id, art. 14:

"1. Literary, artistic and scientific works protected including:

….. m) Computer programs and compilations of data.

2. Derivative works shall only be protected according to paragraph 1 of this Article if they do not infringe the copyrights in respect of the works used to make derivative works.

3. Protected works stipulated in paragraphs 1 and 2 of this Article must be created directly by author's intelligence without reproducing others' works."

[45] English Oxford dictionaries, https://en.oxforddictionaries.com/definition/compilation (last visited May 31, 2017)

VII. Conclusion

To conclude, the legal protection of databases is very important, since it is designed to prevent unauthorized reproduction, distribution or communication of its contents. There are various differences in the legislation of different countries, in terms of database copyright protection: some countries grant copyright protection for non-creative databases, whereas others have created a sui generis right which is usually applied less restrictively, although it is still based on a certain level of effort or investment. In some countries, such as the USA (since the Feist ruling in 1991), there is no proper legal protection for non-creative databases.

In general, legal systems protect those databases, which constitute a creative compilation under copyright law. However, the level of creativity required for copyright protection has not been defined internationally, and the position of databases with respect to copyright protection still remains unclear.

In my opinion, the most important aspect of a copyright claim, concerning compilations formed by the creative selection and arrangement of information (generally referred to as a 'database'), is that this selection and arrangement should rely on human activity (or "input"). If this selection and arrangement can be performed easily using a computer-run algorithm, then it is difficult to claim that it meets the requirement of being "creative". On the other hand, if the data is selected, arranged and organized by humans rather than software, and if the production of this database relies on the creativity of an individual or a team, then these designers and/or their businesses should have the right to obtain copyright protection for their database.