Football fixtures, horse races and spin-offs: the ECJ domesticates the database right.

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On November 9, 2004 the European Court of Justice (‘ECJ’) handed down a quartet of eagerly awaited decisions concerning the European Database Directive (‘the Directive’). The decisions provide the first clarification by the ECJ of certain key concepts of the Directive. Importantly, they hold that investment in ‘creating’ data, e.g. by drawing up a list of sporting events, does not count towards ‘substantial investment’, thereby denying database protection to such ‘single-source’ data as football fixtures and horseracing schedules. By making a distinction between ‘created’ and ‘obtained’ data, the ECJ embraces one of the main arguments underlying the so-called ‘spin-off theory’. Equally important is the ECJ’s interpretation of the scope of database protection; in determining infringement the economic value of the appropriated data is irrelevant.

However, the decisions by the ECJ also leave a number of issues undetermined and, arguably, by implication, question the efficiency of the Directive in achieving its ostensible goal of protecting the investment involved in producing databases without providing exclusive rights in relation to the data contained within those databases. This article offers an analysis of the key aspects of the decisions, and in doing so considers some of the implications of the decisions.

The facts of the cases

The four cases concern similar facts. Each case relates to a database of sporting information, the largest and most complex of which is a database of horse racing information maintained by the British Horseracing Board (‘BHB’). The defendant in that case, off-track betting company William Hill, had obtained racing data via a third party which was licensed to access and use the BHB’s database. The information was used by William Hill to supply racing information to its betting clientele. The quantity of data used by the defendant on any one occasion was quite limited; it used only the dates, times and places of races together with the names and numbers of horses running in those races.

1 Fixtures Marketing Ltd v Svenska AB (Svenska), C-338/02; Fixtures Marketing Ltd v Organismos Prognostikon Podosfairou EG (OPAP), C-444/02; Fixtures Marketing Ltd v Oy Veikkaus Ab (Oy Veikkaus), C-46/02; British Horseracing Board Ltd v William Hill Organization Ltd (BHB decision), C-203/02.

The BHB’s database contained considerably more information, such as data on horse ownership, breeding and identification, as well as details of their jockeys and trainers.

The other three cases relate to lists of fixtures of English and Scottish football. The organisers arranged for the exploitation of their fixtures lists to be handled by Fixtures Marketing Limited (‘Fixtures’) in respect of exploitation outside of the United Kingdom. Fixtures brought actions against betting companies in Greece, Sweden and Finland which used parts of the fixture lists for their pools betting operations. In any one week, the defendants would use about a quarter of the matches to be played in the Premier League and other divisions.

**Creating data is not ‘obtaining’**

Article 7 of the Directive requires Member States to confer a database right upon a database maker who demonstrates that it has made a quantitatively or qualitatively substantial investment in ‘obtaining, verifying or presenting’ the contents of its database. Defendants had argued, as various commentators had contended, that investment in data-generating activities, such as drawing up a fixtures list, may not be qualified as investment in ‘obtaining’ the contents of a database. The ECJ agrees and adopts the view that any investment in creating data is to be disregarded in determining whether a database maker has made a substantial investment in obtaining, verifying or presenting the contents of the database.

But how to distinguish between ‘creating’ and ‘obtaining’ when data are generated and immediately incorporated into a database, such as happened in the cases at hand? Here, the ECJ departs from the Advocate General’s opinion. In her opinion, “That [obtaining] would be the case if the creation of the data took place at the same time as its processing and was inseparable from it.” The ECJ takes a different view. It discounts investment in collecting data that is indivisibly linked to its creation. Hence, in relation to football fixtures, it states:

> Finding and collecting the data which make up a football fixture list do not require any particular effort on the part of the professional leagues. Those activities are indivisibly linked to the creation of those data, in which the leagues participate directly as those responsible for the organisation of football league fixtures. Obtaining the contents of a football fixture list thus does not require any

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4 Para 59 of the OPAP opinion
investment independent of that required for the creation of the data contained in that list.\textsuperscript{5}

The ECJ furthermore clarifies which type of activities and investment can be ascribed to data creation, as opposed to obtaining.

10. The preparation of those fixture lists requires a number of factors to be taken into account such as the need to ensure the alternation of home and away matches, the need to ensure that several clubs from the same town are not playing at home on the same day, the constraints arising in connection with international fixtures, whether other public events are taking place and availability of policing.

11. Work on the preparation of the fixture lists begins a year before the start of the season concerned. It is entrusted to a working group consisting, inter alia, of representatives of the professional leagues and football clubs and necessitates a certain number of meetings between those representatives and representatives of supporters’ associations and the police authorities.

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42. … [s]uch resources represent an investment in the creation of the fixture list. Such an investment, which relates to the organization as such of the leagues, is linked to the creation of the data contained in the database at issue, in other words those relating to each match in the various leagues. It cannot, therefore, be taken into account under Article 7(1) of the directive.\textsuperscript{6}

The ECJ takes a similar hard line in the BHB case, rejecting the proposition that the BHB had made a relevant substantial investment in the data used by the defendant.

The resources deployed by BHB to establish, for the purposes of organizing horse races, the date, the time, the place and/or name of the race, and the horses running in it, represent an investment in the creation of materials contained in the BHB database.\textsuperscript{7}

In addition, the ECJ rejects an argument that investment in verification during the process of creating the relevant data could constitute the relevant substantial investment. Hence, it states that:

39.[T]he process of entering a horse on a list for a race requires a number of prior checks as to the identity of the person making the entry, the characteristics of the horse and the classification of the horse, its owner and the jockey.

\textsuperscript{5} Para 44 of the Oy Veikkaus Ab decision
\textsuperscript{6} Paras 10, 11 and 42 of the Oy Veikkaus Ab decision.
\textsuperscript{7} Para 80 of the BHB decision.
40. However, such prior checks are made at the stage of creating the list for the race in question. They thus constitute investment in the creation of data and not in the verification of the contents of the database.

41. It follows that the resources used to draw up a list of horses in a race and to carry out checks in that connection do not represent investment in the obtaining and verification of the contents of the database in which that list appears.\(^8\)

The ECJ’s insistence that a database maker demonstrate a substantial investment in obtaining, presenting and verifying pre-existing, independent data that are incorporated into its database, significantly reduces the potential scope of the Directive. Information products such as football fixtures and television program schedules are unlikely to attract the protection of the database right because investment in those items is primarily attributable to the creation of the information contained therein rather than on obtaining, presenting or verifying that information.

**The spin-off doctrine**

By making a distinction between ‘created’ and ‘obtained’ data, the ECJ embraces one of the main arguments underlying the so-called ‘spin-off doctrine’, which has been particularly popular among Dutch courts and commentators.\(^9\) According to the spin-off doctrine, the database right accrues only in investment that is directly attributable to the production of the database. The doctrine is premised on the ‘incentive’ rationale of the sui generis right. Recitals 10-12 preceding the Directive illustrate that the principal reason for introducing the sui generis right was to promote investment in the (then emerging) European database sector.\(^10\) Judging from these recitals, the database right is not a right of intellectual property rooted in notions of natural justice, but a right based on utilitarian (instrumentalist) reasoning. In the light of this incentive rationale there would appear to be no reason to grant protection to data compilations that are generated quasi ‘automatically’ as by-products of other activities.\(^11\)

Although the ECJ’s decisions do not explicitly mention the spin-off doctrine, their reasoning is certainly informed by the Directive’s incentive rationale:

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\(^8\) Paras 39-41 of the BHB decision.

\(^9\) See note 3.

\(^10\) ‘(10) Whereas the exponential growth, in the Community and worldwide, in the amount of information generated and processed annually in all sectors of commerce and industry calls for investment in all the Member States in advanced information processing systems;

(11) Whereas there is at present a very great imbalance in the level of investment in the database sector both as between the Member States and between the Community and the world's largest database-producing third countries;

(12) Whereas such an investment in modern information storage and processing systems 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;’

Under the 9th, 10th and 12th recitals of the preamble to the directive, its purpose, as William Hill points out, is to promote and protect investment in data ‘storage’ and ‘processing’ systems which contribute to the development of an information market against a background of exponential growth in the amount of information generated and processed annually in all sectors of activity. It follows that the expression ‘investment in … the obtaining, verification or presentation of the contents’ of a database must be understood, generally, to refer to investment in the creation of that database as such.\(^\text{12}\)

**Sole-source databases**

By implication, the ECJ’s decisions offer a partial solution to one of the most obvious deficiencies of the Directive, the absence of a regime of compulsory licensing to cure the anticompetitive effects of ‘sole-source’ information monopolies, such as those exercised by BHB and Fixtures. The First Proposal of the Directive provided for such a scheme (in Art. 8), but this was left out of the final version of the Directive.\(^\text{13}\) By restricting the ambit of the database right to collections of pre-existing data, by way of a strict interpretation of ‘obtaining’, the ECJ effectively denies protection to collections of untreated sole-source data, thereby reducing the need for compulsory licensing. In its result, this distinction between creation and obtaining is somewhat similar to the so-called idea/expression dichotomy in copyright – the maxim that copyright protects only original expression, leaving untreated ideas, facts and theories in the public domain.

Yet, while the ECJ’s approach to creating as opposed to obtaining, presenting and verifying data is easily enunciated, the application of that approach is another matter. A number of problems can be identified:

**The distinction between creating and obtaining information.**

While the ECJ appears to be confident it can distinguish between ‘creating’ and ‘obtaining’ data, the distinction is not always so easy to make. For instance, is the derivation of data from naturally occurring phenomena an act of creation or obtaining?

\(^\text{12}\) Para 30 of the BHB decision  
\(^\text{13}\) Proposal for a Council Directive on the Legal Protection of Databases, COM (92)24 final, Brussels, 13 May 1992, OJ 1992 C156/4. Art. 8, paras. 1 and 2, of the Proposal read as follows: ‘(1) Notwithstanding the right provided for in Article 2(5) to prevent the unauthorized extraction and re-utilization of the contents of a database, if the works or materials contained in a database which is made publicly available cannot be independently created, collected or obtained from any other source, the right to extract and re-utilize, in whole or substantial part, works or materials from that database for commercial purposes, shall be licensed on fair and non-discriminatory terms. (2) The right to extract and re-utilize the contents of a database shall also be licensed on fair and non-discriminatory terms if the database is made publicly available by a public body which is either established to assemble or disclose information pursuant to legislation, or is under a general duty to do so.’
One example may be the recording of meteorological data such as the daily maximum temperature in a particular location. Are those data created or obtained? Similarly, do scientists obtain the genetic sequences of living organisms or do they create them? The strict approach taken by the ECJ in these four cases would suggest that the answer is that such data are created. Meteorological data and genetic sequences are records and representations of natural phenomena, not the phenomena themselves, and it would be difficult for scientists to argue that they have simply collected the data as opposed to creating them. On the other hand, when a large mass of such data has been created, there are also significant costs associated with presentation and verification which may meet the requirements in Article 7(1) of the Directive. In any event, these metaphysical distinctions will undoubtedly continue to concern courts, and commentators for some time to come.

Database makers will engage in conduct to ‘get around’ the ECJ decisions.

Obviously, the ECJ’s decisions are a major setback to producers of ‘synthetic’ data such as sporting events fixtures, television program listings, telephone subscriber data, and the like. The ECJ squarely denies them protection by database right, while due to the elevated standard of originality mandated by Art. 3(1) of the Directive (“the author’s own intellectual creation”), copyright protection will probably be unavailable as well. Such database makers are therefore likely to devise strategies to ‘get around’ the decisions. An obvious strategy is to substantially invest in the presentation or subsequent verification of the information. The ECJ clearly acknowledges this possibility. Hence, databases of large amounts of ‘created’ data may well obtain protection on the basis that a substantial investment was made in presenting the information. Thus makers of telephone directories are still likely to qualify for database right on the grounds that in addition to the investment in creating the data, such as organizing and recording the individual subscriptions, there has been a substantial investment in presenting the data as a cohesive information product, e.g. by having it edited and printed as a telephone directory. Alternatively, a database maker could introduce procedural systems to enable it to clearly delineate between investment in creating data and subsequent presentation or verification. A clear chronological and procedural distinction between the two processes might support the argument that verification has occurred separately from the initial act of creation.

The source data, however, would always remain free from database right. Producers of sole-source data would therefore be tempted to deny access to the public to the untreated source data, e.g. by applying technological measures or other methods of access control. The ECJ decisions do not, and indeed cannot, solve the problem of de facto monopolization of data by sole-source database producers. What a would-be competitor needs under such circumstances is not a compulsory license or an absence of database

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15 Para 35 of the BHB decision.
right altogether, but an obligation on the part of the producer to actually deliver the data under fair and non-discriminatory terms. Such obligations exist, for instance, in the realm of telecommunications law.\textsuperscript{16}

Another, rather speculative way for database makers to get around the creation/obtaining distinction would be to create data and, before making them publicly available, sell exclusive rights thereto. The purchase might be deemed a substantial investment in obtaining the data, because the data would be pre-existing and the financial cost of purchasing the data would arguably meet the test of substantial investment.\textsuperscript{17} Thus the purchaser would acquire a database right which could then be freely traded, possibly even by way of re-sale back to the original creator of the data.

\textbf{Meaning of substantial investment}

The ECJ decisions do not completely answer the questions as to what quantum of investment is necessary to meet the requirement of substantial investment and how that might be measured. While making the point that investment in creation of data is irrelevant, as is investment in verification during the process of creation, the ECJ states:

\begin{quote}
Although the search for data and the verification of their accuracy at the time a database is created do not require the maker of that database to use particular resources because the data are those he created and are available to him, the fact remains that the collection of those data, their systematic or methodical arrangement in the database, the organization of their individual accessibility and the verification of their accuracy through the operation of the database may require substantial investment in quantitative and/or qualitative terms within the meaning of Article 7(1) of the Directive.\textsuperscript{18}
\end{quote}

The ECJ does not clearly enunciate what would constitute such a substantial investment, although the Fixtures decisions make it clear that the presentation and verification of football fixtures would not meet the test of `substantial’ investment.\textsuperscript{19} Similarly, the BHB decision is based on a finding that the investment of the BHB in obtaining, verifying or presenting (as opposed to creating) the dates of its races, the place of those races and the names and numbers of the horses was minimal.

\textbf{The scope of database protection: correlating investment and infringement}

The ECJ decisions do address another crucial question, which is directly related to the issue of substantial investment. The database right protects makers of a database against the unauthorized extraction or reutilization of a ‘substantial part’ of the database. How to assess what constitutes a ‘substantial part’?

\textsuperscript{16} See e.g. European Court of Justice, 25 November 2004, Case C-109/03 (KPN v. OPTA).
\textsuperscript{17} See eg Recital 39 of the Directive
\textsuperscript{18} Para 36 of the BHB decision.
\textsuperscript{19} Eg paras 45-47 of the Oy Veikkaus decision
In copyright law and elsewhere in the law of intellectual property, an immediate correlation exists between the prerequisites and the extent of protection. The criterion of ‘originality’ in copyright not only determines what is protected subject matter, but also the scope of the rights of reproduction and adaptation. Only if what is copied is ‘original’ will there be a case of copyright infringement. Similar scope rules apply in patent law and trademark law.

The Directive, however, does not provide for a clear correlation between the pre-requisite for obtaining protection and the test of infringement. The former confers protection once the necessary substantial investment has been made in obtaining, presenting or verifying. The latter simply requires an extraction or reutilisation of a substantial part of the contents of the database. As we have seen in the cases at hand, the majority of the investment by the database maker may well have been in the creation of the data in question. If the database maker can also demonstrate a substantial investment in obtaining, verification or presentation, it might still obtain wide and exclusive rights in respect of the data contained in its database, if courts fail to correlate the investment with the extracted portions of the database.

The ECJ appears to have been aware of this difficulty. In considering what constitutes a qualitatively substantial part of a database, the ECJ states that ‘it must be considered whether the human, technical and financial efforts put in by the maker of the database in obtaining, verifying and presenting those data constitute a substantial investment’. In the context of the BHB decision, the data reutilised by William Hill, namely the dates, time and place of races and the name and numbers of horses racing, was not deemed qualitatively substantial as no substantial investment had been made in obtaining, verifying or presenting those data.

Very importantly, the ECJ rejects the argument that as the data reutilised by William Hill had substantial economic value, this would demonstrate that the data amounted to a substantial part of the contents of the database:

[T]he intrinsic value of the data affected by the act of extraction and/or re-utilisation does not constitute a relevant criterion for assessing whether the part in question is substantial, evaluated qualitatively. The fact that the data extracted and re-utilised by William Hill are vital to the organization of the horse races which BHB and Others are responsible for organizing is thus irrelevant to the assessment whether the acts of William Hill concern a substantial part of the contents of the BHB database.

The approach of the ECJ rejects judicial opinions that had awarded near-absolute protection to a database on the premise that the extracted data, however minimal, were of significant value to the defendant. For example, in the decision in first instance in the case of BHB v. William Hill, Justice Laddie of the High Court had expressed the view

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20 Para 76 of the BHB decision.
21 Para 78 of the BHB decision.
that ‘[T]he significance of the information to the alleged infringer may throw light on whether it is an important or significant part of the database.’  

Similarly, in the Dutch decision of NVM v. De Telegraaf, a case concerning a database of real estate listings, the lower court held that ‘even the extraction of small amounts of data would qualify as substantial extraction, since just a few data might be of great value to end users’. The net result of this obviously erroneous approach would be that the database right become a property right in (valuable) information. This is clearly not intended by the framers of the Directive, as Recitals 45 and 46 clarify.

The ECJ’s approach to a ‘qualitatively substantial part’ is summed up as follows:

[S]ubstantial part, evaluated qualitatively, of the contents of a database refers to the scale of the investment in the obtaining, verification or presentation of the contents of the subject of the act of extraction and/or re-utilisation, regardless of whether that subject represents a quantitatively substantial part of the general contents of the protected database. A quantitatively negligible part of the contents of a database may in fact represent, in terms of obtaining, verification or presentation, significant human, technical or financial investment.

Extracting a ‘qualitatively’ substantial part

While the rejection by the ECJ of the suggestion that the intrinsic value of the contents extracted or re-utilised determine its substantiality and the insistence on a connection between the relevant investment and substantiality is very welcome, some problems remain.

A quantitatively substantial part of the contents of a database is relatively easy to determine. It refers to “the volume of data extracted from the database and/or re-utilised and must be assessed in relation to the volume of the contents of the whole of that database”. In the context of the BHB decision, the materials reutilised by the defendant, were a small proportion of the total database and hence not regarded as quantitatively substantial. The more difficult analysis is to determine whether such minimal appropriation would amount to a substantial part in a ‘qualitative’ sense. The paragraph quoted above suggests that the extraction of only a few data would amount to database right infringement insofar as obtaining the data required substantial ‘qualitative’

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24 ‘(45) Whereas the right to prevent unauthorized extraction and/or re-utilization does not in any way constitute an extension of copyright protection to mere facts or data;
(46) Whereas the existence of a right to prevent the unauthorized extraction and/or re-utilization of the whole or a substantial part of works, data or materials from a database should not give rise to the creation of a new right in the works, data or materials themselves;’
25 Para 71 of the BHB decision
26 Para 70 of the BHB decision
27 Para 74 of the BHB decision
investment, e.g. significant intellectual achievement. This, once again, raises the spectre of the database right becoming a property right in data per se. ‘Qualitative’ investment is, indeed, a rather dangerous notion, which should be reconsidered in the course of the Directive’s forthcoming evaluation by the European Commission.28 Understandably, the most recent proposal to introduce database protection legislation in the United States does not adopt such terminology.29

Another question concerns the possibility of substantial investment by way of purchase discussed above. What if a significant amount was paid by the database maker to obtain one datum or a small number of data? Would that not make those data, when extracted, a substantial part of the database?

Repeated and Systematic Infringement

Finally, in relation to infringement, the ECJ considers the question as to whether William Hill’s repeated and systematic use of insubstantial parts of the plaintiff’s database breached Article 7(5) of the Directive. The ECJ notes that the purpose of this provision is to prevent repeated acts by a user which would lead to “the reconstitution of the database as a whole or, at the very least, of a substantial part of it.”30 Given the ECJ’s view that the data used by the defendant were a very insubstantial part of the plaintiff’s database, it concludes that the repeated reutilisation of these insubstantial parts did not amount to a reutilisation of a substantial part, and therefore Article 7(5) did not apply.

‘Indirect’ extraction and re-utilisation

One of the arguments put forward by William Hill was that infringement could only occur if data were acquired directly from the plaintiff’s database. As William Hill had acquired the data in question from a third party, it could not have infringed the plaintiff’s database right. This argument is unequivocally rejected both in the Advocate-General’s opinion31 and in the BHB decision32 although there are some differences in their approach. The Advocate-General had expressed the view that indirect extraction was not possible.33 Thus, a person could copy data from a third party for their own private use but the reutilisation of those data by making them publicly available would infringe the database right, even if the defendant was unaware of the database maker’s rights34 and was undertaking the reutilisation for non-commercial purposes.35

The ECJ holds that “the concepts of extraction and reutilisation do not imply direct access to the database concerned”, suggesting that the copying of a substantial part of the

28 Article 16 § 3 of the Database Directive.
29 U.S. Database and Collections of Information Misappropriation Bill, HR 3261.
30 Para 87 of the BHB decision.
31 Paras 64-65 of the Opinion
32 Paras 52-53 of the BHB decision
33 Para 100 of the Opinion.
34 Para 96 of the Opinion
35 Para 88 of the Opinion.
original database from a third party’s copy may constitute extraction. The ECJ then qualifies this proposition by a somewhat confusing reference to a claim “[t]hat protection does not … cover consultation of a database”. 36 ‘Consultation’ is not a term used in the Directive, and the ECJ’s introduction of the concept is not helpful. It seems to be saying that once a database maker makes its database available to the public or permits a third party to make the database available to the public, it can not object to any member of the public viewing the contents of the database that are made available in that way. 37

It then goes on to stay that while the database maker can not object to consultation of the database, its rights of extraction and reutilisation remain. Since ‘consultation’ of an electronic database involves temporary reproduction of part of the contents of the database, it is not immediately apparent why ‘consultation’ is permitted. 38 Note that the Database Directive, in contrast to the more recent Copyright (‘InfoSoc’) Directive, does not provide for a mandatory exception permitting such temporary copies. 39 The best interpretation that can be placed on this part of the judgment is that once a database maker makes its database available to the public, it is implicitly consenting to the viewing of the database by any person and that consent will cover any temporary copies made for that purpose.

Some unanswered questions – ‘databaseness’ and the term of protection

Due to the answers given by the ECJ, it finds it unnecessary to respond to some of the questions referred to it. In particular, two questions from the BHB v. William Hill referral remain unanswered. First, William Hill had argued that it would only be infringing the database right if the data that it had extracted or reutilised reflected the systematic or methodical arrangement (‘databaseness’) of the plaintiff’s database. Since the contents taken did not constitute a substantial part of a database in the eyes of the ECJ, it sees no need to answer this question. It may be worth noting that the Advocate-General’s opinion clearly rejected this argument. If such an argument were successful, it would probably rob the Directive of any significant operation over and above the protection already granted by copyright to the selection and arrangement of data.

A second question that remains is whether a dynamic database such as that of the BHB should be regarded as a series of databases each with its own term of protection,
commencing every time a substantial change to the database is made. At first instance, Justice Laddie had concluded that a constantly updated electronic database was but a single database, but the Advocate-General disagreed. She expressed the opinion that each time a substantial change to the contents of a database is made, a new database emerges that qualifies for its own term of protection. Hence, a dynamic electronic database would effectively consist of a series of separately protected databases, even though the latest version of the database would contain a great deal of the data (or all the data) that were part of the original database. In this context it should be borne in mind that a substantial investment triggering a new term of protection of a database might be nothing more than a thorough verification of its contents.

**Conclusions**

The decisions of the ECJ certainly restrict the operation of the Directive, particularly with their emphasis on the distinction between creation of data and obtaining it. In the process, the Court embraces the principal argument of the spin-off doctrine by refusing to acknowledge any investment before or at the time of creation of data as constituting substantial investment in a database. In addition, the court’s findings on the meaning of ‘substantial part of the contents of a database’ ensure a reasonably close connection between the investment that is intended under the Directive to be the subject of protection and what constitutes infringement of the database right. While that connection does not prevent the protection of small quantities of data that represent substantial ‘qualitative’ investment, that is an almost inevitable consequence of the wording and structure of the Directive with its notions of ‘qualitative’ investment and ‘qualitatively’ substantial part, and its reliance on a regime of exclusive rights of extraction and reutilisation in stead of less far-reaching unfair competition remedies.

Of course, many issues remain unresolved. These include the further consideration of the distinction between creating and obtaining data. What for instance to make of scientific discovery; are scientific data ‘created’ or ‘obtained’? It is also inevitable that database makers will respond to the decisions by devising legal and economic strategies to get around their consequences, such as keeping the sole-source data secret, applying measures of access control, and investing substantially in presentation and verification of the database as it is made publicly available. While the ECJ’s decisions rein in some of the potential extremes of the Directive, it remains to be seen whether the database right, that wild beast of intellectual property, has now been fully domesticated.

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40 Para 143- 154 of the BHB opinion.
41 Recital 55 and para 147 of the BHB opinion.