

**IN THE HIGH COURT OF JUSTICE**  
**CHANCERY DIVISION**  
**INTELLECTUAL PROPERTY**

Royal Courts of Justice  
Strand, London, WC2A 2LL

Date: 24 August 2017

**Before:**

**DAVID STONE**  
**(sitting as a Deputy High Court Judge)**

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**Between:**

**(1) TECHNOMED LIMITED (2) TECHNOMED  
TELEMEDICINE LIMITED**

**Claimants**

**- and -**

**(1) BLUECREST HEALTH SCREENING  
LIMITED (2) EXPRESS DIAGNOSTICS LIMITED  
T/A CARDIO ANALYTICS**

**Defendants**

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**Mr Jonathan Hill** (instructed by **Beale & Company**) for the **Claimants**  
**Ms Madeleine Heal** (instructed by **Perrin Myddelton**) for the **Defendants**

Hearing dates: 17, 18, 19, 20, 21 July 2017

Judgment

**David Stone (sitting as Deputy High Court Judge) :**

1. In these proceedings, the claimants Technomed Limited and Technomed Telemedicine Limited (whom I shall collectively call “Technomed” as nothing now turns on the distinction between them) claim that the defendants, Bluecrest Health Screening Limited (“Bluecrest”) and Express Diagnostic Limited trading as Cardio Analytics (“Express”) have infringed their database right and their copyright in their electrocardiogram (“ECG”) analysis and reporting system known as ECG Cloud.
2. This judgment relates only to the allegations of database right and copyright infringement. Bluecrest’s counterclaim for breach of contract has been split from the intellectual property claim and stayed pending the resolution of this aspect of the dispute.
3. At trial, Mr Jonathan Hill appeared for Technomed and Ms Madeleine Heal appeared for Bluecrest and Express. I am grateful to counsel and to those instructing them for their assistance.

**The witnesses**

4. The following witnesses gave evidence.

*Technomed's witnesses*

Mark Hashemi

5. Mr Hashemi is the founder and managing director of Technomed and of parent company, Technomed (Group) Limited. Mr Hashemi has worked in the cardiac rhythm diagnosis and management industry since 1988 in sales, clinical support and senior management roles. He is not medically trained, but has through practice acquired a good working knowledge of ECGs in a clinical setting. As part of Technomed's opening statement at the trial, Mr Hashemi gave a PowerPoint and live demonstration of Technomed's ECG Cloud system, and later confirmed the truth of that presentation. Mr Hashemi also gave written and oral evidence of the development of ECG Cloud and Technomed's relationship with Bluecrest. Ms Heal criticised Mr Hashemi's oral testimony (but not his presentation), suggesting that he "dissembled, played for time and would not answer questions initially when they were put to him". I do not accept that criticism. Whilst, as is accepted by Mr Hill, Mr Hashemi was occasionally combative in his responses, I accept that he gave a truthful account of both the development of ECG Cloud and Technomed's relationship with Bluecrest.

Robin Fuller

6. Mr Fuller is employed by Technomed as a web-systems developer, a position he has held since 2010. He is also a shareholder of the second claimant. He gave evidence as to the development of ECG Cloud and the relationship with Bluecrest. He also assisted with Mr Hashemi's demonstration of ECG Cloud. He was a clear and careful witness.

Dr Mark Sopher

7. Dr Sopher is a consultant cardiologist based at the Royal Bournemouth Hospital since 2005. He is an experienced cardiologist, with a sub-speciality interest in cardiac rhythm management. In addition to his full-time clinical role, he acts as a free-lance consultant to Technomed, through a company, providing an auditing service for ECGs reported by cardiac physiologists using ECG Cloud. He is also a shareholder of the second claimant. Dr Sopher gave evidence of his work with Technomed and the development of ECG Cloud, including its further development for the purposes of Technomed's relationship with Bluecrest. Dr Sopher was put forward as a witness of fact. I found Dr Sopher to be a cogent and helpful witness.

Christopher Dickson

8. Mr Dickson is the principal of Framley Limited, a software engineering practice. He has over 25 years' experience of designing and writing software. Mr Dickson gave expert evidence in relation to Technomed's ECG Cloud software, Express's software ("EAnalyse"), and his opinion on the comparison of the two. In addition to his witness statement, Mr Dickson also co-authored a Joint Statement of Experts together with Mr Nigel Young, the defendant's expert on this subject. There was a large degree of agreement between Mr Dickson and Mr Young, and no criticism was made of Mr Dickson's evidence. He was a careful and frank witness.

*Bluecrest's and Express's witnesses*

Peter Blencowe

9. Mr Blencowe is the managing director of Bluecrest. His background is in marketing – he is not medically trained. He gave evidence as to the relationship between Technomed and Bluecrest, and between Bluecrest and Express. Mr Hill submitted that Mr Blencowe’s oral testimony could not be relied on, saying that it was evasive. Mr Hill described Mr Blencowe as “often giving long speeches about irrelevant matters”. I agree with that criticism. Whilst Mr Blencowe no doubt believed himself to be assisting the court to the best of his ability, I found his evidence to be made up of repetitive restatements of Bluecrest’s case, rather than answers to the questions put to him. Where Mr Blencowe provided in his oral evidence his interpretation of documents from 2013 and 2014, I prefer to accept the documents for what they say, rather than the gloss Mr Blencowe placed on them in his evidence.

Ian Jarvis

10. Mr Jarvis has been a director of Express for 20 years. His background is in accounting – he is not medically trained. He has many years of practical experience of ECG interpretation and reporting. As part of the defendants’ opening statement, he gave a presentation by PowerPoint and video of Express’s EAnalyse system, and later confirmed the accuracy of that presentation. He also gave evidence about EAnalyse, and the relationship between Express and Bluecrest. Mr Hill also criticised Mr Jarvis’s oral evidence. With one caveat, I do not accept those criticisms. Whilst Mr Jarvis occasionally strayed from matters that were within his knowledge, he accepted this when it was put to him. Mr Jarvis was asked in cross-examination about the meaning of documents from December 2013 and January 2014. I do accept that the gloss Mr Jarvis attempted to put onto those documents was not accurate, and prefer to accept that the documents mean what they say.

Nigel Young

11. Mr Young is a computer consultant, put forward as an expert witness. He gave evidence of his technical investigation of ECG Cloud and his comparison with EAnalyse. As noted earlier, in addition to his witness statement, together with Mr Dickson he provided a joint statement of experts, recognising significant agreement between them. Mr Young’s evidence did not adequately follow the rules and guidance applicable to expert witnesses, but I do not consider that this is something for which he can be criticised. I found his answers to questions put to him to be clear and cogent.

Professor Harry Mond

12. Professor Mond is a Specialist Physician in the Department of Cardiology at the Royal Melbourne Hospital and medical director of Cardioscan Pty Limited (“Cardioscan”), a company which provides ECG monitoring services. He was presented as an expert witness. He gave his opinion on Technomed’s materials in a brief six paragraph witness statement. Professor Mond’s cross-examination was hampered by technical difficulties that resulted in a planned video-link with Australia being substituted for by use of an ordinary mobile phone on speaker placed in the middle of the courtroom. Whilst this was by no means optimal, I am satisfied that Professor Mond’s cross-examination proceeded in a satisfactory manner, and neither

Mr Hill nor Ms Heal suggested otherwise. However, early in cross-examination, it became apparent that Professor Mond's company Cardioscan was in commercial discussions with the second defendant, Express. When asked, Professor Mond immediately, and quite properly, agreed that he had a common interest with one of the defendants in this case. I was told from the bar table, and I accept, that this was the first Ms Heal had heard of it. It also became clear in cross-examination that the manner in which Professor Mond was instructed as an expert was unusual, and not as set out in his written report. His written report states that he was instructed by the defendants' solicitors, and sets out at paragraph 6 a typical declaration under Part 35, including a statement "I know of no conflict of interest of any kind". When questioned, it became apparent that Professor Mond's instructions had in fact come from an officer of Cardioscan and two members of the board of that company, not from the defendants' solicitors. He was provided with some materials, and, if there was any explanation of those materials it was, in his words, "extremely brief and of no real help". He then prepared a letter, which took him half an hour. That letter was later turned into his report.

13. Both Mr Hill and Ms Heal addressed me in detail in closing submissions on Professor Mond's evidence. Mr Hill described Professor Mond's evidence as "wholly valueless" for the reasons including those I have set out above. Ms Heal explained that Professor Mond had been instructed for some time as an expert witness in the counterclaim. She submitted that it was open to me to find that Professor Mond's evidence was tainted by the issues I have identified, and that it would now be inappropriate for Professor Mond to give expert evidence in the counterclaim. Nevertheless, she submitted that I ought to rely on Professor Mond's written and oral evidence in this part of the case. She referred me to page 1098 of the White Book and the cases cited there, and, after the close of the trial, to *The Governors and Company of the Bank of Ireland and Anor v Watts Group PLC* [2017] EWHC 1667 (TCC).
14. In *National Justice Companie Naviera SA v Prudential Assurance Co Limited (The "Ikarian Reefer")* [1993] 2 Lloyd's Rep 68, Cresswell J summarised the duties and responsibilities of experts. Relevantly, he emphasised the need for expert evidence to be *and to be seen to be* the independent product of the expert. Here, Professor Mond was put forward as an independent expert when in fact a company of which he is medical director was in commercial discussions with Express, the second defendant. This was not a situation where the conflict of interest was disclosed early in proceedings so it could be dealt with in advance – the conflict only became apparent in cross-examination. Whilst I am sure Professor Mond was doing his best to give honest and frank evidence, having not disclosed the fact of his company's involvement with Express, it cannot be said that he can be seen to be independent of the parties. Further, the situation was exacerbated by the manner in which Professor Mond's report was commissioned. On his own evidence, he was instructed by an officer and two board members of Cardioscan, the very company in commercial discussions with Express. He was clearly not properly instructed under Part 35. He wrote a letter that was later turned into a witness statement, appending a statement of independence that turned out not to be accurate. The report also states that Professor Mond had read Part 35. This, too, turned out not to be true, although Professor Mond did say that Part 35 had been explained to him.

15. As I was preparing to provide this judgment in draft to the parties' representatives, I received a letter from the defendants' solicitors raising two additional points which had not been made during the course of the five day trial, in each case because I was told that they had only recently come to the solicitors' attention. Put shortly, the matters are:
- i) That Professor Mond's company, Cardioscan, in addition to having a commercial relationship with one of the defendants also has a relationship with Technomed; and
  - ii) That Mr Hashemi had inappropriately contacted Cardioscan after Professor Mond had given evidence.

Shortly after receiving this correspondence, which had quite properly been copied to Technomed's solicitors, I received correspondence from the latter rebutting the two allegations made. I deal with each briefly in turn.

16. The defendants now claim that in addition to Cardioscan's relationship with Express, Cardioscan also has a relationship with Technomed. I was provided with an undated Non-Disclosure Deed between Cardioscan and Technomed, apparently signed on behalf of Technomed by Mr Hashemi. I was also provided with an undated Non-Disclosure Deed in similar terms between Cardioscan and Express. The defendants' position, set out in their solicitors' letter, is as follows:

“it is strongly felt that this matter should have been brought to the attention of the Court. It is submitted that if Dr Mond's company had a business relationship with both the Claimants and the Second Defendant, then this effectively neutralises any alleged bias...It is our submission that this relationship between the Claimants and Cardioscan Pty Limited is something that should be taken into account very carefully when considering Dr Mond's evidence and the allegations that it was potentially biased.”

17. In response, Technomed's solicitors recited on instructions their understanding of the relationship between Technomed and Cardioscan. An approach was made by Cardioscan to Technomed in July 2016, two conversations took place, and Cardioscan was informed on 14 September 2016 that Technomed did not intend to proceed with the discussions. Technomed therefore denies any existing business relationship between it and Cardioscan.
18. I do not accept the defendants' submission that Professor Mond's company's brief discussions with Technomed “neutralise” the bias I have found above. One of the problems with Professor Mond's evidence is that he cannot be seen to be independent of the parties – an independent expert appointed to assist the court on matters within his expertise. Having relationships with both parties (if that were the case) does not make him more independent than his having a relationship with one party. He disclosed neither relationship, and, indeed, to the contrary, gave a sworn statement as to his independence from both sides. I do not consider that this new information changes the assessment I have set out above.

19. As to the second allegation of witness intimidation and/or interference, I have been provided with an email from Ms Hashemi to Jeremy Steele of Cardioscan. That email reads in full:

“Dear Jeremy

Perhaps you might want to read the attached and explain Professor Mond’s evidence that he gave today. The contents raise a number of issues.

Best wishes

Mark”

20. The defendants’ solicitors say that this was “highly irregular and could be construed as intimidation and/or interference with a witness”. In response, Technomed’s solicitors deny “foul play”. They say:

“We have been informed by Mark Hashemi of our client that, following the revelations at day 4 of the trial during Dr Mond’s evidence, he wrote to Mr Steele with the intention of politely reminding him and Cardioscan of their duties of confidence under the NDA. The Court has seen a copy of this email, and we can confirm that there has been no response. It is not to be taken as evidence of a continuing relationship, but instead the continuance of the executed NDA.”

21. I do not need to comment further on Mr Hashemi’s email other than to say that it does not alter the position I have set out above in relation to Professor Mond’s evidence. I have held that Professor Mond was not independent, and the email from Mr Hashemi does not make him so. If allegations of impropriety are to be made against Mr Hashemi’s conduct (and I am by no means inviting them), then they should be made at the appropriate time and in the appropriate way.
22. In conclusion in relation to Professor Mond, Ms Heal accepted at trial that it would not be proper for Professor Mond now to give expert evidence in the counterclaim. I do not see any basis for drawing a distinction between that evidence and the evidence he has given in this trial. Nothing in the post trial correspondence changes that. I therefore attach no weight to Professor Mond’s evidence.
23. If I am wrong in this, I would add that I do not think it matters in this case. As Mr Hill put to me in opening (that is, before Professor Mond’s cross-examination), Professor Mond’s evidence did not address sufficiently specifically or accurately the issues before me. Even if the evidence had been properly given, it would not have assisted me.
24. Mr Hill also suggested that I should draw adverse inferences following the defendants’ failure to call Dr Nick Summerton, a doctor commissioned by Bluecrest to assist with a rewrite of some of its documents in 2016. Further, Mr Hill says that someone involved in the implementation of Express’s systems should have given evidence. I make some comments below about the evidence that Mr Jarvis provided in relation to Dr Summerton’s work, but I do not consider that it is necessary or appropriate to draw any adverse inferences in this case.

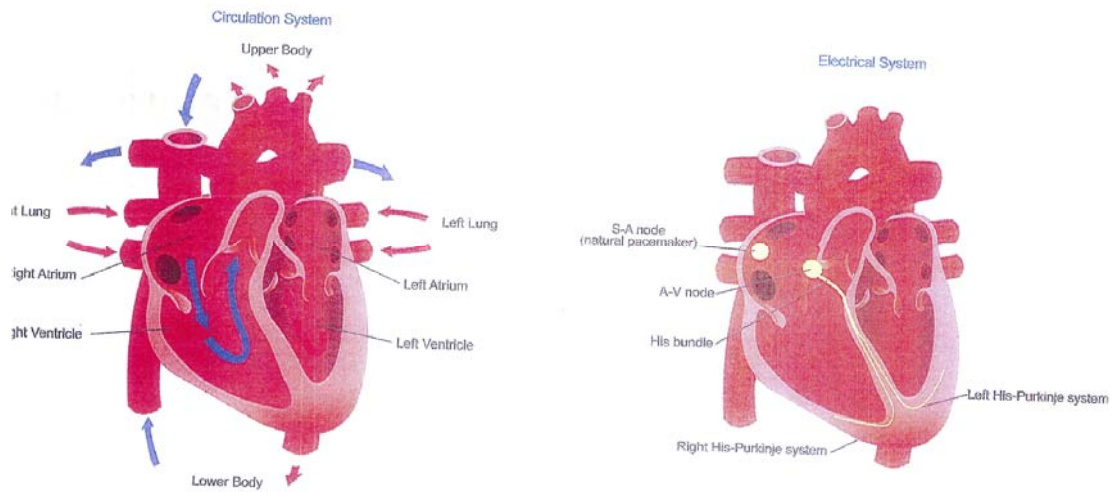
## **Factual Background**

25. An ECG traces the movement of electricity through a patient's heart's electrical system, providing an indication of the health of the patient's heart. ECGs are available in various forms: relevant for these proceedings are 6-lead ECGs (also called limb ECGs) and 12-lead ECGs. 12-lead ECGs include chest readings, and enable additional diagnoses that are not possible with 6-lead ECGs.

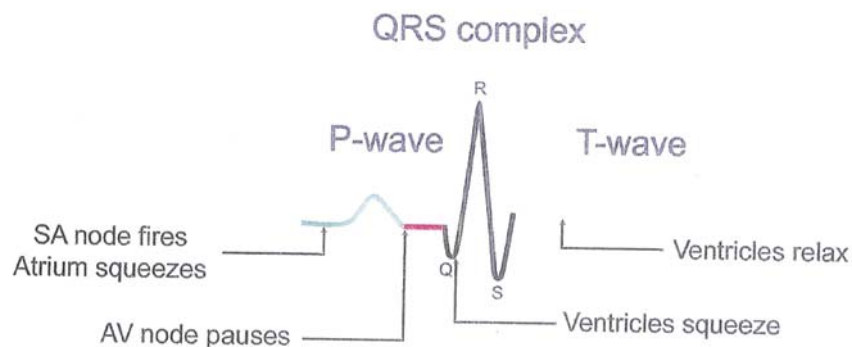
### *Technomed develops ECG Cloud*

26. Technomed supplies ECG equipment, systems and services using an internet-based ECG analysis and reporting system known as ECG Cloud. Development of the current version of ECG Cloud began in 2010, based on an earlier version from 2009. ECG Cloud enables ECG readings to be analysed remotely by reporters who are not themselves carrying out the readings. ECG Cloud is a screening service – it does not aim to provide definitive patient diagnosis, but rather to flag up potential problems to be referred to and investigated by cardiologists. It does this through what was described as a traffic light system, where green indicates a normal result, and red indicates critical or urgent abnormalities to prompt urgent reference to a hospital or other secondary care facility. Put briefly, the process of using ECG Cloud starts with a mobile ECG machine which takes a reading from a patient. The patient data are then inputted into ECG Cloud through a web-based processing system. The patient data are reviewed by a qualified cardiac physiologist who selects from a range of options from menus. The menus correspond to each ECG variable in a database.
27. Technomed relies on its rights in that underlying database. Unhelpfully, for the purposes of these proceedings, Technomed defined its database as “the Database”. The Database comprises a set of classifications of relevant physical characteristics shown by ECGs (“the Classifications”), such as ventricular rate or PR interval. Ventricular rate is the resting heart rate – with slow or fast heart rates potentially indicating cardiac abnormalities. PR interval is the time an electrical impulse takes to travel from the sinus node to the ventricles – readings outside the normal range for the patient's age can indicate cardiac abnormalities. For each Classification, the Database contains a number of options for how the characteristic tends to manifest in ECG readings (“the Options”). For example, with ventricular rate, the Options are listed as “normal”, “bradycardia” (slow), “tachycardia” (fast) and “uncertain”. Within ECG Cloud, Classifications are presented to users as a series of drop down menus, with the Options comprising the menu items. Associated with each Option is a risk status, or “Traffic Light”, which is intended to reflect best medical practice for ECG screening purposes, and some explanatory text to provide further information to the patient on the ECG reading (“the Patient Definitions”).
28. To enable the patient to access the results of the ECG screening, using software (“the Software”) ECG Cloud outputs an extensible mark-up language (“XML”) file with a standardised format (“the XML Format”). The XML file is then used to generate a report for distribution to the patient or general practitioner by inserting the information held in the XML Format into a template. The template contains general explanatory text about ECG screening (“the Explanatory Materials”) and (relevantly) two diagrams:

- i) A diagram of two hearts, showing on one the flow of blood through the heart, and on the other showing the flow of electricity through the heart, as follows (“the Two Hearts Diagram”):



- ii) A diagram of an ECG wave with some explanatory text, as follows (“the Wave Diagram”):



29. The Two Hearts Diagram and the Wave Diagram were created by Mr Hashemi and Mr Chris Hitchcock, both Technomed employees, with Mr Hitchcock handling the software to create the diagrams and Mr Hashemi giving directions as to the content he wanted. The Two Hearts Diagram was created using a stock image of a single heart that Technomed had licensed. Mr Hitchcock made several changes to that image on Mr Hashemi’s direction, in order to demonstrate the relationship between the heart’s electrical and mechanical activities:

- i) He copied the whole heart so as to create two hearts next to each other;
- ii) Labels were added to the left-hand heart;
- iii) On the right-hand heart, the blue blood flow arrows were removed and an electrical system was superimposed in yellow; and



iv) The right-hand heart was labelled.

The Wave Diagram was created from scratch by Mr Hashemi working again with Mr Hitchcock. Mr Hashemi could not find a suitable stock image of an annotated ECG, so he sketched one out on paper, and worked with Mr Hitchcock to create a digital version.

30. The Database, the Classifications, the Options, the Traffic Lights and the Patient Definitions were developed by Mr Hashemi from 2009, with assistance from Dr Sopher, Dr Wyn Davies and Dr Pete Mace.
31. The Database has been modified since its creation, including through a feedback tool that enables reviewing cardiac physiologists to edit various aspects of the reporting data – but where they do so, they are required to provide justification. Each amendment is then reviewed and any necessary amendments are made to the components of ECG Cloud. Between 3 January 2013 and 15 January 2015, there were 184 modifications to ECG Cloud as a result of this feedback tool.

#### *Technomed contracts with Bluecrest*

32. Following approximately three months of discussions, on 31 October 2012 Technomed entered into a written contract with Bluecrest to provide heart screening services (“the TMBC Contract”). The TMBC Contract was stated to last for two years from 1 January 2013 (that is, until 31 December 2015). Prior to its relationship with Bluecrest, Technomed’s ECG screening reports were addressed to general practitioners – for Bluecrest, the ECG screening reports were to be provided directly to the patients themselves, customers of Bluecrest, as part of a wider report dealing additionally with other aspects of the patients’ health. The ECG screening for Bluecrest was to use 6-lead (or limb lead) machines, rather than the 12 lead machines used previously by Technomed. Technomed therefore adapted the output of ECG Cloud to accommodate these differences.
33. In mid-February 2013, Mr Tom Hughes of Bluecrest telephoned Technomed’s Mr Fuller to request a copy of the ECG Cloud database. In response, on 22 February 2013, Mr Fuller sent to Mr Craig Wilmott at Bluecrest an email attaching electronic copies of the Two Hearts Diagram, the Wave Diagram, and a pdf document containing the Database, that is, the Classifications, the Options, the Traffic Lights and the Patient Definitions (“Technomed’s 2013 pdf”).
34. Although Technomed’s service did not commence on time, there do not appear to have been any difficulties during most of 2013 – Technomed received 6-lead machine readings for Bluecrest’s customers, analysed them, and provided XML Format reports which Bluecrest used to generate the ECG section of their more general health screening for their customers.

#### *The relationship sours*

35. The relationship between Technomed and Bluecrest soured from around late November 2013. Citing financial difficulties, Bluecrest asked for a reduction in the price agreed under the written contract from £5.25 to £4.00 per ECG or Bluecrest indicated it would take its business to one of Technomed’s competitors, including the

second defendant Express. At this time, the TMBC Contract still had over 12 months, half its term, to run. Bluecrest had already been in contact with Technomed's competitors, indicating to Technomed that a competitor had offered a price of £4.00 per ECG.

36. Matters worsened in December 2013 when Technomed stopped reporting ECG screenings submitted by Bluecrest between 16 and 27 December 2013. This was on Mr Hashemi's instructions, because of £36,156.93 owed by Bluecrest to Technomed. Mr Hashemi was also concerned about the 20 ECG machines and barcode readers which had been rented to Bluecrest under the terms of the contract, which Mr Hashemi now feared would not be returned. Mr Blencowe gave evidence that the move away from Technomed was in part owing to quality concerns. As this is the subject of the counterclaim which is yet to be heard, I say nothing further about it.
37. Technomed agreed a price reduction, and suggested a new written contract to reflect the new price and to correct other inadequacies Technomed felt appeared in the earlier document. Bluecrest agreed to work towards finalising a new contract by January 2014.
38. Meanwhile, Bluecrest had approached Express, as early as 20 November 2013, and by around 16 December 2013 had agreed with Express to cease using Technomed for ECG screening, and to transfer that work to Express. By 20 December 2013, the correspondence shows that Bluecrest's technology expert, Mr Hughes, was in contact with Mr Jarvis of Express. On 20 December 2013, Mr Hughes sent Express an XML Format file for Bluecrest's screening report. On 23 December 2013, Mr Hughes asked Mr Jarvis to "let me know how long you think it would take to replicate the XML Format/trace pdf that I sent through". On 30 December 2013, Mr Hughes sent Express an email with the subject "report goodies" attaching a number of further documents, including the Two Hearts Diagram, the Wave Diagram, the Explanatory Materials, and a pdf document containing the Database, that is the Classifications, the Options, the Traffic Lights and the Patient Definitions. Mr Blencowe of Bluecrest gave evidence that this was the same document that Technomed had sent to Bluecrest in February 2013, Technomed's 2013 pdf.
39. Whilst Bluecrest was working with Express to enable a switch to occur, it was also dissembling with Technomed. On 19 December 2013, Mr Blencowe emailed a member of his staff stating:

"I will try to speak to [Mr Hashemi] at 8.30ish to give him the impression we are going to agree to his terms, but need time to obtain the guarantees he's after (being ultra-nice to him and giving him a lot of bullshit) but in the background can we work to make the switch asap?"

On 20 December 2013, Mr Blencowe emailed Mr Hashemi, saying "I think it will be in both of our interests to put into place a new contractual agreement and look forward to getting this resolved on/before 14th January". Mr Blencowe accepted in cross-examination that that email was misleading. As late as 9 January 2014, Bluecrest recorded a telephone call between Mr Hashemi of Technomed and Mr Blencowe and Mr Alex Higman of Bluecrest. The recording was done without Mr Hashemi's knowledge. Towards the end of a long conversation, Mr Blencowe and Mr

Higman agreed to review the new contract, and to meet in Kent on 16 January 2014 to finalise and sign it.

40. The day after that call, 10 January 2014, Express provided to Bluecrest heads of terms for their relationship. On 13 January 2014, Bluecrest was “ready for the big switch over on Wednesday”.
41. On Wednesday 15 January 2014, Bluecrest informed Technomed that it was cancelling the TMBC Contract forthwith, and would return the ECG machines. No meeting to sign the new Technomed/Bluecrest contract occurred in Kent on 16 January 2014. Rather, that day Express replaced Technomed and started providing ECG screening services to Bluecrest which essentially replicated the service provided by Technomed.

*Bluecrest’s patient reports*

42. Since September 2012, Bluecrest has operated a software package called BABS for the receipt of XML imports concerning patient data. BABS enables various readings, including for blood tests, liver function, biometric data, osteoporosis readings etc to be formatted into a health screening report for Bluecrest to provide to its customers. Put briefly, BABS accumulates XML files from various providers and, once all have been received for a given patient, creates a standard form general health screening report for that patient.
43. As set out above, between early 2013 and 14 January 2014, the ECG input to Bluecrest’s health screening reports was provided by Technomed. Since then, that input has been provided by Express.
44. The Express EAnalyse system works differently from Technomed’s ECG Cloud system. ECG readings are taken from patients using a 6 lead (limb lead) machine, and transmitted to the E-Scribe system operated by Express. The E-Scribe system allows for high definition intense magnification of ECGs, using an .ecg file (rather than the pdf used by Technomed). Express’s system also uses what were described as acronyms, which stand for recognised cardiac conditions. Further, Express’s system has built into it differentiations for male and female patients. Whilst there were differences in how Express’s EAnalyse system worked compared to Technomed’s ECG Cloud system, the output, at least from 15 January 2014, was close to identical. Indeed, Mr Jarvis of Express gave evidence that, following discussions between him and Mr Blencowe, “a conscious decision was taken to match closely the wording use by [Technomed]”.
45. There were in evidence Bluecrest reports which were generated after 15 January 2014, that is, they were generated using material supplied by Express:
  - i) A report dated 17 February 2014 referred to as the Roberts Report;
  - ii) A report dated 2 July 2014;
  - iii) A report dated 1 October 2014;
  - iv) A report dated 11 November 2014; and

v) A report dated 30 October 2015.

No evidence was led which suggests that these reports were not representative of other Bluecrest reports prepared at or about the relevant times.

46. In general terms, the reports set out above are consistent with Mr Jarvis's evidence about the development of reports generated by Bluecrest. As noted above, Mr Jarvis and Mr Blencowe decided to "match closely" Technomed's wording when Express first started generating reports for Bluecrest. The Roberts Report therefore includes verbatim or almost verbatim the Explanatory Materials, the Two Hearts Diagram and the Wave Diagram, and Classifications, Options, Traffic Lights and Patient Definitions relevant to that patient drawn from the Database. Mr Jarvis gave evidence that modifications were made, and launched around July 2014. The Patient Definitions were then "redrafted", with the results introduced into patient reports in October 2014, confirmed by a solicitors' letter of 29 October 2014. The November 2014 Report therefore has some differences – the Explanatory Materials and the Two Hearts Diagram and Wave Diagram are no longer produced, and the other wording differs.
47. To assist its operatives, Bluecrest had documents available to its staff, including:
- i) Bluecrest Traffic Light Classifications Version 00 ("Bluecrest Classifications Version 00"), which was used between January and around March 2014;
  - ii) Bluecrest Traffic Light Classifications Version 01 ("Bluecrest Classifications Version 01"), which was used from March to June 2014; and
  - iii) Bluecrest Traffic Light Classifications Version 02 ("Bluecrest Classifications Version 02"), which was used between around July 2014 and around November 2016.

Mr Hill described these documents as the "dictionary which Bluecrest and [Express] use to build their XML reports." Mr Blencowe was asked what input Bluecrest staff had in preparing these documents – he was unable to say. These documents include columns headed "Classification and Options", "Range", "Traffic Light" and "Patient Definition". From November 2016, a different document was used, presented in landscape format, and with columns headed "Interpretive Findings", "Range", "Flag" and "Explanations and Recommended Actions". Although it is not headed, for ease, I will refer to this as "Bluecrest Classifications Version 03". I return below to the genesis of this document.

*Technomed asserts its intellectual property*

48. Following Bluecrest's ending of the TMBC Contract, Mr Hashemi wrote to Bluecrest on Monday 20 January 2014 in terms which included the following:

"I would like to take this opportunity to remind you that the reporting software and report formats are the intellectual copyright property of Technomed Limited and must not be reproduced or passed onto any third parties without our written permission."

Earlier, on 7 January 2014, Mr Hashemi had already written to Mr Jarvis of Express. Mr Hashemi was aware that Bluecrest was negotiating with Express to replace Technomed, and was concerned about Technomed's intellectual property. Mr Hashemi's email to Express included the following:

"...I feel it only fair to advise you that should we [Technomed and Bluecrest] fail to reach agreement we will be forced to protect our investment, intellectual property and copyright protected materials."

Mr Jarvis gave evidence that he did not respond to this email. Rather, he forwarded it to Mr Higman of Bluecrest with the comment:

"The only new point seems to be the question of copyright. Presumably he supplied the test and diagram for the introductory explanation on ECGs and it may be better to change this as well in due course."

It is likely that by "test", Mr Jarvis meant "text".

49. Mr Highman of Bluecrest responded shortly thereafter that day, including:

"yes they did supply the heart graphic and copy for the reports, so probably best to rework both these items in the reports ASAP."

A further email from Mr Jarvis followed, this time additionally copying in Mr Blencowe. It included:

"If we can show (as we expect) the graphics are straight from the internet they can stay. We will change the text whatever."

In cross-examination, neither Mr Blencowe nor Mr Jarvis was able to point to any investigation they or their staff did at the time to determine whether the graphics referred to were taken from the internet or from any other source.

#### *Proceedings commence*

50. On 1 August 2014, solicitors acting on behalf of Technomed sent letters before action to Bluecrest and to Express. Express responded through its solicitors, noting:

"We can confirm that the text complained of in the Claim Letter was provided to our client by Bluecrest. We note that the level of originality of that wording is low given the requirement to use certain medical terms and standard expressions. Since receipt of the Claim Letter our client has redrafted those elements so that the wording previously used is no longer used and any alleged infringement of copyright in the Patient Definitions is now avoided."

51. Proceedings were not issued until 6 March 2015, in the Intellectual Property Enterprise Court, against both defendants. Since then, the proceedings have had what Mr Hill described as "a long and convoluted history". By consent, the proceedings were transferred out of the Intellectual Property Enterprise Court into the Chancery Division General List on 11 January 2016, and, again by consent, transferred into the Shorter Trials Scheme on 5 July 2016. The proceedings were then transferred out of

the Shorter Trials Scheme on 17 March 2017, and fixed for hearing for 5 days, although that order was later varied to stay the counterclaim, so that the trial that came on before me on 17 July 2017 was only of the intellectual property infringement aspects of the proceedings. Nevertheless, it has taken nearly two and a half years to prepare the case for trial of only some of the issues in the case.

52. Mr Hill says that this is largely because of the defendants' handling of the case, including their counterclaim, which he says has been manufactured as a tool to resist the claim. It is not necessary or appropriate for me to comment on that contention: as mentioned above, the counterclaim is set to be progressed following this judgment.
53. Technomed claims infringement of the following rights:
- i) *sui generis* database right in the Database;
  - ii) copyright in the Database, either as a database or other type of literary work;
  - iii) copyright in the Software (although this claim has been narrowed to a claim of:
    - a) copyright in the XML Format as a literary work; and
    - b) copyright in the XML Format and/or the Database as preparatory design material for a computer program);
  - iv) copyright in the Explanatory Materials as a literary work;
  - v) copyright in the Patient Definitions as a literary work, taken either together with the associated Classification and Option or each Patient Definition individually; and
  - vi) copyright in the Two Hearts Diagram and in the Wave Diagram as artistic works.
54. Mr Hill submitted that I should judge infringement against the following documents of the defendants:
- i) Bluecrest Classifications Version 00, Version 01, Version 02 and Version 03, which he says reproduce the Database (including the Classifications, the Options, the Traffic Lights and the Patient Definitions);
  - ii) The Diagnoses.es source code files used in EAnalyse version 1.0 and 1.1 (which contain the information in the Bluecrest Classifications Version 00 and the Bluecrest Classifications Version 01);
  - iii) The configuration XML files used in EAnalyse version 2.0 and version 2.1 (which contain the information in the Bluecrest Classifications Version 02 and the Bluecrest Classifications Version 03); and
  - iv) Reports produced for Bluecrest customers, including the Roberts Report, and the Bluecrest reports dated 2 July 2014, 1 October 2014, 11 November 2014 and 30 October 2015, which he says variously reproduce the Explanatory

Materials, the Two Hearts Diagram and the Wave Diagram, and the Classification, Option and Patient Definition relevant to that patient. Mr Hill also says that the XML files generated by Express to feed into the template which Bluecrest uses to create the patient report also contain the Classification, the Option and the Patient Definition relevant to that patient, but he does not press for this to be considered separately.

55. Mr Hill also points to a copy of the Database forwarded by Bluecrest to Express on 30 December 2013 (in the form of Technomed's 2013 pdf). I also note the documents containing the Two Hearts Diagram and the Wave Diagram, as well as the Explanatory Materials, sent by Bluecrest to Express in that same email.
56. Technomed claims, as is usual in intellectual property matters: injunctions; damages or an account of profits; an order for delivery up or destruction of infringing materials; an order for publication of the judgment; and costs. Because damages are claimed under section 97(2) of the Copyright, Designs and Patents Act 1988 ("the CPDA 1988"), I am also asked at this stage to decide whether any infringement by the defendants was knowing and/or flagrant, although otherwise assessment of damages, including the question of any unjust benefit, is deferred to any inquiry.
57. Bluecrest and Express deny infringement. Their primary argument is that none of the rights claimed subsists, and if they do subsist, they are not infringed. Ms Heal also runs a defence based on causation. The defendants also initially disputed qualification and ownership, and joint tortfeasance by the two defendants, as well as raising a defence of transient or incidental copying. These issues were dropped before the trial. Additionally, on the first day of the trial, Ms Heal conceded that if copyright subsists in the Two Hearts Diagram and the Wave Diagram and in each of the Patient Definitions (but not each Patient Definitions together with the associated Classification and Option), then they were infringed up to certain dates. Further, on the last day of the trial, Ms Heal abandoned her pleading that the defendants were entitled to use Technomed's intellectual property for a reasonable period following the end of the TMDB Contract by virtue of an implied licence term to that effect.

#### *The experts review ECG Cloud and EAnalyse*

58. As set out above, there was a large degree of agreement between the two computer experts put forward by the parties. They agreed that there was no evidence for, nor likelihood of, copying of program source code by the defendants. They also agreed that they found Patient Definitions, Classifications title and numeric Traffic Light codes from the Database in the defendants' source code. Further, they found that the defendants used the same XML schema as previously used by Technomed, and that the revised XML schema later used by the defendants was a minor revision not a fundamental redesign. Neither Mr Hill nor Ms Heal attempted to move either expert from this agreed position.

#### *List of Issues*

59. On 21 December 2016, Proudman J settled a list of issues in this case. That list ran to 30 numbered paragraphs, with a further 26 sub-issues within those paragraphs. Even without the counterclaim, at the start of the trial there were still a substantial number of issues to be determined. I am grateful to the parties for their further attempts to

narrow those issues, so that I was left with 18 enumerated issues by the end of the trial. I was reminded by Mr Hill that the list of issues must not supplant the pleadings. I agree. The Chancery Guide touches only briefly on lists of issues. Relevantly, the Chancery Guide notes in relation to skeleton arguments:

“In most cases before a judge, a list of the persons involved in the facts of the case, a chronology and a list of issues will also be required. The chronology and list of issues should be agreed where possible.”

Greater detail is provided by the Commercial Courts Guide (emphasis added):

“D6 List of issues

D6.1

After service of the defence (and any reply), the solicitors and counsel for each party shall produce a list of the key issues in the case. The list should include the main issues of both fact and law. The list should identify the principal issues in a structured manner, such as by reference to headings or chapters. Long lists of detailed issues should be avoided, and sub-issues should be identified only when there is a specific purpose in doing so. A separate section of the document should list what is common ground between the parties (or any of them, specifying which). The common ground section should include features of the factual matrix which are agreed to be relevant. Any disagreements as to the relevant features of the factual matrix should be addressed in the List of Issues.

D6.2

- (a) The list of issues is intended to be a neutral document for use as a case management tool at all stages of the case by the parties and the court. Neither party should attempt to draft the list in terms which advance one party's case over that of another.
- (b) It is unnecessary, therefore, for parties to be unduly concerned about the precise terms in which the list of issues is drafted, provided it presents the structure of the case in a reasonably fair and balanced way. Above all the parties must do their best to spend as little time as practicable in drafting and negotiating the wording of the list of issues and keep clearly in mind the need to limit costs.
- (c) Accordingly, in most cases it should be possible for the parties to draft an agreed list of issues. However, if it proves impossible to do so, the claimant must draft the list and send a copy to the defendant. The defendant may provide its comments or alternative suggested list to the court (with a copy to the claimant) separately.

D6.3

- (a) A draft (or drafts) of the list of issues is to be available to the court prior to the first case management conference. It is intended that at that stage the draft list should be in a general form, identifying the key issues and the



structure of the parties' contentions, rather than setting out all detailed sub-issues.

- (b) At the first case management conference and any subsequent case management conferences which take place, the court will review and settle the draft list of issues with a view to refining it and identifying important sub-issues as appropriate and as required in order to manage the case. Accordingly the list of issues may be developed, by expansion or reduction as the case progresses.

D6.4

**The list of issues will be used by the court and the parties as a case management tool as the case progresses to determine such matters as the scope of disclosure and of factual and expert evidence and to consider whether issues should be determined summarily or preliminary issues should be determined.**

D6.5

**The list of issues is a tool for case management purposes and is not intended to supersede the pleadings which remain the primary source for each party's case. If at any stage of the proceedings, any question arises as to the accuracy of the list of issues, it will be necessary to consult the pleadings, in order to determine what issues arise."**

60. For my part, I found regular discussion of the list of issues a helpful practice both in terms of keeping the fixed-end trial on track, and also for certainty around what issues remained live, particularly given the number of concessions made before and during the trial. It also avoided the questioning of witnesses straying into issues raised by the counterclaim, and unrelated to the intellectual property claims. The agreed final list of issues has also provided a helpful checklist in ensuring that I have dealt with all the listed issues in my judgment.

### **The legal context for the database right and copyright claims**

61. The UK legislation on database right and copyright is based heavily on international conventions and EU law. The applicable principles of interpretation of the UK legislation are clearly and helpfully set out by Arnold J in *Forensic Telecommunications Services Limited v Chief Constable of West Yorkshire Police* [2011] EWHC 2892 (Ch) at paragraphs 52 to 73. I need not repeat here Arnold J's comments, which I gratefully adopt.
62. In any event, I did not understand Mr Hill and Ms Heal to be at odds over the legal principles to be applied in this case. Their submissions on the application of those principles to the facts of this case differed significantly, but (with the exception of the causation issue) they were largely agreed on the law to be applied.

### **Database right**

63. In summary, Technomed claims that it owns database right in the Database within the terms of Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases (the “Database Directive”), and that Bluecrest and Express have infringed that right. Before turning to the parties’ arguments, I remind myself of the helpful comment of Sir Robin Jacob (with whom Lewison and Lloyd LJ agreed) in *Football Dataco Limited v Sportradar GmbH* [2013] EWCA Civ 27 at para 44: “the policy of the Directive is that databases which cost a lot of investment and can readily be copied should be protected. The right is created to protect the investment which goes into the creation of a database.”

*Is the Database a database?*

64. As Sir Robin Jacob further noted in *Football Dataco v Sportradar* at para 19:

“The *sui generis* right is created by the UK implementation of Article 7 of the Database Directive 96/9/EC. As is now standard practice counsel did not bother to refer to the UK Act implementing the Directive, for there is no point in doing so. All that matters is the language of the Directive itself.”

65. Article 1(2) of the Database Directive deals with subsistence of the right as follows:

**“Article 1(2)**

For the purposes of this Directive “database” shall mean a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means.”

66. The definition has been the subject of comment in the Court of Justice, in proceedings in which a football fixture list was expressly held to be a “database” within the meaning of Article 1(2): C-444/02, *Fixtures Marketing Limited v Organismos Prognostikon Agonon Podosfairou (OPAP)* [2004] ECR I-10549. The Court of Justice set out a wide concept of what falls within the definition:

“[20] As both Fixtures and the Commission submit, there are several indications of the intention of the Community legislature to give the term database as defined in the directive, a wide scope, unencumbered by considerations of a formal, technical or material nature.

[21] For instance, according to Article 1(1) of the directive, it concerns the legal protection of databases ‘in any form’.

[22] Although the proposal for a Council Directive on the legal protection of databases (OJ 1992 C 156, p.4), presented by the Commission on 15 April 1992 concerned exclusively electronic databases according to the definition of database contained in Article 1(1) of that proposal for a Directive, it was agreed in the course of the legislative process, that ‘protection under this Directive should be extended to cover non-electronic databases’, according to the 14th recital of the preamble of the directive.

[23] According to the 17th recital of the preamble to the directive, ‘the term “database” should be understood to include literary, artistic, musical or other

collections of works or collections of other material such as texts, sound, images, numbers, facts, and data'. The fact that the data or information at issue relate to a sporting activity thus does not preclude the database from being recognised as such in the terms of the directive.

[24] Whereas, in its opinion of 23 June 1993 on the Commission proposal for a Council directive on the legal protection of databases (OJ 1993 C 194, p. 144), the European Parliament had suggested defining a database as a collection of a 'large number' of data, works or other materials, that condition no longer appears in the definition in Article 1(2) of the directive.

[25] For the purposes of determining whether there is a database within the meaning of the directive, it is irrelevant whether the collection is made up of materials from a source or sources other than the person who constitutes that collection, materials created by that person himself or materials falling within both those categories.

[26] Contrary to the contentions of the Greek and Portuguese Governments, nothing in the directive points to the conclusion that a database must be its maker's own intellectual creation to be classified as such. As the Commission points out, the criterion of originality is only relevant to the assessment whether a database qualifies for the copyright protection provided for by Chapter II of the directive, as is clear from Article 3(1) and from the 15th and 16th recitals of the preamble to the directive.

[27] Against the background of a wide interpretation various aspects of the directive demonstrate that the term database within the meaning thereof is more specifically defined in terms of its function.

[28] A reading of the recitals of the preamble to the directive reveals that, given the 'exponential growth, in the Community and worldwide, in the amount of information generated and processed annually in all sectors of commerce and industry' as the 10th recital states, the legal protection provided by the directive is intended to encourage the development of systems performing a function of 'storage' and 'processing' of information, according to the 10th and 12th recitals.

[29] Thus, classification as a database is dependent, first of all, on the existence of a collection of 'independent' materials, that is to say, materials which are separable from one another without their informative, literary, artistic, musical or other value being affected. On that basis, a recording of an audio-visual, cinematographic, literary or musical work as such does not fall within the scope of the directive, according to the 17th recital of the preamble to the directive.

[30] Classification of a collection as a database then requires that the independent materials making up that collection be systematically or methodically arranged and individually accessible in one way or another. While it is not necessary for the systematic or methodical arrangement to be physically apparent, according to the 21st recital, that condition implies that the collection should be contained in a fixed base, of some sort, and include technical means such as electronic, electromagnetic or electro-optical processes, in the terms of the 13th recital of the preamble to the directive, or other means, such as an index, a table of contents, or

a particular plan or method of classification, to allow the retrieval of any independent material contained within it.

[31] That second condition makes it possible to distinguish a database within the meaning of the directive, characterised by a means of retrieving each of its constituent materials, from a collection of materials providing information without any means of processing the individual materials which make it up.

[32] It follows from the above analysis that the term database as defined in Article 1(2) of the directive refers to any collection of works, data or other materials, separable from one another without the value of their contents being affected, including a method or system of some sort for the retrieval of each of its constituent materials.

[33] In the case in the main proceedings, the date and the time of and the identity of the two teams playing in both home and away matches are covered by the concept of independent materials within the meaning of Article 1(2) of the directive in that they have autonomous informative value.

[34] Although it is true that the interest of a football league lies in the overall result of the various matches in that league, the fact remains that the data concerning the date, the time and the identity of the teams in a particular match have an independent value in that they provide interested third parties with relevant information.

[35] The compilation of dates, times and names of teams relating to the various fixtures in a football league is, accordingly, a collection of independent materials. The arrangement, in the form of a fixture list, of the dates, times and names of teams in those various football matches meets the conditions as to systematic or methodical arrangement and individual accessibility of the constituent materials of that collection. The fact, raised by the Greek and Austrian Governments, that lots are drawn to decide the pairing of the teams is not such as to call into question the above analysis.

[36] It follows that a fixture list for a football league such as that at issue in the case in the main proceedings constitutes a database within the meaning of Article 1(2) of the directive.”

This passage from the Court of Justice was cited with approval by Sir Robin Jacob in *Football Dataco v Sportradar*: at para 26 Sir Robin said “I think this is completely clear.”

67. Mr Hill took me to an example of a very simple data set which was held to be a database within the definition in Article 1(2) of the Database Directive. In *Forensic Telecommunications*, Arnold J assessed a list of 33 pairs of permanent memory absolute addresses covering 25 different mobile phone models, each address consisting of eight alphanumeric digits, representing four bytes of binary data in hexadecimal notation. Arnold J held that the list fell within the definition of a database, because the claimant had made a substantial investment in obtaining and verifying the data in the list.

68. Mr Hill put to me that a database need not have a complex structure or be large or have a sophisticated method of indexing. He submitted that the spread sheet recording the Database undoubtedly meets the definition, as does the pdf form of that document. Ms Heal approached the question slightly differently. She focussed on the pdf form of the Database, arguing that whilst it is a collection of independent materials, those materials are not separable from one another without their informative values being affected. She also appeared to suggest that a pdf can never be a database – on the basis that it is akin to a photograph of a database, rather than the database itself.
69. On this question, I prefer Mr Hill’s submission. Even if I accept Ms Heal’s definition of a database, the Database, in spread sheet or pdf format, importantly ties together a Classification, an Option, a Traffic Light and a Patient Definition. Individual Classifications are accessible, either by reading the pdf with the human eye, or accessing the spread sheet electronically. By choosing an Option within a Classification, the relevant Traffic Light and Patient Definition are provided. The informative values are not affected. In my judgment, the use to which the Database can be put (and indeed was put by the defendants) is no different to a telephone book (where accessing a name carries with it an address and a phone number) or a list of football features. I do not accept that a pdf document cannot be a database for these purposes. Clearly, the contents of the pdf can be accessed, either through electronic conversion, through digital character recognition, or old-fashioned reading or re-typing.
70. Ms Heal’s submission may have had greater force if in fact the defendants had not used the Database as a database. However, as I have found elsewhere in this judgment, not only did the defendants copy the entire Database, but they also electronically accessed the contents of the database, using the determined Classification/Option to carry over into their patient reports the relevant Traffic Light and Patient Definition.
71. The Database is a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means. In my judgment, it is a database within the meaning of the Database Directive.

*Does database right subsist in the Database?*

72. That does not get Mr Hill across the line – he must also prove that database right subsists in the Database. Database right subsists in a database where the requirements of Article 7(1) of the Database Directive are met:

**“Article 7**

(1) Member States shall provide for a right for the maker of a database which shows that there has been qualitatively or quantitatively a substantial investment in either the obtaining, verification or presentation of the contents to prevent extraction and/or re-utilisation of the whole or a substantial part, evaluated qualitatively and/or quantitatively, of the contents of that database.”

73. Mr Hill submitted that in this case, there had been substantial investment in the obtaining, verification or presentation of the contents of the Database. Mr Hill

recognised, following the Court of Justice's decisions in C-203/02, *British Horseracing Board Ltd v William Hill Organisation Ltd* [2005] RPC 13; C-46/02, *Fixtures Marketing v Oy Veikkaus AB* [2005] ECDR 2; C-388/02, *Fixtures Marketing Ltd v Svenska Spel AB* [2005] ECDR 2 and *Fixtures Marketing v OPAP* that the investment cannot lie in the creation of the contents of the database, but has to relate to the gathering, verification or presentation of pre-existing information. But he also relied on *Football Dataco v Sportradar*, in which the Court of Appeal confirmed that database right could still arise even if some of the parts of the contents of the database were created in the process of compiling the database, so long as other parts were not. As Sir Robin Jacob put it in that case at paragraph 67:

“Suppose a scholar created a database consisting of all Charles Dickens' references to law and lawyer. That would involve expenditure of significant resources and the database would qualify for protection. Now suppose the scholar added a commentary to the entries. Would he lose protection for his database? Obviously not.”

74. Ms Heal reminded me of the distinction to be drawn between creating the underlying data which will form part of a database, and obtaining, verifying and presenting that data. The purpose of the Directive, she said, is to promote and protect the investment in data “storage” and “processing” systems which contribute to the development of an information market. Whilst Ms Heal noted that the *sui generis* database right can still subsist when the same entity both creates the materials contained in the database, and the database itself, she submitted that the creator of the database has to establish that the obtaining, verification and presentation of the contents of the qualifying database required substantial investment which was independent of the resources used to create the materials contained within the database.
75. Mr Hill submitted that the Classifications, Options and Traffic Lights record objective information which has not simply been created by Technomed, although Technomed has, he said, recorded that information in its own way. It took Mr Hashemi many hours. Technomed has also invested substantially in verifying the information through a process of audit and review. As mentioned above, the feedback tool enables reviewing cardiologists to edit various aspects of the reporting data, which amendments are then reviewed and alterations made to the Database. 184 modifications were made to the Database. Further, Mr Hill says Technomed invested substantially in the presentation of the information, by means of its structured format. I agree. I do not need to resolve the controversy of whether, as Mr Hashemi said, compiling the database took hundreds of hours, or some lower number. I need to find that Technomed's investment in compiling the database was substantial, and I so find. That investment was in the obtaining and verifying of the data, assessed qualitatively.
76. Ms Heal also suggested that investment had to be made to prevent extraction and/or re-utilisation of the whole or a substantial part of the contents of the database. She gave an example of an indexed folder containing recipes, suggesting that no database right could subsist in the collection of recipes unless it was kept under lock and key. I do not consider that this submission is correct, nor that it assists the defendants. First, as a question of fact, the Database was not available to the general public. Options, Traffic Lights and Patient Definitions extracted from the Database were provided to patients as part of their ECG screening reports, but it would require significant work

and the presentation of patients with each of the various many conditions identified to enable a third party to compile a replica of the Database. Second, this submission is directly contrary to Ms Heal's submission that investment in presentation includes matters which facilitate users to access a database's contents – in this part of her written submissions she criticises Technomed for not providing public or third party access to the Database. Third, I cannot find in the cases I have been referred to an example of a database failing to attract database right for this reason. There is no basis for Ms Heal's submission in the legislation or case law to which I was referred.

77. There has been substantial investment in the obtaining and verification and presentation of the contents of the Database, assessed qualitatively. Technomed has sought to prevent extraction and/or re-utilisation of the whole or a substantial part of the contents of the Database. In my judgment, *sui generis* database right subsists in the Database.

*Is the database right infringed?*

78. Article 7(1) of the Database Directive prohibits extraction and/or reutilisation of the whole or of a substantial part (evaluated qualitatively and/or quantitatively) of the contents of the database. The terms “extract” and “reutilise” are defined in Article 7(2) of the Database Directive:

“For the purposes of this Chapter:

(a) “extraction” shall mean 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;

(b) “re-utilization” shall mean 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.”

79. Mr Hill says that the whole of the database was copied and it was therefore extracted – and I agree. Technomed's 2013 pdf, which was provided by Technomed to Bluecrest, was later provided by Bluecrest to Express for use by Express in creating reports for Bluecrest's customers. No evidence was given by Bluecrest or Express as to how this occurred. It does not matter. The end result is still the same: Bluecrest had, and provided to Express, a full copy of Technomed's Database. It was then copied. It can be found, for example, in the Bluecrest Classifications documents Version 00, 01 and 02. In my judgment, for the reasons I have set out below, Version 03 of the Bluecrest Classifications document does not reproduce a substantial part of the Database. By this time (November 2016), Dr Summerton had reworked the Bluecrest Classifications document so that it no longer sufficiently resembles Technomed's 2013 pdf. In my judgment it therefore does not infringe.
80. There will also be infringement under Article 7(5) of the Database Directive where there is repeated extraction:

“The repeated and systematic extraction and/or re-utilisation of insubstantial parts of the contents of a database implying acts which conflict with a normal

exploitation of that database or which unreasonably prejudice the legitimate interests of the maker of the database shall not be permitted.”

81. In relation to infringement by repeated and systematic extraction and re-utilisation, Mr Hill says that Express has accessed the database contents to produce the XML files that it provided to Bluecrest for the purposes of Bluecrest’s patient reports. This, he says, unreasonably prejudices Technomed’s legitimate interests. I agree. As set out in more detail below, each XML file for each patient provided by Express to Bluecrest contained an extraction from the Database of the Classification, the Option, the Traffic light and the Patient Definition appropriate for that client.
82. Mr Hill also drew my attention to what was said in the Court of Appeal in *Football Dataco v Sportradar*. Continuing his discussion of the database of Charles Dickens law references with additional author comments, Sir Robin Jacob noted at para 67:

“And equally obviously his database right would not prevent extraction from the database of any of the information he himself had created. This is because the rules as to what amounts to infringement focus on whether the infringer is making undue use of the relevant resources which went into the database. The scholar’s own commentaries would not be relevant resources...He might well of course have copyright protection in his annotations, but that protection would be nothing to do with the database protection.”

Whilst this may strictly be a matter for any damages enquiry, as I have heard the evidence in this case, I make the following brief comment. I have held (below) that copyright subsists in each Patient Definition. The Patient Definitions are in my judgment akin to the scholar’s notations in Sir Robin Jacob’s example, and Technomed is not entitled, in my judgment, to double recovery in relation to both copyright infringement and database right infringement in relation to the Patient Definitions. Technomed is entitled, however, to recover in relation to the extraction of each Classification, Option and Traffic light until November 2016.

### *Conclusion on database right*

83. *Sui generis* database right subsists in the Database and was infringed until November 2016.

### **Copyright**

84. The CPDA 1988 provides, relevantly, as follows:

#### **“1. Copyright and copyright works**

(1) Copyright is a property right which subsists in accordance with this Part in the following descriptions of work –

(a) original literary ... or artistic works,

...



(2) In this Part “copyright work” means a work of any of those descriptions in which copyright subsists.

...

### **3. Literary, dramatic and musical works**

(1) In this Part –

“literary work” means any work, other than a dramatic or musical work, which is written, spoken or sung, and accordingly includes-

- (a) a table or compilation other than a database,
- (b) a computer program,
- (c) preparatory design material for a computer program; and
- (d) a database.

...

### **3A Databases**

(1) In this Part “database” means a collection of independent works, data or other materials which –

- (a) are arranged in a systematic or methodical way, and
- (b) are individually accessible by electronic or other means.

(2) For the purposes of this Part a literary work consisting of a database is original if, and only if, by reason of the selection or arrangement of the contents of the database the database constitutes the author’s own intellectual creation.

### **4. Artistic works**

(1) In this Part “artistic work” means

- (a) a graphic work ... irrespective of artistic quality,

...

(2) In this Part-

...

“graphic work” includes-

- (a) any ... diagram ...

### **16. The Acts restricted by copyright in a work**

(1) The owner of the copyright in a work has, in accordance with the following provisions of this Chapter, the exclusive right to do the following acts in the United Kingdom-

(a) to copy the work...

(3) References in this Part to the doing of an act restricted by the copyright in a work are to the doing of it-

(a) in relation to the work as a whole or any substantial part of it...

## **21. Infringement by making adaptation or an act done in relation to adaptation**

(1) The making of an adaptation of the work is an act restricted by the copyright in a literary ... work.

...

(3) In this Part “adaptation” –

...

(ab) in relation to a computer program, means an arrangement or altered version of the program or a translation of it;

(ac) in relation to a database, means an arrangement or altered version of the database or a translation of it...

(4) In relation to a computer program a “translation” includes a version of the program in which it is converted into or out of a computer language or code or into a different computer language or code.

(5) No inference shall be drawn from this section as to what does or does not amount to copying a work.”

85. In these proceedings, four types of work are alleged to subsist and to be infringed:
- i) Artistic works (the Two Hearts Diagram and the Wave Diagram);
  - ii) Literary works (including the Explanatory Materials, the Patient Definitions (taken individually or together with the associated Classification and Option), the XML Format and the Database as a literary work);
  - iii) Literary works in a database (the Database); and
  - iv) Preparatory design material for a computer programme (the XML Format and/or the Database).
86. In each case, the defendants deny subsistence of copyright, submitting that the above works were not original – they are merely “generic”.

*Subsistence of copyright generally*

87. Under section 1(1)(a) of the CPDA 1988, it is a requirement for subsistence of copyright of a literary or artistic work that it should be original. The CPDA 1988 does not contain a definition of originality for these purposes. Section 3A(2) provides a definition of originality for the purposes of copyright in a database; if it constitutes the author's own intellectual creation.
88. *Copinger and Skone James on Copyright* (2016) contains a helpful paragraph (at 3-208) on the threshold of originality under UK case law:
- “It was often stated in the English cases that a work need only be ‘original’ in the limited sense that the author originated it by his efforts rather than slavishly copying it from the work produced by the efforts of another person. Here, there were two interconnecting strands involved. First, the work must originate from the author, in the sense that it must not be slavishly copied from another work, for ... in such a case the copyist does not ordinarily obtain copyright in his copy. ... the work may nevertheless be original even though the author has drawn on knowledge common to himself and others, or has used already existing material. Second, the English cases made clear that whether or not the author had drawn on other material, what was required was the expenditure of more than negligible or trivial effort or relevant skill in the creation of the work.”
89. I was also referred to the test set out in *C-5/08 Infopaq International A/S v Danske Dagblades Forening* [2010] FSR 20. The differences between the *Infopaq* test and the traditional UK case law were not argued before me, but what is clear from *Infopaq* is that the originality threshold is a low hurdle, a requirement for the work to be the author's own intellectual creation. For present purposes, I do not need to resolve any debate on whether the test in *Infopaq* is different to or higher than the traditional UK case law set out in the preceding paragraph as, in my judgment, and as set out below, the works in which I have found copyright subsists meet both tests. It was also agreed between the parties that the test for originality for database copyright is higher: *Football Dataco Limited v Britten's Pools Limited* [2010] EWHC 841 (Ch).
90. Ms Heal and witnesses for the defendants described the various literary and artistic works asserted by Technomed as “ubiquitous”, “commonplace”, “generic”, “very, very generic”, “not unique”, “bog-standard”, “substantially copied”, “widely available”, “text book stuff”, “common” and “fairly generic standard stuff”. I deal with each copyright work alleged below, but as a general remark, it is insufficient in a copyright case to claim that the copyright work relied on is generic. Rather, as the learned authors of *Copinger and Skone James* point out, there are two questions to be asked. First, has the work been slavishly copied? In order to prove slavish copying, it is not enough to assert that “it appears in all the texts books” or “everyone knows”. Rather, the usual course will be to adduce the text books that are alleged to have been copied, to show that they were both accessible and earlier, and then to point to identical or near identical images or passages from which the copyright work alleged has been slavishly copied. With two small exceptions which I discuss below, that was not done in these proceedings. Second, where it is alleged that there has been no more than negligible or trivial effort or relevant skill in the creation of the work, this, again,

needs to be proved by cogent evidence, mindful of the low threshold set by the legislation as interpreted by the Court of Justice.

91. In addition to being original, for copyright to subsist, the relevant work must also be fixed, in the sense that it must be recorded in some material form. Although Ms Heal mentioned this in her opening written submissions, she did not refer to it thereafter, and I do not understand her to be making a point in relation to the fixing of any of the works relied on by Technomed.

*Infringement of copyright generally*

92. The relevant acts restricted by copyright in a work are set out above. For present purposes, it is necessary for Technomed to prove that there has been copying of the whole or a substantial part of the relevant copyright work. In this regard, Ms Heal drew my attention to a number of authorities. First, she submitted, and I accept, that copyright “is not an exclusive right to prevent the publication of a work on a similar subject or a work which happens to contain similar material, thematic or otherwise”: *Baigent v The Random House Group Limited* [2007] EWCA Civ 247 per Mummery LJ at para 124. On this point, she also referred me to Arnold J’s judgment in *Meakin v British Broadcasting Corporations and Ors* [2010] EWHC 2065 (Ch), a case about television formats, in which Mr Meakin’s copyright infringement claim was held to have no prospects of success. Arnold J found that the similarities relied on were “no more than general ideas at a fairly high level of abstraction and, moreover, commonplace ideas in the field of television game show formats at that”. I accept Ms Heal’s submission that a claimant cannot use the law of copyright to obtain a monopoly right over unoriginal, everyday ideas and concepts.
93. On the issue of substantiality, she referred me to the following further passage from Mummery LJ’s judgment in *Baigent* at paras 144 to 147:

“[144] The 1988 Act does not define ‘a substantial part’ or even indicate what factors are relevant to substantiality. I do not think that there is any real point in asking: what does ‘a substantial part’ mean? That sort of question is only a path to a dictionary and to the dubious substitution or addition of other words which do not help to answer the crucial question of fact: is DVC a copy of ‘a substantial part’ of HBHG?

[145] It is more sensible to ask whether there exist in this case the necessary and sufficient conditions for characterising the parts copied from the original work as “a substantial part” of the original work. The decided cases help in identifying the relevant necessary and sufficient conditions for substantiality. Thus, it is not necessary for the actual language of the copyright work to be copied or even for similar words to be used tracking, like a translation, the language of the copyright work. It is sufficient to establish that there has been substantial copying of the original collection, selection, arrangement, and structure of literary material, even of material that is not in itself the subject of copyright.

[146] It is not, however, sufficient for the alleged infringing work simply to replicate or use items of information, facts, ideas, theories, arguments, themes and so on derived from the original copyright work.

[147] I agree with Lloyd LJ that no clear principle can be laid down on how or where to draw the line between the legitimate use of the ideas expressed and the unlawful copying of their expression.”

I did not understand Ms Heal to be saying that Bluecrest and Express did not have an opportunity to copy – rather, her case on infringement rested on arguments that the defendants did not substantially reproduce any works of Technomed in which copyright subsisted.

94. Having referred briefly to these general concepts, I now turn to each of the rights on which Technomed relies.

*Does copyright subsist in the Database as a database?*

95. The parties were agreed that the definition of a database for the purposes of copyright is the same as that for the purposes of *sui generis* database right. As I have set out above, I consider the Database to be a database for the purposes of the *sui generis* right. I therefore also find that it is a database for the purposes of copyright under section 3A(1) of the CPDA 1988.
96. The existence or otherwise of *sui generis* database right does not determine whether or not copyright might also subsist in the same database: *Football Dataco v Sportradar* per Sir Robin Jacob at para 29. The test for originality of a database for copyright purposes is different to that for other literary works. As set out above, section 3A of the CPDA 1988 provides that “a literary work consisting of a database is original if, and only if, by reason of the selection or arrangement of the contents of the database the database constitutes the author’s own intellectual creation”. Following the Court of Justice’s ruling in *Infopaq*, the hurdle is a low one.
97. Floyd J (as he then was) summarised a four step test for database copyright in *Football Dataco Limited and Ors v Brittens Pools Limited and Ors* [2010] EWHC 841 (Ch) at para 91:

“It seems to me that the task for the court is as follows:

- i) Identify the data which is collected and arranged in the database;
- ii) Analyse the work which goes into the creation of the database by collecting and arranging the data so identified, to isolate that work which is properly regarded as selection and arrangement;
- iii) Ask whether the work of selection and arrangement was the author's own intellectual creation and in particular whether it involved the author's judgment, taste or discretion;
- iv) Finally one should ask whether the work is quantitatively sufficient to attract copyright protection.”

I have set out above the data collected and arranged in the Database: the Classifications, the Options, the Traffic Lights and the Patient Definitions.

98. Mr Hill submits, and I accept, that considerable intellectual effort and creativity were expended in choosing the contents of the Database. Mr Hashemi, later assisted by Drs Sopher and Davies, selected known Classifications, and arranged them in an order that suited him together with the Options in a structured format to enable drop down menus which would attach to the relevant Option the selected Traffic Light, and a Patient Definition. These were later tested, and the Database updated so as to be more accurate. I have, as set out above, excluded from my assessment the work involved in drafting the Patient Definitions, as this is not, in my judgment, properly construed as selection or arrangement.
99. In my judgement, the work of selection and arrangement I have referred to above was the authors' own intellectual creation, and involved Mr Hashemi, Dr Sopher and Dr Davies exercising their judgement. Again, I have excluded from this assessment the creation that went into the Patient Definitions. Finally, in my judgement, the work undertaken by Mr Hashemi, Dr Sopher and Dr Davies in selecting and arranging is qualitatively sufficient to attract copyright protection. As I have set out above, I do not need to resolve the dispute between the parties as to whether the Database involved many hundreds of hours of work, or a much smaller number. The work undertaken was sufficient. Copyright subsists in the Database as a database.

*Is copyright in the Database as a database infringed?*

100. I have set out above my reasons for my finding that the *sui generis* database right has been infringed, including by the copying of the whole Database, and extraction from the Database until November 2016. For those reasons, I also find that copyright in the Database has been infringed.

*Does copyright subsist in the Database as a literary work other than a database?*

101. Shortly after the pre-trial review, the claim was amended, with permission, to include the following:

“If, contrary to the Claimants’ case above, the Database does not comprise a database within the meaning of s.3A(1) CDPA, then it is alternatively protected by copyright as a literary work other than a database.”

102. As is clear from Technomed’s pleading, copyright in the Database as a literary work is put in the alternative. As I have found that copyright subsists in the Database as a database, I do not therefore need to consider whether copyright subsists in the Database as a literary work. However, if I am wrong in my conclusion as to copyright in the Database as a database, then I am satisfied that copyright subsists in the pdf form of the Database as a literary work, and was infringed until November 2016.

*Does copyright subsist in the XML Format?*

103. XML is a standard computer language for defining/representing structured data in a way which is partly self-describing using natural language terminology. It is not a data format, but a standardised abstraction which allows flexibility in the kinds of data structure which can be represented, and in the choice of terminology and layout. Because of its flexibility, it is likely that independently designed XML schemata will differ markedly, even when describing essentially the same data.

104. Technomed claims no rights in XML as a language: rather, it claims rights in data formats written in the XML language. The XML Format was created by Mr Fuller, an employee of Technomed, between 7 April 2011 and 15 January 2014. It contains text from the Classifications, the Options and the Patient Definitions as well as Traffic Light codes using an alphanumeric convention. Different versions were created over that period as improvements and adjustments were made. As noted above, Technomed's XML Format was provided by Bluecrest to Express on 20 December 2013.
105. Technomed's computer expert, Mr Dickson, undertook a comparison of Technomed's XML Format with an XML file produced by Express for Bluecrest. Mr Dickson identified 16 characteristics shared by the two files. He considered that it was "inconceivable" that a number of those shared characteristics could have arisen by coincidence. It was his evidence that those common characteristics could only be explained by one of the files being derived from the other, or both being derived from a common source.
106. As noted earlier, the computer experts who gave evidence both agreed that the defendants used the same XML schema as previously used by Technomed, and that the revised XML schema later used by the defendants was a minor revision not a fundamental redesign. Mr Dickson in his report noted that Express's derived XML schema was in use until at least 11 December 2015.
107. Ms Heal submitted, and Mr Hill accepted in his written closing submissions, that the XML Format is not entitled to protection as a computer program (citing the Court of Justice in *C-406/10 SAS Institute Inc v World Programming Limited* [2012] RPC 31 and Arnold J in *SAS Institute Inc v World Programming Limited* [2013] EWHC 69 (Ch)). But Mr Hill submitted that the XML Format is entitled to protection as a literary work, in support of which he cited Arnold J at para 41 of *SAS Institute*. Ms Heal accepted in her written closing that the XML Format could be a literary work so long as it meets the intellectual creation test. I therefore do not need to resolve the concerns expressed by Arnold J in *SAS Institute* about fixing of a format.
108. Mr Hill submitted that the XML Format exhibits the personal stamp of its author Mr Fuller, relying on Mr Dickson's evidence where he helpfully set out in an exhibit an example of an XML file generated by ECG Cloud, and colour highlighted those parts of it which were names chosen by the scheme designer, as opposed to the actual data described by the document, and syntax element dictated by the XML standard. Mr Dickson was not cross-examined about this document. Mr Hill submitted on this basis that the XML Format contains content – not just structure, and hence is entitled to copyright protection.
109. I accept Mr Hill's submission. The XML Format is the product of Mr Fuller's intellectual creation. Copyright subsists in the XML Format.

*Is copyright in the XML Format infringed?*

110. Given my finding that the XML Format is a literary work protectable by copyright, I turn now to whether or not that copyright work was infringed. As noted above, by the defendants' own evidence, Technomed's XML Format was provided by Bluecrest to Express. So Express had the opportunity to copy it. The experts agreed that Express

used the same schema as Technomed. Express has not put forward any evidence to establish independent creation. I therefore find that Express copied Technomed's XML Format, infringing its copyright. According to Technomed's expert, this was ongoing until at least 11 December 2015.

*Does copyright subsist in the XML Format and Database as preliminary design material for the Software?*

111. Mr Hill further submitted that the spreadsheet copy of the Database is infringed as preliminary design material for the Software. I do not accept that submission. I have found that copyright subsists in the Database and in the XML Format. The acts of copying alleged and which I have found proved are the same as are alleged under this heading. It does not assist Technomed to add a claim that these infringed documents were also infringed as preparatory design documents for software which was not itself infringed.

*Does copyright subsist in the Explanatory Materials?*

112. Mr Hashemi wrote the Explanatory Materials in February 2013, which were later updated in collaboration with Dr Sopher and Dr Davies. Mr Hashemi reviewed various cardiology products in the market place, including a document described as produced by Boston Scientific (although no such document dated prior to 2013 was adduced before me). Mr Hashemi's evidence, which I accept, was that he did not simply replicate existing materials, but produced new patient friendly text to explain the ECG screening results in lay person's terms.
113. Mr Hill accepted that there are a number of similarities between the Explanatory Materials and the version of the Boston Scientific document which was adduced in court. For example, the description of the His-Purkinje system is very similar to that in the Boston Scientific document. But even if one sentence was taken Mr Hill submitted that the Explanatory Materials were not a slavish copy of the Boston Scientific document.
114. Ms Heal submitted that no copyright could subsist in the Explanatory Materials because copyright does not protect ideas which are banal or commonplace in the field. In my judgment, that rather misses the point. The test for subsistence of copyright, which I have set out above, only requires the literary work (as is the case here) to pass a low threshold of originality. Other than the single sentence taken from the Boston Scientific document, Ms Heal was unable to point to any other sentences from the Explanatory Materials that Mr Hashemi had taken from elsewhere. Mr Hashemi denied having read or consulted the documents relied on by the defendants, and I accept that evidence. It is, in any event, not sufficient to defend a copyright infringement claim to say that the literary work is "derived from the standard texts, familiar to all in the field". It does not matter if the literary work contains no original thought. What matters is that the words used are a product of the author's intellectual effort. As Mr Hill put it, the Explanatory Materials undoubtedly involved non-negligible intellectual expression by Mr Hashemi. That is all that is required. I find that copyright subsists in the Explanatory Materials.

*Is copyright in the Explanatory Materials infringed?*



115. I turn now to whether copyright in the Explanatory Materials was infringed. No concession was made by Ms Heal in this regard. There were in evidence several Bluecrest health screening reports prepared using ECG screening services provided by Express. These include the Explanatory Materials reproduced verbatim or almost verbatim, until and including the October 2014 Bluecrest report. As set out above, Express and Bluecrest had the opportunity to copy (they had the Explanatory Materials) and have not put forward any explanation for the near identity of this aspect of their own reports. I therefore find that the Explanatory Materials were copied and that copyright in the Explanatory Materials was infringed. This is not a case of copyright being used to protect ideas which are banal or commonplace in the field. Technomed is entitled to protect its non-negligible intellectual expression from exact copying.

*Does copyright subsist in each Patient Definition?*

116. In relation to the Patient Definitions, Technomed amended its case, with permission, in May 2017, so as to read:

“The text of each of the Patient Definitions taken by itself and/or in combination with its associated Option and Classification is an original literary work in which copyright subsists...”

117. As noted above, if copyright is found to subsist in the Patient Definitions on their own, the defendants concede infringement until 14 July 2014. Infringement of the Patient Definitions after that date is denied. Infringement of the Patient Definitions in combination with its associated Option and Classification is also denied. In closing, the defendants also denied infringement of any copyright claimed in each sentence of each Patient Definition. I did not understand Mr Hill to be making that claim, which in any event was not pleaded, either initially or in the amended pleading. I therefore say nothing further about it.

118. The Patient Definitions were written by Mr Hashemi and updated by Dr Sopher and Dr Davies, based on their general knowledge of ECGs, occasionally checking matters as required. Mr Hashemi and Dr Sopher denied copying the Patient Definitions from other sources, and I accept their evidence. I was not taken to any document dating from prior to the creation of the Patient Definitions in which any of them appears.

119. Rather, Ms Heal advanced in relation to the Patient Definitions similar arguments against subsistence of copyright to those advanced in relation to the Explanatory Materials. In her written closing, she submitted that the Patient Definitions were “ubiquitous”, and submitted that Professor Mond and Dr Sopher had accepted that that was the case. As noted above, this is not the test. However, having been invited by Mr Hill to review carefully the evidence of Professor Mond and of Dr Sopher and having done so, I do not accept that either Professor Mond or Dr Sopher said what is suggested. Professor Mond’s written evidence (to which I have in any event given no weight) was that the “Patient Definitions and Comments” “is a more complex list and requires translation of the medical terms into a language which the patient is expected to understand. Any attempt to translate an ECG report into a simple and correct patient explanation sheet is a significant and difficult challenge, which if poorly done causes more concern than help.” I do not consider that this is an acceptance that the

Patient Definitions were ubiquitous – indeed, it suggests the care needed to compile them. Professor Mond was not asked about the Patient Definitions in his oral testimony. Dr Sopher did not give written evidence about the “ubiquity” of the Patient Definitions. In cross-examination, Dr Sopher was asked about standard measurements – for example, that a normal PR interval would be understood by cardiologists around the world. When asked about the Patient Definitions in this case, he did not agree that these were standard definitions for the conditions listed, because, as he said, they are not definitions at all. He described them as “language specifically created to try to explain to patients, remote patients, patients one was not having face-to-face contact with, patients who one knew nothing about who were having health screening for example”. I therefore do not accept Ms Heal’s written submission that Professor Mond or Dr Sopher gave evidence that the Patient Definitions were ubiquitous.

120. I put to Ms Heal in closing that copyright could subsist in a more elaborate formulation of the Patient Definitions. For example, rather than:

“The “normal” resting heart rate sits in a range of 60 – 99 beats per minute. Your heart rate is within normal limits.”

the text could read:

“Congratulations, well done, your heartbeat is normal, keep eating an apple a day and getting regular exercise, this is tops! ☺”

121. Ms Heal accepted that copyright would subsist in my suggested version, even without any artistic copyright in the emoji. So I did not hear her to be saying that copyright could never subsist in this type of text – only that, in her submission, Technomed had not been creative enough in their drafting.
122. As set out above, the test for subsistence of copyright in literary works is a low hurdle. In my judgment, having reviewed each of them, there was sufficient intellectual creation in each Patient Definition to clear that hurdle. It does not matter whether it took Mr Hashemi “hundreds of hours” to compile them, or the five hours that Professor Mond suggested it would take a small team. What matters is that sufficient, non-negligible intellectual effort was expended, and I find that it was. Copyright subsists in each Patient Definition.

*Is copyright in each Patient Definition infringed?*

123. As noted above, Ms Heal conceded that if copyright subsists in the Patient Definitions individually, it was infringed by the defendants until 14 July 2014. That, in my view, was a sensible concession, given that the Classifications, the Options, the Traffic Lights, and the Patient Definitions were almost identically reproduced in Bluecrest’s Classifications Version 00 document used to populate health screening reports produced for it by Express until that date. The reproductions included errors copied from Technomed’s 2013 pdf – for example, “osmetimes” in the definition for QRS Duration Long – although some typographical errors were corrected. In my judgment, Bluecrest took the document sent to it in February 2013, and reproduced it almost verbatim to create the Bluecrest Classifications Version 00. Further, the Classifications, the Options, the Traffic Lights and the Patient Definitions were embedded in the XML code, which was sent by Bluecrest to Express and used to

populate reports provided to patients from as early as 16 January 2014. In my judgment, each of those reports reproduced one or more of the Patient Definitions almost verbatim.

124. No concessions were made in relation to younger versions of Bluecrest's classifications document.
125. Bluecrest Classifications Version 01, which was used from around March 2014 until around June 2014 reproduces Technomed's Classifications and Options, Traffic Lights and Patient Definitions, again, almost identically. The classifications for QRS Morphology onwards were not present in Version 00, but appear in Version 01. Again, some errors that were in Technomed's 2013 pdf are present. Others that had been corrected in Version 00 are present in Version 01. This suggests, and I find, that Version 01 was created not by amending Version 00, but by returning to Technomed's 2013 pdf and copying it afresh. There are some differences between Version 01 and Technomed's February 2013 pdf. For example, there are new classifications and definitions for Marked Bradycardia, Marked Sinus bradycardia, Non-Specific, and Uncertain (within P-Wave Morphology), Non-Specific T-Wave Abnormality, Abnormal T-Wave Morphology, Non-Specific ST Segment and Abnormal ST Segment which do not appear in Technomed's February 2013 pdf and therefore do not infringe. Some definitions have been deleted and therefore are not infringed. Some definitions have been slightly reworked – but in my judgment, none of those reworked definitions is sufficiently different to Technomed's February 2013 pdf so as not to constitute a substantial reproduction with the exception of Bigeminy and Trigeminy, which have been completely rewritten and therefore do not infringe. Version 01 therefore infringes, as do the Bluecrest patient reports that reproduce the individual patient definitions in Version 01 that I have found to infringe.
126. Version 02 was used from around July 2014 to around November 2016. Version 02 is very similar to Version 01 – there are some further minor amendments, but, in my judgment, Version 02 infringes in the same ways that Version 01 infringes. The Patient Definitions taken from Version 02 also infringe as with Version 01.
127. Version 03 of Bluecrest's Classifications document differs more substantially, both from Version 02 and also from Technomed's 2013 pdf. This was explained by Mr Jarvis in his evidence. In his written evidence, Mr Jarvis referred to a "major re-writing of the text in conjunction with Dr Summerton of Bluecrest in the summer of 2016". Mr Jarvis estimated that Dr Summerton's input took him approximately 8 hours. Dr Summerton was not called to give evidence. In cross-examination, Mr Jarvis suggested that Dr Summerton had rewritten Bluecrest's Classifications document on a long train journey, without, he said, any access to Technomed's document, or earlier versions of Bluecrest's Classifications document. Mr Hill asked that I reject this evidence as "unsupported hearsay and because it is inherently implausible". Mr Jarvis was not on the train with Dr Summerton, and he gave no evidence of any discussion he had with Dr Summerton relaying Dr Summerton's own account of how he (Dr Summerton) prepared Version 03. In my judgment, Mr Jarvis has simply surmised what he thinks Dr Summerton may have done, rather than reporting what Dr Summerton said he had done. It is that which makes Mr Jarvis's evidence on this point unreliable. Mr Jarvis did not give evidence of having discussed with Dr Summerton what he did – and so he can have no knowledge of Dr

Summerton's process. Having reviewed Dr Summerton's work, it does not appear at all likely to me that it was compiled from scratch, without reference to one of Bluecrest's classifications documents. As Mr Hill points out, there are simply too many similarities for it to be an independent creation. The Classifications and Options are largely the same and in the same order. I do not accept Mr Jarvis's evidence that the order simply followed the order in which an ECG would be analysed. Mr Jarvis is not a cardiologist: Dr Sopher, who is, gave clear and unchallenged evidence that the order differs from the analysing order that has been taught in medical schools for years. In my judgment, Dr Summerton did not prepare his document from scratch but rather he had access to Bluecrest's classifications document, most likely Version 02, and used that as the basis for Version 03.

128. Whilst I have found that there was copying, that is not sufficient for a finding of infringement. As I have mentioned, Version 03 was not a slavish reproduction of any earlier documents. Mr Hill urges on me that rewriting is enough – as it is for translating a work into another language or copying the plot of a novel, so long as sufficient detail is taken. Mr Hill's difficulty is that the Patient Definitions are not a novel, and Dr Summerton's version is not a translation. Whilst I am satisfied that he had access to Version 02, in my judgment he has rewritten the concepts he saw there, based on his own skill and judgment. The exercise he undertook was not unlike that undertaken earlier by Mr Hashemi when, having seen the Boston Scientific document, he put together the Explanatory Materials. In my judgment, Version 03 does not substantially reproduce any of the earlier versions, or Technomed's 2013 pdf. In my judgment, it does not infringe, and thus, the reports which excerpt patient definitions from Version 03 do not infringe.

*Does copyright subsist in each Patient Definition in combination with its associated Classification and Option?*

129. In each case, the Patient Definition is attached to a Classification and an Option, as well as a Traffic Light. By its amended pleading, Technomed also claims copyright in each Patient Definition in combination with its associated Classification and Option. In his written submissions, Mr Hill added to this list the Traffic Lights – but as the Traffic Lights were not pleaded, I do not consider them further.
130. I do not consider that a finding in Technomed's favour on this point takes it significantly further – however, as it was argued, I deal with it briefly. As I have found that copyright subsists in each Patient Definition, I also find it subsists in each Patient Definition in combination with its associated Classification and Option. Whilst Ms Heal made concessions in relation to the individual Patient Definitions alone, she did not in relation to each Patient Definition together with its Classification and Option. However, for the reasons I have set out already, for each of my findings that each Patient Definition was infringed, so I also find that each Patient Definition in combination with its associated Classification and Option is infringed.

*Does copyright subsist in the Two Hearts Diagram and the Wave Diagram?*

131. As noted above, if copyright is found to subsist in the Two Hearts Diagram and the Wave Diagram, the defendants concede infringement until 11 November 2014. No case of infringement of the diagrams after that date is pressed.

132. As noted above, the definition of an artistic work in section 4(1)(a) of the CPDA 1988 includes “a graphic work ... irrespective of artistic quality”. “Graphic work” is defined in section 4(2) of the CPDA 1988 to include a diagram.
133. I did not hear Ms Heal to dispute that the Two Hearts Diagram and the Wave Diagram are artistic works within the meaning of section 4 of the CPDA 1988. There was some discussion in closing argument as to whether words could be part of an artistic work. Given words are a common part of a diagram, a term expressly defined in the legislation to be a graphic work, I do not consider this issue to be in doubt. I was not taken to any authority to the contrary. Both diagrams are clearly artistic works within the meaning of section 4 of the CPDA 1988. What Ms Heal did actively dispute was whether the diagrams were original within the meaning of section 1 of the CPDA 1988. Ms Heal’s submission in opening was that the diagrams were “generic in the field over which [the claimants] have no monopoly”. She developed this in closing, submitting that the changes made to the stock image to create the Two Hearts Diagram were insufficient to lend the finished diagram the required originality. Further, she said that the Wave Diagram was “utterly standard”.
134. I do not accept these submissions. Although, as Mr Hill accepts, neither of the diagrams required large amounts of work for their production, the test of originality is a low hurdle. That hurdle is met in this case – in the case of the Two Hearts Diagram, the changes made by Mr Hashemi to the stock image were sufficient to create a new, original work, and in the case of the Wave Diagram, although the idea behind it may well be utterly standard, this particular representation of it is the result of the creators’ intellectual effort. They are original artistic works for the purposes of copyright law.

*Is copyright in the Two Hearts Diagram and the Wave Diagram infringed?*

135. As noted above, Ms Heal conceded that if copyright subsists in the diagrams, it was infringed until 11 November 2014 and I so find.

**Causation**

136. At trial, the defendants ran an additional defence to both the *sui generis* database right infringement claim and the copyright infringement claim. This was said to be the issue of causation. Ms Heal summarised for me in closing the issue she submitted I needed to decide at this point in the proceedings in order to make a finding of infringement:

“Has the alleged infringement been the thing that has in fact caused the damage to the claimants?”

137. As Mr Hill pointed out in opening, this issue was not pleaded, nor, I add, included in the list of issues settled by Mrs Justice Proudman on 21 December 2016 or before me. But as Ms Heal made detailed submissions in opening and closing, whilst I consider her submissions to be misgiven at this stage of the proceedings, I deal with them below.
138. Ms Heal’s more detailed position is as follows. In her opening written statement, Ms Heal mentions, under the heading “Causation”, that Mr Hashemi had given evidence as to the cessation of the TM-BC Contract, “but the infringement complained of was

not the relevant cause of the loss alleged”. In her written closing argument, she submitted that the “question of causation is inextricably linked with liability for alleged infringement, namely what is the loss for which [the defendants] could justly be held liable.” Further:

“[i]t must be shown at this stage of proceedings that the loss contended for has been caused by the alleged wrongdoing in question, is not too remote and is foreseeable. The usual rules of causation and remoteness apply...One cannot separate questions of liability from questions of causation; one is always liable for something. The law limits liability to those consequences which are attributable to that which made the act lawful”.

139. Ms Heal relies on *USP Plc v London General Holdings Ltd* [2005] EWCA Civ 931 at paragraphs 29 and 44. That decision of the Court of Appeal (Waller, Laws and Jacob LJ) was on appeal from the Master conducting the damages inquiry. Whilst Laws LJ provided the main judgment (with which Waller and Jacob LJ agreed), Jacob LJ added his own pithy paragraph (at para 44) – one of the paragraphs to which Ms Heal referred me:

“Copyright in a literary work is infringed if the work is copied exactly or [a] substantial part was taken (see s.16(1)(a) and (3) of the Copyright Designs and Patents Act 1988). It is the test of the work which is protected from copying. The head of damage claimed here in no way turns on the fact that the exact text was copied. It is not attributable at all to the precise nature of the text used by the defendants. So it did not flow from the fact that the exact text was taken – it was not caused by the infringement.”

140. I respectfully agree with this statement of his Lordship. But I do not see how his Lordship’s comments assist the defendants in this case. I have found that copyright subsisted in a number of Technomed’s works, and I have found that the defendants copied them exactly and/or substantially reproduced them. That is sufficient for establishing copyright infringement. In these proceedings, the claim has been bifurcated such that I am only deciding liability at this point. What follows from my judgment is that Technomed is now entitled to elect either damages or an account of profits. If it elects for a damages enquiry, it may in due course need to deal with the issue of causation that Ms Heal raises. But that time is not now. Before dealing with causation of any damages, the election must be made, and Technomed must plead its damages. It is neither possible nor appropriate to assess causation before those two events have occurred.

141. Ms Heal also referred me to *Work Model Enterprises Limited v Ecosystem Limited and Clix Interiors* [1996] FSR 356. That was a decision of Jacob J (as he then was) again relating to a damages inquiry. The Judge recorded as follows (at page 358 of the report):

“The first defendant took a short cut in preparing its technical brochure. It copied the very words of the Avanti brochure and thereby infringed the copyright therein. It has admitted it has done wrong thereby and submitted to judgment before Carnwath J on July 18, 1995. It also submitted to an inquiry as to the damages cause by its infringement of copyright in the Avanti brochure.”

Rather than assist Ms Heal, this passage does the opposite. It records the usual position in copyright (and, I add, database right) infringement cases that damages are dealt with at the inquiry, and that causation is not a matter for the judge trying the liability claim.

142. I have carefully considered the additional cases that Ms Heal referred me to: *Kuwait Airways Corp v Iraqi Airways Co* (Nos 4 and 5) [2002] 2 AC 883 HL; *South Australia Asset Management v York Montague* [1996] 3 WLR 87; *Paterson Zochonis Limited and Ors v Merfarken Packaging Limited and Ors* [1983] FSR 273; *Sutherland Publishing Company Limited v Caxton Publishing Company Limited* [1936] Ch 322; and *Gerber Garment Technology Inc v Lectra Systems Limited and Anor* [1977] RPC 383 (another case involving a damages inquiry). I do not consider that any of these provides support for Ms Heal's submissions.
143. After the close of the trial and after I had written these paragraphs of my judgment, Ms Heal provided by email (properly copied to Mr Hill) a further case: *The Governors and Company of the Bank of Ireland and Anor v Watts Group PLC* [2017] EWHC 1667 (TCC). In that decision, Coulson J dealt with causation at paras 124 to 177. That case involved claims for professional negligence against a firm of quantity surveyors relating to a residential development in York. In the event, Coulson J found that negligence was not made out, but he went on to assess reliance and causation, before dealing with quantum. That is not the position here: again, this is the trial for liability for intellectual property infringement – issues of loss are matters for any damages inquiry in due cause. I have not found anything in Coulson J's decision that assists Ms Heal's case.
144. I consider Ms Heal's causation arguments to be unmeritorious at this time. However, if I am wrong in that, I would add that I would have accepted Mr Hill's suggestion that there is a sufficient causative link between the defendants' infringement and at least some damage in relation to each and every infringement that I have found. At the simplest level, were Technomed to plead damages to the value of a reasonable royalty for each act of infringement, then there would be, in my judgment, a sufficient causative link between that loss and the defendants' infringement.

### **Flagrancy**

145. Mr Hill submitted that the email traffic between Bluecrest and Express in December 2013 and January 2014 shows that those entities carried out their acts of infringement in the face of assertions of Technomed's database right and copyright, and following a conscious decision to proceed despite the consequences.
146. Section 97(2)(a) of the CPDA 1988 provides as follows:

**“97. Provisions as to damages in infringement action**

...

(2) The court may in an action for infringement of copyright having regard to all the circumstances, and in particular to –

(a) the flagrancy of the infringement, and

(b) any benefit accruing to the defendant by reason of the infringement,

award such additional damages as the justice of the case may require.”

It was agreed between the parties that the issue of whether the defendants have benefited from their infringement should be deferred to any damages inquiry.

147. In relation to flagrancy damages, the learned authors of *Copinger & Skone James* note at paragraph 21.300 (footnotes omitted):

“**Flagrancy:** Flagrancy implies scandalous conduct or deceit, including deliberate and calculated infringement where a defendant reaps a pecuniary advantage in excess of the damages he would otherwise have to pay. Where the infringement has been carried out in breach of a court order, it is fairly to be described as flagrant. Flagrancy is not a necessary ingredient of additional damages. It is merely a factor to take into account if it is present. Indeed, it has been held that additional damages may be awarded if the defendant has been guilty of carelessness sufficiently serious to amount to an attitude of ‘couldn’t care less’.”

148. Mr Hill did not rely on infringement in the face of a court order, but rather submitted that the email correspondence between Bluecrest and Express clearly showed an awareness of Technomed’s intellectual property rights, or, at best, what he described as “Nelsonian blindness” to the level of culpability required for a finding of flagrancy. He submitted that in light of Technomed’s rights, the defendants carried on because it suited their purposes.

149. I have set out above relevant extracts from the email correspondence between Bluecrest and Express. This indicates that, from 7 January 2014, Bluecrest and Express were aware that copyright likely subsisted in the Two Hearts Diagram and the Wave Diagram, as well as the Explanatory Materials. Mr Jarvis set out how to overcome any potential infringement: finding copies of the diagrams on the Internet to prove they were not original, and in the case of the text, changing it “whatever”, by which I took him to mean “come what may”. However, neither of those things was done. Mr Blencowe and Mr Jarvis each gave evidence that no searches of the Internet were conducted, and that no changes were made to the Explanatory Materials. I therefore find that Bluecrest and Express knew of the subsistence of copyright, but, in Mr Hill’s words, carried on because it suited their purposes. Both Mr Blencowe and Mr Jarvis gave evidence that they simply didn’t have the time to make the changes, given the need to commence ECG reporting services shortly thereafter, even though they both said that the necessary changes would only take a small number of hours. Not having the time is neither a defence to copyright infringement, nor to a finding of flagrancy.

150. I therefore find that the infringement of the Two Hearts Diagram, the Wave Diagram and the Explanatory Materials was flagrant within the meaning of section 97(2) of the CPDA 1988. Nothing in the correspondence or witness evidence suggests to me that Bluecrest or Express knew or turned a blind eye to infringement of the other copyright works alleged to the level of scandalous conduct or deceit to which Mr Hill referred.

### **Threat of continued infringement**



151. As set out above, I have found that Bluecrest and Express have infringed a number of Technomed's intellectual property rights. However, none of those infringements is, in my judgment, on-going. I therefore do not consider that there is a realistic threat that infringement will be recommenced.

## **Conclusions**

152. In conclusion:

- i) *Sui generis* database right subsists in the Database and was infringed until November 2016;
- ii) Copyright subsists in the Database as a database and was infringed until November 2016;
- iii) Copyright subsists in the Database as a literary work and was infringed until November 2016;
- iv) Copyright subsists in the XML Format as a literary work and was infringed until at least 11 December 2015;
- v) Copyright subsists in the Explanatory Materials and was infringed until mid-November 2014;
- vi) Copyright subsists in the Patient Definitions individually and was infringed until November 2016 except the definitions for Bigeminy and Trigeminy which did not infringe from March 2014;
- vii) Copyright subsists in the Patient Definitions taken together with the associated Classification and Option and was infringed as in (vi) above;
- viii) Copyright subsists in the Two Hearts Diagram and the Wave Diagram and was infringed until 11 November 2014;
- ix) The defendants' infringement of the Explanatory Materials, the Two Hearts Diagram and the Wave Diagram was flagrant; and
- x) The defendants do not threaten further infringement.