A. What = database?

In essence, a collection of independent works, data or other materials which are systematically arranged and can be individually accessed. Cf. definition in EC Database Directive, Article 1(2).

Database can take, in principle, any form.

Cf. term “compilation” used in, e.g., TRIPS Agreement.

B. Database protection under international Treaties

International IP Treaties do not protect databases unless the latter satisfy requirements for copyright protection. Databases must be “intellectual creations” to qualify for protection.

Berne Convention, Art. 2(5) protects (in their own right) “collections of literary or artistic works” (e.g., encyclopedias, anthologies) which, “by reason of selection and arrangement of their contents, constitute intellectual creations”. According to authoritative academic commentary, (S. Ricketson, 1987 (p. 303)), there must be diversity of subject matter in the collection. Query 1: are electronic databases protected? No. Query 2: can collection of non-copyright materials be protected? Probably yes: see Sterling, § 6.18.

TRIPS Agreement, Art. 10(2) has similar thrust though focuses on “compilations of data or other material, whether in machine readable or other form”. Cf. WIPO Copyright Treaty, Art. 5.

Draft database protection Treaty tabled (by USA!) at WIPO Diplomatic Conference, December 1996, but never adopted: see further Sterling § 17.15. WIPO engaged in preparatory work for convening Diplomatic Conference for adoption of Treaty on database protection but timetable unclear.

C. EC Database Directive

For overview, see MacQueen et al., paras. 2.56–2.63; 6.4–6.20. See too, e.g., Sterling 2003, § 26E.

Directive builds on, and inspired by, “catalogue rule” in Nordic copyright legislation: see, e.g., Art. 49 of the Swedish Copyright Act of 1960 which provides – with some exceptions – specific protection (for 10 years) for “A catalogue, a table or another similar production in which a large number of information items have been compiled”.

Object of protection is not data per se but database in which the data are found: see recital 46.

Basic aim of Directive = stimulate European-based database industry: see recitals 10–12. To what extent has this aim been achieved?

Definition of database in Article 1(2): wide range of material may constitute database.
Both electronic and non-electronic databases covered.

Computer programs fall outside scope of Directive: Art. 1(3).

Database Directive provides two-fold protection for databases:

(i) Under copyright – if database = intellectual creation (Art. 3); copyright does not extend to database contents, only database as such.

(ii) *Sui generis* protection – if database =

   a. result of “substantial investment” (by database maker) in
   b. “obtaining, verification or presentation” of its contents; this prevents
   c. “extraction and/or re-utilisation” of
   d. “the whole or … substantial part” of the contents (Art. 7(1)).

Re (ii): Substantial investment can be quantitative (i.e., money, “sweat”) or qualitative (i.e., know-how, expertise). If “substantiality” criterion in (d) not met, protection still available if:

   a. “repeated and systematic” extraction/re-utilisation (of insubstantial parts) which either
   b. “conflict with normal exploitation” (of database) or
   c. “unreasonably prejudice the legitimate interests” of database maker (Art. 7(5)).

Term of protection under *sui generis* right = 15 years from completion of making of database (Art. 10(1)). Note “renewability” problem. See further MacQueen *et al.*, para. 6.11 *et seq*.

Increasing amount of case law on *sui generis* right in Art. 7. See, e.g., online database at: <http://www.ivir.nl/files/database/index.html>. (However, this online resource is only current as of Dec. 2006!)

Especially important is case law of ECJ beginning with quartet of decisions in 2004:

- Fixtures Marketing v. Oy Veikkaus Ab (Case C-46/02) [2005] ECDR 21
- British Horseracing Board v. William Hill Organisation (Case C-203/02) [2005] ECDR 1
- Fixtures Marketing v. AB Svenska Spel (Case C-338-02) [2005] ECDR 32
- Fixtures Marketing v. Organismos Prognostikon Agonon Podosfairu (Case C-444/02) [2005] ECDR 43

These cases address issues relating to the definition of database in Article 1(2), the nature of required investment in Article 7(1), and the nature of infringement in Article 7(2) and 7(5).


ECJ has subsequently handed down 2 further decisions:

- Directmedia Publishing GmbH v. Albert-Ludwigs Universität Freiburg (Case C-304/07), decision of 09.10.2008
- Apis-Hristovitch EOOD v. Lakorda AD (Case C-545/07), decision of 05.03.2009.

These cases addressed issues relating to what = “extraction” and “substantial” – viz. points (ii)(c) and (d) above. Both decisions build on and confirm the earlier ECJ case law. For analysis, see, e.g., E. Nettleton & S. Llewellyn, “ECJ provides further guidance on the ambit of database right”, *Computer Law & Security Review*, 2009, vol. 25, pp. 477–81.
Selected legal issues:

Regarding definition of database:

- What = “data or other materials”? How material are “materials”? Are “materials” to be limited to the immaterial? Can database concept extend to biobanks, seedbanks and other similar collections of physical/biological material? Issue not dealt with by ECJ.
- What = independent works etc.? See MacQueen et al., para. 2.60. See ECJ decisions, espec. discussion in Fixtures Marketing v. OPAP (ECJ C-444/02), para. 29ff.
- What = “systematic” or “methodical” arrangement? See MacQueen et al., para. 2.61. And again, see Fixtures Marketing v. OPAP (ECJ C-444/02), para. 30ff.
- What = “individually accessible”? See MacQueen et al., para. 2.62. Again, see OPAP decision.
- Can sui generis protection be given to a database consisting of publicly available materials? Yes: Apis, paras. 72–3.

Regarding nature of investment in Article 7(1):

- What = “obtaining”? Does it cover generation/creation of data for inclusion in database (as well as collection of pre-existing data) ECJ held no (BHB case, paras. 29–33). Thus, substantial investment in creating data that make up database is not relevant for application of Art. 7. Thus “single-source” data o/side scope of Art. 7. Query: is distinction between obtaining and creating problematic?
- What = “substantial investment”? How substantial is “substantial”? And in relation to what? Directive makes clear that investment need not be just financial; can also involve time, effort and energy (recitals 7, 39, 40). Must investment be directed specifically at making of database or can it be directed at another activity which has database creation as mere “spin-off”? Note “spin-off” theory, particularly prevalent in Netherlands and amongst academic commentators – i.e., that investment must be directed specifically at database generation, in order for database to qualify for protection under Art. 7. See further Hugenholtz, “Program Schedules, Event Data and Telephone Subscriber Listings under the Database Directive: The ‘Spin-Off’ Doctrine in the Netherlands and elsewhere in Europe” (2003), available at <http://www.ivir.nl/publications/hugenholtz/spinofffordham.html>. ECJ implicitly supports “spin-off” doctrine (see, e.g., OPAP case, paras. 45–52). See further MacQueen et al., para. 6.9.

Regarding nature of infringing acts (Article 7(2)):

- What = “extraction” and “re-utilisation”? ECJ in BHB case (para. 54) held that extraction does not necessarily mean physical removal; but mere consultation ≠ extraction. See further MacQueen et al., para. 6.13. Cf. Derpoet.de case (decision of District Court (Landgericht) Cologne, 2nd May 2001) in which framing of texts on website such that plaintiff’s banners were hidden = extraction. In Apis (espec. para. 41; see too Directmedia, para. 36) ECJ holds that extraction occurs when data are transferred to another medium (than original database); whether transfer of data is permanent or temporary is irrelevant for extraction issue (para. 45). Also irrelevant is purpose of transfer (para. 46), but if purpose is to create rival database this could be material to assessment of measure of damages (para. 50). Also irrelevant is whether infringer has used own software and other resources to create their database. And in Directmedia (espec. para. 40), ECJ holds that extraction > mechanical copying; extraction can involve some adaptation of taken data; means of arranging data in infringer’s database irrelevant.
- What = “substantial part”? ECJ holds that one is to disregard the intrinsic value of the part – BHB decision, paras. 72, 78. Substantial part is to be linked to investment efforts – BHB decision, para. 69; confirmed in Apis. Small quantities of data may be protected if they are object of substantial qualitative investment. See further MacQueen et al., paras. 6.13–6.14. Cf. “crown in the jewel” test adopted in Cadremploi v. Keljob (dec. by District Court (Tribunal de grande instance) Paris 5th Sept. 2001) – only 12% of data extracted but these
were found to be most valuable and, hence, substantial part. Cf. English axiom: “What is worth copying is worth protecting”, referred to by Rostock Lower Court (Amtsgericht) in decision of 20th Feb. 2001. Re. *quantitative* assessment, this has to be in relation to contents of entire database that are protected by database right; size of infringer’s database irrelevant. If protected database is modular and each module = database, then assessment of how much data is extracted, is to be made only in relation to volume of data in respective module: see partic. *Apis* (espec. para. 60).

**D. Approaches outside EU – with focus on USA, Australia, Canada and Japan**

**Point of departure**

No *sui generis* regime (as yet) for database protection in either USA, Japan, Canada or Australia. Such regimes unusual outside EU. Much scepticism in non-EU states about economic need for such regimes. See, e.g., US criticisms gathered at <http://www.umuc.edu/distance/odell/cip/links_database.html>.

However, various attempts to introduce such regime in USA: see, e.g., Bill for *Consumer and Investor Access to Information Act* (introduced into Congress in 1999 but not enacted). Most recently, see Bill for *Database and Collections of Information Misappropriation Act* (introduced into Congress in August 2003; fate uncertain). For general overview of relevant Bills introduced into US Congress, see J. Band, “The database debate in the 108th US Congress: the debate continues” [2005] EIPR 205.

Neither USA, Japan, Canada nor Australia (nor other non-EU states) obliged under international law to introduce such regime, cf. above.

**Protection under copyright law**

In USA, Australia, Canada and Japan databases may qualify for protection as literary works, on the basis that they are “compilations”.

See, e.g., Australia’s *Copyright Act* s. 10 – defining “literary work” to include “a table, or compilation, expressed in words, figures or symbols (whether or not in a visible form)”. Latter clause in parentheses intended to make clear that computerised databank can be a compilation: see Explan. Memo. to *Copyright Amendment Bill 1984*. Doubtful that film clips or music clips would be covered as these are not “expressed in words, figures or symbols”.

For USA, see *Copyright Act*, 17 USC § 101 (defining “compilation”) & § 103 (extending copyright protection to compilations as form of literary work). For case law, see, e.g., *Lane v. First National Bank of Boston*, 687 F Supp 11 (DC Mass 1988).

For Japan, see Copyright Act, Art. 12 (protecting compilations).

However, under US, Australian, Canadian and Japanese law, for copyright to subsist in database (as compilation), the database must either:

(a) contain original content; or
(b) its creation must involve a certain degree of skill, judgement or ingenuity.
Usually, databases will not have original content as data are factual. But they may satisfy criteria in (b). Issue then is what degree of skill etc is necessary? Is mere investment of time and resources sufficient?


Authorship requirement: under US and Australian copyright law, a work must usually have a human author.

**Other possible avenues of protection**

**Contract**
Database owner attempts to enter into contract with potential users of its database, stipulating terms and conditions of use.

Several problems with this strategy, particularly if effectuated by “click-wrap” clauses: e.g., is sufficient notice given of terms and conditions? See, e.g., leading US case of ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996). See further my lecture notes on contract law and copyright.

**Passing off**
Tort of passing off intended to stop one party from misrepresenting their goods/services as being or having a connection with goods/services of another party. Protection of a business’ goodwill is main rationale for tort. See further Reckitt & Coleman Products Ltd v. Borden Inc. [1990]; Erven Warnink v. J. Townsend & Sons (Hull) Ltd. [1979].

**Trespass to chattels**
Plaintiff must show that defendant intentionally, and without authorisation, interfered with plaintiff’s possessory interest in its property.

Physical contact required. US case law holds that electronic access meets this requirement: see eBay case below.

In Australian (and English) law, actual damage to chattel arguably not required; intentional touching sufficient. In US law, there must be either dispossession, impairment of quality/value, or loss of use for substantial time.

In present context, it is impairment of chattel’s quality or value which is most relevant.


**Trade secrets**
Contents of database may be protected under tort or legislation on breach of trade secrets. Successful conviction usually requires that the compiler has made reasonable efforts to maintain secrecy.

**Criminal Action**
Application of criminal offences for unauthorised access of computer systems. Successful conviction usually requires proof “beyond reasonable doubt” which is more stringent than “balance of probabilities” threshold for civil actions.

**Unjust Enrichment**
The modern law of unjust enrichment has following elements:
(i) Unjust behaviour;
(ii) Enrichment of defendant;
(iii) *Either* at expense of plaintiff and by subtraction from plaintiff;
(iv) *Or* by doing wrong to plaintiff;
(v) Where no defences are applicable.

Little case law in USA, Canada or Australia applying unjust enrichment law to database extraction, but such law could play important role in the future. See further, e.g., Fitzgerald & Gamertsfelder, “Protecting Informational Products (including databases) through Unjust Enrichment Law: An Australian Perspective”, *European Intellectual Property Review*, 1998, vol. 20, pp. 244–255.

**Unfair competition/commercial misappropriation**

**Business Patents**
Arguable that database system can be patented and therefore capable of protection as a business method patent – at least under US law. But online databases need to satisfy strict requirements for patent to succeed. For overview of problems and implications of patenting in online context, see, e.g., Grossfeld & Hoeltzenbein, “CyberLaw and CyberControl: Cyberspace Patents”, in Schweizer *et al.* (eds.), *Festschrift für Jean Nicolas Druey* (Zürich: Schulthess, 2002), pp. 755ff.

**Broadcasting law**
In Japan, some digital databases may be protected under broadcasting legislation.

**E. Supplementary literature and sources (in addition to those mentioned above)**