OPINION

Big Data and the Ownership in Data: Recent Developments in Europe

Prof. Dr Thomas Hoeren*
Westfälische Wilhelms-Universität, Institut für Informations- , Telekommunikations- und Medienrecht (ITM)

Data; Ownership; Proprietary rights

Big data is a catch word which is used now as a denominator for a variety of new data processing services. But one "simple" question behind big data is unsolved: Who owns data? Can data be "owned"? And who is the owner if data are stored for instance in the data recorder of a car—the car producer, the car owner, the driver? Property in data seems to contradict the traditional concepts of civil law which have attributed property to tangible goods since Roman times. These concepts seem to have become undermined in the information society. But the first courts in the United Kingdom and Germany have dealt with the matter and seem to have developed a new intellectual property right to data.

Preface

In the world of big data, there are many considerations of whether data as such might be protected. The question seems to be merely academic, but is a very practical one. Take for instance data recorders stored in cars. These recorders store thousands of pieces of technical data as to the car, its "behaviour", the efficiency of the brakes, etc. These data are not related to a specific person. They are important for the car producers in the long run to check whether their cars have been developed in an appropriate and especially secure way. But who is the owner of these data? The buyer of the car? The driver? The seller? Or the automobile producer?

In the following considerations, I would like to show that maybe there is a new property right in data arising which has nothing to do with data protection or database rights.

Property concepts of Roman law in recent cases

There are already some legal regimes which might be used for protecting data. Primarily, the old Roman law idea of tangible property can be used.[1] Since the Digests, civil law has been based on the distinction between rights and goods.[2] Goods are inseparably linked with tangibility and movability. Thus, the discussion in the last century focused on the question whether and how we can extend the concept of tangible property to intangible values.[3] For instance, US and European courts sometimes applied the tangible property test to data. There, the New York Court of Appeals[4] applied for the first time the tort of conversion model to the deletion of data by employees. Although not physical, electronic data are regarded by the court to be "essential" in all aspects of business activities. In this case, the employee protested against the seizure of his personal data and his emails by the former employer.

For the tort of conversion, the employer has to claim ownership or immediate superior right of possession to the electronic information.[5] Furthermore, he has to prove that the defendant exercised unauthorised dominion over the property in question to the exclusion of the plaintiff's rights.[6] The court held that "an action for conversion will

* Prof. Dr Thomas Hoeren is the head of the Institute for Information, Telecommunications and Media Law (ITM) at the University of Münster (Germany) and currently a visiting Professor at the Stanford Law School.

[1] cf. Russ Versteeg, "The Roman Law Roots of Copyright" (2000) 39 Md. L. Rev. 522, 531.

[2] Gaius, Inst II 12–14.

[3] *Retail Systems Inc v CNA Insurance Cos* 469 N.W. 2d 735 (Minn. App. 1991): "Other considerations also support the conclusion that the computer tape and data are tangible property under this policy. The data on the tape was of permanent value and was integrated completely with the physical property of the tape. Like a motion picture, where the information and celluloid medium are integrated, so too were the tape and data integrated at the moment the tape was lost." Pet. for rev. denied (Minn. August 2, 1991); *American Guarantee and Liability Insurance Co v Ingram Micro, Inc* 2000 WL 726789 (D. Ariz, 2000). For a classification as intangible, see *AOL v St Paul Mercury Insurance* 207 F. Supp. 2d 459 (E.D. Va 2002); aff'd No.02-2084 (4th Cir. 2003) (St Paul Mercury).

[4] *Thyroff v Nationwide Mutual Ins. Co* N.Y. 3d 283 (2007).

[5] *Republic of Haiti v Duvalier* 211 A.D. 2d 379 (1st Dept. 1995); *Ahles v Aztec Enterprises, Inc* 120 A.D. 2d 903 (3d Dept. 1986).

[6] *Thyroff v Nationwide* N.Y. 3d 283, 288 (2007).

not normally lie when it involves intangible property".[7] Nevertheless, it is necessary for courts to accept that in today's society "computers and digital information are ubiquitous and pervade all aspects of business, financial and personal communication activities".[8]

In *Thyroff*, the plaintiff was an insurance agent for the defendant employer Nationwide, who entered into an arrangement whereby Nationwide would lease him computer hardware and software (collectively referred to as the AOA system). The purpose of the AOA system was "to facilitate the collection and transfer of customer information to Nationwide".[9] The plaintiff used this technology for business data, but also for personal emails, correspondence and other relevant customer data. Nationwide uploaded daily all the information from the plaintiff's computer system on to its centralised computers.

However, the court only affirmed that a claim for conversion of electronic records and data is possible under New York law. It did not decide upon the proper "owner" of the electronic information at issue; the court simply presumed that the plaintiff was the owner of the data based upon tangible property in the hardware and the possession of technical devices.[5]

Following the approach of the *Thyroff* judges, the US Bankruptcy Court of the Southern District of Texas[10] decided that the copying of seismic data stored on a computer may be regarded as a conversion claim. The data "could not exist apart from some physical storage medium, such as a computer, flash drive, tapes, or film"[11] and "could be accessed by a human user in a manner analogous to the access of traditional tangible property".[12] The court furthermore held that although the data were stored in an electronic format for efficiency reasons, it "could have been represented through other, indisputably tangible, media".[13]

However the concept of tangible property leads to nowhere, especially in the age of the internet. Even if there was a "marriage" between data and their computer readable substrate this concept cannot be used in the internet world where these substrates no longer exist. Apart from that, it might lead to strange effects if the owner of the carrier gets the property rights to the data stored on this carrier. Imagine a case where somebody bought a blank DVD under reservation title. Should the owner of the formerly blank DVD become the owner of all the data stored on that DVD afterwards?

Consequently, this approach has been denied by UK courts recently. For instance, the UK Court of Appeal[14] had to decide whether data might be subjected to liens. In this case, an IT maintenance company claimed a lien over the database of the defendant, pending payment of the fees. Contrary to what the High Court decided, the Court of Appeal ruled that the common law clearly distinguished between tangible and intangible property.[15] A lien was only possible over tangible property. An electronic database did not fall within that category. There were powerful arguments to extend liens to digitised materials, but as this would involve a significant departure from existing law, this would need Parliament to change the law. Databases apparently are not regarded as "property" by British courts.

Perhaps copyright protection might help to protect the structure of the database if the database is based upon a highly original concept. The sui generis database right implemented within the scope of the EU Database Protection Directive[16] contains a legal regime which allows the protection of a substantial amount of time and money invested in structured data.[17] But neither approach protects data as such. They are made to safeguard the originality embodied in or the investment made for structuring data. Therefore, The ECJ underlined the requirement in the *British Horseracing Board* case that, in order to qualify for protection, there must be substantial investment in the database. Resources spent in creating the data in the database cannot be taken into account.[18]

Similar problems arise if you want to apply the rules of data protection to big data. Some of these data might be classified as being obviously related to a specific person. In the case of the data recorders mentioned above, the device might store information on the behavior of the driver.[19] However, a lot of data have nothing to do with the driver; they include general observations on the technicalities of the car.[20] Therefore, we quickly come back to the question how these raw data can be protected.

[7] *Sporn v MCA Records* 58 N.Y. 2d 482, 489 (1983).
[8] *Thyroff* N.Y. 3d 283, 291 f (2007).
[9] *Thyroff* N.Y. 3d 283, 285 (2007).
[10] *In re Yazoo Pipeline Co LP* 459 B.R. 636 (Bankr. S.D. Tex. 2011).
[11] *Yazoo Pipeline* 459 B.R. 636. 653 (Bankr. S.D. Tex. 2011).
[12] *Yazoo Pipeline* 459 B.R. 636. 654 (Bankr. S.D. Tex. 2011).
[13] *Yazoo Pipeline* 459 B.R. 636. 653 (Bankr. S.D. Tex. 2011).
[14] *Your Response Ltd v Datateam Business Media Ltd* [2014] EWCA Civ 281; [2014] 3 W.L.R. 887.
[15] *Your Response* [2014] EWCA Civ 281; [2014] 3 W.L.R. 887 at [13].
[16] Directive 96/9 on the legal protection of databases, *http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31996L0009:EN:HTML* [Accessed September 23, 2014].
[17] *British Horseracing Board Ltd v William Hill Organization Ltd* (C-203/02) [2004] E.C.R. I-10415; [2005] 1 C.M.L.R. 15; *Fixtures Marketing Ltd v Oy Veikkaus AB* (C-46/02) [2004] E.C.R. I-10365; [2001] R.P.C. 612; *Fixtures Marketing Ltd v Svenska Spel AB* (C-338/02) [2004] E.C.R. I-10497; [2005] E.C.D.R. 4; *Fixtures Marketing Ltd v Organismos Prognostikon Agonon Podosfairou* (C-444/02) [2004] E.C.R. I-10549; [2005] 1 C.M.L.R. 16.
[18] *British Horseracing Board* [2004] E.C.R. I-10415; [2005] 1 C.M.L.R. 15 at [33].
[19] Ira S. Rubinstein, "Big Data: The End of Privacy or a New Beginning?" (2013) 3 *International Data Privacy Law* 74.
[20] Kate Crawford and Jason Schultz, "Big Data and Due Process: Toward a Framework to Redress Predictive Privacy Harms" (2014) 55(1) *Boston College Law Review* 93; see also NYU School of Law, Public Law Research Paper No.13-64; NYU Law and Economics Research Paper No.13-36, SSRN, *http://ssrn.com/abstract=2325784* [Accessed September 23, 2014].

Is protection needed?

Before we try to consider how data might be protected, we first have to discuss whether these data should really be the object of a new protection regime. This question has already been decided upon in Germany. Section 453 of the German Civil Act provides that things which are neither rights nor goods may nevertheless be sold within a sale contract. Data are sold; big data is a big business. Data have a high economic value.[21] Therefore, we need clear rules to determine to whom these data belong.

Another case shows the need for a clear attribution of data to "owners". On July 3, 2012, the ECJ published its landmark decision in *UsedSoft GmbH v Oracle International Corp* (C-128/11).[22] The court held that the commercial distribution of software via a download on the internet is not only based on a licence, but on a sale of goods. Therefore, the owner of copyright in software cannot prevent a perpetual "licensee" from selling his software.[23] The decision implies that there is a specific ownership attributed to intangible goods like software downloaded via the internet. Although the applicability of this model to other digital goods remains to be considered in future court decisions, the ECJ has opened the door for a discussion on ownership in intangible assets.

The German cases

The apparently unsolved matter of property rights in data cries out for a solution by the courts. In Germany, the Court of Appeal of Nuremberg has decided a case which directly relates to a new model of property in data.[24] The judges had to settle the question whether former employees were allowed to delete the data stored on their company-owned laptops. The data related to business contacts and possible customers. The company alleged that the employees committed data theft when they deleted the files and asked the courts for a criminal conviction under s.303 (a) of the German Criminal Act. This section provides that unlawfully erasing, corrupting or altering computer data incurs a penalty of imprisonment not exceeding two years, or a fine. However, the Act does not say anything about the ownership of data; it simply presupposes that the courts determined the borderline between the lawful destruction of one's own data and the criminal erasure of data belonging to somebody else. But what does "belonging to somebody" mean? The court makes reference to a lot of voices in the legal literature which stick to the theory of the so-called "*Skripturakt*". The person who generates the data gets the right to the data.[25] These rules apply as well to the data generated within an employment contract. The person who directly generates the data gets the rights to the data even if the data afterwards are used for the business or for the sake of the employer. Thus, the employees were allowed to delete the data under criminal law (independent of the fact that they might be dismissed under labour law). However, the court held that in employment the situation might be different if the data have already been passed over to the employee.[26] In this case, the employee is deemed to be the owner according to the judges. Similarly, the data originally belong to the employee if the data were created completely according to the demands of the employee.

The tendency seems to be clear. Data might be related to the person who generates them. A kind of property right might be vested in the "generator". However, the cases until now have had a strong connection with criminal law. The question is whether we can apply them in civil law as well. Civil law has a more flexible approach to property issues. Therefore, the principle of generating data might be amended by additional rules such as the principle of agency or employment. If somebody has been employed to generate data (for the company), the ownership in the data should be attributed to the employer.[27] Similarly, the person who mandates another person to generate data should get the rights to the data. This approach has been chosen in German labour law. The Labour Court of Appeal of Saxony (Landesarbeitsgericht) of Saxony had to decide a similar case in 2007.[28] There, an employee bought and installed Microsoft Outlook on a laptop which was given to him by his employer. Then he became ill for a long time. His employer asked for the laptop and all the emails related to his job. He got the computer and the emails, but Outlook was deleted. The court held that this was reason for dismissing the employee. The judges used ideas from classical property law, especially a reference to s.950 of the German Civil Act. Via the installation of the email program on the laptop of the employer he has obtained the property in the software.[29] The employee thus destroyed the data of the employer when he deleted the email program from the laptop—thus he could be dismissed.

The two cases, the one from Nuremburg and the other one from Saxony, seem to contradict each other somewhat. The court in Nuremburg held that the employer cannot be punished under criminal law if he deletes data he had produced with his employment contract. The court in Saxony held that the data created by an employer

[21] David Brooks, "The philosophy of Data" (February 4, 2013), *http://www.nytimes.com/2013/02/05/opinion/brooks-the-philosophy-of-data.html?_r=0* [Accessed September 23, 2014].
[22] *UsedSoft GmbH v Oracle International Corp* (C-128/11) [2013] Bus. L.R. 911.
[23] *UsedSoft* [2013] Bus. L.R. 911 at [80].
[24] OLG Nürnberg 1. Strafsenat, Beschluss vom 23.01.2013 — 1 Ws 445/12, CR 2013, 212 = BeckRS 2013, 03553, *http://www.gesetze-bayern.de/jportal/portal/page/bsbayprod.psml?doc.id=KORE418122013 &st=ent&showdoccase=1&paramfromHL=true.*
[25] OLG Nürnberg 1. Strafsenat, Beschluss vom 23.01.2013 - 1 Ws 445/12 at [14].
[26] OLG Nürnberg 1. Strafsenat, Beschluss vom 23.01.2013 - 1 Ws 445/12 at [16].
[27] OLG Nürnberg 1. Strafsenat, Beschluss vom 23.01.2013 - 1 Ws 445/12 at [17].
[28] LAG Sachsen, Urteil vom 17.01.2007 — 2 Sa 808/05, MMR 2008, 416, *http://www.justiz.sachsen.de/lag/download/2Sa808-05.pdf* [Accessed September 23, 2014].
[29] LAG Sachsen, Urteil vom 17.01.2007 — 2 Sa 808/05, A I.

belongs to the employee. However, the one case derived from criminal law the other from civil (labour) law. They can be combined insofar as, in general, the property in data is attributed to the originator, creator, or producer of these data. However, in the case of data made for hire (to use the US copyright term), the data belong to the employer. Therefore, even the Court of Nuremburg granted a property right in data directly to the employee in cases where he fully mandated the creation of the data.[30]

Remaining questions

Furthermore, it is unclear what is happening in the case of automatically generated data. In this case it is not a person who is generating the data but only a "machine". However, we might use the regulations in the United Kingdom or other countries analogously. Section 9(3) of the UK Copyright, Designs and Patent Act 1988 provides that in the case of a literary, dramatic, musical or artistic work which is computer-generated, the author shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken. In addition, it remains to be solved how this new property right fits into to the existing legal framework of property law. Can there really be a lien in data (see the Court of Appeal above)? What is the relationship between property in data and the ownership in the media where the data are stored? What happens if the new property rights in data conflict with data protection laws? All these questions remain open for further academic research—and court cases.

[30] OLG Nürnberg 1. Strafsenat, Beschluss vom 23.01.2013 — 1 Ws 445/12 at [17].