

**Database Protection in the
European Union and the United States**
Comprising an Analysis in Relation to Location-Based Services

Author: Markus Siltanen

Report of the Support Project of NAVI-programme:
Regulatory Framework



Publisher:

Helsinki Institute for Information Technology (HIIT)
Tammasaarekatu 3
P.O. box 9800
FIN 02015 HUT, Finland
info@hiit.fi
samuli.simojoki@hiit.fi

Helsinki Institute for Information Technology (HIIT) is a joint research unit
of the two leading research universities in Helsinki, Finland,
the University of Helsinki (UH) and the Helsinki University of Technology
(HUT)

I ABBREVIATIONS

BBS	Bulletin Board Service
CDPA	Copyright, Designs and Patents Act 1988 (U.K)
Ch.	Chapter
DC	District Court
DL	Defensor Legis
DMCA	Digital Millennium Copyright Act
EIPR	European Intellectual Property Review
EU	European Union
FC	Federal Court
FCC	Finnish Copyright Council
HC	High Court of Justice
H.R	House Report
IIC	International Review of Industrial Property and Copyright Law
IPR	Intellectual Property Right
LBS	Location-Based Service
RAM	Random Access Memory
SC	Supreme Court
SMS	Short Message System

II REFERENCES

Literature

- Bruun, Niklas Intellectual Property Law in Finland. Kluwer Law International. Hague, London, Boston 2001.
- Clark, David S –
Ansay, Tugrul (Ed.) Introduction to the Law of the United States. Kluwer Law and Taxation Publishers. Deventer and Boston 1992.
- Cornish, W.R Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights. Fourth Edition. Sweet & Maxwell. London 1999.
- Intellectual Property. Third edition. Sweet & Maxwell. London 1996.
- Gendreau, Ysolde –
Nordemann, Axel –
Oesch, Rainer (Ed.) Copyright and Photographs: an International Survey. Kluwer Law International. London, Hague, Boston 1999.
- Goldstein, Paul Copyright, Patent, Trademark and Related State Doctrines – Cases and Materials on the Law of Intellectual Property. The Foundation Press. 1997.

Haarmann, Pirkko-Liisa

Immateriaalioikeuden oppikirja. 3. painos. Kauppakaari. Helsinki 2001.

Tekijänoikeus & lähioikeudet. Lakimiesliiton kustannus. Helsinki 1999.

Tekijänoikeus, lähioikeudet ja oikeus valokuvaan. Lakimiesliiton kustannus. Helsinki 1992.

Hugenholtz, P Bernt (Ed.)

Copyright and Electronic Commerce: Legal Aspects of Electronic Copyright Management. The Hague, London, Boston 2000.

The Future of Copyright in a Digital Environment: Adapting Copyright to the Information Superhighway, pp. 81-96. The Hague, Kluwer Law International 1996.

Implementing the European Database Directive, pp. 183-200, in the work: Kabel, Jan J.C and Mom, Gerard J.H.M (ed.): Intellectual Property and Information Law, Essays in Honour of Herman Cohen Jehoram. Kluwer Law International. The Hague, London, Boston. 1998.

Karnell, Gunnar

The Nordic Catalogue Rule, pp. 67-72, in the work: Hugenholtz - Dommering (ed.): Protecting Works of Fact. Boston 1991.

- Kelleher, Dennis -
Murray, Karen IT Law in the European Union. Sweet & Maxwell.
London 1999.
- Koktvedgaard, Mogens –
Levin, Marianne Lärobok i immaterialrätt. Sjätte upplagan. Nordstedts
Juridik Stockholm 2000.
- Laddie, Hugh The Modern Law of Copyright and Designs. Third
Edition. Vol. 1. Butterworths. London 2000.
- Lee, Lewis C -
Davidson, J. Scott (Ed.) Intellectual Property for the Internet.
Wiley Law Publications. New York 1997.
- Olsson, Henry Upphovsrättslagstiftningen: en kommentar. Stockholm
1996.
- Copyright: Svensk och internationell upphovsrätt. 6.
Upplagan. Stockholm 1998.
- Rees, Christopher -
Chalton, Simon Database Law. Jordan Publishing. 1998.
- Salokannel, Marjut
Ownership of Rights in Audiovisual Productions – A
Comparative Study. Kluwer Law International. 1997.
- Schricker, Gerhard(Ed.)

Urheberrecht. Kommentar. Munchen 1987.

Sterling, J.A.L World Copyright Law. Sweet & Maxwell. London
1998.

Stewart, Stephen M International Copyright and Neighbouring Rights.
Butterworths 1989.

Torremans, Paul -
Holyoak, Jon Intellectual Property Law. Second Edition. Butter-
worths. London, Edinburgh, Dublin 1998.

Articles

Aalto, Sakari –
Paemen, Dieter ‘Copyright Licensing of Music on the Internet in the
EU’. DL 4/2001, pp. 629-645.

Bruun, Niklas ‘Paikkatietojen tekijänoikeudet’. Maankäyttölehti
2/2000. Helsinki 2000.

Chalton, Simon ‘The Copyright and Rights in databases Regulations
1997: Some Outstanding Issues on Implementation of
the Database Directive’. EIPR 5/1998, pp. 178-182.

‘Database Right: Stronger than It Looks?’
EIPR 6/2001, pp. 296-300.

Conley, John M. & Al ‘Database Protection in a Digital World’

The Richmond Journal of Law and Technology Vol. VI, Issue 1, 1999.

- Davidson, Mark J ‘Proposed U.S. Database Legislation: a Comparison with the U.K Database Regulations’. European Intellectual Property Review 1999, pp. 279-284.
- Denicola, Robert C ‘Copyright in Collections of Facts: a Theory for the Protection of Non-fiction Literary Works’. Columbia Law Review 1981, pp. 516-542.
- Doherty, Michael-
Griffiths, Ivor ‘Harmonisation of European Union Copyright Law for the Digital Age’. European Intellectual Property Review, Issue 1 2000, pp. 17-23.
- Garrigues, Cristina ‘Databases: a Subject Matter for Copyright or for a Neighbouring Rights Regime?’. EIPR 1/1997, pp. 3-5.
- Gaster, Jens L ‘The New EU Directive Concerning the Legal Protection of Databases’. 20 Fordham International Law Journal 1996, pp. 1129-1150.
- Geller, Paul Edward ‘Copyright in Factual Compilations: U.S. Supreme Court Decides The Feist Case’. International Review of Industrial Property and Copyright Law, Issue 6 1991 pp. 802-808.
- Hugenholtz, P. Bernt ‘The New Database Right: Early Case Law From Europe’. Fordham University School of Law

Ninth Annual Conference on International IP Law & Policy, New York, 19 –20 April 2001.

Helsinki, 24
'The New Database Right'. Lecture material from the seminar held by Professor Hugenholtz in April 2001.

Jensen, Henrik A
'Sui generis rett – betydningen av begrepene "gjengivelse" og "viderebruk" nes forutsetningen om en "vesentlig investering" vurdert "kvalitativt og/eller kvantitativt" i det databasedirektivet'. NIR 2001 Stockholm.

Karo, Marko
'Database Protection in the EU and the US: Searching for the Right Balance between Intellectual Property and Access to Information', pp. 59-107, in the work: Saarnilehto, Ari (Ed.): Teollisoikeudellisia kirjoituksia III. Turun yliopiston oikeustieteellisen tiedekunnan julkaisuja. 1998 Turku.

Kaye, Laurence
'The Proposed EU Directive for the Legal Protection of Databases: a Cornerstone of the Information Society?'. EIPR 12/1995. pp. 583-588.

Koivumaa, Ari
Näkökulmia elektroniseen julkaisemiseen: johdatus tekijänoikeuden perusteisiin. 2000.
<<http://www.uta.fi/tyt/digit/kaytto/johdatus/johdatus.html#10.6>>; 10.6.2002.

- Laddie, Justice ‘Copyright: Over-strength, Over-regulated, Over-rated?’ EIPR 5/1996, pp. 253-260.
- Lai, Stanley ‘Database Protection in the United Kingdom: The New Deal and its Effects on Software Protection’. EIPR 1/1998, pp. 32-35.
- von Lewinski, Silke ‘WIPO Diplomatic Conference Results in Two New Treaties’. IIC Vol. 28, no. 2/1997, pp. 203-208.
- Liedes, Jukka ‘International Protection of Databases: a Non-Copyright Regime to Complement Copyright?’. Festschrift Till Gunnar Karnell, pp. 447-459. Stockholm 1999.
- Oesch, Rainer ‘Några drag i immaterialrättens utveckling i Finland i början av det nya millenniet’. Juridisk tidskrift i Finland. Helsinki 2000.
- Powell, Mark ‘The European Union’s Database Directive: An International Antidote to the Side Effects of Feist’. 20 Fordham Int’l L.J, pp. 1215-1250. 1996.
- Rainio, Antti (Ed.) ‘Henkilökohtainen navigointi: markkinat, teknologia ja sovellutukset’. VTT:n tiedotteita 2037. Espoo 2000.
- Shaw, Jonathan Carter ‘The New Database Right’. Trolley's Communication law, Vol. 2, No. 4, pp. 133-135. Croydon 1998.

- Simojoki, Samuli 'Positioning Technology: Current Regulatory Framework'. Report of the Support Project of NAVI-Programme: Regulatory Framework. Espoo 2000.
- Sterling, J.A.L 'Philosophical and Legal Challenges in the Context of Copyright and Digital Technology'. IIC Vol. 31 No. 5/2000
- Sugarman, Alan D 'Database Protection – Tilting the Copyright Balance'.1996.
< <http://www.hyperlaw.com/dbprot1.htm>; 9.5.2001>
- Thakur, Neeta 'Database Protection in the European Union and the United States: the Database Directive as an Optimum Global Model'. Intellectual Property Quarterly, 1, 2001, pp. 100-133.
- Vanovermeire, Vinciane 'The Concept of the Lawful Use in the Database Directive'. No. 1/2000. Weinheim 2000.

Official Sources

- Asiakirja 97/0359/COD Muutettu ehdotus Euroopan parlamentin ja neuvoston direktiiviksi tekijänoikeuden ja lähioikeuksien tiettyjen piirteiden yhdenmukaistamisesta tietoyhteiskunnassa 21.5.1999.
<<http://europa.eu.int/eur-lex/fi/com/dat/1999/fi599PC0250.html>; 6.5.2001>.

- Executive Summary Digital Planet: The Global Information Economy 1
 <<http://www.witsa.org/press/dpexsumm.pdf>>;
 6.5.2001.
- Explanatory Memorandum
 Explanatory Memorandum to the Proposal for a Council Directive on the Legal Protection of Databases, COM (92) 24 final, 13 May 1992, Brussels.
- The Global Context for U.S Technology Policy 4
 <<http://www.ta.doc.gov/OTPolicy/Reports.htm#USTPS>>;6.5.2001.
- Green Paper Green Paper on Copyright and the Challenge of Technology. Copyright Issues Requiring Immediate Action. COM (88) 172 final, Brussels, 7 June 1988.
- HE 170/1997 Hallituksen esitys Eduskunnalle laeiksi tekijänoikeuslain ja rikoslain 49 luvun 1 §:n muuttamisesta. 1997.
- House Report ‘Database Investment and Intellectual Property Antipiracy Act’. HR 3531, 1996.
- House Report ‘Collections of Information Antipiracy Act’. HR 2652, 1997.
- House Report ‘Collections of Information Antipiracy Act’. H.R 354, 1999.

House Report ‘Consumer and Investor Access to information’. H.R.
1858, 1999.

Proposal Proposal for a Council Directive on the Legal Protec-
tion of Databases, COM (92) 24 final, Brussels.

United States Government

The Report of the Working Group on Intellectual
Property Rights, Intellectual Property and the National
Information Infrastructure 1995.

European Legislation

Council Directive 96/9/EC of the European Parliament
and of the Council of 11 March 1996 on the legal pro-
tection of databases.

Council Directive 93/98/EEC of 29 October 1993
harmonizing the term of protection of copyright and
certain related rights.

European Case Law

BG 1999 Tele-Info-CD
Bundesgerichtshof 6.3.1999

DC 2000 846 Dagbladen v. Eureka Internetdiensten, Kranten.com –
case. District Court in Rotterdam, Netherlands,
22.8.2000.

FCC 1999:17	Finnish Copyright Council 1999:17
FCC 2000:5	Finnish Copyright Council 2000:5
HC 2000 1335	The British Horseracing Board Limited v. William Hill Organisation Ltd. High Court of Justice, London, United Kingdom, 9.2.2001.
LG 16 O 448/ 98	Online-Kleinanzeigen-markt als Datenbank Landgericht Berlin, Deutschland, 8.10.1998 Computer und Recht 6/1999, pp. 388-389. Kritisch Anmerkung J. Obermuller.

Legislation of the United States of America

Copyright Law of the United States of America and Related Laws Contained in Title 17 of the United States Code.

Digital Millennium Copyright Act on August 4, 1998.

Case Law of the United States of America

Bellsouth Advertising & Publishing Corp. v. Donnelly Information Publishing; 999 F. 2d 1436 (11th Cir. 1993).

Cambell v. Acuffrose Music, Inc., 114 S. Ct. 1164, 1177 (1994).

CCC Information Services v. Maclean Hunter Market Reports; 44 F. 3d 61 (2nd Cir. 1994).

Feist Publications v. Rural Telephone Service Co. Inc., 499 U.S 340 (1991).

Jewelers Circular Publishing Co. v. Keystone Publishing Co. 281 F. 83, (2nd Cir.), 259 U.S 581 (1922).

Key Publications v. Chinatown Today Publishing Enterprises. 945 F. 2d 509 (2nd Cir. 1991).

Matthew Bender & Co. v. West Publishing Co.; 158 F. 3d 674, 48 U.S.P.Q 2d (BNA) 1560 (2nd Cir. 1998).

Matthew Bender & Co. v. West Publishing Co. 158 F. 3d 693, 48 U.S.P.Q. 2d (BNA) 1545 (2nd Cir. 1998).

Playboy Enters. Inc. v. Frena, 893 F Supp. 1552 (M.D Fla. 1993).

ProCD Inc. v. Zeidenberg, 86 F. 3d 1447, (7th Cir. 1996).

Religious Technology Ctr. V. Netcom On-line Communication Servs. Inc., 907 F Supp 1361 (N.D Cal. 1995).

Sony Corporation v. Universal City Studios Inc., 464 U.S 417 (1984).

Other Case Law

FC 1995 Australisian Performing Right association Ltd. V Telstra Corp Ltd [1997] IIC 136. Federal Court of Australia, 23 August 1995.

SC 1996 SGAE v Hotel Blanco Don SA [1997] 1 EIPR D-21. Supreme Court of Spain, 11 March 1996.

International Conventions

Berne Convention For the Protection of Literary and Artistic Works. Parish 1971.

International Covenant on Civil and Political Rights

G.A. res. 2200A (XXI), 21 U.N. GAOR Supp. (No. 16) at 52, U.N. Doc. A/6316 (1966), 999 U.N.T.S.171, Mar. 23, 1976.

International Covenant on Economic, Social and Cultural Rights

Adopted and opened for signature, ratification and accession by General Assembly resolution 2200A (XXI) of 16 December 1966.

Paris Convention for the Protection of Industrial Property

Of March 20, 1883, as revised at Brussels on December 14, 1900, at Washington on June 2, 1911, at Hague on November 6, 1925, at London on June 2, 1934, at

Lisbon on October 31, 1958, and at Stockholm on July 14, 1967.

Universal Declaration of Human Rights

Adopted and proclaimed by General Assembly resolution 217 A (III) of 10 December 1948.

TRIPS

Agreement on Trade-related Aspects of Intellectual Property Rights including Trade in Counterfeit Goods. Uruguay 1994.

WIPO Copyright Treaty

Adopted by the diplomatic conference. Geneva 1996.

TABLE OF CONTENTS

I ABBREVIATIONS	II
II REFERENCES.....	IV
Literature.....	IV
Articles.....	VII
Official Sources	XI
European Legislation	XIII
European Case Law	XIII
Legislation of the United States of America.....	XIV
Case Law of the United States of America.....	XIV
Other Case Law.....	XVI
International Conventions.....	XVI
1 INTRODUCTION	1
1.1 Background.....	1
1.2 Purpose and Limitations	2
1.3 Methodological Questions	3
1.4 The Structure of the Study	4
2 THE IDEA AND THE DEVELOPMENT OF THE COPYRIGHT.....	4
2.1 The Idea of the Copyright.....	4
2.1.1 The Idea - Expression Dichotomy	5
2.2 The Development of Copyright	7
2.3 Balance Between the Copyright and Access to Information	9
3 FRAMES OF DATABASE PROTECTION IN EUROPEAN UNION	11
3.1 General Observations on the Subject Matter	11
3.2 The European Database Directive	13
4 COPYRIGHT PROTECTION OF DATABASES UNDER THE DIRECTIVE	13

4.1 The Subject Matter of Protection.....	14
4.2 The Requirement of Originality.....	16
4.3 The Authorship and Ownership.....	21
4.4 Exclusive Rights of the Copyright Owner and Copyright Exemptions.....	22
4.4.1 Restricted Acts.....	22
4.4.2 Copyright Exemptions.....	25
4.5 The Object of Protection.....	29
4.6 The Term of Protection.....	29
4.7 Conclusions.....	30
5 SUI GENERIS PROTECTION UNDER THE DIRECTIVE.....	32
5.1 The Subject Matter of Database Right.....	33
5.2 The Scope of Database Right.....	37
5.3 Exceptions to Prohibited Acts.....	42
5.3.1 Rights and Obligations of Lawful User.....	43
5.3.2 General Exceptions to the Sui Generis Right.....	43
5.4 Beneficiaries of Protection.....	45
5.5 The Term of Protection.....	47
5.6 The Object of Protection.....	48
5.7 Conclusions.....	49
6 DATABASE PROTECTION IN THE UNITED STATES.....	52
6.1 Legal System of United States.....	52
6.2 General Observations on Database Protection.....	53
6.3 Copyright Protection.....	54
6.3.1 The Subject Matter of Copyright.....	54
6.3.2 The Scope of Protection.....	56
6.3.3 The Object of Protection.....	62
6.3.4 The Authorship and Ownership.....	63
6.3.5 Exclusive Rights of Copyright Owner.....	65
6.3.6 Copyright Exceptions.....	70

6.3.7 The Term of Protection.....	73
6.4 Proposed Database Legislation.....	75
6.4.1 Key Issues on H.R 354 and H.R 1858	77
6.5 Supplementary Forms of Protection	80
6.6 Conclusions.....	81
7 DATABASE REGULATIONS AND LOCATION-BASED SERVICES	84
7.1 Key Concepts Regarding Positioning Services	84
7.2 Positioning Technology and Location Based Services.....	85
7.3 The Effects of Database Law in Relation to Commercial Applications of Location Based Services.....	89
7.3.1 Effects in Europe.....	89
7.3.2 Effects in the U.S	91
8 FINAL CONCLUSIONS.....	92

1 INTRODUCTION

1.1 Background

Information technology is one of the fastest growing areas worldwide. Expenditures in the information and communication technology markets exceed \$ 1.8 trillion per year and contain six percent (6%) of aggregate global gross domestic product.¹ In France, Germany and United Kingdom technology market responded in 1997 over seventy percent (70 %) of each country's economic growth.² At the same time United States was spending approximately \$ 643 billion annually on information and communication technologies. As we can consider the technological revolution is really taking place especially on the fields of information and communication technology markets.

Regarding information technology, one interesting form of new services are the location-based services. They cover the different service concepts for both working and leisure by enabling interaction with consumers and commercial services regardless of time or physical location. Location-based services can be used e.g. in relation to finding points of interests (restaurants, hotels etc.), ordering of local weather forecast or analysing the optimal timetable and route of public transport. Opportunities to utilise location-based services are enormous in near future.

On 11 March 1996 the European database directive was adopted six years after its presentation. By the directive, member states are enforced to protect databases in two different ways. Databases are eligible for copyright protection if they are intellectual creations. The new *Sui generis* –right was established to prohibit substantial extraction or re-utilization of the content of database. The primary goal

¹ Executive Summary, Digital Planet: The Global Information Economy 1
<<http://www.witsa.org/press/dpexsumm.pdf>>.

² The Global Context for U.S Technology Policy 4
<<http://www.ta.doc.gov/OTPolicy/Reports.htm#USTPS>>.

behind the protection of database is to guarantee sufficient incentive for the creation of databases and related services. Lacking the adequate incentive the entire industry may encounter serious difficulties.

On the other hand the free dissemination of information and the interest of public to gain access to original works are the extremely essential principles in a modern society. Citizens should have a possibility to obtain information they require in normal living (etc. private use, studying, criticism) and competitors must be able to develop better works on the basis of former creations. Thus, the balance of rights between the authors of databases (and other copyrightable works) and public domain has to be granted.

1.2 Purpose and Limitations

The purpose of this thesis is to analyse the current conditions of European Union database regulations as a whole. However, my primary interest lies on questions upon object of protection of both copyright and sui generis right and in the determination of the concepts of substantial investment and substantial part of contents of a database (sui generis) as well as the requirement of the originality (copyright). Although my main interest lies on the database law in European Union, I will also examine the main principles and current state of database law in United States.

At the beginning of this study I seek to demonstrate the idea of copyright and the meaning of necessary balance between the free dissemination of information and the adequate incentives for authors. In my opinion this is relevant in order to understand the significance and effects of database regulation.

Regarding to object of protection, the interesting question is whether the structure of database or the information itself will be covered by the protection? It is also questionable what amount of investment qualifies to be substantial and therefore I

seek to provide some guidelines for this problem. Furthermore, the database directive announces that only the extraction or re-utilisation of substantial part of database is prevented.³ The directive fails to determine “substantial”. Thus, I will research the amount of information falling under the database directive’s substantial part of a database. Finally my endeavour is to achieve a conclusion on the effects of provided database protection and location based services in Europe and United States. Above all, the most essential questions related to providing of location based services are the aforementioned question on object of protection and in the clarifying of concepts of substantial investment and substantial part of a database.

My examination is based on relevant Nordic and international juridical literature. Because the adoption and implementation of the database directive has been completed in Europe there already exists some interesting court decisions. Some of these decisions are essential material for this research and are used in analysing relevant parts of research problem. In connection with the examination of the database law in Unites States the case law plays a fundamental role.

This study is not examining either the contractual issues related to database law nor the personal data questions related to location-based services. Also copyright interrogations pertinent to computer programs, which enable the utilisation of databases, are outside the scope of this thesis.

1.3 Methodological questions

The research method, which is used in this study, is dogmatic jurisprudence, in other words, it interprets and analyses regulation information and judicial principles to describe and criticise the state of legislation. Because this study is also

³ Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases (hereinafter “Database directive”) article 7 § 1.

considering the state of the legislation and case law in both Europe and United States, the research method is when suitable comparative jurisprudence.

1.4 The structure of the Study

This study is divided into 8 chapters. In the beginning of this thesis the idea and history of the copyright and database law are tackled down. In order to understand the effects of database protection the questions regarding the protectability of information are described also in chapter 2. Next on this I seek to clarify on chapters 3, 4, 5, and 6 the substance of database law in Europe and U.S. In connection with U.S. database law the basic structure of the legal system of United States is illustrated. The conclusions are drawn in each individual section as well as in a summary section at the end of each chapter. In chapter 7 the database law is analysed in relation to location based services. Ultimately on chapter 8 the final conclusions are described.

2 THE IDEA AND THE DEVELOPMENT OF THE COPYRIGHT

2.1 The Idea of the Copyright

*"To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Investors the exclusive Right to their respective Writings and Discoveries."*⁴

As the U.S constitution shows the primary objective of copyright has traditionally been the promotion of science and useful arts. The copyright is designed to benefit the society by encouraging the creation and dissemination of copyrighted works.⁵ This has been sought to reach by the creation of an incentive system.

⁴ U.S. Constitution, article 1 Section 8.

⁵ Cornish (1989), p. 259.

Consequently, this means that the authors are granted the exclusive rights over their works for limited times.⁶ After the expiration of exclusive time granted for authors others are encouraged to develop freely upon the ideas and information carried by the work. By allowing this information is disseminated and utilised intensively in the society.

There are wide range theories concerning justification of copyright. Those theories are based on arguments relating to natural justice, creative incentive, general public interest, social contract and moral considerations.⁷ Arguments on behalf of justification vary from one jurisdiction to another, some emphasising the public benefits and rewarding of authors, and others are more grounded upon the principles of natural justice and human rights.⁸ The conception of the natural justice emphasizes the author's ownership to copyrighted work. The idea was that a creator was entitled to compensation of his work. It was also important to prevent others to gain inequitable advantage derived from the author's work. In this connection it has to be emphasized that aforementioned observations concerning natural justice are relatively strange for database law (excluding the copyright protection for database). The main reason for this is the different nature of the database law. The database right protects the 'sweat of the brow' of the database producer, in other words the skill, energy and money invested in the database, when the copyright protects the intellectual and original creation of the author.

2.1.1 The Idea - Expression Dichotomy

According to subjective idea theory (in Swedish *subjektiv idélära*), also known as intellectual property law's naivety realism (*immaterialrättens naiva realism*), the object of the intellectual property right is the author's or inventor's personal idea

⁶ Ibid.

⁷ Sterling (1998), paras. 2.27-2.42.

⁸ Sterling (2000), p.517.

or notion.⁹ Although, the subjective idea theory is said to correlate quite strongly with the idea of rewarding of a creative author and legislation's pursue to guarantee such incentives, it is finally considered to be excessively narrow in the meaning of the jurisprudence.¹⁰ Ideas and notions belong to individual's own awareness and thou shall not be subject to exclusive rights.¹¹

On the contrary, the objective idea theory (*objektiv idélära*) defines the expression of an idea, in its abstract and ideal form, to the object of copyright protection. In other words, the object of the right is the abstract classification of an expression not the individual item of the work. The work can merely be recognised by the external expression, like a piece of work or via the presentation of work. The advantage of the theory is that it corresponds quite well with a normal linguistic usage and particular characteristics of intellectual property law (e.g. the difference between the transfer of a right and the transfer of an item of work).¹² However, according to Koktvedgaard and Levin the doctrine on the objective idea theory is insufficient and erroneous. It leads to conclusion, which separates the legal analysis from the physical phenomenon (piece of work), which is the basis for the examination of intellectual property rights.¹³ Objective idea theory is based on ideas presented by the German legal theorist Joseph Kohler with his scholarship in relation to the "*Immaterialgüterrecht*". The objective idea theory has been influenced as well by the doctrine introduced in the Nordic jurisprudence at the beginning of 1920s.¹⁴

The dichotomy between the idea and expression is inherent in copyright law. Copyright or database law does not protect, at least in their traditional forms,

⁹ Koktvedgaard - Levin (2000), p. 34.

¹⁰ Ibid. at 34-35.

¹¹ Ibid. at 35.

¹² Koktvedgaard - Levin (2000), p. 35; see also Haarmann (1999), p. 38.

¹³ Ibid. at 35-36; Haarmann (1999), pp. 38-39.

¹⁴ Ibid.

facts, ideas, or information as such but only their expression in the original form. Accessibility to information and free dissemination of facts and ideas is characteristic of a modern democratic society. However, at least the European version of database law may differ from this principle because it grants, on certain conditions for the owners of a database, a copyright or sui generis right that prohibits the extraction or re-utilisation of the content of a database.¹⁵

Finally, it is essential to understand that the basic framing of a question in relation to copyright theory is not construed upon the question of immaterial objective of copyright, but to relations between divergent characters. At this point questions should be directed to examine the extent of author's exclusive rights.¹⁶

2.2 The Development of Copyright

Since the beginning of the human history the mankind has sought to protect the results of its work. In the ancient history Homo erectus cut signs to skulls of bears and used these signs afterwards.¹⁷ In the Eskimo culture, it was not allowed to sing a song, which was developed by another Eskimo.¹⁸

The modern type of intellectual property rights were established at the time of late Classical Antiquity and Middle Ages. One crucial factor to this was the inventing of art of printing, which enabled the mass production of written works.¹⁹ To reduce the economical risk of book printing the sovereign was forced to develop a privilege system that granted special rights to carry on a trade e.g. book printing.²⁰ The first modern intellectual property right, copyright, was born when it became

¹⁵ Database directive, article 7 (1).

¹⁶ Koktvedgaard - Levin (2000), p. 36; Haarmann (1999), pp. 38-39.

¹⁷ Haarmann (1999), p. 1.

¹⁸ Koktvedgaard - Levin (2000), p. 24.

¹⁹ Ibid. at 25.

²⁰ Koktvedgaard - Levin (2000), pp. 25-26.

necessary for book printers to acquire consent of an author of the work to publish it.²¹ The first reproduction right was expressly named to copyright in United Kingdom with the Statute of Queen Anne in 1709. At the same year the federal copyright law was also established in the United States. That was mainly based on the principles that were introduced in the British law.²² Regardless of a form of a society and an economic system prevailing, almost all countries around the world have adopted some kind of protection for works created by humans on the field of copyright.²³

In the nineteenth century two very significant international IPR conventions, Paris Convention (Convention de Paris pour la protection de la propriété industrielle 1883) and Bern Convention (Convention de Berne pour la protection des oeuvres littéraires et artistiques 1886), were introduced. The former concerns industrial rights e.g. patent and trademark, and the latter copyrights and neighbouring rights. The latest international significant convention, Agreement on Trade-Related Aspects of Intellectual Property Rights, was introduced by the organisation of GATT in 1993. It was enforced in 1.1.1995 and it has been designed to strengthen the meaning of copyright because of its trade policy import.²⁴

For the countries that are part of European Union the influence of EU has been significant in addition to IPRs. When European Community came into existence it was quite clear that the separate system covering the harmonisation of the legislation of the IPRs was required.²⁵ Currently EU has regulated the field of IPRs with numerous regulations and directives especially on the field of copyright and rights related to it.

²¹ Haarmann (1999), pp. 3-4.

²² Ibid.

²³ Olsson (1996), pp. 17-23.

²⁴ Haarmann (1999), pp. 26.

²⁵ Koptvedgaard - Levin (2000), p. 44.

2.3 Balance Between the Copyright and Access to Information

The copyright regime has been developed to benefit the public by encouraging the creation of either scientifically or artistically valuable works and their wide dissemination. Consequently, the copyright system must provide a sufficient incentive to authors of the works. At the same time the level of incentive shall be limited in order to enable new works to be built on the former ones.²⁶ His honourable Mr Justice Laddie, widely appreciated judge of Royal High Court in United Kingdom, has stated this idea very clearly:

"The whole of human development is derivative. We stand on the shoulders of the scientist, artists and craftsmen who preceded us. We borrow and develop what they have done: not necessarily as parasites, but simply as the next generation. It is at the heart of what we know as a progress."²⁷

Arguments, which are used to justify the restriction of the copyright, can be divided into three different categories: limitations based on 1) fundamental principles of law; 2) public interest considerations and 3) economical factors.²⁸

Copyright limitations that are based on fundamental principles of law seek to guarantee individual freedoms, in other words, the interest of general public. The right to respect human dignity, privacy and right to be informed are certainly values, which has to be balanced against the right holders' interests. Copyright is not an absolute right. One of the most valuable exemptions based on fundamental principles of law is the private use (fair use in U.S). Nowadays the public's fun-

²⁶ Denicola, Robert C (1981), pp. 518-524.

²⁷ Laddie (1996), p. 259.

²⁸ Edt. Hugenholtz (2000), p. 127.

damental right to information and freedoms of expression are secured under several international conventions.²⁹

Promotion of education and culture is an essential argument to restrict rights of copyright owners.³⁰ Statutory provisions through out the globe grant for certain institutions created for the public good, rights exempted from the authority of creator of protected work. Schools, libraries, archives and museums are privileged to use protected works for certain purposes of unauthorised uses.³¹ Without allowing this kind of unauthorised use the progress of science would be endangered.

Economical factors are more and more significant also in legislative process. The creation of an effective legal system requires taking consideration both the factors of justice and economics. On the field of IPRs, the Copyright limitations can be based on market failure consideration.³² Market failure might come into existence at least by two ways: in case where

i) circumstances on the market make bargaining between individual copyright owners and potential users of protected material impossible or prohibitively costly; or

ii) copyright owners are incapable to enforce their rights effectively against illegal users.³³

On conditions where limited possibilities for negotiations or absence of negotiations occur between the right-owners and users, the economic efficiency obliges

²⁹ E.g. Universal Declaration of Human Rights art. 19; International Covenant on Civil and political Rights art. 19; International Covenant on Economic, Social and Cultural Rights art. 15.

³⁰ Edt. Hugenholtz (2000), p. 137.

³¹ Ibid.

³² Edt. Hugenholtz (2000), p. 140.

³³ Ibid.

to seek alternative ways to replace defective system of bargaining and guarantee the sufficient remuneration for the copyright owners.³⁴ The form of non-voluntary licences is a modern way to correct the defects of economical markets. It is also the most common copyright limitation based on market failure. Non-voluntary licences have been used for example via the home-taping and blank cassettes levies in Europe.³⁵

In the field of digital environment the copyright limitations based on market failure have been considered to be eliminated by the electronic copyright management systems and other digital measures. Consequently, the development may lead to situation where a number of copyright limitations could be abolished.³⁶ Too effective technological measures and anti-circumvention legislation with the contractual practises will endanger the free flow of information and public's fundamental rights related to information and expression of information. The balance between the right-owners and users shall be granted by the legislative non-voluntary propositions if the functionality of a market does not guarantee that kind of development by its normal operation.

3 FRAMES OF DATABASE PROTECTION IN EUROPEAN UNION

3.1 General Observations on the Subject Matter

As literary works, collections of data have been utilised for centuries. Collections of data have been also under the protection of copyright regime. The revolution of information technology has shown that the area covered by the protection has enlarged to cover new phenomena. This is mainly because of a reason that the copyright is quite a flexible field of a law.

³⁴ Ibid.

³⁵ Ibid.

³⁶ Hugenholtz (1996), p. 94.

Databases are at least in their electronic form relatively new phenomena. Notwithstanding databases are important products on the information markets and they comprise both commercial value and social utility. To guarantee the functional, effective and competitive ability of database industry in the EU the sufficient protection for databases is necessity. Like the recital 12 of the database directive says: "*...an investment in modern information storage and processing system will not take place within the Community unless a stable and uniform legal protection regime is introduced for the protection of the rights of makers of databases*".

For the purpose of this thesis it is essential to determine a concept of database. Database is simply defined as a collection of data or other information.³⁷ Catalogues, telephone directories, listings on the stock exchange and the World Wide Web are all forms of database. According to the European database directive, a database is defined as “a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means”.³⁸ Thus, database may be either electronic or manual.

Technically a database as a form of information system is composed of raw data and computerised tool that is used to arrange, store and process the raw data.³⁹ Raw data consists of information that may be the source of knowledge or contain entertainment value. Value of a database is derived of contained information and its manipulation.⁴⁰

³⁷ Laddie (2000), p. 1055.

³⁸ Database directive, art. 1 (2).

³⁹ Brown – Bryan – Conley (1999), sec. 13.

⁴⁰ Ibid.

3.2 The European Database Directive

The history of database directive began with the Green Paper on Copyright and the Challenge of Technology introduced by the European Commission in 1988.⁴¹ It presented preliminary plans of Commission on the future harmonisation of some copyright issues related also to information technology. The commission established its initial proposal to the Council on 13 May 1992 and after large scale amendments the European Parliament accepted it on 14 December 1995. On 11 March 1996 European Database Directive was after all enacted.

The database directive aims to harmonise the protection of databases through EU and guarantee the production of databases and related services by providing an incentive for the creation of databases. It also pursues to balance interests of right-owners and normal citizens.⁴²

The database directive has created a dual system of protection of electronic and non-electronic databases. On the one hand databases are protected under copyright as intellectual creations and on the other hand by introducing a sui generis right to prevent unauthorised extraction or re-utilisation of the substance of a database. The latter is so called database right.

4 COPYRIGHT PROTECTION OF DATABASES UNDER THE DIRECTIVE

⁴¹ Commission of the European Communities, Green Paper on Copyright and the Challenge of Technology. Copyright Issues Requiring Immediate Action. COM (88) 172 final, Brussels, 7 June 1988.

⁴² Karo (1998), p. 61.

Internationally there have been two main theories, which have justified the copyright protection of databases. The first has been labelled for the ‘sweat of the brow’ and it is generally used in common law -countries. The sweat of the brow -theory contains an idea, where the creator’s skill, time and financial investment are the reasons why copyright is granted for the maker. A copyright can be understood as a compensation for the sacrifices done by the creator. Another theory is a concept used in continental Europe and it guarantees the copyright for the databases, which are the result of creativity in the selection or arrangement of the contents of a database.⁴³

4.1 The Subject Matter of Protection

Database which is an output of independent works, data or other materials is entitled to copyright protection if a database "*by reason of the selection or arrangement of their contents, constitute the author’s own intellectual creation*".⁴⁴ No other criteria, like aesthetic or qualitative requirements, shall be applied.⁴⁵ The ‘selection and arrangement’ requirement was introduced in the Trips Agreement.⁴⁶ However, it has been created initially by the courts of United States.⁴⁷ In addition to selection or arrangement of contents, database shall be arranged in a systematic or methodical way and it shall be individually accessible by electronic

⁴³ Garrigues (1997), p.3.

⁴⁴ Database directive, art. 3 (1).

⁴⁵ Database directive, art. 3 (1); Recital 16.

⁴⁶ Trips Agreement, article 10 (2): "Compilations of data or other material, whether 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...". See also Berne Convention Article 2 (5): "collections of literary works such as encyclopaedias and anthologies which by reason of the selection and arrangement of their content, constitute intellectual creations".

⁴⁷ Hugenholtz (1998), Implementing the European Database Directive p. 187.

or other means to attract copyright protection.⁴⁸ This precondition applies also to sui generis right.

Systematic or methodical arrangement is required in order to consider database as a purpose of the database directive. This basically intends that a mere collection of data without any organised structure may not be the database in a meaning of directive. Specific data contained in the database must be obtainable by certain search tool e.g. computer aided system. However, the order in which data is physically stored is irrelevant. It does not have to be stored in an organised manner.⁴⁹

Database shall be individually accessible by electronic or other means. Thus, it is required that each individual and independent work shall be accessible individually. Both electronic (CD-ROM or on-line) and non-electronically databases (card or book format) are eligible to database protection.⁵⁰ Kaye has argued that World Wide Web -site may create a database as a collection of independent works when it contains articles, phonographs, video and sound materials.⁵¹ The protection also covers "literary, artistic, musical or other collections of works or collections of other material such as texts, sound, images, numbers, facts and data" or other independent materials.⁵² However, the directive does not include recording or an audiovisual, cinematographic, literary or musical work as such.⁵³ The protection of the directive may also apply to materials necessary for the operation or consultation of certain databases such as thesaurus and indexation systems.⁵⁴ The applicability of the directive seems to be relatively broad.

⁴⁸ Database directive, art. 1 (2).

⁴⁹ Torremans - Holyoak (1998), p. 174.

⁵⁰ Database directive art. 1 (1) and (2); Recital 22.

⁵¹ Kaye (1995), p. 584.

⁵² Database directive recital 17.

⁵³ *ibid.*

⁵⁴ Database directive recital 20.

To attract the copyright protection, selection or arrangement in the database must express authorship, in other words personal intellectual creativity.⁵⁵ One crucial goal of the harmonization of database law was the adjustment of the criteria of originality through EU with the assistance of a creative selection or arrangement - standard.⁵⁶

Picture 2: conditions for copyright protection according to database directive:

- i) author's own intellectual creation by the reason of the selection or arrangement of the contents of a database
- ii) arranged in a systematic or methodical way
- iii) individually accessible by electronic or other means

4.2 The Requirement of Originality

Question of originality is determinative when considering the eligibility of a database to copyright protection. Selection or arrangement of the contents has to indicate the creative input of the author. Thus, the database has to be author's own intellectual creation. In case that concrete expression of database and an idea background merge, on condition that there are only restricted amount of possibilities to express the idea, a database does not attract copyright protection.⁵⁷ In United States this doctrine is called Merger Doctrine.

⁵⁵ Database Directive, article 3 (1); see also Cornish (1999), p. 524.

⁵⁶ Karo (1998), pp. 71-72. See also Gaster (1996), pp. 1135-1136.

⁵⁷ Karo (1998), p.72.

Before the enactment of Database directive the requirement of originality was disharmonised in member states. In continental Europe and Scandinavia most of the countries used the concept of originality, which set up quite a strict requirement to originality. In United Kingdom the threshold of originality is slightly lower than in most of European countries. The result of originality requirement in database directive is a compromise between British requirement of 'skill and labour' and continental requirement of 'originality'.⁵⁸

Continental requirement of originality has to be defined in relation to a work. The work is an expression of the personality of its author.⁵⁹ According to e.g. Germany's Copyright act, the protection is guaranteed merely for works, which are "personal and intellectual creations".⁶⁰ Louwenheim has clarified this requirement by stating that "work shall be characterized by author's individual spirit".⁶¹ The German Federal Supreme Court has also applied the test of 'Überdurchschnittlichkeit' when determining a level of creativity.⁶² If the work gains a minimum standard of originality it is said to satisfy the criterion of level of creativity. In this event the work is entitled to copyright protection.⁶³

Picture 3: Continental requirement of originality

- i) the work has to be a result of author's intellectual exertion
- ii) criterion of level of creativity has to be fulfilled

⁵⁸ Ibid.

⁵⁹ Torremans - Holyoak (1998), p. 169.

⁶⁰ Urheberrechtsgesetz 2 §, 9.9.1965.

⁶¹ Schricker (1987), p. 95.

⁶² Hugenholtz (1998) p. 187. From "Überdurchschnittlichkeit" see also G. Schricker, Farewell to the "Level of Creativity" in German Copyright Law, IIC 1995, 41.

⁶³ Haarmann (1999), pp. 47-48. In German the "level of creativity" is called "Gestaltungshöhe", in Finnish "teostasoo or teoskynnys", in Swedish "verkshöjd".

According to Scandinavian researchers Kocktvedgaard and Levin, originality requirement reflects the derivation and individuality of the work. Despite of that fact, the originality cannot be observed in a similar way as requirements of novelty and innovation in patent law. Those concepts are objective and absolute in patent law when the requirement in copyright law only requires that a work is created by the author and it is a result of his intellectual exertion.⁶⁴

In British copyright system databases were not explicitly entitled to copyright protection under the national legislation.⁶⁵ If the database was original it attracted copyright protection as a compilation under section 3 (1) of the CDPA 1988 (as a form of literary work).⁶⁶ However, the British requirement for originality is considerably dissimilar to continental one.

British copyright law is generally based on so called minimum effort standard. Basically this means that a work will be considered as an original work and merits to copyright protection if two criteria are fulfilled. First, the work must originate from the author. Second, the author must have invested a minimum investment of skill, judgment and labour.⁶⁷ A work originates from its author when it is not a copy from former work. Requirement of minimum investment is in practice relatively simple to attain. It is so called 'de minimis rule' which signifies that even such a low amount of skill, labour and judgment will attract copyright protection for the work.⁶⁸

⁶⁴ Kocktvedgaard - Levin (2000), pp. 65-68. It is important to notice that they interpret requirement of originality in accordance with the Swedish law.

⁶⁵ Copyright, Designs and patent Act 1988 (hereinafter CDPA) .

⁶⁶ Torremans - Holyoak (1998), pp. 173-174.

⁶⁷ Ibid. at 168.

⁶⁸ Ibid. at 170.

After the implementation of the Database directive to U.K law, the regulations amended the CDPA 1988 in a way that it will expressly admit databases under the copyright protection, if the database is original by reason of the selection and arrangement of the contents of the database and therefore constitutes the authors' own intellectual creation.⁶⁹ The protection covers only the structure not the content of database. That was also the first time when concept of originality was expressly clarified in British copyright law.⁷⁰ According to British law, database may merit copyright protection also as a traditional compilation. In that case the requirement of originality can be fulfilled with the lower (minimum standard requirement of originality) standard originality criterion.⁷¹

Picture 4: requirement of originality in relation to databases in accordance with U.K copyright law:

- i) by reason of the selection or arrangement of the contents of the database; and
- ii) the database constitutes the author's own intellectual creation.

As a conclusion, it may be argued that requirement of originality causes in practice remarkable difficulties for the application of copyright protection for databases. Relatively regularly contents of many databases are not selected or arranged in an original manner. It is relatively clear that an ordinary telephone directory or yellow pages catalogue⁷² arranged in a standard alphabetical order by name and including majority of target subjects in a specific area, shall not qualify to be author's own intellectual creation. This is mainly due to the commonplace method that is used to arrange or select material, which does not express any crea-

⁶⁹ CDPA 1988 3A (2).

⁷⁰ Lai (1998), p. 32.

⁷¹ Torremans - Holyoak (1998), pp. 174-175.

⁷² Yellow Page Catalogue means a catalogue in which all kinds of service operators or other types of entrepreneurs are listed in a meaning of advertising their services or products.

tivity. According to Garrigues, quite frequently a database producer is not having choices to arrange the material originally but is rather obliged to complete the arrangement with certain limited manners.⁷³ Database that consist of material that is attached to database in accordance with fixed rules or database being produced from material that includes the entire information available in the public domain, does not express required level of mental input, and the database is therefore outside the scope of protection.⁷⁴ In my opinion, the selection of the contents of a database is more likely than by arranging the material, to create a database that is entitled to copyright protection. At least in theory, there are in most cases an unlimited amount of possibilities to select a content of database while there are only a few ways to arrange the material in a manner that guarantees the effectiveness and functionality of database in a real world.

European database directive has become developed on the basis of continental model of originality. The amount of originality required by the directive is at the same level as in Software and Terms of Protection Directive⁷⁵. In other words, the work has to be author's own intellectual creation.⁷⁶ Therefore the threshold for copyright protection in relation to databases has become more demanding in the U.K since the implementation of the Directive. On the other hand, the requirement of originality in Germany, where traditionally has existed a bit higher threshold for the requirement of originality, may approach the continental standard.

Picture 5: requirement of originality in accordance with database directive:

Database shall be author's own intellectual creation

- more than skill, judgment and labour in U.K law

⁷³ Garrigues (1997), p.3.

⁷⁴ Ibid.

⁷⁵ Council Directive 93/98/EEC of 29 October 1993 Harmonizing the term of protection of copyright and certain related rights, article 6.

⁷⁶ Hugenholtz (1998), p. 187.

- less than traditional originality requirement in continental Europe⁷⁷

4.3 The Authorship and Ownership

The origin of an authorship in relation to databases may materialise in two different ways depending on the stage of legislation in each Member State. The initial authorship shall belong to a natural person or group of natural persons who has created the database, or for the legal person designated as a right holder by the legislation of the Member State in question.⁷⁸ If the Member State recognises collective works the economic rights shall be governed by the person holding the copyright.⁷⁹

Co-ownership of the copyright may arise in two ways. Co-ownership occurs if the protected work is created by joint authors, or, an interest of right is transferred to a third person.⁸⁰ The exclusive rights must be governed jointly if the database is developed in cooperation by a group of natural persons.⁸¹

The directive does not contain regulation regarding the assignment within employment. An idea that the initial authorship belongs to a creator is common for Nordic and most of the Continental countries. However, this starting point is strange for Anglo-American countries. There an employer becomes the initial owner of the copyright if a work results in the course of an employment and in the absence of a contrary agreement.⁸²

⁷⁷ Hugenholtz (2001 Helsinki), p. 2.

⁷⁸ Database directive, art. 4 (1).

⁷⁹ Database directive, art. 4 (2).

⁸⁰ Cornish (1996), p. 409.

⁸¹ Database directive, art. 4 (3).

⁸² Haarmann (1999), pp. 234-235.

4.4 Exclusive Rights of the Copyright Owner and Copyright Exemptions

Database directive provides an extensive number of exclusive rights and a limited group of copyright exceptions. Exclusive rights, which are also called as restricted acts, include acts that are protected by the copyright. Exclusive rights define the scope of an author's autonomy to control the exploitation of created database. Restricted acts may be performed or authorised solely by the copyright owner.

Besides, directive ensures some exceptions to restricted acts. These limitations are designed to confine the power of copyright owners to fair and efficient extent. As an exception to principal rule, these copyright exemptions shall be interpreted in a restricted sense. In the first place directive states that a lawful user is entitled to perform all restricted acts, which are essential for normal use of database. Secondly, directive allows Member States to enact limitations to restricted acts in some express cases.

Copyright owner's exclusive rights provided by the directive are for the most part formerly recognized by the national copyright regulations in Member States.⁸³ This indicates that provisions are by now relatively well known. However, the exceptions to exclusive rights are more limited than in the past.

4.4.1 Restricted Acts

The exclusive rights of copyright owner are specified in article 5 of the directive. The right owner is entitled to carry out or authorise:

- i) temporary or permanent reproduction by any means and in any form, in whole or in part;
- ii) translation, adaptation, arrangement and any other alteration;

⁸³ Karo (1998), p. 73.

- iii) any form of distribution to the public of the database or of copies thereof. The first sale in the Community of a copy of the database by the right holder or with his consent shall exhaust the right to control resale of that copy within the Community;
- iv) any communication, display or performance to the public;
- v) any reproduction, distribution, communication, display or performance to the public of the results of the acts referred to in (b).

The content of reproduction right seems to be relatively broad. It covers reproduction in all forms, whether it is manual or mechanical. It includes both the temporary and permanent copying. Notwithstanding, digital environment has clouded the concept of reproduction. Display of the content of an on-line database or typical Internet use browsing may cause an infringement, if a RAM-copy is been created to computer's memory.⁸⁴ In my opinion it is difficult to consider RAM-copy as a form of reproduction right. RAM-copy serves the normal function of a computer and is produced without any express orders from the user. In practise it is an interim copy, which will be deleted when the computer is switched off at the latest.

In the Internet, transmission of copyright protected database⁸⁵ or its part creates temporary copies to router's memory. These routers are used to convey the transmitted content from the originating server to the destination server.⁸⁶ Technically each copy saved into router's memory results as a temporary reproduction of a small fraction of the content being transmitted. Thus, it could be argued that this kind of operation constitutes copyright infringement. This complex situation will be resolved in the long run by the courts. One method to consider this problem is to regard router copies as a mere transmission. By this approach, copies that are

⁸⁴ See also Recital 44 of the Database directive.

⁸⁵ Transmission occurs when someone is using web-page located database.

⁸⁶ Aalto – Paemen (2001), pp. 635-636.

the result of transmission in digital networks should fall outside the copyright owner's restricted acts.

In addition, quite frequently works are copied as interim copies to so called proxy caches. Proxy caches are used to reduce the requirement of transmission capacity.⁸⁷ In practice, proxy cache operation creates a copy of browsed Web-page material to user's own hard drive or to server's memory. Proxy cache operations main function is to enable a use or transmission of desired web-page, which itself may be deemed as database.⁸⁸ If a proxy cache is merely a technological process it may be argued that its impact is largely related to efficiency of transmission. Therefore, it could be excluded from the exclusive rights of an author.

Alteration right, i.e. the right to create translations, adaptations or other modifications from the original work, is a traditional exclusive right. It protects both economical and moral rights of an author. The significance of the alteration right has remained vital in a digital environment. In addition, reproduction, distribution and communication to the public of the results of the alteration are not permitted.⁸⁹

Distribution right to the public includes all forms of dissemination of databases. Dissemination may result in the course of normal distribution channels or via electrical networks. However, the exhaustion of the right of distribution takes place when the first sale of a copy of the database in the Community occurs with the consent of right holder.⁹⁰ Naturally this exhaustion concerns merely the right to control resale of a copy involved.

⁸⁷ Ibid. at 635; pp. 637-638.

⁸⁸ Ibid. at 637.

⁸⁹ Database directive, art. 5 (E).

⁹⁰ Database directive, art. 5 (C).

Communication, display or performance of a database to the public are considered as restricted acts. Basically the infringement takes place when a database is published or made available to the public. Like distribution right, these communication rights may be performed also via new electrical networks e.g. the Internet.

4.4.2 Copyright Exemptions

Exemptions to copyright owner's exclusive rights play fundamental role in complex question of fair balance between right holders' interests and public benefits.⁹¹ Article 6 of the directive defines the rights of so called lawful user. Lawful user is entitled to perform any of the acts listed in article 5 (exclusive rights), which are necessary for the purposes of access to the contents of the databases and normal use of the contents. This right belongs to lawful user without any authorisation of a right holder. However, if a lawful user is allowed to use merely part of the database, the right provided in article 6 applies merely to that part.⁹² The provision related to right of a lawful user is mandatory and cannot be abolished by a contract.⁹³

The concept of a lawful user is vague and undefined. A definition of the notion of lawful user is not provided by Database directive or its recent preliminary works. However, the Explanatory Memorandum to the Initial Proposal of the directive⁹⁴ contains a definition. According to that Explanatory Memorandum, a lawful user is a "*person having acquired a right to use the database*".⁹⁵ Unfortunately, this definition offers quite little guidance, because it does not state how a right to use the database may be obtained.⁹⁶ In literature, it is possible to find at least 3 differ-

⁹¹ See above chapter 2.3.

⁹² Database directive, art. 6 (1).

⁹³ Database directive, art. 15.

⁹⁴ Proposal for the Council Directive on the Legal Protection of Databases. 1992 OJ C 156/4.

⁹⁵ Explanatory Memorandum COM (92) 24 final, at 52.

⁹⁶ Vanovermeire (2000), pp. 65-75.

ent interpretations for the concept of lawful user. The first one is a traditional and includes anyone performing according to law or contract to be a lawful user.⁹⁷ The second recognizes only licensee as a lawful user. The third considers the lawful user to be a person who has acquired the database lawfully.⁹⁸ This interpretation is similar to one subsisting in Software directive.⁹⁹ The outcome should be the same if a database is provided publicly and freely by an instance that is lawful user.¹⁰⁰ This kind of organisation could be for instance a library or a public authority. Lawful user rights in connection to copyright protection of databases are more liberated when compared to lawful user rights applied to the sui generis right.¹⁰¹

In ordinary situation lawful user makes use of database when exercising that commodity. Nevertheless, the concept of use is unclear in case of databases. The use of database should as a minimum include the following acts: search information from a database; store information to a database; extract material from a database; re-utilise a database; access a database and; conclude negative inference from a database.¹⁰²

Member States have an option to provide other exceptions to right holders' exclusive rights. However, these exceptions are subject to Berne Convention's provisions concerning the protection and use of protected work: exceptions shall not unreasonably prejudice the right holder's legitimate interests nor may they con-

⁹⁷ Vanovermeire (2000), p. 65.

⁹⁸ Ibid.

⁹⁹ Council Directive of 14 May 1991 on the Legal Protection of Computer Programs (91/250/EC). 1991 OJ L 122, 22 IIC 676 (1991). Hereinafter "Software directive".

¹⁰⁰ Karo (1998), pp. 74-75.

¹⁰¹ Chalton (1998), p. 180.

¹⁰² Ibid.

flict with normal exploitation of the database.¹⁰³ Directive permits options for restrictions on exclusive rights in the subsequent cases:¹⁰⁴

- i) in the case of reproduction for private purposes of a non-electronic database;
- ii) 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;
- iii) where there is use for the purposes of public security or for the purposes of an administrative or judicial procedure;
- iv) where other exceptions to copyright which are traditionally authorised under national law are involved, without prejudice to points (a), (b), and (c).

Reproduction for private purposes has been one of the most significant copyright exceptions in a number of Member States. According to Directive reproduction right for private purposes prevails only where the source of copying has been a non-electronic database. If a copy has been reproduced from a digital database in a digital form this exception is not applicable and reproduction in that case requires authorisation from the right holder. Notwithstanding, it is allowed to produce paper prints from a digital database.¹⁰⁵ The development of this kind reflects the change of attitude of Commission. The right holders have been successful in lobbying the idea that 'digital is different'.¹⁰⁶ But how different it is in fact?

Digital environment enables identical copies from original material in a short time. It also facilitates gathering of such creative material because electrical net-

¹⁰³ Database directive, art. 6 (3).

¹⁰⁴ Database directive, art. 6 (2).

¹⁰⁵ Haarman (1999), p. 209.

¹⁰⁶ Hugenholtz (1998), p. 188.

works may contain an enormous quantity of substance that is rather trouble-free to locate. Premier movies and unpublished pieces of music can be found without difficulties in the Internet. On the contrary, one may argue that digital networks are merely novel devices for efficient information distribution. They may increase the efficiency of database providers' business opportunities by enabling more cost-effective Internet-based service providing. In case of on-line databases the use of technological protecting measures enable the defence of databases against reproduction when required. According to my knowledge the private copying of digital databases is not inevitably danger. Databases, which contain commercial utility, are becoming more complex to use. The surplus value of purchaser comprises not only a possibility to use that database but opportunity to receive e.g. user support and consultation. This is possible only when database is purchased from the right holder or his representative. As a conclusion, the limitation of reproduction right for private purposes in digital environment seems to be fairly strict. Conceivably, results of enhanced possibilities for private copying may not reduce database industry's competitive ability more than is acceptable considering the freedom of expression and information.

Illustration for teaching or scientific research is eligible to be considered as optional copyright exception on condition that exploitation has a non-commercial purpose and the source is specified. Exception shall not be used for illustration of examination characterised by public benefit if they contain any commercial purposes. This exception is established to promote the development of a whole society.

Public security or an administrative or judicial procedure may confer a reason to enact copyright exception. This derogation may not be used in each individual case but is applicable to certain group of situations, which are specified in national legislation.

The final exception allows providing exemptions on the basis of traditionally authorised national regulations. Member State may continue to apply provision, which subsists in its national copyright act. This enables to pay attention to national and historical differences.

4.5 The Object of Protection

The database contains in its ordinary form already existing information. In other words, the information itself does not embody the intellectual input of its author. Thus, the information stored in the database may not be the object of protection.¹⁰⁷ The object of protection is the manner how the database has been arranged or how the information contained in the database has been chosen. Consequently, copyright protection of database directive protects the structure or schema of a database.¹⁰⁸ In addition the legislation concerning unfair competition may confine some valuable assist in order to protect the content, i.e. information as such, of database.

4.6 The Term of Protection

The economical rights of copyright are not perpetual. Traditionally, the duration of copyright has been linked to the lifetime of an author. At certain juncture a personal connection between the right holders and the author is deemed to be excessively distant and there are no reason for the remuneration of the prevailing right holders.¹⁰⁹ Exhaustion of the copyright may also bring works into more effective use, which eventually benefits a whole society.

¹⁰⁷ Database directive, art. 3 (2).

¹⁰⁸ Database directive recital 15; Gaster (1996), p. 1134.

¹⁰⁹ Haarmann (1999), p. 176.

The database directive does not contain a provision that regulates duration of copyright. In the European Union the term of copyright protection is laid down to the E.C Directive on Duration.¹¹⁰ In relation to literary (databases are included), dramatic, musical and artistic works the principal rule for the duration of copyright is the author's life and a period of 70 years from the end of the calendar year in which the author dies. Copyright in a work of joint authorship terminates 70 years from the date of the last surviving author's death.¹¹¹

The copyright duration of 70 years after the death of an author seems to be considerably long lasting. In practice the term of protection will be around 150 years because an average lifetime is approaching 80 years. The fast technological development in relation to information technology and an extensive term of protection guarantee an effective protection for databases. Thus, when the copyright protection is exhausted the database concerned is in practice of no value.

4.7 Conclusions

It is in the essence of whole copyright regime that authors are encouraged with sufficient incentive to create intellectual creations. It guarantees the development of a society and thus benefits each citizen. However, the public benefit must be ensured also by another means. By providing exceptions to author's exclusive rights it is possible to restrict his power to fair and just extent.

Concept of lawful user remains to be unclear.¹¹² The directive fails to determinate one of its own key notions. Notwithstanding, subscription, licence or purchase of a material copy of database must ensure the status of lawful user.

¹¹⁰ Council Directive 93/98/EEC of 29 October 1993 harmonizing the term of protection of copyright and certain related rights. Hereinafter referred as " Directive on Duration".

¹¹¹ Cornish (1996), p. 351.

¹¹² The concept of lawful user was introduced in Software directive.

In digital environment reproduction of databases for private purposes plays a relatively limited role. There can be found good quality arguments against and for the extensive prohibition of private copying as is described in chapter 4.4.2. In my opinion a restriction, which prohibits all kind of copying for private use is excessively categorical and therefore too limiting.

Copyright protection for databases does not cover the content of database but only the original structure. In practice databases are arranged in a practical and conventional way. Therefore, the data is regularly organised in alphabetical or chronological order.¹¹³ This kind of arrangement of the contents of a database does not attract copyright protection because of the lack of author's intellectual input. The most valuable function of database is ordinarily the database's operation as a source of information. According to database directive reproduction of the contents of the database either in whole or partly does not cause necessarily copyright infringement. Hence copyright in databases does not afford relatively comprehensive protection. To resolve this problem Commission also established a new right, the sui generis right, which protects also time, effort and investment expended in the development of the database.

Despite of the major differences in determination of originality between continental and British copyright system, European Union managed to harmonize copyright protection of databases. The result of harmonization is closer to continental than to British concept of originality. In any case, the final determination of originality will be achieved through the decisions made by the Member States' courts and European Court of Justice.

¹¹³ Karo (1998), p. 72.

5 SUI GENERIS PROTECTION UNDER THE DIRECTIVE

The roots of a Sui Generis¹¹⁴ right, which was introduced in the first proposal of database directive¹¹⁵, can be found in the Nordic catalogue rule. In the Nordic countries the Copyright Act has provided tailored protection for collections of data approximately 40 years.¹¹⁶ However, the protection offered by the catalogue rule is fundamentally based on competition law character. The goal of catalogue rule has been to guarantee and protect corporate's financial investment and to prevent commercial piracy and unfair competition exploited by the rivals.¹¹⁷ To attract the catalogue protection the collection shall be compiled from the large numbers of information items. In accordance to Nordic catalogue rule the sui generis protection for non-copyrightable factual compilations grants for the author the exclusive right to authorise or prohibit reproduction of a compilation in whole or in substantial part.¹¹⁸ Thus, the protection is remarkably more extensive than the protection provided by the copyright law.

The new sui generis right was developed in connection with a rapid development of database industry and its commercial utilisations. The sui generis right was necessary because copyright protection is not able to protect databases, which lack the standard of originality. Notwithstanding, such databases may present huge commercial value and thus need to be protected. Furthermore, databases in their electronic form are extremely vulnerable for unauthorised reproduction in a digital environment, which enables quick and identical copies of an original source. The sui generis right was also composed because European Community law does not cover the field of unfair competition between Member states, which

¹¹⁴ Sui generis is Latin and means: 'in a class of its own; unique'.

¹¹⁵ Proposal for a Council Directive on the Legal Protection of Databases, COM (92) 24 final.

¹¹⁶ Lieder (1997), *International Protection of Databases*, p. 448

¹¹⁷ Karnell (1991), p. 70.

¹¹⁸ See for instance Finnish Copyright Act chapter 5 (rights related to copyright).

would enable to treat these situations in a relation to unfair use of information and thus ensure the similar results that are provided by the database right.¹¹⁹ Sui generis right is a property right and it is independent of whether the database is entitled to copyright protection or not.¹²⁰

5.1 The Subject Matter of Database Right

The sui generis right was developed to protect the ‘sweat of the brow’ of the database producer, in other words, the skill, energy and money invested to the creation of a database.¹²¹ On the contrary to the copyright protection, the intellectual effort of an author is not required. Thus, the object of protection is only the investment, which has been devoted to produce the database.

Database right protects the maker of database when there has been "*a substantial investment in either the obtaining, verification or presentation of the contents*" of a database.¹²² The directive confers little assistance what qualifies as a minimal amount of investment required. However, the recital of directive announces that substantial investment may consist of financial, human or technical resources.¹²³ Substantiality shall be evaluated either qualitatively, quantitatively or it can be combination of both.¹²⁴

According to Hugenholtz, a qualitative investment may result, for example from the specific expertise of a professional like lexicographer, who selects the key words for a dictionary.¹²⁵ The quantitative element comes into existence from a

¹¹⁹ Cornish (1999), p. 525.

¹²⁰ Torremans - Holyoak (1998), p. 509.

¹²¹ Hugenholtz (2001), p. 2.

¹²² Database Directive, article 7 (1).

¹²³ Recital 40; Shaw (1998), p. 134.

¹²⁴ Database directive, article 7 (1).

¹²⁵ Hugenholtz (1998), p. 190.

quantitative investment of financial resources or consumption of time, effort and energy. Virtually, the quantitatively investment might be the more applicable because of the structure of an average database which is composed from collections of data or other material, and is the result of hard work more than specific skills deployed.¹²⁶ Musical performances on a CD do not meet the conditions for sui generis right because they do not contain substantial enough investment.¹²⁷ On account of that exclusion it is reasonable to conclude that the threshold for substantial investment is intended to be fairly large. Laddie has argued that the test for substantial investment is high and must be concluded in connection with investment made by commercial producers of databases.¹²⁸ Database maker bears the burden of proofing of a birth of the quantitative investment. Thus it is essential that maker of database retains documents that include information on the amount of performed investment.¹²⁹

The accurate quantity of substantial investment is difficult to determine. Basically the question lies on the amount of required work produced by the database maker. According to my understanding the likelihood that investment is considered as substantial increases with every step the maker takes in order to develop database. Presently there exists some interesting case law in the region of Europe.

In British Horseracing case, the substantial investment was deemed to occur when the costs of database were approximately 25 per cent of company's annual expenditure.¹³⁰ According to Finnish Copyright Counsel the substantial investment was performed on the basis of financial and human resources when the group of medical researchers composed a database that was grounded on interviews, clinical

¹²⁶ Ibid.

¹²⁷ Recital 19.

¹²⁸ Laddie (2000), p. 1076.

¹²⁹ Ibid.

¹³⁰ Chalton (2001), p. 297.

examination and laboratory experiment of 780-831 persons.¹³¹ Due to the expensive and laborious nature of medical examinations it is reasonable to consider investment resulting in a database as substantial in this and forth-coming similar cases.

In *Kranten.com*-case the District Court of Rotterdam ruled that database containing a daily-renewed list of dozen titles of news reports did not demonstrate that there has subsisted a substantial investment in presentation of the titles on newspaper's web-page.¹³² This ruling was based on an assumption that qualitative investment was not shown because the selection of the titles and articles in this scale was matter of minor importance. Also the argument of quantitative investment was rejected because seven employees who were responsible for the maintenance of the news paper's web-page did not constitute substantial investment due to their trivial quantitative significance in relation to considerably greater total number of people working for the plaintiff newspaper as a whole.¹³³

In Germany, the District Court of Berlin accepted that on-line database including classified advertisements published in the newspaper was the result of substantial investment due to the transformation of analogue files to digital (from newspaper to on-line form), choice, updating and verifying of the ads.¹³⁴ As appears from the judgement, the selection was performed from 70.000 advertisements published in the newspaper. Thus, it is fair to assume that numerous quantities of labour are required in order to select and classify chosen ads. It also strengthens the assumption of substantial investment. In addition, there exists the decision of the Federal Supreme Court of Germany concerning the substantial investment in ordinary

¹³¹ Finnish Copyright Council 1999:17, p. 1 and pp. 8-10.

¹³² *Dagbladen v. Eureka Internetdiensten* (2000); known as *Kranten.com*-case; English translation at www.ivir.nl/rechtspraak/kranten.com-english.html; p. 4.

¹³³ *Ibid.* at 7-8.

¹³⁴ *Berlin.Online Landgericht Berlin* (1998); *Hugenholtz* (2001), p. 7; *Computer Und Recht* 6/1999, pp. 388-389.

telephone directories. The Court ruled in Tele-Info-CD –case that ordinary telephone directory does not qualify to the domain of copyright protection. However, the production of telephone directory results quite regularly in a substantial investment and thus the applicability of sui generis –regime is likely to appear.¹³⁵

Nevertheless of some existing court rulings, the numerical quantity for the substantial investment is impossible to define. The required substantial investment must be in fair proportion to a database maker's total quantity of conducted business. This means that the substantial investment may be different e.g. for small-scale entrepreneur and medium-size company. In my opinion the required level of investment that qualifies to be substantial may be obtained even with considerably smaller amount of total costs than 25 per cent of a conducted business. From the view point of economical approach, the investment is essential and has relevant effects to the productivity and income of the company even in situation in which the investment represents a few per cents of conducted business. Naturally, likelihood that an investment is considered to be substantial increases in last-mentioned case when the total size of conducted business enlarges.

The substantial investment is required to be attained in relation to "*the obtaining, verification or presentation of the contents*" of the database".¹³⁶ These three concepts are also without definition given by the directive or its preliminary works. In that case those notions shall be interpreted according to their ordinary linguistic meaning. The *obtaining* alludes to the gathering of data, works or other materials that create the database. *Verification* refers to the checking, correcting and updating of material, which is already subsisting in the database. Finally, *Presentation* includes the retrieval, communication of the contained data and digitalisation of analogue files, the creation of thesaurus or development of a user interface.¹³⁷

¹³⁵ Tele-Info-Cd (1999); Hugenholtz (2001), p. 7.

¹³⁶ Database directive, article 7 (1).

¹³⁷ Hugenholtz (2001), p.3.

5.2 The Scope of Database Right

The sui generis right is defined to be a right, which prevents "*extraction and/or re-utilisation of the whole or of a substantial part, evaluated qualitatively and/or quantitatively, of the contents of that database*".¹³⁸ Directive also clarifies that *extraction* shall signify "*the permanent or temporary transfer of all or a substantial part of the contents of a database to another medium by any means or in any form*".¹³⁹

In other words, the sui generis right ensures for the right holder the right to prevent extraction or re-utilisation of the whole or a substantial part of the database's content. Thus, it remains to be legal to reproduce or use the insubstantial part of a database without the consent of a right owner. Similarly to the concept of substantial investment the substantial part of the content of the database is assessed qualitatively or quantitatively.¹⁴⁰

Determination of substantial part of a database is difficult. Henrik Jensen starts his analysis on the substantial by defining synonyms. He argues reasonably that words large, significant and remarkable signify similar contents than the concept of substantial.¹⁴¹ In the context of normal linguistic meaning it can be argued that these words indicate the numerical amount that subsists at least between 50-99,9 % of the whole content. One may also argue, on the basis of an ordinary experience of life and common sense, that in case of reproduction or re-utilisation that exploits more than 50 per cents of an initial work/database, the exploiter makes use of a substantial part of the content. It would also effect negatively for the in-

¹³⁸ Database directive, article 7 (1).

¹³⁹ Database directive, article 7 (1) a.

¹⁴⁰ Karo (1998), pp. 81-82.

¹⁴¹ Jensen (1999), p. 68. Words used in this article are translation of Norwegian words of "stor", "viktig" and "veldig".

centive to produce databases if such a large quantity of exploitation were deemed to be insubstantial and thus it would endanger the functionality of the whole industry. Therefore it seems to be relatively apparent that quantity of at least 50 - 99.9 per cents of the original content is regularly deemed to be substantial part and thus requires the authorisation of a right holder.¹⁴²

According to my understanding, even considerably lesser quantity than 50 per cent may constitute a substantial extraction or re-utilisation of an original content. In the decision of Finnish Copyright Council concerning maps that illustrated potential localities of cloudberry, the Council decided that the reproduction of the content comprising 25 and 29 per cents of the original total content of the localities of cloudberry were considered to be substantial parts.¹⁴³ Starting point for the consideration of a quantitative substantial part could be yet the amount of 4 - 50 per cents of the utilised original content. This assumption is based on a view that there is no reason to allow even an exploitation of 5 per cent of the original content of a database without reasonable counter arguments. The investment beyond the obtaining, verification or presentation of such 5 per cent's content may require considerable exploitation of time, money and effort and thus the result of such acts should belong as a general rule to the performer of such investment. However when there exists reasonable counterarguments this assumption may be overruled. Thus this kind of numerical analysis is the mere starting point for the determination of substantial part of the content of a database.

Finally, the extraction or re-utilisation that represents 1 – 4 per cents of the original content would normally create an assumption of utilisation of database's insubstantial part. It is essential to bear in mind that these numeric values are merely guiding values and they are therefore only to assist a decision-making. The

¹⁴² Ibid. at 68-69 and 73.

¹⁴³ Finnish Copyright Council 2000:5

whole conclusion on the consideration of substantial part of a database must be based on comprehensive analysis of relevant facts of involved case.

The determination of substantial part of a database may be also grounded on qualitative analysis. In aforementioned British Horse racing –case, the honourable judge Laddie argued that primary function of the plaintiff was to carry on horse racing business, and therefore the ultimate purpose of plaintiff’s database was to assist to control and facilitate horse racing and the fund raising related to it.¹⁴⁴ Hence, the information in the database was deemed to be ultimate and crucial in order to conduct such business and the parts extracted and re-utilised from the database were considered as substantial parts. At this case the qualitative analysis laid the main stress on the determination of substantial part of a database. It seems to be that in the determination of substantial part by the qualitative basis, the analysis must be composed regarding the importance of utilised part to the maker of database. Thus, the more essential the extracted or re-utilised part of a database is for the right owner, the likelihood that such a part is assessed to be substantial increases. The evaluation of the utilised part of a database shall be constructed from the objective standpoint. However, there exists no accurate information how the assessment of the importance of the utilised part to the right owner should be measured.

Picture 6. Guidelines for the determination of substantial part of the contents of a database:

- i) quantity of 50 - 99.9 (50 – 99.9 %) per cents of the original contents is regularly deemed to be substantial part;

¹⁴⁴ The British Horseracing Board Limited v. William Hill Organisation Ltd (2001), sec. 53.

- ii) quantity of 4 – 50 (4 – 50 %) per cents of the original contents is assessed without reasonable counterarguments as substantial part;
- iii) quantity of 1 – 4 (1 – 4 %) per cents of the original contents is assessed generally and without reasonable counterarguments as insubstantial part.

The determination of substantial part leads to the next issue. Repeated or systematic extraction of insubstantial parts of the contents of a database shall not be permitted if those acts conflict with normal exploitation of database or otherwise prejudice the legitimate interests of the maker of the database.¹⁴⁵ It is argued that at least one piece of data would be insubstantial. There are also opinions that consider portions of data as insubstantial on condition that these portions are not eligible for independent protection.¹⁴⁶ The applicability of this provision requires repeated or systematic utilisation. Thus, it is in the essence of the directive that some kind of continuity is required. The provision concerning insubstantial parts is enacted to prevent the circumvention of the main rule, which prohibits the exploitation of a whole or of a substantial part of the contents of the involved database.

It is obvious that extraction in a non-digital world covers all kinds of copying, reproduction, duplication and transcription whether the extraction is made by hand or machine. Problems arise when the database is in a digital world (ones and zeros in byte space) like in the form of an on-line database or a CD- database. Unfortunately, database directive does not facilitate this approach. In fact it states that " *when on-screen display of the contents of a database necessitates the permanent or temporary transfer of all or a substantial part of such contents to an-*

¹⁴⁵ Database directive, art. 7 (5).

¹⁴⁶ Karo (1998), p. 81.

other medium, that act should be subject to authorization by the rightholder."¹⁴⁷

In practise this means, as far as interim copy is stored in computer's RAM-memory, hard disk or in router's or server's memory (proxy), that for instance normal use of internet will require the authorisation from the right owner, on condition that the substantial part of the database is reproduced. Thus, the most common ways of internet use such as browsing is exclusive acts of right owner and the authorisation of the right holder is provided.¹⁴⁸

Re-utilisation is defined as "*any form of making available to the public all or a substantial part of the contents of a database by the distribution of copies, by renting, by on-line or other forms of transmission*".¹⁴⁹ The term making available was introduced at the first time in WIPO Copyright Treaty.¹⁵⁰ In that event, making available was defined particularly as a right of an on-line transmission.¹⁵¹ In other words, the members of public may access these works from "*a place and at a time individually chosen by them*". In the Database Directive the definition of making available seems to be broader. It includes all forms of distribution no matter of the form of the transmission. Thus, re-utilisation includes all types of publication of the contents of a database. It can be argued that re-utilisation includes most of the operations occurring on the World Wide Web -environment on condition that browsing through a work can be considered as a public display of the work.¹⁵²

To consider database that is presented in on-line circumstances that are able to be accessed by individual users as a public performance, there are some requirements to be fulfilled. In the first place it is required that work is displayed on the screen

¹⁴⁷ Database directive, recital 44.

¹⁴⁸ Karo (1998), p. 80; Powell (1996), p. 1239.

¹⁴⁹ Database directive, article 7 (2) b.

¹⁵⁰ WIPO Copyright Treaty (1996), article 8.

¹⁵¹ von Lewinski (1997), p. 205.

¹⁵² Karo (1998), p. 80.

of terminal (like computer). In the second place it is required that there will be an audience from which the author is justified to receive compensation on the basis of the exploitation of his work.¹⁵³ According to Torremans aforementioned display/performance of website may create a public performance similarly as it is argued to occur in the mobile phone¹⁵⁴ and the hotel case¹⁵⁵. In those two international cases it was considered that several people listening background music or watching TV and video broadcasts at the time individually chosen by them, created an audience and consequently the whole watching or listening act resulted in a public performance.¹⁵⁶ In other words the database displayed on the website may create a public display/performance, which means that the consent of the author is required on condition that the whole or a substantial part of database is re-utilised.

5.3 Exceptions to Prohibited Acts

Exemptions to the sui generis right may be divided in two categories. Primarily, directive defines rights and obligations of lawful users. Secondly, it incorporates three types of optional exceptions to exclusive rights of a database maker in relation to sui generis right. Mainly these exceptions are comparable to ones provided by article 6 (2) A-C for copyright owner's exclusive rights. However, there exists also an essential difference regarding exceptions to database maker's exclusive rights: sui generis right applies solely to databases, which have been made available to the public.¹⁵⁷ This is not required in the field of copyright protection.

¹⁵³ Torremans - Holyoak (1998), p. 514.

¹⁵⁴ Australian Performing Right association Ltd. V Telstra Corp Ltd [1997].

¹⁵⁵ SGAE v Hotel Blanco Don SA [1997].

¹⁵⁶ Torremans - Holyoak (1998), p.515.

¹⁵⁷ Database directive, art. 8 and 9.

5.3.1 Rights and Obligations of Lawful User

Lawful user is a person who has acquired a right to use a database. Extraction and re-utilisation of insubstantial parts of the database contents is officially permitted for lawful user provided that database has been made available to the public. In case lawful user is entitled to use a part of a database, the extraction and re-utilisation rights of insubstantial parts apply solely to that part.¹⁵⁸ Provision contains an idea that ordinarily an exploitation of database includes reproduction of the content to the limited extent and database maker should comprise a cost of such right in an initial price of that database.

There are two kinds of obligations that are allocated expressly to lawful user. A lawful user is obliged not to perform acts that conflict with the normal use of the database or unfairly prejudice the legitimate interests of the maker of a database.¹⁵⁹ However, the normal use of database may be difficult to determine.

It is worth remembering that a database and a content of database are different subjects. The directive specifies that lawful user may not cause prejudice to the right holder regarding the works or material contained in the database.¹⁶⁰ Hence, the protection of material contained in the database may be protected independently.

5.3.2 General Exceptions to the Sui Generis Right

Member States are authorised to regulate a few situations where lawful user is entitled to extract or reutilise a substantial part of database content without the

¹⁵⁸ Database directive, art. 8 (1).

¹⁵⁹ Database directive, art. 8 (2).

¹⁶⁰ Database directive, art. 8 (3).

authorisation of its maker. In this event it is required that a database is made available to the public. Optional situations are as follows:

- i) in the case of extraction for private purposes of the contents of a non-electronic database;
- ii) in the case of extraction for the purposes 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;
- iii) in the case of extraction and/or re-utilisation for the purposes of public security or an administrative or judicial procedure.¹⁶¹

This provision resembles considerably to the exceptions provided by the directive in respect of copyright protection. Optional exception to private use is considered differently between an electronic and a non-electronic database: extraction is accepted merely from the contents of a non-electronic database. Provision reflects the assumed difference between a digital and a non-digital environment.¹⁶² The same distinction was made on the field of copyright exception for private purposes.

The exception in relation to education and research seems to be more limited in scope than comparable provisions in national copyright laws provided by Member States.¹⁶³ The applicability of this exemption is restricted to lawful users and merely for extraction acts for such purposes. Furthermore, the requirements of a source indication and a non-commercial purpose of use of extraction shall be fulfilled as well as the general criteria not to perform acts which conflict with the normal exploitation of the database or to unreasonably prejudice the legitimate interests of the database maker.¹⁶⁴ However, the extractor is not permitted to make

¹⁶¹ Database directive, art. 9.

¹⁶² See above ch. 4.4.2.

¹⁶³ Karo (1998), p. 83.

¹⁶⁴ Database directive, art. 9 (2) and 8 (2).

use of copied material in the creation of a new and independent database, which is intended to be made available to the public.¹⁶⁵ According to provision in question, the exploitation of databases as research tools is especially questionable. This opinion is based on the viewpoint that provision allows solely the illustration of concluded results, not the other uses for scientific research e.g. an independent use of material in order to draw conclusions, which are capable to be used freely in a purpose of illustration.¹⁶⁶

The third exception provided by article 9 is the sole one to allow both the extraction and re-utilisation acts for the purposes of public security or an administrative or judicial procedure. These purposes are evaluated to be sufficiently essential to justify also the use of re-utilisation act. Also the nature of these exempted purposes is kind that normally requires the act of making available e.g. a legal proceeding.

It is worth noting that sui generis exceptions do not comprise several limitations, which were well-known in national legislations. Restrictions to exclusive rights in relation to education, libraries and archives, news reporting or governmental documents are lacking in this provision.¹⁶⁷ On the contrary to copyright exceptions, article 9 does not offer an optional opportunity to stipulate an exception on the basis of traditionally authorised national law. However, the recital 52 of the directive permits to retain the exceptions traditionally specified by the rules that are comparable to the new sui generis right.

5.4 Beneficiaries of Protection

¹⁶⁵ Thakur (2001), p. 114.

¹⁶⁶ Karo (1998), p. 83.

¹⁶⁷ Hugenholtz (1998), p. 191.

The sui generis protection of the directive is pointed to the database makers and right holders that are connected relatively powerfully to the European Union. The directive provides a protection for nationals of a Member State or community citizens.¹⁶⁸ The latter is provided on condition that a citizen has its habitual residence in the area of Community. The protection covers also companies and firms which are established according to law of a Member State and which are virtually conducting their business within the Community. A registered office, central administration and principal place of business are relevant when determining a connection between a company and a Member State.¹⁶⁹ In principle this signifies that a maker of a database may be initially a company where the database has become created. In case database is not developed in an organisation of a company, database belongs to the person who has performed the substantial investment.

The essence of international dimension of sui generis right is laid down to article 11 (3). In order to achieve the protection in EU, nationals and citizens of third countries must conclude an agreement with The Council of the European Union. It is likely that aforementioned agreement may be reached only on the basis of essential material reciprocity.¹⁷⁰ Arguments concerning nature of database right in relation to reciprocity have been quite divided. Gaster has argued that directive's provision concerning reciprocity is not infringing any international obligations directed to EU countries because database right is a new legal creature and is not bound by any international conventions.¹⁷¹ On the contrary, Cohen Jehoram has stated that the rule of national treatment of the Paris Convention¹⁷² is applicable, on condition that database right is included to the group of rights of industrial property.¹⁷³ National treatment, which was introduced in Berne Convention, en-

¹⁶⁸ Database directive, art. 11 (1).

¹⁶⁹ Database directive, art. 11 (2).

¹⁷⁰ Hugenholtz (2001), p. 4; Recital 56.

¹⁷¹ Gaster (1995), p. 261.

¹⁷² Paris Convention for the Protection of Industrial Property Of March 20, 1883.

¹⁷³ Cohen Jehoram (1992), p. 133.

sures that each member state bound by the convention is obliged to confer for citizens of another member state a treatment equal to one accorded to its own citizens.¹⁷⁴ If national treatment applies to the sui generis right as Cohen Jehoram has considered, a discrimination of third countries is not possible and reciprocity shall be granted without express agreement. Currently, database right offers no protection to United-States originated databases unless the United States may provide comparable protection to European databases. Hence, the applicability of national treatment seems to be rejected.

5.5 The Term of Protection

The sui generis right lasts for 15 years from the end of a calendar year the database was completed or become available to the public during the initial period of 15 years.¹⁷⁵ However, this initial duration of protection may be extended. A further substantial change to the contents of the database, which may be either qualitative or quantitative, completed in relation to deletion, alteration or verification will provide an additional 15-year duration.¹⁷⁶ The substantial change must qualify to be considered as a substantial new investment. The amount of investment that results in substantial investment has not been clarified in directive. Guidance for this kind of assessment may be found in a determination of initial substantial investment.¹⁷⁷ Therefore, a minor daily or monthly occurring verification or alteration of contents is unlikely to be considered as substantial new investment. The final clarification for the concept of new substantial investment will be attained with the ruling of European Court of Justice.

¹⁷⁴ Haarmann (1999), p. 20.

¹⁷⁵ Database directive, art. 10 (1) and (2).

¹⁷⁶ Database directive, art. 10 (3).

¹⁷⁷ See above ch. 5.1.

The value of database depends materially on the accuracy and quantity of information. Updating and improving of database play essential role in a securitisation of a value of database. The provision concerning an extension of sui generis right on the basis of new substantial investment has been established to guarantee the exploitation of such databases.¹⁷⁸ Otherwise a free riding of renewed databases would endanger a development of databases, which require constant updating. From this point of view, the regulation is essential in protection of constantly developing databases.

One may argue that a possibility to extend the duration of protection affords excessively broad protection. Firstly, the extension covers the database as whole instead of extended part of it. Secondly, databases that require constant updating obtain a perpetual protection on condition that required substantial investment is reached every time.¹⁷⁹ Hence, a limitation of term of sui generis right regarding regularly improved databases loses its meaning.

5.6 The Object of Protection

In contrast to copyright protection, database right is not intended to protect the intellectual creation of an author but the investment undertaken in obtaining, verifying and presenting the contents of a database. Recital of the directive expressly emphasizes that sui generis right should not give rise to the creation of a new right in the works, data or material themselves.¹⁸⁰ However, considering the fact that database is normally created to manage and give access to information, it is difficult to protect the financial investment without protecting the information con-

¹⁷⁸ Karo (1998), p. 84.

¹⁷⁹ Rees – Chalton (1998), p. 23.

¹⁸⁰ Database directive, recital 46.

tained in the database to some extent.¹⁸¹ In other words, the real value of database may be in information contained in the database, instead of selection and/or arrangement of its content.

On this issue Justice Laddie has expressed some relevant and interesting comments in recent British Horseracing case.¹⁸² According to Laddie the main purpose of database protection is to prevent acts which cause considerable damage to the investment. Quite often that investment is used to gather information. In fact this means that information itself will be protected. The result will be the same if the information is derived indirectly from the protected database. This kind of conclusion is contrary to the fundamental principle of idea-expression dichotomy but it is also the only way to ensure the protection of investment, and thus the protection of most valuable parts of databases.

On the contrary to the arguments introduced in British Horse Racing -case, there have been opinions that would exclude at least the so-called raw data from the scope of the protection. Genetic information, information based on meteorological observations as well as picture and sound material produced by the digital cameras are presented as an example of raw data.¹⁸³

Despite the approach of judge Laddie in the British Horse Racing -case, the object of sui generis protection remains to be vague and thus needs to be clarified by the future rulings of courts. However, the protectability of pure raw data seems to be outside the scope of protection.

5.7 Conclusions

¹⁸¹ Chalton (1998), p. 182.

¹⁸² The British Horseracing Board Limited and others v. William Hill Organisation Ltd (2001).

¹⁸³ Finnish Government Bill 1997/170 p. 12.

The new sui generis right was developed to correct defects of traditional copyright law in protecting valuable databases. Database right extends the scope of protection to databases, which are the result of a substantial investment. Directive fails to clarify some essential concepts like the threshold requirement of substantial investment. Notwithstanding, I have sought to determinate some instructive guidelines for the determination of substantial investment as well as substantial part of the contents of the database, analysed both quantitatively and qualitatively. However, the adequate minimum investment will be determined officially by the case law in the near future. Unfortunately, this enables the different interpretations of national courts until the clarifying decision made by the European Court of Justice.

It is also vague whether the object of protection covers the information itself. As the Laddie has interpreted the information may be protected to some extent. In my opinion it is important to bear in mind that this does not guarantee the exclusive right for the maker of database to use that information, but it only prevents the direct or indirect extraction or re-utilisation of that information. In other words, if someone gathers independently the same raw data and creates the same kind of database without using the material of another already existing database, he does not infringe the database right. Consequently, the information itself is not protected.¹⁸⁴

Exceptions to the sui generis right are even more limited than exemptions in relation to copyright. Somehow, this kind of result is a little bit extraordinary because database right ensures a broader protection than copyright provisions. In that case the possibility to stipulate rational and material exceptions should be enhanced. However, the most essential exception, the right to extract or re-utilise insubstantial parts of database plays a fundamental role for a lawful user. At this point, one

¹⁸⁴ The idea may be compared to the double creation that is known in copyright. See e.g. Koivumaa (2000), ch. 2.3.

problem may arise: what amount qualifies to be insubstantial? There have been arguments emphasizing that at least portions containing diminutive amounts of information should qualify to be insubstantial. However, this kind of assumption arouses the next question – remains the data insubstantial in case that it is very valuable to the exploiter? For me the negative answer seems to be logical but in order to conclude judicially reasonable conclusion the ruling of the European Court of Justice must be attained.

It can be argued that database right is not even trying to resolve the problem of moral rights of database makers. Directive does not ensure the moral rights for the pre-existing authors although the significance of moral rights in digital environment may be essential.¹⁸⁵

The international parallel of sui generis protection remains to not exist. An imbalance between Europe and other major database industries is growing in the favour of European producers. Equal judicial business environment must be guaranteed throughout the globe in order to create efficient exchange of valuable data and economical growth provided by electronic databases.¹⁸⁶

Finally, the creation of new sui generis right was quite astonishing way to resolve problems relating to protection of databases. The more practical way may have been the exploitation of neighbouring rights regime. This standpoint is supported by various reasons. Primarily, databases share the same characteristics than neighbouring rights. Secondly, the neighbouring rights system is already operating moderately, and finally, the rules and principles of related rights are known by the experts.¹⁸⁷

¹⁸⁵ Thakur (2001), p. 121.

¹⁸⁶ *ibid.* at 120.

¹⁸⁷ Garrigues (1997), p. 5.

6 DATABASE PROTECTION IN THE UNITED STATES

6.1 Legal System of United States

On the contrary to the European (Continental) legal structure, the legal system of United States belongs to the tradition of Anglo-American common law system. Thus, law is primarily based on precedents established by courts. In addition to most relevant source of law, case law, other primary sources are statutes and statutory regulations whether they are federal or local legislation.¹⁸⁸ Secondary sources of law are Restatements of law as well as Uniform laws and law reviews. Restatements of law is a commentary series which introduces systematically the content of United States' case law. It was developed to facilitate awkwardness of examination of valid case law.¹⁸⁹ However, it is published and conducted by the private association and is thus not linked to the governmental organisations.

According to US legal system, laws are made at the federal and state levels. The Constitution of the United States is the supreme law of the land. It provides the basis for the U.S. government and guarantees the freedoms and rights of all citizens. Statues may be adopted by two legislative bodies. Congress enacts federal laws and state legislatures stipulate state law. Any powers not delegated expressly to the federal government in the Constitution nor prohibited by it to the states, are reserved to the states. The federal and state court systems comprise of two levels of courts: district courts and appellate courts. At the first stage cases are tried in district courts. Appellate courts review the decisions of the district courts. Ultimately, the Supreme Court may rule the final decision.¹⁹⁰

¹⁸⁸ Clark – Ansay (1992), pp. 37-45.

¹⁸⁹ Ibid.

¹⁹⁰ Ibid. at 49-90.

Both the federal and state courts enforce statutes and create new law for common law subject areas. Common law covers areas excluded by statutes. It is created by judges when they apply previous decisions, *ratio decidendi*, to present cases. In other words judges establish common law through written opinions that are binding on future decisions of lower courts in the same jurisdiction.¹⁹¹ Also the high court is obliged to follow its former precedents in case that cases are sufficiently similar or there is no reason to overrule the prevailing precedent. These rules covering the binding force of former cases are mainly included to the Stare decisis – doctrine.¹⁹² It is established and developed in England but is also applied in US.

6.2 General Observations on Database Protection

United States is the largest database producer in the whole world.¹⁹³ Hence, the protection of databases represents major issue for US. The new sui generis right enables a more efficient database protection in Europe and it therefore creates a serious risk for the future of United States based database industry. A development of this kind forces United States to seek solutions that guarantee an extensive and comparable national legislation. The extensive national legislation would meet the criteria of reciprocity and thus would ensure the protection also in Europe.

The constitution of United States contains some restrictions to the enactment of Copyright legislation. The Copyright Clause obliges the Congress to legislate rules in order to promote the science and useful arts in a way that guarantees an exclusive right for authors merely for limited time.¹⁹⁴ This means that perpetual rights in relation to databases are forbidden. Supreme court of United States has

¹⁹¹ Clark – Ansary (1992), p.36.

¹⁹² Ibid.

¹⁹³ Thakur (2001), p. 120.

¹⁹⁴ Thakur (2001), p. 117.

also stated in Feist case that since the Copyright Clause, a minimum level of intellectual effort is required to ensure protection.¹⁹⁵ Also the First amendment of the Constitution imposes some constraints in relation to dissemination of information. In practise this means that database legislation must ensure a sufficient freedom for a use of information and to certain extent allow making use of pre-existing works.¹⁹⁶ Restriction laid down by the First amendment emphasises also unprotectability of information as such, facts and ideas.

Currently, the database protection may be based merely on federal legislation.¹⁹⁷ US Copyright Act 1976¹⁹⁸, enacted by the Congress, provides the protection for databases as literary works but also for so called compilations. The act follows a universal principle of idea – expression dichotomy. Thus, the copyright protects merely the expressions behind ideas not the facts or principles.¹⁹⁹ The leading database precedent, the Feist Publications, Inc. v. Rural Telephone Service Co²⁰⁰ represents the valid US approach to the database protection.

6.3 Copyright Protection

6.3.1 The Subject Matter of Copyright

In 1976 the House Report expressly announced that databases are protected by the copyright as literary works.²⁰¹ The House Report specified that a concept of literary work does not require any qualitative values, and thus the protection is served for catalogues, factual compilation and computerised databases.²⁰² A copyright

¹⁹⁵ Ibid.

¹⁹⁶ Ibid.

¹⁹⁷ Goldstein (1997), p. 174.

¹⁹⁸ US Copyright Act 1976 (hereinafter “Copyright Act” or “U.S.C.A”).

¹⁹⁹ Karo (1998), p. 91.

²⁰⁰ 499 U.S. 340 (1991).

²⁰¹ Stewart (1989), p. 569.

²⁰² H.R. 1476 (1976), p. 54.

protection exists in “*original works of authorship fixed in any tangible medium of expression, known now or later developed, from which they can be perceived, reproduced or otherwise communicated, either directly or with the aid of machine or device*”.²⁰³

As described above, in order to achieve copyright protection there subsist some prerequisites, which shall be carried out so that the level of creativity shall be fulfilled. Firstly, a work must originate from an author. Basically, this denotes that a work may not be a copy of another work. Secondly, a criterion of standard of originality must be met. In other words, an intellectual effort of an author is required. Finally, a work must be fixed in any physical medium in order to enable a perception of a work. Copyright protection shall not protect any ideas, procedures, principles, methods of operation or discoveries but merely the original expression of them.²⁰⁴

In addition, a work must be registered in the Copyright Office in order to take legal action against offender.²⁰⁵ However, the registration is not a precondition for the protection. After US acceded to the Bern Convention in 1988, there have not existed any formal requirements for attaining the protection, but one may still benefit some litigatory advantages by employing the copyright sign ©.

The US Copyright act expressly affords the protection for the category of compilations and derivative works as specified by the general copyright provision in 102 §.²⁰⁶ A compilation is defined as “*a work formed by the collection and assembling of pre-existing materials or of data that are selected, coordinated, or arranged in a such way that the resulting work as a whole constitutes an original*

²⁰³ U.S.C.A § 102 (a).

²⁰⁴ U.S.C.A § 102 (b).

²⁰⁵ U.S.C.A § 411.

²⁰⁶ U.S.C.A § 103 (a).

work of authorship. The term compilation includes collective works.”²⁰⁷ A compilation consists of material that exists before a creative input of an author. Thus the original element that is required cannot be in a connection to the content of database. The originality requirement may be fulfilled in a relation to selective arrangement of the content. However, copyright shall not extend to the parts of database that may contain unlawfully exploited pre-existing material or to the pre-existing material itself.²⁰⁸

To sum up the requirements of copyright protection nominated by Feist the following components may be illustrated: a) collecting and compiling of pre-existing material; b) selection and arrangement of substance; c) a creative effort of an author that results in selection and arrangement.²⁰⁹

6.3.2 The Scope of Protection

When defining the sphere of protection provided by US copyright law it is highly essential to understand also a content of case law. The combination of contents of copyright law and valid precedents constitute the substance of protection.

6.3.2.1 Description of Feist Case

The Feist case represents a valid approach to the essence of database protection in United States. In this issue a question was about a dispute between two telephone companies. The plaintiff, Rural Telephone Service Co. (Rural), carried on business by publishing an annual white page directory of all telephone subscribers in the service area and in alphabetical order. The defendant, Feist Publications (Feist), which operated on the same branch of business, sought to negotiate a li-

²⁰⁷ U.S.C.A § 101.

²⁰⁸ U.S.C.A § 103 (a and b).

²⁰⁹ Rees – Simon (1998), p. 47.

cence to make use of Rural's material including names, town and telephone numbers. Feist's idea was to create a competing directory comprising a more extensive operation area. The result was that Rural refused to grant a licence for Feist. In spite of this Feist copied the information of Rural's directory without authorisation and thus based its own directory to the information gathered by Rural. Rural sued Feist for copyright infringement and claimed that Feist was not authorised to use information contained in Rural's telephone directory (database).

The sweat of the brow -doctrine, which is also known as 'industrious collection concept', was the prevailing approach in copyright protection in relation to databases. The doctrine was derived in a ruling of *Jewelers Circular Publishing Co. v. Keystone Publishing Co.*²¹⁰ in 1922 and included an idea that sufficient amount of time, money or effort results in copyright protection irrespective of the creative effort of an author.²¹¹ However, in the Feist ruling the Supreme Court rejected the sweat of the brow -doctrine and established a new criterion that is based on originality.²¹² In consequence of the new ruling, the Rural's claim for copyright infringement was dismissed because of lacking originality and Feist was entitled to make use of information contained in the directory of Rural. The court argued its ruling by pointing out that Rural may not afford copyright for material that consists of factual substance nor to the method of arrangement and selection of that material since the method did not express sufficient originality. However, the court stressed that telephone directories belong to a narrow and extremely exceptional class of works, which are constitutionally limited and trivial in originality.

6.3.2.2 The Standard of Originality

²¹⁰ 281 F. 83, (2nd Cir.), 259 U.S 581 (1922).

²¹¹ Thakur (2001), p. 105.

²¹² Karo (1998), p. 92.

The requirement of originality plays an essential role when determining copyrightability of a database in Europe. In United States requirement of originality has been conceived as a characteristic, which is combined more to traditional classes of works than factual compilations.²¹³

In Feist Decision the Supreme Court expressly stated that a work must be original to the author in order to receive copyright protection.²¹⁴ The originality was described to consist of two different considerations. In the first place work must be independent creature of an author. Thus it is required that it cannot be a copy of another work. Second, a work must contain minimum degree of creativity. The standard of originality is “extremely low”. The court clarified the minimum amount of creativity by stating that huge majority of works will qualify the degree of originality even if they appear as a crude, humble or obvious.²¹⁵ The modicum of creativity is a requirement imposed by the constitution.²¹⁶

According to ruling of the court in Feist decision, a modicum of creativity whether in the selection, arrangement or organisation of facts results in copyright protection of a compilation. This opinion is based on a view that facts are uncopyrightable because they are more the result of a discovery than creative act of an author.²¹⁷ Therefore, the final conclusion includes an idea that it is legal to reproduce a raw data or information contained in a database, and the solitary copyrightable area of a database is the maker’s original selection and arrangement of contents.

Considering databases and other factual compilations, originality in the selection or arrangement may be indicated by deciding information to be included, by or-

²¹³ Salokannel (1997), p. 56.

²¹⁴ Karo (1998). p. 92.

²¹⁵ Ibid.

²¹⁶ Thakur (2001), p. 103.

²¹⁷ Thakur (2001), p. 105.

ganising facts to specific order and by arranging material in a way that it is effectively and practically possible to utilize.²¹⁸ It is important to notice that copyright protection in relation to databases is relatively thin. This assumption is based on the fact that protection covers merely the original parts of database.²¹⁹ Unoriginal and banal parts of database remain to be free to utilise.

The effect of Feist has emphasised the intention of courts not to accord the copyright protection for mere factual compilations that do not possess a modicum of creativity. However, courts have furthermore restricted the applicability of legal rule conferred by Feist decision.²²⁰ The Court of Appeal ruled in *Key Publications v. Chinatown Today Publishing Enterprises*²²¹ that plaintiff's business directory for New York's Chinese society expressed sufficient originality with its 260 different categories. Despite the fact on conferred copyrightability of the directory, the Court disclaimed a claim of defendant's infringement on account of independent copyrightability of subsequent work comprising merely 28 categories.²²² Hence, it seems to be evident that facts, information and raw data in all forms is legally and without restraint exploitable as far as the protected 'selection and arrangement' is not utilised.²²³

In *Bellsouth Advertising & Publishing Corp. v. Donnelly Information Publishing*²²⁴ the Court rejected the protection of a yellow page directory even though the defendant reproduced both the structure of compilation headings and directory's information itself. The Court argued that yellow page directory did not merit to

²¹⁸ Karo (1998), p. 93.

²¹⁹ Ibid.

²²⁰ Thakur (2001), p. 5.

²²¹ *Key Publications v. Chinatown Today Publishing Enterprises*. 945 F. 2d 509 (2nd Cir. 1991).

²²² Thakur (2001), p. 6.

²²³ Ibid. at 6.

²²⁴ *Bellsouth Advertising & Publishing Corp. v. Donnelly Information Publishing*; 999 F. 2d 1436 (11th Cir. 1993).

copyright protection because the classification of the content was not sufficiently original.²²⁵ The problem of this case was fairly similar to *Feist*. However, the result of this subsequent decision must have been more complex to achieve because the arrangement of such material by using independently developed heading system must have resulted in personal output containing at least modicum of creativity. The argumentation of the Court reveals that *Bellsouth* has labelled the headings excessively generally or obviously and without any creativity.²²⁶ For this case, ruling of another court may have been different.

The Court of Appeals emphasised in *CCC Information Services v. Maclean Hunter Market Reports* (hereinafter *Maclean*)²²⁷ that the standard of originality is relatively concise. *Maclean* published a database containing evaluations of used cars and the defendant decided to reproduce substantial part of that database. Evaluations of cars were deemed to be original creation not the mere facts on the basis of professional judgment and expertise employed by the plaintiff. Secondly, in this case, the criterion of selection and arrangement was also fulfilled.²²⁸ As regards the determination of originality the *Maclean* case represent in my opinion quite a clear case. The originality was a result of creative effort accomplished by independent assessment concerning values of used cars. One may argue that situations that represent evaluation of different things may hardly ever be so mechanical or obvious that they may be considered as non-originals.

Two *West Publishing* cases against *Matthew Bender & Co.* are apparent indications of *Feist* decision.²²⁹ In the first of them, the Court of Appeal repeated the legal rule of *Feist* and conferred the protection for works that satisfy both the re-

²²⁵ *Thakur* (2001), p. 6.

²²⁶ *Ibid.*

²²⁷ *CCC Information Services v. MacLean Hunter Market Reports*; 44 F. 3d 61 (2nd Cir. 1994).

²²⁸ *Thakur* (2001), p. 6.

²²⁹ *Matthew Bender & Co. v. West Publishing Co.*; 158 F. 3d 674, 48 U.S.P.Q. 2d (BNA) 1560 (2nd Cir. 1998); 158 F. 3d 693, 48 U.S.P.Q. 2d (BNA) 1545 (2nd Cir. 1998).

quirement of modicum creativity and that the work originated from its author. In this case factual information like summaries of legal cases, information on participant and procedural estimations did not qualify the test of originality.²³⁰ The latter West Publishing decision contained a dispute on West's pagination system that was used by the defendant in its CD-ROM discs. The Second Circuit found the pagination system not sufficiently original to merit copyright protection due to Feist decision. The CD-ROM published by the defendant comprised compilations of United States based case law and a structure of CD-ROM was such that user may independently arrange the material to the similar order as plaintiff's original arrangement. However, the court reasoned that infringement may not take place without an act of end user and thus those two competing products were not substantially similar.²³¹ This decision is consistent with the infringement doctrine introduced by the Feist, which requires as precondition for the infringement that the copied work must contain the same selection and arrangement as the original work. In addition the plaintiff's creature, a pagination system, was not even considered as a original creature of an author.

It is crucial that information and facts are not eligible to copyright protection. This enables a rational access to information and guarantees a free exploitation of information in order to create more developed creatures that benefit the progress of a whole society. One may also emphasize the fundamental principle beyond the copyright protection of United States: the purpose of copyright is "not to reward the labour of authors but to promote the progress of science and useful arts".²³² However, the result of Feist decision may constitute considerable difficulties and financial risks for compilers because works developed by them may be used in other works without compensation, if the criterion of standard of originality is not met. An incentive to accomplish time-consuming operation of data collection is

²³⁰ Thakur (2001), p. 7.

²³¹ Ibid.

²³² 499 U.S 340 (1991), p. 349-350 (decision in Feist).

endangered and database regulation moreover encourages exploitation of pre-existing material developed by someone else. Particularly this kind of operation is profitable when establishing a new online or web-based services that make use of pre-existing material. From this viewpoint the rejection of the sweat of brow - doctrine in relation to factual compilations may create considerable problems and destabilize the function of database industry in United States. In consequence of Feist, the standard of originality criterion resembles significantly the requirement imposed by the Continental European countries.²³³

6.3.3 The Object of Protection

As described in Feist decision the information as such shall not be included to the object of protection. Mere factual contents of databases do not merit the copyright protection because they are not the result of an act of an author but merely an outcome of a discovery of facts. Since the Feist the sweat of the brow -doctrine became replaced and the object of protection was converted. The main consequence was the separation between a form of a database and contents of it.²³⁴

The copyright law provides a protection for compilations that are collected and assembled of pre-existing materials or of data that are selected, coordinated, or arranged.²³⁵ In other words, according to current approach of copyright protection in relation to databases the object of protection is the original selection and arrangement of database content. The form of database is composed of selection, organization and arrangement of content and this structure must meet the criteria of originality, otherwise the protection is not conferred. Therefore, a content of database consisted of factual information shall not be part of the object of protection.

²³³ Salokannel (1997), p. 60.

²³⁴ Thakur (2001), p. 4.

²³⁵ U.S.C.A § 101.

To analyse the effectiveness of designated object of protection one may give voice to few point of critical assessment. According to current copyright law, the form and structure of database is calculated to be more essential than the content of database i.e. information itself. However a modern ‘online society’ equipped with efficient information technology may be exclusively constructed and hinge on accurate and up-date information. The collecting and arrangement of information is certainly one of the most expensive and time-consuming operations when creating a database. Hence information itself should be to some extent eligible for protection. Naturally, an unfair competition approach as well other types of legislation may guarantee an efficient and sufficient protection. From my point of view, this standpoint is definitely not excluding the protectability of original forms and structures of databases.

The creative selection and arrangement criterion seems to leads fairly similar result as the object of European database protection, which confers the copyright protection for databases that constitute the author’s own intellectual creation by reason of the selection or arrangement of their contents.

6.3.4 The Authorship and Ownership

U.S copyright law is based on the separation of authorship and ownership of a work. According to general rule of copyright law, the initial authorship is vested in the author or authors of the work.²³⁶ In the event of joint work, authors participated in the development of the work are considered as co-owners.²³⁷ In 1884 the Supreme Court facilitated the determination of authorship by defining a connec-

²³⁶ U.S.C.A § 201 (a).

²³⁷ Ibid.

tion between an authorship and originality in famous Oscar Wilde case.²³⁸ According to this interpretation the author of a work is the person producing originality to that work.

However, the general principle contains an essential exemption that creates the whole Anglo-American ‘work made for hire’ –system.²³⁹ On the contrary to general principle, work made for hire rule applies to situation where the work is developed in the course of an employment. The application of this specific rule transfers the initial authorship to a employer in the absence of contrary written agreement.²⁴⁰ Prior to codification of ‘work for hire rule’ this legal rule was in force due to common law.

Besides works developed by the employees, the work made for hire –rule applies for Commissioned or specially ordered works.²⁴¹ Thus, the orderer or commissioner becomes the initial owner of a work. In practise, the commissioner of a database becomes the initial owner superseding an author and producing corporate behind the whole process.

The ownership of a copyright may be transferred in whole or in part on condition that written assignment is drafted and underwritten by the right owner or his duly authorised representative.²⁴² Recordation of transfer shall be fulfilled in order to obtain the protection against subsequent conveyances.²⁴³

²³⁸ Gendreau – Nordemann – Oesch (1999), p. 307; *Burrow-Giles Lithographic Co. v. Sarony*, 111 US 53 (1884).

²³⁹ *Ibid.*

²⁴⁰ U.S.C.A § 201 (b).

²⁴¹ U.S.C.A § 101.

²⁴² U.S.C.A § 201 (d) and § 204 (a).

²⁴³ U.S.C.A § 205.

Determination of copyright ownership is extremely vital because the owner exercises economical rights granted by statutes and case law. As is discovered and unlike than in Europe, the initial ownership may come into existence directly to an employer. Furthermore, the initial author of a work may be legal entity. Some European countries like Finland contain corresponding rules, which transfer an initial copyright directly to employer in case of work developed in the course of an employment.²⁴⁴

6.3.5 Exclusive Rights of Copyright Owner

Economic rights provided by copyright act may be divided to five different main groups:

- i) the right to reproduce the work;
- ii) the right to produce derivative works;
- iii) the right to disseminate copies of the work to the public by sale, rental, lease or lending;
- iv) the right to perform or display the work in public;²⁴⁵
- v) the right to import copies of work.²⁴⁶

The right to reproduce copies of a work is one of the most valuable exclusive right of a right holder. The content of reproducing right is clarified in the United States government's 1995 White Paper on the National Infrastructure²⁴⁷. The White Paper is constructed on the basis of fairly broad concept of reproduction

²⁴⁴ Finnish copyright act section 40 (b) §.

²⁴⁵ U.S.C.A § 106.

²⁴⁶ U.S.C.A § 602 (a).

²⁴⁷ The Report of the Working Group on Intellectual Property Rights, Intellectual Property and the National Information Infrastructure 1995, p. 65-66.[Hereinafter the "White Paper"].

right. According to the White Paper, the act of reproduction occurs among other things when a work is stored in the storing device including a floppy disk, hard disk (ROM), other storing device or computer's RAM memory on condition that storing is not transient by its nature.²⁴⁸ Unfortunately, a non-brief nature of a copy remains to be vague. Uploading and downloading of digitised files require the reproduction of an original work and are therefore treated as a restricted act. Furthermore the same applies when files are transferred through information networks and when information is viewed on end-users screen e.g. in Internet use.²⁴⁹ To sum up one may argue that in the on-line and other network uses the reproduction act occurs invariably when the information is transferred. However, the transient copy that is made in computer's random access memory is excluded in the White Paper from the exclusive rights of a right holder.

The right to create derivative works is essential especially considering the database industry. It is also closely related to the reproduction right. New improved versions of former databases could be created with little investment of time, effort and money if subsequent works were based on former ones without authorisation. A class of derivative works includes translations, modifications and improved works. In order to infringe the exclusive right to make derivative works, an infringing party must alter, modify, revise or translate a substantial part of subsisting work. The quantity of substantial part is assessed qualitatively.²⁵⁰ The assessment must be contributed in relation to the requirement of substantial similarity in the copyright infringement. The exclusive right to make derivative work in connection with databases shall be infringed, if a database maker contains alterations of copyrighted work into his database without the consent of former right holder on condition that a new and independent work may not be assessed to be constituted.

²⁴⁸ Lee – Davidson eds. (1997), pp. 134-135.

²⁴⁹ Ibid.

²⁵⁰ Ibid at 134.

From the economical point of view the right to distribute copies of the work to the public is extremely essential. Distribution right includes the acts of sale or other transfer of ownership, rental, lease and lending.²⁵¹ However, the concept of distribution is not defined in the copyright act. Therefore, it remains to be vague whether electronic transmission is included to the scope of distribution right.²⁵² In *Playboy Enters. v. Frena*²⁵³ the Federal district court ruled that the uploading and subsequent downloading of digitised photographs by BBS subscribers without the consent of the right holder resulted in the infringement of distribution right.²⁵⁴ Rules governing the right of distribution reflect the requirements that were imposed for the legislation at the time of stipulation.

Currently the state of technology has converted operational environment in a way that challenges the legislation. In the absence of express rules concerning operations in new distribution channels like electronic networks, the content of legislation must be attained by the interpretative methods from the applicable rules and laws. One may argue that electronic networks do not differ by their fundamental characteristics from the former ones in a way that justifies a different handling of them. Mainly, the principal question remains on the distribution of copies, and whether that occurs in traditional distribution channels or in electronic networks is not fundamentally essential. To sum up, in my opinion, there are no adequate reasons to consider new distribution channels differently to former ones. Thus, the applicability and content of exclusive distribution right in electronic networks must remain equal to traditional ones.

²⁵¹ U.S.C.A § 106 (3).

²⁵² Lee – Davidson eds. (1997), pp. 134.

²⁵³ *Playboy Enters. Inc. v. Frena*, 893 F Supp. 1552 (M.D Fla. 1993).

²⁵⁴ Lee – Davidson eds. (1997), pp. 134.

United States' law includes a comparable exhaustion doctrine of the right of distribution, which subsists in Europe when the first sale of a copy of the database occurs in the Community with the consent of the right holder. The doctrine is known in the United States as a right of first sale.²⁵⁵ The doctrine of first sale is composed of limitation that confines author's right to vend or otherwise convey copies of the work after the first sale of such copies.

The right to import copies of work is closely related to the doctrine of first sale. In order to import copies of copyrighted work into the United States, the authorization of the right owner must have been obtained on condition that copies have been acquired outside the United States.²⁵⁶ Otherwise an importer infringes the author's exclusive right to distribute copies or phonorecords under section 106. According to ruling of the Court of Appeals, the author is entitled to control imported works merely when they are not distributed with his consent.²⁵⁷ On the contrary, the works that owe their issue for the act of an author are not subject to exclusive right of importation.

An opportunity to download material that is stored on a Web site's server outside the United States is problematic from the point of view of the importation right. Basically the transmission of a work, irrespective of the electronic form, belongs to the exclusive right of importation. Notwithstanding, the copyright infringement on this basis seems to be unjust and conflicts with the basic idea of Internet. In this case, the application of Fair use doctrine is recommendable under condition of non-commercial nature of such use. The law of the United States describes no accurate rule for this problem. However, the White Paper represents a contrary point of view. It argues that applicability of the importation right to the transmis-

²⁵⁵ U.S.C.A § 109 (a).

²⁵⁶ U.S.C.A § 602 (a).

²⁵⁷ Stewart (1989), p. 593.

sion via international communication links is not possible.²⁵⁸ This approach is explained by the view that importation, which occurs in the form of electronic impulses, cannot be treated as a copy or phonorecord that is required by the law under section 106.²⁵⁹

The public performance of database seems to be rather theoretical option and therefore it is not relevant to treat such a possibility in this context. However, the public display of a database is worth closer examination. According to copyright law, to perform or display a work in public means,

- i) to perform or display it at a place open to the public or at any place where a substantial number of persons outside of a normal circle of a family and its social acquaintances is gathered; or
- ii) to transmit or otherwise communicate a performance or display of the work to place specified by clause (1) or to the public, by means of any device or process, whether the members of the public capable of receiving the performance or display receive it in the same place or in separate places and at the same time or at different times.²⁶⁰

At the first option, a public display of a database may occur if a database is conveyed for example to a fair, exhibition or into domain of private corporation. It is significant that the element of public display is involved. This means that the display must take place in a non-private place. Nevertheless, the second alternative is more dangerous threat in a modern digital environment. Making a work available for public by the electronic networks like in World Wide Web may constitute an infringement on the basis of public display. In Playboy case²⁶¹ the Federal district

²⁵⁸ The White Paper (1995), pp. 108-109.

²⁵⁹ Ibid.

²⁶⁰ U.S.C.A § 101.

²⁶¹ Above at fn. 253.

court ruled that the right of display was breached by transmitting copyrighted photographs to a Bulletin board service. As a result, it is vital that receiving of public display with an assist of technology is considered to be treated equally to traditional form of display. The receiving of a display at the time and place individually chosen by recipient enables the applicability of discussed regulation to the new technology. This is likely to increase the anticipation and fairness of the law in force. Arguably, in connection to violation of the right of display, the exclusive right of reproduction and distribution of copyrighted works are likely to be breached simultaneously. This may facilitate the litigation of a plaintiff in practise.

6.3.6 Copyright Exceptions

Exclusive rights are granted in order to create an adequate incentive to develop new works that benefit whole society. On the other hand, the exclusive rights shall be limited so that essential public interests are considered. Copyright exceptions operate as a counterbalance to exclusive rights. Law of United States recognises copyright exceptions in relation to databases on the basis of Fair use, reproduction of libraries and archives and aforementioned exhaustion of distribution right.

6.3.6.1 The Principle of Fair Use

The principle of Fair use is maybe the most essential copyright exception recognised in United States. It resembles a concept of private use applied in Nordic Countries. The Fair use principle can be applied to every form of exclusive rights provided in section 106 and 106 A in copyright law. Notwithstanding, it is required that Fair use of an copyrighted work occurs for the purposes of criticism, comment, news reporting, teaching (including copies for classroom use), scholar-

ship, research or similar types of use.²⁶² As can be observed, Fair use must benefit a society. The list of purposes provided in copyright law is not exhaustive and defence against a claim of infringement may be based on Fair use in case of purposes not expressed in law.²⁶³

Due to vital essence of Fair use a determination of its content plays fundamental role. The law provides some guidance by clarifying issues, which shall be considered in order to decide whether the use of work in any particular case amounts to Fair use. Factors that are worthy of consideration are as follows:

- i) the purpose and character of the use, including whether such use is of a commercial nature or is for non-profit educational purposes;
- ii) the nature of the copyrighted work;
- iii) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
- iv) the effect of the use upon the potential market for or value of the copyrighted work.²⁶⁴

The commercial nature of a product and the effect of the use on potential market are essential in the determination of Fair Use. In *Sony Corporation v. Universal City Studios*²⁶⁵ the Supreme Court argued an opinion that commercial uses do not merit presumptively to the domain of copyright exception on the basis of Fair use.²⁶⁶ However, the Supreme Court specified this presumption in *Cambell v. Acuffrose Music*²⁶⁷ by stating that mere acts of copying rarely pass the test of Fair use in case of commercial exploitation. Furthermore, the court stated that pre-

²⁶² U.S.C.A § 107.

²⁶³ Lee – Davidson eds. (1997), pp. 139.

²⁶⁴ U.S.C.A § 107.

²⁶⁵ *Sony Corporation v. Universal City Studios Inc.*, 464 U.S 417 (1984).

²⁶⁶ Lee – Davidson eds. (1997), p. 139.

²⁶⁷ *Cambell v. Acuffrose Music, Inc.*, 114 S. Ct. 1164, 1177 (1994).

sumption is most likely to be abolished if defendant's use is not merely duplicative but transformative.²⁶⁸ Basically this means that exploitation of work is comprised of applied use as a contrary of direct reproduction. Commercial nature of use is not required to be in connection with defendant's business operations. The use of work is deemed to be unfair if the effect of use reflects to potential market or to the value of work. The potential market effect may occur although the actual use is characterised as private or unprofitable use.

An interesting question lies again on temporary copies that result in the ordinary course of browsing web sites or in the course of transmission of material in electronic networks. For the former question there are no precise answer due to lacking ruling of courts. It follows to me that duplication that owes its existence for a browsing and viewing system of web sites in electronic networks must be distinguished from ordinary reproduction. In general such a use produces transient copies that are stored on the RAM memory or the hard drive of the end user device but those copies are the result of mere viewing of a web page not a targeted act of reproduction. Hence this kind of reproduction should qualify for domain of Fair use doctrine on condition that general requirements described in section 107 are completed. Otherwise normal browsing use of Internet shall cause a copyright infringement. Mainly the same applies to reproduction in the ordinary course of viewing web sites. In *Netcom* case²⁶⁹ the court ruled that transient copies that have a purpose to enable transmission in a network may not constitute a direct infringement. However, a contributory infringement may be performed.²⁷⁰

6.3.6.2 Other Limitations on Exclusive Rights

²⁶⁸ Lee – Davidson eds. (1997), p. 139.

²⁶⁹ Religious Technology Ctr. V. Netcom On-line Communication Servs. Inc., 907 F Supp 1361 (N.D Cal. 1995).

²⁷⁰ Lee – Davidson eds. (1997), p. 140.

Libraries and archives benefit because of the exceptions laid down in the Copyright act. They are allowed to reproduce and distribute copyrighted works under certain circumstances.²⁷¹ The same applies to employees of libraries and archives when they are operating in the course of their employment. The right to reproduce and distribute works in public instances may affect to the rights of copyright holder. However, an economical influence is likely to be minor. Exhaustion of distribution right, which is considered also as a limitation on exclusive right, is described above in section 6.3.5.

6.3.7 The Term of Protection

The duration of copyright is defined by two divergent regimes. The determinative factor when deciding on the applicability of a correct regime is an accurate time when the work was developed. A work created on or after the first of January in 1978 merits the copyright protection for the life of the author extended with 70 years after the author's death.²⁷² For joint works, the extended period of 70 years is counted from the death of last surviving co-author.²⁷³ A problem arises if an authorship of a work subsists in the domain of a legal entity. Works that owe their existence for the work made for hire –rule attain the copyright protection for a term of 95 years from the year of its first publication, or a duration of 120 years of the development of the work, either one expires first.²⁷⁴

The former system was based on the registration and renewal of the term of protection.²⁷⁵ The protection was ensured for works that were created before the first of January 1978. According to this former regime, the protection was afforded for the duration of 28 years with the renewability of another 28-year period on condi-

²⁷¹ U.S.C.A § 108.

²⁷² U.S.C.A § 302 (a).

²⁷³ U.S.C.A § 302 (b).

²⁷⁴ U.S.C.A § 302 (c).

²⁷⁵ Gendreau – Nordemann – Oesch (1999), p. 310.

tion that a few formalities were carried on. After the amendments of 1978 the extended period was altered to be 47 years and if the term of protection was previously extended twofold the additional period of 19 years was added.²⁷⁶ The applicability of a transitional period is employed for works that were created but not published or copyrighted before 1 of January 1978. In this case the rules of the new regime apply and the copyright shall not expire under no circumstances before the end of 2002.²⁷⁷

Currently, the term of protection provided in the United States is brought into accord with the European 70-year period of protection. In my opinion the development of this kind is highly essential in order to create global and effective markets of information technology industry. Equal requirements for protection and similar results of provided protection world-wide enable the undistorted operation of market constituents by ensuring equal competitive circumstances for databases, whether developed in Europe or United States. A good example of crucial element affecting to competitive ability of a product is the duration of protection that grants an exclusive copyright in the market. If the protected period is similar in every relevant market area costs and profits of a product are divided to period that is equal to competitors' protected period. Hence, a state of copyright law is not affecting to the effective function of markets, which is one of the most fundamental elements of proper market operation.

In practice the duration of copyright subsists currently at the level (author's life + 70 years) that ensures the protection for period that exceeds a lifetime of most products in which they are economically possible to be exploited. Due to the nature of products of information technology a profitable lifetime of a product is likely to be considerably shorter than the protected duration. However, in theory a

²⁷⁶ Ibid.

²⁷⁷ U.S.C.A § 303 (a).

database that is improved consistently may benefit for the whole period of protection.

6.4 Proposed Database Legislation

Familiarising the content of US copyright law on the issue of legal protection of databases it is apparent that remarkable fears subsist among the database industry in relation to database protection conferred in Europe. The current copyright law seems to be inadequate to serve requirements of database providers in modern information based society. Therefore there have been some legislative efforts to extend more extensive protection for the whole industry. The primary question lies on the protectability of facts and data compiled in databases.²⁷⁸ As a result of Feist decision, the protectability of databases is inadequate. In order to recover the prevailing imbalance between the conferred protection among United States and Europe, development is required to be attained on this area.

The first initiative in an improvement process of database regulation occurred on May 20th 1996, when the United State's delegation introduced a proposal for the sui generis protection of databases to the Director General of WIPO.²⁷⁹ The proposal was utilized as a foundation to the Draft Treaty on databases for the Diplomatic conference on 'Certain Copyright and Neighbouring Rights' organised in Geneva in 1996. The Draft Treaty resembled considerably European database directive but contained one essential dissimilarity. According to US delegation the duration of protection was determined to be period of 25-years instead of proposition of 15-years by the delegation of European Union. However, the adoption of the Treaty was rejected by the reason of opposition of several remarkable interest groups.²⁸⁰

²⁷⁸ Thakur (2001), p. 16.

²⁷⁹ Ibid.

²⁸⁰ *ibid.*

In addition to the Draft Treaty, domestic legislative efforts were started by the representative Howard Coble, who presented the Database Investment and Intellectual Property Antipiracy Act²⁸¹ in May 1996. The bill was based on strong emphasises on unfair competition and model of the European Union database directive. However, it was not passed.²⁸² The enactment of the Digital Millennium Copyright Act²⁸³ was the next step in order to strengthen database protection. The DMCA contained a provision labelled as the Collections of Information Antipiracy Act²⁸⁴. On the whole, the bill resembled the sui generis protection of European database directive. Notwithstanding, the part containing database protection was eliminated when the DMCA was passed in the US Senate in 1998. The main reason for the abolition was the ultimate opposition of libraries, universities, and communication and financial companies. The opposition argued that the Collections of Information Antipiracy Act confined the fundamental right of access to information and was therefore breaching the First Amendment of the United States Constitution.²⁸⁵

Currently, there are two interesting pending bills in relation to database protection. The first one is the new version of the former Collections of Information Antipiracy Act, which was presented as a House Report 354 on the former name.²⁸⁶ The other bill, Consumer and Investor Access to information was introduced in 1999.²⁸⁷

²⁸¹ H.R 3531 (1996).

²⁸²Thakur (2001), p. 118.

²⁸³ H.R 2281 (1998); hereinafter referred as “DMCA”.

²⁸⁴ H.R 2652 (1997).

²⁸⁵ Thakur (2001), p. 118.

²⁸⁶ H.R 354 (1999); hereinafter referred as “H.R 354”.

²⁸⁷ H.R 1858 (1999); hereinafter referred as “H.R 1858”.

6.4.1 Key Issues on H.R 354 and H.R 1858

House Report 354 ensures protection for collections of information against misappropriation of all or substantial part of a collection of information gathered, organised or maintained by the creator of substantial investment.²⁸⁸ If a substantial extraction or other use occurs with commercial effect in a way that damages other person's actual or potential market for a product or service that includes the extracted collection of information, the violation is considered to occur.²⁸⁹ Similarly to European database directive, the assessment of substantial part is determined either quantitatively or qualitatively.

One may argue that H.R 354 defines an infringement with a narrower scope when compared to European one. Extraction and re-use are prohibited acts merely on condition that they harm database owner's actual or potential markets. The concept of potential market is defined as any market where a person has current or provable plans to exploit or which is commonly exploited by persons offering similar products or services incorporating collections of information.²⁹⁰ Therefore, in order to prohibit the commercial exploitation of extracted part of database, actual or potential competition situation between duplicator and collection owner is required. In addition, this allows an opportunity to exploit the copyrighted work for lawful extraction or commercial use in case that reproduced information is not characterised as commercially valuable or where a duplicator seeks to use information in a unique manner without the similar demonstrable plans of the owner of collection of information.²⁹¹ By this view, US database protection is strongly based on arguments of competition law. According to Euro-

²⁸⁸ H.R 354 (1999) § 1402.

²⁸⁹ Ibid.

²⁹⁰ H.R 354 (1999) § 1401 (3).

²⁹¹ Davison (1999), p. 282.

pean database directive, extraction and re-utilisation of substantial part of database is prohibited without any obligation to prove any harm to right holder.

In principle, U.S. proposal ensures relatively broad frames for non-commercial uses of reproduced databases. The new bill introduced an exception in relation to educational, scientific, research and other additional reasonable uses including illustration, explanation, comment, criticism, or analysis.²⁹² This Fair use doctrine based exception is essential because its application is ensured even in case of occurring damages to any potential market. Additional reasonable uses are defined among other things according to the nature of an individual act of the use or extraction of information and purpose of a duplicator. In no case the commercial effect of extraction is permitted.²⁹³ However, the protection guaranteed by this provision is excluded from the digital on-line use including acts that address, route, transmit, or store digital online communications or provide or receive access to connections for digital online communications.²⁹⁴ This indicates a reasonable intension to legalise temporary copies produced by the ordinary Internet uses such as browsing.

On the contrary to former bill, in the Collections of Information Antipiracy Act the duration of protection is limited to 15-years from the first offer in commerce. Interestingly, an extension of the duration of protection is in practice made extremely difficult or even impossible.²⁹⁵ This is understandable when considering extensive critic exposed by the Americans for the extendable European term of protection.

²⁹² H.R 354 (1999) § 1403 (a).

²⁹³ H.R 354 (1999) § 1403 (a) 2.

²⁹⁴ H.R 354 (1999) § 1404 (c).

²⁹⁵ Thakur (2001), p. 118.

As a whole H.R 354 is based on liberal attitude concerning the Fair use -doctrine. Thus, the copyright exceptions provided by the new bill are more extensive when compared to Fair use -principle under the current law or European database directive, which imposed the enactment of exceptions under the control of Member States. However, there is one essential standpoint that may eliminate the liberal spirit of the new bill. Under the new proposal, the exceptions to right owner's exclusive rights are discretionary and may thus be overridden by the contract.²⁹⁶ Despite the fact that express exceptions to right owner's exclusive rights are broader than traditionally in U.S copyright regime or in European database directive, the practical effect of such provisions is considerably diminished by the possibility of contractual arrangements. Consequently, the European database directive may contain more practical significance. Rights granted for lawful user or possibility to extract or re-utilise insubstantial parts of database cannot be overruled by the contract.

H.R 1858, introduced on 19 of May in 1999, is based on different aspect of law than H.R 354. It is grounded on the law of unfair competition and is thus applied merely to competitors.²⁹⁷ The primary point of H.R 1858 is to prohibit duplication and distribution of a database that is substantially similar to already existing database.²⁹⁸ Restrictions to exclusive rights of the right owner are defined in a narrower sense than in H.R 358. Notwithstanding, exceptions provided by 1858 contain rules concerning news reporting, scientific, and educational or research uses.²⁹⁹

Currently, the readings of H.R 354 and H.R 1858 are pending in the House. However, there exists a strong disbelief to approval of the bills. It has been argued that

²⁹⁶ H.R 354 (1999) § 1405 (a), (b) and (e).

²⁹⁷ Thakur (2001), pp. 118-119.

²⁹⁸ H.R 1858 (1999) sec. 102.

²⁹⁹ H.R 1858 (1999) sec. 103.

the requirements of the First Amendment and Copyright Clause are not satisfied.³⁰⁰

6.5 Supplementary Forms of Protection

Due to fairly weak protection offered by the law of United States, the database industry has been forced to develop supplementary forms of protection. As a result owners of databases have relied on two main strategies, contractual methods and technological measures.

Contractual strategies are typically completed by the licence agreements where the database producer/licensor entitles the user/licensee to exploit the database according to terms of licence agreement.³⁰¹ By this way, database owners receive the same results, which could be obtained by the suitable legislation but even more rapid way. However in theory, the total cost will be greater when compared to the transaction costs in situation where the legislator has stipulated required legislation with the consequence that each individual market operator is exempt from individual negotiation and other kind of transaction costs. Thus the allocation of resources is inefficient.

The most useful characteristics of contractual arrangements may lie in their flexibility and effectiveness as a form of legal protection.³⁰² They can be individually constructed to meet the requirements of broad spectrum of users. Two main groups of licence agreements are shrink-wrap and click-wrap licences. Shrink-wrap means for instance a database distributed in wrapped boxes and accompanied by a shrink-wrap licence. By opening the box the purchaser enters into contract with the licensor according to the terms printed to the wrap. Similarly, click-

³⁰⁰ Thakur (2001), p. 119.

³⁰¹ Karo (1998), p. 101.

³⁰² Karo (1998), p. 101.

wrap is where licence terms are accepted on screen - generally with a 'click to accept' -procedure. This may happen either in the case of software loaded from disc, or when downloaded. The effectiveness of these shrink- and click-wraps is questionable and may vary between different states. However, in the *ProCD v. Zeidenberg*³⁰³ the Court of Appeals admitted the enforceability of click-wrap licence terms. One may argue that without enforceable licensing to secure the investments of the database industry there would not be any incentive to develop databases and the added-value applications, which eventually benefit the whole society. The situation differs considerably to the circumstances in Europe.

The use of technological measures is increasing in the database industry. With the assistance of technological means the right owner is able to control the use of the work before the infringement as well as afterwards.³⁰⁴ Technological means include frequently technology which employs encryption, passwords, or other means to control information access or use subject to the owner's authorization.

Despite the major advantages provided by the licences they cannot substitute the forms of legislative measures. Contractual arrangements are solely effective between their parties, but unfortunately there exists a third group of operators, namely third parties that operate outside the scope of contracts. In the case of lacking contractual relationship these third parties remain to be free to perform acts what ever they desire. Therefore the only existing method to develop exclusive right of a right owner is the effective legislative framework. Contractual and technological measures are merely effective means to increase the efficiency of the acts of legislator.

6.6 Conclusions

³⁰³ *ProCD Inc. v. Zeidenberg*, 86 F. 3d 1447, (7th Cir. 1996).

³⁰⁴ Karo (1998), p. 101-102.

An extensive database protection that is available in Europe is forcing the U.S. legislator to decide whether to protect databases comprehensively or not. Currently databases are not adequately protected by the U.S. copyright law. The valid approach to copyrightability of factual compilations and databases is stated in Feist -decision. In Feist the court rejected the former sweat of the brow –doctrine and ruled that a modicum of creativity is required in the selection, arrangement or organisation of facts in order to provide a copyright protection for a database. In practise, the difference between the sweat of the brow –doctrine and aftermath of Feist –decision is not so revolutionary. The modicum of creativity is satisfied with a relatively small amount of creativity. Therefore after the Feist the protection is denied merely from the databases that do not contain even the modest quantity of required originality. What is essential is the fact that the scope of protection in U.S. differs drastically to the content of database protection in Europe and is detrimental for the U.S. database business. It is in the interest of U.S. to rectify this considerable imbalance rapidly.

U.S. database protection relies on reasonable starting point where individual facts are not subject to private ownership. Facts and other kinds of information should be eligible for private and commercial use even in case that those facts are contained in a copyrighted database. The same applies to exploitation of databases relating to purposes of education, science, criticism and news reporting which all benefit the public good. Notwithstanding, it is essential to secure the interests of right owners by ensuring an adequate protection for performed investments in order to enable commercial exploitation of databases. It is also worth noting that in digital-age the economic significance of database industry plays a fundamental role for any national economic.

It is relevant to bear in mind that the enactment of adequate database protection in United States is subject to constitutional constraints. The First Amendment and Copyright Clause require a consideration of access to information that guarantees the unprotectability of facts and ideas as well as they enable the stipulation of

exclusive rights merely for limited time. Due to prevailing approach to database protection it is certain that the supporters of current copyright law are not in favour of copyright law reform. Hence it is likely that a strong political decision is required to be made before the final approval of the new bills that would enhance the scope of protection.

In addition to legislative methods contractual and technological arrangements improve the provided protection. However, their role should be limited to the supplementary form of protection. This is also essential from the point of view of users that base their exploitation under the principle of Fair use because their rights and obligations may be defined impartially merely by the legislator and the courts. In case of mere contractual arrangements, for instance the private use would not subsist.

To sum up, one may argue that despite the essential differences in the scope of protection, an assessment regarding the analysis of individual provisions illustrates that Europe and United States have approached each other. Especially this development is possible to be observed in relation to the term of protection and copyright exceptions in digital environment. However, the enactment of international treaty requires unanimity of the substance. At first stage U.S. government must decide whether they need some kind of sui generis -protection for databases and factual compilations. Currently, the database industry originating from the U.S is in difficulties. The information contained in the databases is not protected and thus the incentive to develop and maintain databases is reduced. One way to correct this kind of defect is the enactment of sui generis protection or the return of sweat of the brow –doctrine. In these cases, the control of free dissemination of information must be secured e.g. on the basis of compulsory licensing mechanism in the event of sole-source data.

7 DATABASE REGULATIONS AND LOCATION-BASED SERVICES

7.1 Key Concepts Regarding Positioning Services

In this part of this examination two interesting technological notions are established, location and spatial data. For the purpose of this thesis they are defined in a way that is suitable for demands of commercial applications of positioning technology. *Location data* is a set of co-ordinates specifying a location of a service user. Location data is also known as a geographical data or geographical information.³⁰⁵ *Spatial data* is a set of co-ordinates describing a location of a service or a location of another subject or fact.³⁰⁶ Professor Niklas Bruun has divided the geographical data to different categories. He also argues, that geographical data may consist even of spatial data. Geographical data is comprised of information that is based on:

- 1) character of terrain or place (water systems, forest areas, population center etc.);
- 2) land use (dwelling place, industry area, natural conservation area);
- 3) public buildings (public swimming pools, schools);
- 4) traffic channels or road information (classification of roads);
- 5) names of the roads and places;
- 6) address information.³⁰⁷

Maps seek to demonstrate a reduced picture of a specific surface of an area. Therefore traditional maps represent undeveloped form of location and spatial data. As a general rule copyright protection provided by the copyright law ensures protection as literary works for original maps and other descriptive works.³⁰⁸ The

³⁰⁵ Simojoki (2000), pp. 30-32. See also vocabulary for positioning technology at <http://www.nls.fi/ptk/pyk-kasikirja/sanasto/sanasto.html>.

³⁰⁶ Ibid. Location and spatial data are hereinafter jointly referred as “positioning information”.

³⁰⁷ Bruun (2000), pp. 38-39.

³⁰⁸ See e.g. Finnish Copyright Act 1 (2).

object of protection is the original form of expression concerning realistically existing facts of nature.³⁰⁹ However the object of protection is not expanded to factual information of nature like topographical facts or landscape. Haarmann has argued that the requirement of standard of originality is slightly smaller in case of maps and other descriptive works when compared to other categories of works.³¹⁰

In digital age, the protectability of electronic maps may face some difficulties. Arguably, maps in their electronic form may create a database. However, a map that is composed of mere factual location and spatial data without any intellectual effort is not eligible for copyright protection. If the map is digitised directly from the traditional paper map in the manner, which maintains the original input of an author the aforementioned problem is not arising. Basically, a form of a map, whether it is electronic or paper, should not affect to the protectability of such map. Despite the fact of lacking intellectual effort the database may qualify to a domain of sui generis protection on condition that normal requirements of sui generis protection are met. However the individual portion of location or spatial data seems to be outside the object of protection.

7.2 Positioning Technology and Location Based Services

Generally and in this study, positioning means determination of location via the recognised co-ordination system. There are various different positioning technologies available on the market. The two most significant technologies are satellite based positioning and positioning based on mobile terminal network (or the mixation of those two).

³⁰⁹ Olsson (1996), p. 43.

³¹⁰ Haarmann (1992), p. 62.

Satellite positioning is based on Global Positioning System (GPS), which means that positioning is produced by the signals of satellite system and distance counting utilised by the satellite orbits.³¹¹

The second important positioning system is cellular network based procedure. It is expected that in 2003 there will be one billion mobile terminals and every fourth one will be in Europe. When mobile terminal is used it is connected to local support base, which affords inaccurate information about the location of mobile terminal. The location data produced by the most developed systems is based on the measurement that counts the running time of signals of cellular networks and directions of those signals on the cellular network or to the calculation of signals in a mobile terminal.³¹²

There is a wide variety of different location based services (hereinafter LBS) which already exists in Europe or which will be available in a near future also in Finland. The user of LBS can easily find points of interest like restaurants, museums and shops etc. It is possible to choose the route and the means of transportation and the navigator device is also able to provide guidance during the trip. An emergency calls made by mobile terminals are planned to be located automatically and individual weather forecasts utilising the location of service subscriber are designed to be offered. The possibility to create different kinds of services is enormous.

Location based services are ordinary content services. The location of a service subscriber is improved with a commercial service data and the combination of those two creates the subscribed value-added service, which will be delivered to mobile terminal. I seek to demonstrate this with an example. A Finnish service

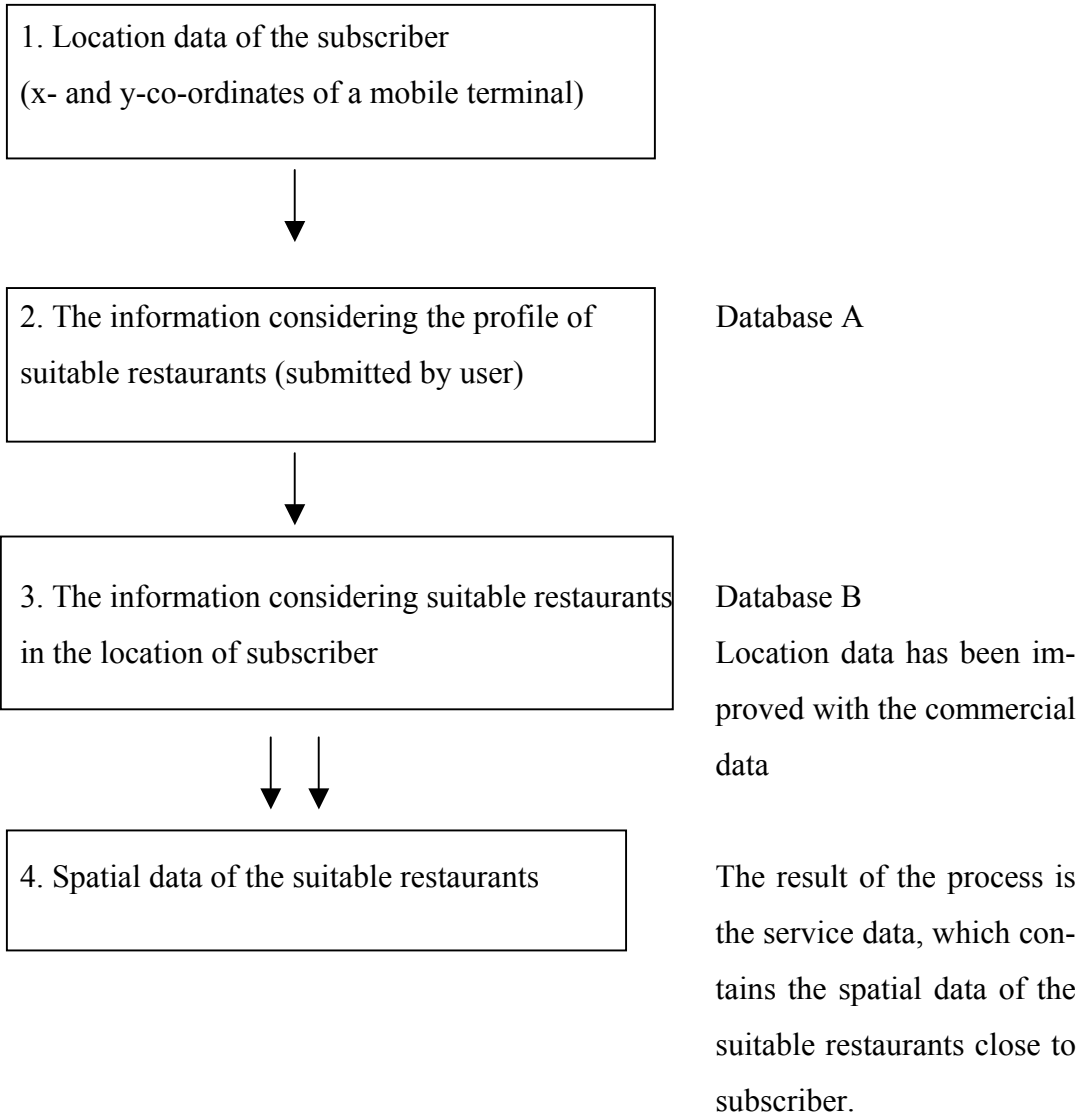
³¹¹ Henkilökohtainen navigointi: markkinat, teknologia ja sovellutukset. VTT:n tiedotteita 2037. Espoo 2000.

³¹² Ibid at 45.

subscriber is having a vacation in London and after the hours of sightseeing she becomes hungry. She knows a service provider, which is able to deliver the information of restaurants close her location (which matches perfectly with the pre-information about the favourite food of the service user) to her mobile terminal. The information about the suitable restaurants will be delivered to her mobile terminal after she has sent a short message (hereinafter SMS) considering the ordering of a 'restaurant service' to service provider.

Basically, a commercial application of content service that is utilising positioning information is dependent on great deal of information that is contained in different types of databases. Valuable databases may consist of location data, contact information of service producers, advertisements or all most every kind of information related to provided content services. In a modern information society it is information that is the most valuable asset.

Picture 7. Use of location based service in relation to search of suitable restaurant:



7.3 The Effects of Database Law in Relation to Commercial Applications of Location Based Services

Utilisation of positioning technology and positioning information in content services is likely to contain numerous amounts of material that is protected by the copyright or sui generis right. Arguably, the utilisation of such material is subject to authorisation of a right holder. Therefore it is required that the consent of a right owner is obtained. It is abundantly clear that a content provider of a location based service is obliged to comply with these regulations and thus it is of great importance for the conducted business that material and information which is provided for a subscriber is fully licensed.

7.3.1 Effects in Europe

Under copyright law, the major issue regarding location-based services seems to be the scope of protection. In Europe the protection is conferred merely to databases that contain intellectual creativity in the selection or arrangement of their content. The content of database as such is not covered by the protection. Databases that are used in content services related to location-based services may rarely contain required level of standard of originality due to their nature as mere information provider. Therefore such databases are less frequently eligible for copyright protection. In case that required level of intellectual creativity is met, a database qualifies under copyright regime. However the information itself remains to be unprotected.

The protection provided by the database right is not as unidimensional. According to database right the object of protection is the substantial investment beyond the development of a database. It is quite likely that an extensive investment in a development of a database that is useful for a purpose of commercial application of

LBS, may result in substantial investment.³¹³ In the majority of cases the substantial investment is in these events grounded on quantitative investment, which results of deployment of human or financial resources.

A second issue worth considering is a right owner's possibility to prevent extraction or re-utilisation of substantial part of the contents of a database. In principle, a content provider offering LBS is entitled to exploit commercially or non-commercially insubstantial parts of a useful database that is owned and governed by another company, public authority or by the private person. The issue becomes even more complicated when it is realised that the portion of information that is required to be extracted or re-utilised outside the domain of a content provider at a time is extremely small, probably merely one portion of information.³¹⁴ Such a portion of information is likely to be considered on the basis of quantitative analysis as insubstantial. The directive, however, prohibits the utilisation of substantial part of content of a database also on account of qualitative analysis.³¹⁵ This signifies that in case that quantitative analysis is deemed not to occur, the prohibited extraction or re-utilisation may take a place if utilised content of database is considered adequately valuable. In the event that provider of LBS is utilising a database that subsists out of his control and the exploitation concerns information of small quantity but is particularly essential or valuable to the right owner, the infringement may take a place. Thus, the assessment of substantial part must be performed regarding the value of information, the quantity of data and circumstances of the database owner. However, one piece of information should never be treated as substantial part of contents.

³¹³ For the analysis of required level of substantial investment see above ch. 5.1.

³¹⁴ See above restaurant example in ch. 7.2.

³¹⁵ See above ch. 5.2 for the determination of substantial part on the basis of qualitative and quantitative analysis.

In connection with a substantial part it is essential to tackle down also the concept of insubstantial part of a database. The provision prohibiting extraction and re-utilisation of insubstantial parts in a repeated and systematic manner and which prejudices the database owner's legitimate interests may be indispensable in protection of insubstantial parts related to LBSes. In practise, the provision prevents the use of insubstantial part of database when the utilisation occurs regularly. This is in the essence of LBSes. Content provider of LBS is not entitled to make use of individual portion of information when the utilisation occurs regularly or systematically. One may argue, that in the event of a conducted business of LBS and in the absence of contractual arrangement between a content provider and a owner of targeted database, the requirement of repeated or systematic exploitation of information is met regularly, if the utilised information is a normal part of a produced information service. Therefore, this provision denies the possibility of a content provider to utilise information of databases out of his domain of assets. Apparently, the protection conferred by database directive regarding aforementioned situation involves even one piece of information.

7.3.2 Effects in the U.S

After the rejection of sweat of the brow -doctrine The Feist decision has expressed the current approach of database protection in U.S. According to Feist, a modicum of creativity is required in the selection, arrangement or organisation of facts in order to provide a copyright protection for a database. Basically this means that labour involved in finding and assembling the facts is not protected. The U.S constitution also imposes some constraints to copyright legislation. Mainly it has been argued that the constitution rewards the original effort not the labour as such.

From the point of view of companies operating with location-based services that exploit databases in their business, the scope of protection seems to be menacing thin. In case of unoriginal database the information contained in database is as whole free to be exploited by the competitors or consumers on condition that un-

fair competition law or contractual arrangement are not imposing any restraints. However, a required quantity of original effort that qualifies to be sufficient is likely to be more modest than in Europe.³¹⁶ In fact the standard of originality is minimal. Nonetheless, mere factual compilations that are organised in alphabetical or other non-original order may not merit to copyright protection. One may argue that databases used in connection to LBS are likely to be considered as non-original. This argument is based on a viewpoint that ordinarily such databases may contain information e.g. on restaurants on specific area, timetables of public transport or preferences of consumers in a standard alphabetical or similar order. In the event that database contains a required minimum amount of creativity, the factual information hold in a database remains not to be subject to copyright protection. Therefore the factual information is likely to be considered as a part of public domain and merely the format of database enjoys the thin protection provided by the copyright law.

The digital age allows an effortless, inexpensive and rapid reproduction and dissemination of large number of information. At the same time a gathering and selection of valuable information becomes more expensive. Thus, an incentive to develop and maintain databases is dependent on the provided protection for the labour and investment beyond the database. Due to the weak protection of databases in United States compilers and database makers are currently forced to use additional forms of protection. Naturally, the same applies to content providers operating with LBS. It is essential to secure the wanted level of protection by making use of contractual and technological methods. Otherwise the threat of an unauthorised use or reproduction by the competitors is likely to occur.

8 FINAL CONCLUSIONS

³¹⁶ See above ch. 6.3.2.2 for the analysis of required level of originality in the U.S.

A correct and just balance between access to information and incentives to develop works is a considerable problem in copyright regime. This becomes more obvious when the object of protection concerns information. Digital environment enhances the possibilities of database makers to protect the use of such works by allowing more effective technological protecting measures. Thus, the free access to information must be guaranteed by the legislative measures.

In my opinion the database directive offers quite large scope of protection and is composed in the favour of database makers. The protection is effective and it will have significant commercial consequences. In practice it means that information contained in the database may be covered by the protection. At the same time it must be borne in mind that this kind of information protection does not comprise exclusive right to information. It merely protects the investment beyond the gathering of information.

The Feist –decision has damaged extensively the database protection provided by copyright law in United States. On the contrary to Europe, the current copyright protection ensures merely a thin protection merely for the form of database while the contents of database remains to be unprotected. From the point of view of database industry the protection is inadequate and thus it is needed to be made more effective with the assistance of additional forms of protection. Especially the protection is required to be improved in relation to databases that are result of substantial investment but lack the minimum effort of originality.

In the 21 century the information itself has become incredibly valuable and requires to be sufficiently protected. Despite the object of protection in United States, the most valuable part of the database may be the information itself instead of the original form of database. Therefore it is in the interest of science and United States' economy that comprehensive protection is obtainable also for database makers. In case of databases the copyright or related right regime may confer valuable assistance as a form of protection.

The database directive has created the new two-tiered protection of databases in Europe. The comprehensive international protection of databases remains to be unaccomplished. This causes uncertainty for the whole database industry and offers divergent competition environments through the globe. Hence, the harmonised international protection must be developed for databases in the near future. Hopefully, the European database directive may confer some valuable guidelines for this process.