IN THE HIGH COURT OF THE REPUBLIC OF SINGAPORE

[1995] SGHC 289

Suit 404/1993

Between

Real Electronics Industries Singapore (Pte) Ltd

… *Plaintiff*

And

Nimrod Engineering Pte Ltd

… *Defendant*

And

T Vimalanathan

… *Third Party*

GROUNDS OF DECISION

Copyright — Infringement; Copyright — Infringement; Copyright — Infringement; Copyright — Infringement; Copyright — Ownership; Words and Phrases; Words and Phrases

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Real Electronics Industries Singapore (Pte) Ltd v Nimrod Engineering Pte Ltd (T Vimalanathan, Third Party)

[1995] SGHC 289

Suit 404/1993
MPH Rubin J
02 December 1995

1 Cur Adv Vult

2 This action concerns a copyright dispute between two relatively new fax-modem manufacturers in Singapore. Fax is an acronym for facsimile and modem is an abbreviation for modulator-demodulator. Fax-modem is a telecommunication device used for transmitting data and facsimile messages through voice communications link such as telephone lines. These peripherals are available in computer hardware and software outlets either as external attachments or as internal boards that could be affixed inside the computer or as PCMCIA (Personal Computer Memory Card International Association) type of cards which can be slotted into the side of a computer. These modems come in differing baud rates or speeds such as 1,200, 2,400, 9,600, 14,400 and 28,800 bits per second (bps). At present, modems with speeds less than 14,400 are regarded as antiquated. The baud rate represents the number of electronic signals or data symbols that can be transmitted along a communications channel every second. These speeds indicate the ability of the modem to send as well as download or receive information and images transmitted by one user to another.

3 In this action, the plaintiffs claim that a 9,600bps fax-modem marketed by the defendants sometime in December 1992 under the latter`s trade name `Nimrod` (Nimrod 9624) is in infringement of the plaintiffs` copyright in a fax-modem board designed and developed by them in February 1992 and marketed by them later under the name `Comfax CF-29SR`. According to the plaintiffs the printed circuit board (PCB) layout as well as the artwork design (the design) pertaining to the plaintiffs` modem were the product of their consultant engineer, Mr Raymond Soh (Mr Soh). They say that their said design which was stored in the memory of their computer during the modem`s development was unlawfully copied and spirited away by T Vimalanathan, the third party in these proceedings, when the latter had access to the plaintiffs` premises in early 1992.

4 The defendants do not dispute that the plaintiffs` modem and their Nimrod modem are 95% identical in layout and component placements. The minor differing features relate to the location of the modem`s speakers and the size of its transformers. The defendants deny that they had knowingly copied the plaintiffs` product. They assert that the third party who became their employee subsequently developed the design himself. They further contend that at any rate, the plaintiffs are not entitled in law to the copyright for the said design, since the design for both modems was derived from a schematic diagram made available to all and sundry in this region by an American modem manufacturer known as Navin/Sierra Systems. Alternatively, the defendants contend that the third party should be held liable for any judgment which may be entered against them.

5 The third party who is the central character in this saga was formerly an electronic artificer with the Singapore Navy. He holds a diploma in electrical and electronic engineering from the Ngee Ann Polytechnic. He claimed that in

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the course of his work he came into contact with the plaintiffs and was persuaded by them to lend his experience in digital electronics on products to be developed and marketed by the plaintiffs. There was divergence between the plaintiffs` account and the third party`s on the terms of engagement between themselves save for an admission that the third party was not in the `employment` of the plaintiffs.

6 The third party asserts that in fact he was the author and brain behind the plaintiffs` modem. According to him, it was he who instructed and guided the plaintiffs` Mr Soh in setting out the layout of the plaintiffs` modem card from the sample demonstration board provided by the Singapore agents of Navin/Sierra who, in addition to the demonstration board, also made available to him the full schematic drawings. He further alleged that the diskette containing the completed design was handed to him by Mr Soh and from this design and by using the schematic diagrams of Navin Systems, he developed the defendants` modem card with some modifications.

7 The plaintiffs` case is pleaded on the basis that the defendants have infringed the plaintiffs` copyright, which subsists in the fax-modem PCB design, by having produced and marketed an identical modem under the name Nimrod fax modem 9624A.

8 The first issue which falls for determination is whether the design under reference was the handiwork of Mr Soh`s exclusive efforts or the product of the third party. Testimonies in this regard from the parties are completely at variance. The third party`s evidence was to the effect that he was the brain behind this design and what Mr Soh did was merely to plot the layout lines on the computer, by operating a computer assisted design (CAD) software known

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as ***Protel*** , under advice and close supervision by the third party. The third party was almost dismissive of the role played by Mr Soh. The third party`s counsel suggested that the functions undertaken by Mr Soh in the development of the design was analogous to a copy typist or a stenographer taking dictation from his or her superior and producing a text by operating a typewriter. The third party also implied that the skill required to operate the said ***Protel*** software was almost negligible. The third party during his testimony endeavoured to impress the court with his extensive understanding of electronic circuitry. His facilities for definition and description were somewhat superior to that of Mr Soh whose attempts at technical explanation at times required red-pencilling. However, although Mr Soh`s performance in the witness box was not all that sparkling, the court could discern a ring of candour, sincerity and an unbroken thread of consistency about his evidence. He too is well qualified, having received a degree in electronic engineering from a UK institution in 1971 and his credentials, despite his lack of fluency, could not be made light of.

9 As mentioned by me earlier, the testimonies of both Mr Soh and the third party were diametrically opposite each other. It therefore became necessary in evaluating their evidence, to consider which account was more probable and whose explanation, more credible.

10 In this regard, Mr Soh in his affidavit of evidence-in-chief filed on 6 December 1993 averred in para 6 therein as follows:

> *... The plaintiff`s Comfax CF-29SR, was however copied by the defendant`s company, through the aforesaid Nathan when he was still in the plaintiff`s company. The said Nathan had the keys to the office and he would often come at night as witnessed by the security guards, the motive for which has now only come to light. It would not have been possible to copy the design which was an intricate layout and worked on by me for more than two months and fed into the computer unless someone like the*

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> *aforesaid Nathan had access to the computer and or by means of laborious duplicating of our sample. The copy of the defendant`s fax/modem card known and marketed as `Nimrod Fax/Data Modem 9624` was seen on 11 December 1992 at the Comtex 1992 Exhibition in the World Trade Centre by the plaintiffs, and again in Johore Bahru.*

11 The third party in his affidavit of evidence-in-chief filed on 15 April 1994 dealt with the allegation of wrong doing against him. He asserted in para 10 of his affidavit as follows:

> *10 The said Raymond Soh was an artwork designer who was commissioned by the plaintiffs to design items such as security alarms and who had knowledge of artwork designing. As the plaintiffs` managing director did not want to remove all the components from the sample modem provided by Cinergi (formerly known as Chartered-Thelmos Design Pte Ltd), the local distributor of Sierra chips, I was asked to lend my expertise in digital electronics to the plaintiffs and to direct the plaintiffs` Raymond Soh in setting out the layout of the modem. The said Raymond Soh merely worked on the computer to design the layout of the product pursuant to instructions given by me to him and not the whole product itself. I aver that anyone with knowledge of using the layout software can, with proper instructions given by the modem designer, produce the requisite layout. I was always given a copy of the diskette each time the product was updated, with the other copy being stored in the computer so that there was no need for me to `steal` Raymond`s design.*

12 The third party when cross-examined claimed that he was given the diskette containing the design by Mr Soh (p 141F of the NE) because he was told by the plaintiffs` managing director that he was the rightful owner of the modem (p 141B of the NE).

13 This part of the testimony of the third party that he was given a copy of the diskette by Mr Soh personally was never put to Mr Soh by opposing counsel. It was also noted that the claim of the third party in court that he was handed this diskette by Mr Soh, appears not to tally with his averment in his affidavit,

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ie he was given ***a copy of the diskette each time the product was updated*** . In any event, if Mr Soh were the person who in fact handed him the diskette, the third party would not have missed such an important feature in his affidavit of 15 April 1994, in response to the allegations by Mr Soh against him.

14 Having regard to all the facts in this case and after evaluating testimony of the witnesses, I have little hesitation in rejecting the suggestion that Mr Soh`s role was no more than that of a copy typist and that he produced the layout simply following instructions and guidelines from the third party. In my finding, Mr Soh is no pushover as the third party would desire the court to conclude. The claim by the third party that he was given a diskette each time the design was updated was not in consonance with his claim in the witness stand that he was given the completed artwork by Mr Soh. Mr Soh impressed me as a witness of truth and I accept his evidence that he was the person who produced the design for the plaintiffs when he was attached with the plaintiffs at the material time, albeit the design under dispute was derived from the schematic drawings obtained from the Singapore agents of Navin/Sierra.

15 Having determined that the design for the plaintiffs` Comfax CF-29SR was the fruit of Mr Soh`s efforts, the consideration shifted to the next factual issue whether the Nimrod fax modem marketed by the defendants was copied from the plaintiffs` design. In this connection, the third party himself had admitted that the design for Comfax preceded the production of Nimrod and that he used the diskette which contained the plaintiffs` design to produce the Nimrod. Apart from the said admission, parties were also in agreement that both modem boards, in almost all respects, save for the placement of the modem`s speaker, the size of the transformer and a few insignificant line variants, are similar and identical. Perusal of the plaintiffs` modem (exh P-2) and the

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defendants` modem (exh D-2) shows that their lines, numbers, placement of parts and all the details etched on both modem boards are almost identical.

16 Other specimen modem boards produced to the court for comparison, one belonging to Navin (exh D-1) and the other from a Taiwanese manufacturer (exh D-3) showed that their layouts are markedly distinct and different from that of the Comfax and Nimrod. Having regard to the evidence before this court, my finding is that the design of Nimrod is identical to that of Comfax and inasmuch as it had already been determined that Mr Soh was the person who produced the design for the plaintiffs` Comfax, which preceded the production and development of Nimrod, whoever undertook the design of Nimrod (in this case the third party) had copied the plaintiffs` design without their consent and approval.

17 The next issue raised by the defendants and the third party was whether the plaintiffs had established their title or ownership to the design, giving them a right to sue. Counsel contended that inasmuch as Mr Soh, the alleged author of the work happened to be just a consultant and not an employee of the plaintiffs, the plaintiffs, by virtue of the provisions of s 30 and read with s 194(3) of the Act, have no locus standi to maintain this action.

18 Section 30 of the Act [particular reference to sub-ss (2) and (6)] provides as follows:

> *(1) This section shall have effect subject to Part X.*
>
> (2) Subject to this section, the author of a literary, dramatic, musical or artistic work shall be entitled to any copyright subsisting in the work by virtue of this Part.
>
> …

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> (6) Where a literary, dramatic or artistic work to which subsections (4) and (5) do not apply, or a musical work, is made by the author in pursuance of the terms of his employment by another person under a contract of service or apprenticeship, that other person shall be entitled to any copyright subsisting in the work by virtue of this Part.

19 Section 194(3) provides as follows:

> *No assignment of copyright (whether total or partial) shall have effect unless it is in writing signed by or on behalf of the assignor.*

20 The phraseology of s 194(3) is unambiguous. In this context, Ricketson points out in his book, ***The Law of Intellectual Property*** (1984 Ed) para 13.66, that an oral assignment supported by parol evidence executed for consideration ...may amount to an equitable assignment. George Wei in his book ***The Law of Copyright in Singapore*** (para 10-2), citing the case of ***Performing Right Society Ltd v London Theatre of Varieties*** [1924] AC 1, states that until the execution of a legal assignment occurs, the equitable assignee would not be entitled to maintain an action for copyright infringement in his own name and that he would have to join the legal owner as the joint plaintiff.

21 The foregoing point of law, despite its import and significance, had not been pleaded and in a way, was sprung upon the plaintiffs` counsel during final submissions. Though a point of law could be pleaded at any stage of the pleadings, such a vital point taken at the submission stage did not speak much for its presenters. Moreover, counsel for the defendants and the third party, save for seeking clarification on the contractual relationship between Mr Soh and the plaintiffs, did not cross-examine either the plaintiffs` managing director, David Dharmaraj or Mr Soh on this issue as to whom the ownership of the modem belonged. Be that as it may, the arguments that the copyright of the contested

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modem`s design lay with Mr Soh and not with the plaintiffs, received a mortal blow by the following statement by Mr Soh in his affidavit:

> *3 I had been labouring and working on an interface and modem card known as COMFAX CF-29SR from November 1991 until about December 1991 when it was completed and documented into a computer in the plaintiff company. Around December 1991 it was sent to M/s Shinluck PCB Engineering Pte Ltd to make the Printed Circuit Board by me on behalf of the plaintiff company.*
>
> ...
>
> (6) ***The plaintiff`s COMFAX*** CF-29SR, was, however, copied by the defendant`s company, through the aforesaid Nathan when he was still in the plaintiff`s company. ... [Emphasis added.]

22 The foregoing passages are unmistakable. Mr Soh whom the defendants` and third party`s counsel allege has the copyright, explicitly conceded that the design developed is the property of the plaintiffs. In such a circumstance, does it lie in the mouth of the defendants and the third party, to ascribe a right to Mr Soh who not only did not wish to claim the alleged right but also declared that it belonged to the plaintiffs. Given this scenario, the issue of assignment, as envisaged under s 194(3), does not arise at all in the case at hand.

23 The next issue is whether copyright can legally subsist in such a design referred to by the plaintiffs in para 1 of their statement of claim. Mr Santhiran for the plaintiffs argued that the design under reference involved much skill and labour and that it was indeed a work of originality and was therefore entitled to protection under the provisions of the Copyright Act (Cap 63) (the Act). He submitted that the said design was not only an artistic work within the framework of the Act but also contained such technical details so as to qualify it as literary work within the meaning of ss 26 and 27 of the Act. Reliance was placed on a Malaysian decision in ***Lau Foo Sun v Government of Malaysia*** [1974] 1 MLJ 28 where the Malaysian Federal Court held that copyright

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subsisted in the engineering drawings and designs prepared by the appellant for the construction of a double-storey school building and that the word `original` as appears in the Malaysian Copyright Enactment (FMS Cap 73 ss 2, 3 and 8) did not mean originality of idea or thought.

24 The joint stand taken by the third party and the defendants as respects the plaintiffs` claim for copyright (based on s 26 and by implication s 27 of the Act) is twofold: (a) that the work under reference, ie the modem as well as its design, are not protected within the statutory framework of ss 26 and 27 read with s 69 of the Act and (b) that the originality requirement had not been made out by the plaintiffs.

25 Section 26(a) of the Act sets out a list of seven exclusive rights to a copyright owner as regards literary, dramatic or musical works. Section 27(1) provides that `copyright shall subsist in an original literary, dramatic, musical or artistic work.`

26 The plaintiffs` design appears to possess no apparent characteristic that merits classifying it as a dramatic or musical work. Plaintiffs` counsel however contended that the work is both literary and artistic.

27 Let me deal with the issue whether the subject matter under dispute can be classified as literary work, for on the face of it, a design such as the one under reference, does not appear to fall within this category. One has, therefore, to look at the definition of `literary work` under the Act and the decided cases thereon.

28 Section 7(1) of the Act defines `literary work` as including tables or compilations expressed in words, figures or symbols (whether or not in a visible

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form) and computer programs. The design at hand, prima facie, is neither a table nor a compilation in the sense it is commonly understood. However, the design (see exh P-2, the plaintiffs` modem CF-29SR, and exh P-3, the PCB showing the design without the housing) contains much technical information by way of a multitude of markings, lines, circles, holes, printed figures, abbreviations and codes with a view to placing thereon the various resistors, capacitors, transistors, transformers, inductors and the requisite switches.

29 In ***Anacon Corp Ltd v Environmental Research Technology Ltd*** [1994] FSR 659, in an action for infringement of copyright, the plaintiffs claimed copyright in three classes of work relating to an electronic dust metre: a computer program, engineering drawings and circuit diagrams. The issue for decision was whether the first defendant had infringed the plaintiffs` copyright in the circuit diagrams by making a `net list` and circuit boards from the plaintiffs` circuit boards. Jacob J in holding that the circuit diagrams of the plaintiffs were both artistic and literary works, observed at p 663:

> *Mr Whittle puts his case in an alternative way. He says: `Well, if one looks at the circuit diagram, it is more than just visual information, it is in fact technical information containing a lot of writing - a lot of writing altogether - against each component, being the information as to what it is, and an indication in visual form of what other component each component is connected to.` He says, in effect, that the circuit diagram is a list of components together with information as to how they are connected together. Thus, he says, not only is it an artistic work, it is also a literary work. Under the present Act - and the provisions are no different in this regard from the old Act - a literary work means any work, other than dramatic or musical work, which is written and includes a table or compilation. He points out that by the definition in s 178:*
>
> *`"writing" includes any form of notation or code, whether by hand or otherwise and regardless of the method by which or medium in or on what it is recorded and "written" shall be construed accordingly.`*

> *So, he says, that any information you write down is a literary work, that this circuit diagram has lots of writing on it, that some of it may be written in code, (eg a resistor) symbol - but so what? He says that it follows that there is here at least a table or compilation, the latter being a compilation of parts. The fact that it is scattered about between pieces of paper and joined up by lines does not stop it being a literary work.*

30 I think he is right in this. My first thought was that it would be absurd to regard a circuit diagram as a literary work, but the more one thinks about the ambit of that expression, as used in the Act, the more one is driven to the conclusion that provided it is all written down and contains information which can be read by somebody, as opposed to appreciated simply with the eye, the more one sees that that is just what it is. Similarly, musical notation is written down, but needs expressly to be taken out of the definition of `literary work`. But that which is not expressly taken out remains within it. What one has here is electrical engineer`s notation.

31 Thus it is, in my judgment, that when the defendants came to make their net list they reproduced the information which is the literary work contained in the circuit diagram.

32 Reverting to the case at hand it should be noted, presently, that the design under reference is not in itself a circuit diagram. It is, according to the plaintiffs, derived from their own schematic drawings (PB-31 and PB-32) which in turn were based on Navin`s schematic drawings (PB-35). Whatever its parentage, the plaintiffs` design contains a considerable body of technical details as would clearly qualify it to be grouped with the family of circuit diagrams. Following the reasoning in ***Anacon*** , which I endorse, I am of the view that the design herein indeed qualifies as `literary work`.

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33 Another submission by plaintiffs` counsel is that the said design is also artistic work. Artistic work is defined under s 7(1) of the Act to include:

> *(a) a painting, sculpture, drawing, engraving or photograph, whether the work is of artistic quality or not;*
>
> (b) a building or model of a building, whether the building or model is of artistic quality or not; or
>
> (c) a work of artistic craftsmanship to which neither paragraph (a) or (b) applies.

34 As regards the issue whether the design under reference is artistic work, there was little dispute between the parties that it is `artistic work` within the definition provided under the Act and it will be entitled to copyright protection so long as it satisfies the `originality` requirement.

35 Examples of drawings held to have copyright are listed by George Wei in his book, ***Law of Copyright*** (1989 Ed), para 2.18, as follows:

> *(i) design drawing of a car exhaust pipe (see* ***British Leyland Motor Co Ltd v Armstrong Patents Co Ltd****);*
>
> (ii) engineering plans and drawings of a building (see ***Lau Foo Sun v Govt of Malaysia***);
>
> (iii) design drawings of parts for a boat (see ***Dorling v Honnor Marine Ltd***);
>
> (iv) dress designs (see ***Bernstein (J) Ltd v Sidney Murray Ltd***);
>
> (v) technical drawings of a screw, a rivet, a stud, a bolt, a metal bar, a length of wire, a length of cable, a block of leather, a washer (see ***British Northrop Ltd v Texteam Blackburn Ltd***); and
>
> (vi) trade marks and logos (see KARO STEP ***Trade Mark*** and ***Schweppes Ltd v Wellington Ltd***). ***British Northrop Ltd v Texteam Blackburn Ltd*** [1974] RPC 57 at p 68, Megarry J observed:
>
> *... `drawing` includes any diagram, map, chart or plan`, and so prima facie if there is anything which can fairly be called a diagram, it is a drawing and may be the subject of copyright. It*

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> *may indeed be that some thing may be drawn which cannot fairly be called a diagram or a drawing of any kind: a single straight line drawn with the aid of a ruler would not seem to me a very promising subject for copyright. But apart from cases of such barren and naked simplicity as that, I should be slow to exclude drawings from copyright on the mere score of simplicity.*
> *...*

36 Evidence presented in this case established that Navin`s schematic diagram (PB-35) was the mother of the plaintiffs` schematic diagrams (PB-31 and PB-32), the latter was in turn used to produce the plaintiffs` design (see the testimony of Mr Soh at pp 63 and 64 of the NE). Mr Leong Deng Tong (PW-3), the plaintiffs` expert, averred that the tracings of circuit lines connecting the various components on both the plaintiffs` and the defendants` boards are 95% identical (see paras 2-5 of his affidavit BA-1/2) whereas the plaintiffs` schematic diagram (PB-31/32) was different in some respects from Navin`s schematic diagram (PB-35). The defendants` expert on the other hand claimed that the plaintiffs` printed circuit board was essentially based on Navin`s schematic diagram.

37 Drawing the court`s attention to the substantial similarities between Navin`s schematic diagrams and that of the plaintiffs, counsel for the defendants and the third party contended that inasmuch as the plaintiffs` diagrams owed its origin to Navin`s diagrams, the plaintiffs` schematic drawings could not be regarded as original, despite the minor differences between the two. In this context, there is one intriguing aspect which merits mention: the plaintiffs produced, at the trial, their schematic diagrams (PB-31 and PB-32); the defendants did not. When asked by the court where the defendants` schematic diagram was, counsel for the defendants could only say (see p 35B of the NE) that it was not in the bundle. When the same question was repeated to the third

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party`s counsel (see p 41D of the NE), he merely referred to Navin`s schematic diagrams and said that the defendants had used them.

38 It must be emphasized that the subject matter of the dispute concerns the design which appears on the printed circuit boards of the respective parties and not any schematic diagrams. A visual examination of the exhibits produced to the court, ie Navin`s board (exh D-1), a specimen Taiwanese board (exh D-3), the defendants` board (exh D-2) and the plaintiffs` board (exh P-2) immediately bring to fore that there is a sea of difference between Navin`s and the plaintiffs` boards. A non-expert comparing Navin`s board with the plaintiffs` would immediately notice that the track patterns and the placement indicators for the various components between these two boards are substantially different, whereas the defendants` board is almost identical to that of the plaintiffs. The difference between Navin`s board and the plaintiffs` is such that I am impelled to accept the plaintiffs` witnesses` testimony that much intellectual effort and some measure of creativity had gone into designing and producing the plaintiffs` board. Even though the plaintiffs` board by itself does not appear to be something particularly unique or outstanding, the end product, in my view, was, undoubtedly through the substantial effort, industry and some skill by Mr Soh. In my opinion, the plaintiffs` board had not been copied from Navin`s board, albeit, Mr Soh developed his design from Navin`s schematic diagrams by skilfully operating the requisite computer software. In ***University of London Press Ltd v University Tutorial Press Ltd*** [1916] 2 Ch 601 at pp 608-609, Peterson J had this to say:

> *... The word `original` does not in this connection mean that the work must be the expression of original or inventive thought. Copyright Acts are not concerned with the originality of ideas, but with the expression of thought, and, in the case of `literary work,` with the expression of thought in print or writing. The originality which is required relates to the expression of the*

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> *thought. But the Act does not require that the expression must be in an original or novel form, but that the work must not be copied from another work - that it should originate from the author. ...*

39 In ***Interlego AG v Tyco Industries Inc*** [1988] 3 WLR 678; [1988] 3 All ER 949, the Privy Council (per Lord Oliver) considered the foregoing statement by Peterson J and observed at p 703B [[1988] 3 All ER 949 at p 969 ***f***]:

> *That statement is, of course, not complete in itself because there may clearly be original work which makes use of material obtained by the author from pre-existing sources. Perhaps the most useful exegesis is to be found in three passages from the opinion of the Board delivered by Lord Atkinson in the Privy Council case of* ***Macmillan & Co Ltd v Cooper*** *(1924) 40 TLR 186, a case concerned with university textbooks consisting of abridgements of or excerpts from existing works with appropriate notes for students. Lord Atkinson observed, at p 188:*
>
> *`it is the product of the labour, skill, and capital of one man which must not be appropriated by another, not the elements, the raw material, if one may use the expression, upon which the labour and skill and capital of the first have been expended. To secure copyright for this product it is necessary that labour, skill and capital should be expended sufficiently to impart to the product some quality or character which the raw material did not possess, and which differentiates the product from the raw material.`*
>
> *A little later, he quoted with approval the following passage from the judgment of Story J in* ***Emerson v Davies*** *(1845) 3 Story`s US Rep 768, 778-779:*
>
> *`The question is not whether the materials which are used are entirely new, and have never been used before or even that they have never been used before for the same purpose. The true question is whether the same plan, arrangement and combination of materials have been used before for the same purpose or for any other purpose. If they have not, then the plaintiff is entitled to a copyright, although he may have gathered hints for his plan and arrangement, or parts of his plan and arrangement, from existing and known sources. He may have borrowed much of his materials from others, but if they are combined in a different manner from what was in use before ... he is entitled to a copyright. ... It is true, that he does not thereby acquire the right to appropriate to himself the materials which*

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> *were common to all persons before, so as to exclude those persons from a future use of such materials; but then they have no right to use such materials with his improvements superadded, whether they consist in plan, arrangement or illustrations or combinations; for these are strictly his own.`*

40 In ***Macmillan & Co Ltd v Cooper*** (1923) 40 TLR 186, the court in dealing with a case concerning a street directory, held that even though many of the compilations in the directory appear to possess nothing original in their parts, yet the sum total and the final product of the compilation may be considered original for the purposes of copyright.

41 Lord Oliver noted in ***Interlego*** ([1988] 3 WLR 678 at p 706E; [1988] 3 All ER 949 at p 972 ***e***) that essentially, artistic copyright is concerned with visual image. It is clear from a comparison of the plaintiffs` design with that of Navin that the differences between them are striking. Mr Soh, when cross-examined by counsel for the third party said that `a PCB layout is a very individualistic expression of the basic idea which is [a] schematic drawing for interconnecting various electronic components to perform their expected duty. No two individuals or engineers can express similar or identical ideas.` (p 79 of the NE). He added: `There are many aspects of designs to complete an electronic system; there would be in the initial phase the fabrication of ICs (integrated circuits); there would later be schematic drawings and the final phase would involve expressing the schematic into a working layout design. Later there will be stuffing the components, testing and marketing.` (p 80 of the NE).

42 Even the defendants` expert, Mr Saw Cheng Boon (DW-2), agreed that the layout and track patterns of the plaintiffs` board are different from that of Navin`s (p 118 of the NE). Having heard all the witnesses, I am disposed to accept Mr Soh`s evidence as contained in para 6 of his affidavit that the

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plaintiffs` design `was laboured and worked on` by him with a view to ensuring that `it gave maximum output and utility with the least noise interruptions and interferences` and that the said design differed from others in the market. My conclusion, after hearing all the submissions, is that there is indeed originality in the plaintiffs` design: much intellectual effort and industry had gone into the product; and it is neither a mere reproduction of Navin`s layout with minor modifications nor can it be considered an insignificant variation of Navin`s design. The visual differences in the work are substantial and significant. The contentions to the contrary by counsel for the defendants and the third party, in this regard, do not appear to focus on the actual subject matter, namely, the design, but had been directed, somewhat tangentially, at the source material, namely, schematic diagrams.

43 The test for a claim for copyright, as mentioned by Jacob J in ***Ibcos Computers Ltd & Anor v Barclays Mercantile Highland Finance Ltd & Ors*** [1994] FSR 275 (where the dispute was in relation to some computer software), is as follows:

> (1) What are the work or works in which the plaintiff claims copyright?
>
> (2) Is each such work `original`?
>
> (3) Was there copying from that work?
>
> (4) If there was copying, has a substantial part of that work been replaced?

44 Reverting to the facts of this case, questions (1) and (2) had already been dealt with; the remaining questions (3) and (4) relate to whether the plaintiffs` design had been copied by the defendants and if the answer is yes, whether it is

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substantial. In this regard, it is instructive to refer again to what Jacob J said in the ***Ibcos*** case (at pp 296-297) on the question: was there copying?

> *For infringement there must be copying. Whether there was or not is a question of fact. To prove copying the plaintiff can normally do no more than point to bits of his work and the defendant`s work which are the same and prove an opportunity of access to his work. If the resemblance is sufficiently great then the court will draw an inference of copying. It may then be possible for the defendant to rebut the inference - to explain the similarities in some other way. For instance, he may be able to show both parties derived the similar bits from some third party or material in the public domain. Or he may be able to show that the similarity arises out of a functional necessity - that anyone doing this particular job would be likely to come up with similar bits. So much is common ground between the parties. The concept of sufficient similarities shifting the onus onto the defendant to prove non-copying is well recognized in copyright law. Thus Lord Wilberforce in* ***LB Plastics v Swish*** *asked whether the inference of copying*
>
> *`could be displaced by evidence from the respondents showing how in fact they had arrived at their design and that they had not done so by copying?`*
>
> *Actually I think the proposition is not so much one of law as of plain rational thought.*

45 It should be noted that at this stage (namely `Was there copying?`) both the important and the unimportant bits of the works being compared count. Indeed it is often identity of trivial matter which traps a copyist. As Hoffmann J observed in ***Billhofer Maschinenfabrik GmbH v Dixon & Co Ltd*** :

> *`It is the resemblances in inessentials, the small, redundant, even mistaken elements of the copyright work which carry the greatest weight. This is because they are least likely to have been the result of independent design.`*

46 As mentioned earlier in these grounds, I do not accept the third party`s claim that the diskette containing the design of the plaintiffs was willingly given to him by the plaintiffs. A joint statement (exh P-1T) tendered to the court by the parties` experts, points to the view that: (1) the layout, holes, location and

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track patterns of the various components of the plaintiffs` and defendants` models are 95% substantially the same and almost identical (by observation and by placing one [board] on top of the other); (2) that a detailed investigation of track patterns show that the plaintiffs and the defendants` track patterns are 95% the same and the 5% difference in the track patterns is in fact non-functional (see paras 1 and 3 of exh P-1T, the joint statement). Additionally, the considered opinion of the plaintiffs` expert, Mr Leong, was that the plaintiffs` model can only be copied if the third party had access to the functional artwork whereas on this issue the defendants` expert had no comment to offer (see para 8 of exh P-1T). Besides the experts` opinion, a visual examination of the boards of the plaintiffs and the defendants shows striking similarities and identical closeness of layout. One would say it is about almost identical.

47 In my view, there is no mistaking that one board was copied from the other. In this connection, there is no suggestion that the plaintiffs copied the defendants` design. The defendants` version is that the third party was the person who developed the product but the third party`s claim that it was developed from the diskette handed to him by the plaintiffs having been rejected by me, it is a necessary conclusion that the defendants` layout/design was copied almost to the last detail (save for a few insignificant non-functional lines) from the plaintiffs. The failure or omission by the defendants or for that matter the third party to produce their set of schematic diagrams, further fortifies the view that there was no independent design by the third party.

48 The next argument by the defendants is based on s 69 of the Act which provides:

> *For the purposes of this Act -*

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> *(a) the making of an object of any kind that is in 3 dimensions does not infringe the copyright in an artistic work that is in two dimensions; and*
>
> (b) the making of an object of any kind that is in two dimensions does not infringe the copyright in an artistic work that is in 3 dimensions,
>
> *if the object would not appear to persons who are not experts in relation to objects of that kind to be a reproduction of the artistic work.*

49 The foregoing provisions require no paraphrasing. As respects copyright infringement in different dimensions, the said section provides for a defence popularly known as `non-expert`s defence` and it owes its origin to s 9(8) of the UK Copyright Act of 1956, enacted following a recommendation by the Gregory Committee on Copyright (Cmnd 8662) that functional designs should receive no greater protection under copyright law than that which they were entitled to receive as a registered design (see ***George Wei*** at pp 173-174, para 7.30).

50 How the court should approach this non-expert`s defence is enunciated by the House of Lords in ***LB (Plastics) Ltd v Swish Products Ltd*** [1979] FSR 145, where Lord Wilberforce reiterated at p 152:

> *... The [defence] applies by way, and only by way of defence, ie after the issue of copying has been decided, and on the assumption that it has been decided in favour of the plaintiff. It is for the defendant to make it good. In relation to the subject matter, it was, as both sides seem to have accepted, for the judge, placing himself in his position of a non-expert ... to decide whether the respondents` components appeared, or rather did not appear, to be reproductions of the appellants` drawings. For this purpose he must be entitled to compare the objects with the drawing, and, in my opinion, to take account of any written matter on the drawing. ... In performing this task the judge must also be credited with some ability to interpret design drawings ... But the comparison to be made is, as I understand it, a visual comparison. The (non-expert) judge should not repeat the process which, as judge with the assistance of expert and other*

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> *witnesses, he has gone through in deciding whether there has been copying or not. ...*

51 In ***British Leyland Motor Corp & Anor v Armstrong Patent Co Ltd & Anor*** [1986] AC 577, [1986] 2 WLR 400, the House of Lords was concerned with an instance of indirect copying of some motor car exhaust pipes by the defendant. A defence based on s 9(8) of the UK Copyright Act of 1956 was rejected by the House. The House held that for the purposes of the Copyright Act 1956, the manufacture of a purely functional object was capable of being a `reproduction` in breach of the copyright in the mechanical drawing of the object if a non-expert recognized the object as a copy of the drawing; and that, accordingly, the manufacture of exhaust pipes although achieved by indirect copying, amounted to an infringement by the defendants of the plaintiffs` copyright in the drawings.

52 In the case of ***Merlet v Mothercare plc*** [1986] RPC 115, the defendant had copied an infant`s rain cape designed by the plaintiff. On the question of infringement of drawings made by the plaintiff for the product, the Court of Appeal held that the s 9(8) defence succeeded because a lay person would not be able to recognize the plaintiffs` drawing by comparison with garments made by the defendant.

53 In the present case, any layman -of course with an appreciation for details - would immediately be able to recognize that not only were the drawings of the plaintiffs copied with utmost particularity, so was the end product, ie the defendants` modem appearing exactly to be a replica of the plaintiffs` (save for the size of the transformer, the position of the speaker and one or two insignificant lines). Quite unlike the situation in ***British Leyland*** where the defendants were said to have produced their goods by way of some indirect

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copying by employing a process known as reverse engineering, the present case bespeaks an endeavour of direct copying.

54 Section 69 of the Act is put in place to encompass instances of three-dimensional objects being manufactured from two-dimensional artistic work and the manufacture of two-dimensional objects from three-dimensional artistic work: The section is not intended to cover cases where direct copying is involved and in my opinion, the defence raised under s 69 of the Act fails.

55 It should be remembered that copyright has often been described as the right to stop others from copying one`s work. In this connection, it is instructive to remember what Lindley J expounded in ***Hanfstaengl v Empire Palace*** [1894] 3 Ch 109 at p 128 in the following terms:

> *Copyright, like patent right, is a monopoly restraining the public from doing that which, apart from the monopoly, it would be perfectly lawful for them to do. The monopoly is itself right and just, and is granted for the purpose of preventing persons from unfairly availing themselves of the work of others, whether that work be scientific, literary, or artistic. The protection of authors, whether of inventions, works of art, or of literary compositions, is the object to be attained by all patent and copyright laws. The Acts are to be construed with reference to this purpose. On the other hand, care must always be taken not to allow them to be made instruments of oppression and extortion. ...*

56 As ***George Wei*** puts it (at p 173, para 7.30):

> *The question of whether infringement has occurred depends of course on the substantiality of the copying. Proof of a strong objective similarity coupled with opportunity to copy, raises at least an inference of copying. In deciding the question of infringement expert evidence on the degree of similarity can be received.*

57 The case at hand in my view is a stark example of outright copying. Experts have testified that the similarities are 95% but as a notional non-expert,

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it appears to me that there is an unmitigated act of substantial reproduction of not only the plaintiffs` design but also the end product, namely, the Comfax CF-29SR. There is little doubt that the third party had expropriated the plaintiffs` design without the latter`s authority and consent.

58 In the premises, I hold that the plaintiffs have proved their case on a balance of probabilities and that copyright subsists in the PCB ***layout/artwork design*** for the plaintiffs and that the defendants have infringed the said copyright. Consequently, the plaintiffs are entitled to the injunctions prayed for and for delivery up to them of all existing infringing copies of the defendants` Nimrod fax/data modem 9624 and the manuals thereof. There will be judgment accordingly.

59 Now, turning to the defendants` claim for indemnity against the third party, it was clear to me from the way the defence was presented, strategies adopted and arguments advanced, that there was not only substantial convergence of interests between the defendants and third party but in fact both of them were speaking with one voice. The issues and contentions, inter se between them, appear more in the nature of shadow boxing than real and the manner of the cross-examination between themselves was also decidedly superficial. At any rate, apart from the pleadings which contained a prayer for indemnity and a cursory one-sentence submission (see para 96 of the defendants` written submission), nothing tangible was presented to the court to justify the granting of the prayer. In the circumstances, I make no order on the defendants` prayer for indemnity against the third party.

60 What then are the respective liabilities of the defendants and the third party to the plaintiffs?

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61 As I have mentioned earlier, the present dispute relates to a modem with 9,600bps. I was informed that such modems are things of the past and the present generation of modems is in the category of 28,800 bps. Though the plaintiffs` pleadings include a prayer for damages, (and in the alternative, an account of profits), curiously the pleadings lack particulars. Be that as it may, I am inclined to accept the submission made on behalf of the defendants that when they embarked upon this project with the help of the third party, they were not made aware of any infringement on the part of the third party. Additionally, the defendants by also not contesting the plaintiffs` motion for injunction at the outset, make themselves eligible for the mitigating provisions of s 119(3) of the Act which reads:

> *... Where, in an action for infringement of copyright, it is established that an infringement was committed but it is also established that, at the time of the infringement, the defendant was not aware, and had no reasonable grounds for suspecting, that the act constituting the infringement was an infringement of the copyright, the plaintiff shall not be entitled under this section to any damages against the defendant in respect of the infringement, but shall be entitled to an account of profits in respect of the infringement whether any other relief is granted under this section or not.*

62 Consequently, the plaintiffs shall only be entitled to an account of profits in respect of the infringement and there will be an order accordingly for an account of profits before the registrar.

63 As respects costs, the learned authors of ***Atkin`s Forms and Precedents*** (1990 Ed) Vol 37, at p 347 para 17, state that although there is no rule in the High Court which expressly empowers the court to order parties in third party proceedings to pay costs, nevertheless, the High Court has full and ample power to make such orders for costs between the plaintiffs, defendants and third and subsequent parties as the justice of the case may require. Thus, the third party

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may be ordered to pay the plaintiffs` costs: see ***Edison & Swan United Electric Light Co v Holland*** (1889) 41 Ch D 28 (CA); and ***Edginton v Clark & Anor (Macassey & Ors (trustees of Whitley House Trust), third parties)*** [1963] 3 All ER 468 (CA). As I perceive this case, it is a contest between the plaintiffs on the one hand and the third party on the other, the defendants seeking shelter behind the shadow of the third party. The issues are fought decisively on the respective rights and claims of the plaintiffs and the third party. Given this scenario, I order that the third party shall bear the costs of the plaintiffs in this action and there be no order of costs between the third party and the defendants.

64 Order accordingly.

MPH Rubin J

S Santhiran (Santhiran & Pnrs) for the plaintiffs
Gopal Krishnan Nair (G Raman & Pnrs) for the defendants
GB Vasu (Wee Ramayah & Pnrs) for the third party

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