

Main-Line Corporate Holdings Ltd v United Overseas Bank Ltd and another (First Currency  
Choice Pte Ltd, third party)  
[2011] SGHC 268

**Case Number** : Suit No 806 of 2004, Summons No 3805 & 3876 of 2010 and 978 & 1232 of 2011  
**Decision Date** : 20 December 2011  
**Tribunal/Court** : High Court  
**Coram** : Yeong Zee Kin SAR  
**Counsel Name(s)** : Wong Siew Hong (Infinitus Law Corporation) for the plaintiff; Kannan Ramesh with Ms Cheryl Koh (M/s Tan Kok Quan Partnership) for the first defendant; Koh Chia Ling with Ms Oh Pin Ping (M/s ATMD Bird & Bird LLP) for the second defendant / third party.  
**Parties** : Main-Line Corporate Holdings Ltd — United Overseas Bank Ltd and another (First Currency Choice Pte Ltd, third party)

*Civil Procedure – Account of profits*

20 December 2011

Judgment reserved.

**Yeong Zee Kin, Senior Assistant Registrar:**

1 The plaintiff is Main-Line Corporate Holdings Limited (Main-Line) who is the registered proprietor of Singapore Patent No 86037, entitled “Dynamic Currency Conversion for Card Payment Systems”. This patent covers the method and system for automatic detection of the country of issue of a credit card, charge card or debit card (hereinafter referred to collectively as “credit card”), converting the value of a credit card transaction from the currency of the country where the point of sale (POS) system is located (the “local currency”) to the currency of the credit card’s country of issue (the “home currency”) and presenting both values at the POS to the card holder for his selection of the currency in which he wishes to make payment for the transaction.

2 The first defendant, United Overseas Bank Limited (UOB) is a major local bank which provided a system similar to Main-Line’s system to merchants in its credit card network. The system provided by UOB was obtained from the second defendant, First Currency Choice Pte Ltd (FCC), which was in the business of providing similar dynamic currency conversion payment services.

**Procedural history**

3 Since its commencement in 2004, this case has generated a string of decisions as it meandered through the court system. The decisions marked significant steps in the procedural history of this case and a summary of these decisions is necessary to provide the factual backdrop for the current set of interlocutory applications.

4 *Main-Line Corporate Holdings Ltd v United Overseas Bank Ltd and another (First Currency Choice Pte Ltd, third party)* [2007] 1 SLR(R) 1021; [2006] SGHC 233 is the decision of Tay Yong Kwang J after the trial on liability. The defendants’ challenge to the validity of the Main-Line’s software patent failed. UOB was found to have infringed Main-Line’s software patent when it used the dynamic currency conversion system provided by FCC and offered FCC’s system to the merchants in its credit card network. FCC was found liable for using its infringing system and offering it to UOB.

Having found liability, Tay J ordered that an assessment of damages or an account of profit should be conducted after Main-Line has made its election on which of these remedies it wished to pursue against the defendants. On appeal, the Court of Appeal upheld Tay J's decision: *First Currency Choice Pte Ltd v Main-Line Corporate Holdings Ltd and another appeal* [2008] 1 SLR(R) 335; [2007] SGCA 50.

5 Having succeeded in establishing liability, Main-Line sought discovery of documents from the defendants in order to make its election: *Main-Line Corporate Holdings Ltd v United Overseas Bank Ltd and Another* [2008] SGHC 55. After reviewing the documents disclosed, Main-Line elected different remedies against each of the defendants: against UOB, it elected to proceed for an account of profits, while it elected for an assessment of damages against FCC. The defendants challenged Main-Line's election of different remedies against each defendant. This challenge failed. Belinda Ang J held that the remedies which Main-Line was entitled to were cumulative as each of the defendants were liable for different acts of infringement: *Main-Line Corporate Holdings Ltd v United Overseas Bank Ltd and another (First Currency Choice Pte Ltd, third party)* [2010] 1 SLR 189; [2009] SGHC 232. On appeal, the Court of Appeal upheld Belinda Ang J's decision.

6 Main-Line then proceeded with an application for interim payment against UOB. An order for interim payment into court was made by the assistant registrar. This order was set aside on appeal on the basis that it was not clear that the quantum sought for interim payment was an amount below which an account of profit would not go: *Main-Line Corporate Holdings Ltd v United Overseas Bank Ltd and Another* [2009] SGHC 212. On further appeal to the Court of Appeal, Chao Hick Tin JA felt that it would unduly prejudice Main-Line if interim payment was not ordered solely because UOB was not able to ascertain its costs incurred in earning its commission. UOB had disclosed that it earned commissions amounting to \$3.1 million. Although it did not keep track of the actual costs incurred in earning this commission, it was able to provide an estimate of the profits at \$1.9 million using income/expense ratios during the discovery application in order to enable Main-Line to make its election. Chao JA felt that the burden laid with UOB to offer an alternative basis of determining the quantum for interim payment if it did not agree with the use of the income/expense ratios. Since it was not able to do so, interim payment of \$1.9 million was ordered to be paid to Main-Line: *Main-Line Corporate Holdings Ltd v United Overseas Bank Ltd* [2010] 2 SLR 986; [2010] SGCA 9.

7 During the course of 2009 and 2010, Main-Line and the defendants commenced discovery for the post-liability stage of the proceedings. Multiple discovery and interrogatory applications were fought. However, as the pleadings filed by parties for the trial on liability contained scant particulars in relation to the post-liability stage of the proceedings – there were simply bare claims for assessment of damages or an account of profits, and equally bald denials – parties had difficulties ascertaining the scope of discovery and interrogatories. This no doubt contributed to the multiple attempts by Main-Line for further discovery and interrogatories. Eventually, parties were directed to file pleadings for this post-liability stage of the proceedings in order to ascertain each party's position in relation to the remedies sought.

8 Parties' positions crystallised sufficiently after pleadings for the post-liability stage of the proceedings had been filed. Thereafter, the following applications were filed:

- (a) Summons No 978 of 2011 is FCC's application to strike out certain paragraphs of Main-Line's statement of case against FCC;
- (b) Summons No 1232 of 2011 is UOB's application to strike out certain paragraphs of Main-Line's statement of case against UOB;

(c) Summons No 1679 of 2011 is Main-Line's application for further and better particulars on certain paragraphs of FCC's statement of defence; and

(d) Summons No 1680 of 2011 is Main-Line's application for further and better particulars on certain paragraphs of UOB's statement of defence.

9 Before me, submissions also encompassed two earlier applications which had been filed before pleadings for this post-liability stage of the proceedings had been ordered:

(a) Summons No 3805 of 2010, which was UOB's application for determination of preliminary issue of what amounts to "profits"; and

(b) Summons No 3879 of 2010, which was Mainline's application under Order 43 of the Rules of Court for an account to be drawn up by UOB.

10 In the course of arguments, it was agreed that the applications in Summons No 1679 and 1680 of 2011 for further and better particulars be deferred until after the more fundamental issues (as against UOB) of what is accountable as profits is resolved and (as against FCC) the heads of damages.

### **Issues arising from the account of profits against UOB**

11 In this part of these grounds, I deal with issues that relate to the account of profits claimed against UOB.

### **The flow of funds in cross-border multi-currency credit card transactions**

12 The workings of the software patent that is central in this matter has been detailed in prior decisions. The flow of funds in a cross-border multi-currency credit card transaction, however, has to be understood in order to proceed with an account of any profits derived from the infringing acts. There is no dispute between parties about how a cross-border multi-currency credit card transaction is carried out, although different labels and characterisation of the economic effects of the flow of funds were employed by parties. It is therefore possible to provide a summary of a typical cross-border multi-currency credit card transaction as follows. First, the following roles are typically involved:

(a) The local merchant;

(b) The acquiring bank (in our case, UOB);

(c) The card scheme (without going into details, this is the umbrella global organisation that, *inter alia*, assists in the settlement of cross-border multi-currency credit card transactions);

(e) The issuing bank; and

(f) The foreign credit card holder.

13 In order to understand how funds flow, we must start first with a traditional cross-border credit card transaction. The foreign credit card holder presents his credit card to the local merchant. The transaction details are in Singapore currency. Once approved, this transaction is submitted by the local merchant to the acquiring bank, eg UOB. The acquiring bank will settle with the local merchant

by paying it an amount that is calculated by deducting the Merchant Discount Rate (MDR) of 1.2% from the transaction amount. This is settled in Singapore currency.

14 The acquiring bank then submits the full transaction value to the card scheme. The card scheme will settle the transaction with the issuing bank in the home currency of the foreign credit card. In this settlement, a 3% Uplift is applied to the transaction value in the home currency of the foreign credit card. This is the amount that the foreign card holder will have to pay to the issuing bank after he reaches home.

15 With the acquiring bank (eg UOB), the card scheme will settle in Singapore currency. The acquiring bank will be paid an amount that is calculated by deducting the Interchange Reimbursement Rate (IRF) of 0.8% from the transaction amount. As can be seen, all settlements in Singapore are in the local currency, and the acquiring bank (eg UOB) earns 0.4% from the transaction, being the difference between the IRF and MDR.

### **How the FCC system works in cross-border multi-currency credit card transactions**

16 The FCC system introduces another party to the mix. Hence, for the FCC system, the following roles are involved:

The local merchant;

(b) UOB, as acquiring bank;

(c) FCC;

(d) The card scheme;

The issuing bank; and

The foreign credit card holder.

17 When the foreign credit card holder presents his credit card in order to make payment, the POS system at the local merchant will offer him a choice of paying in either the local (ie Singapore) currency or in his home currency. In automatically detecting the home currency based on the credit card presented at the POS system, and presenting the transaction value in both local and home currencies, the FCC system was found to have infringed Mainline's software patent. If the foreign card holder chooses to make payment in the local currency, the transaction will proceed in the usual manner (as described in the preceding paragraphs).

18 If the foreign credit card holder chooses to make payment in the home currency of the foreign credit card (we will refer to this as "a converted transaction"), the following takes place. The transaction is denominated in the home currency of the foreign credit card when it is submitted to UOB. The Uplift of 3% to the transaction value is applied and the uplifted amount in the home currency of the foreign credit card is presented to the foreign credit card holder at the POS system.

19 UOB will submit this uplifted amount, again in the home currency of the foreign credit card, to both the card scheme and FCC. FCC will convert the original transaction amount (ie less the Uplift) into the local (ie Singapore) currency and deduct the MDR of 1.2%, and it will then inform UOB what this value is in local (ie Singapore) currency. UOB will pay this amount to the merchant in local (ie Singapore) currency.

20 The card scheme will settle with UOB by paying it the uplifted amount, less IRF of 0.8% calculated based on the uplifted amount. This is settled in the home currency of the foreign credit card. UOB then tops up the IRF and pays the uplifted transaction value to FCC in the home currency of the foreign credit card. In return, FCC converts the original transaction value into local (ie Singapore) currency and pays this to UOB.

21 Hence, UOB continues to earn its 0.4% (being the difference between the MDR and IRF), albeit that it would have topped up the IRF in a home currency of the foreign credit card. Apart from this, UOB also earns a commission of about 0.45–0.65% in accordance with the scale of commission set out in the Multicurrency Exchange Agreement between UOB and FCC.

22 In summary, the FCC system essentially converts a credit card transaction made in Singapore into one made in the home currency of the foreign credit card. In doing so, the Uplift in a converted transaction is effectively shifted to Singapore and earned by FCC, instead of the usual case where the Uplift is earned in the home country of the foreign credit card by the issuing bank. Further, the FCC system also shifts the foreign exchange risks to FCC. FCC earns the Uplift and in return, UOB earns a commission. UOB continues to keep its traditional share of the difference between the MDR and IRF.

### **What is accountable as profits?**

23 Mainline seeks for an account of profits against UOB. From a survey of the cases placed before me, it appears to me that the approach of the courts in taking an account of profits is abundantly clear. In an account of profits, the courts are concerned with the profits actually made by the infringer which is derived from the infringement. The premise of this remedy is the disgorgement of benefits which the infringer ought not retain: see *Dart Industries Inc v Decor Corp Pty Ltd and Another* 116 ALR 385, at p 387 –

An account of profits was a form of relief granted by equity whereas damages were originally a purely common law remedy. ... [E]ven now, an account of profits retains its equitable characteristics in that a defendant is made to account for, and is then stripped of, profits which it has dishonestly made by the infringement and which it would be unconscionable for it to retain. An account of profits is confined to profits actually made, its purpose being not to punish the defendant but to prevent its unjust enrichment.

24 Hence, “the maximum payment which can be ordered is the total profit made by the defendant”: *per* Laddie J in *Celanese International Corp v BP Chemicals Ltd* [1999] RPC 203, at [36]. It has also been observed (albeit in the context of a contractual right to an account of profits) that an order for an account of profits will not be made where it appears that no profits have been made: *Friss & Anor v Casetech Trading Pte Ltd & Ors* [2000] 2 SLR(R) 511, at [39].

25 The amount accountable as profits may be reduced in two ways. First, deductions of costs and expenses (ie outgoings) from receipts (or revenue) are allowed in arriving at the quantum accountable as profits. This approach was adopted by the Court of Appeal in its decision on interim payment where it took into account the apportioned indirect costs (in the form of income/expense ratios) in arriving at its decision of the quantum of interim payment to be made: see *Main-Line Corporate Holdings Ltd v United Overseas Bank Ltd* [2010] 2 SLR 986; [2010] SGCA 9, at [22] –

... it could not be disputed that revenue, in the form of commissions, was earned by UOB from the operation of the FCC System. The uncertainty related to the expenses which ought to be deducted from that revenue for the purposes of ascertaining the net profit made by UOB. ...

26 Outgoings may take the form of direct costs and expenses or they may take the form of indirect costs and expenses (eg overheads). For indirect costs and expenses, the court will have to determine which of such items are attributable to the infringing acts and the proportion which ought to be allowed: see *Dart Industries Inc v Decor Corporation Pty Ltd and Another*. For example, in the Court of Appeal's decision in this case on interim payment, it took into account attributable indirect costs and expenses in the form of income/expense ratios provided by UOB: see *Main-Line Corporate Holdings Ltd v United Overseas Bank Ltd* [2010] 2 SLR 986; [2010] SGCA 9, at [24] & [26].

27 The second way in which the quantum accountable as profits may be reduced is by an apportionment of profits. Where profits are generated by a chain of activities and the infringing acts occupy a part this chain, the patent owner is not entitled to the entire profits but only to a portion of the profits attributable to the infringement. "Hence, once it is conceded or proved that an apportionment is appropriate, the course [*sic*] must do its best to split the profits between infringing and non-infringing parts": *per* Laddie J in *Celanese International Corp v BP Chemicals Ltd* [1999] RPC 203, at [48].

28 The question that arises then is what are the receipts and outgoings in the FCC system. In order to answer this question, I found it useful to look at the flow of funds from the perspective of UOB, the party from whom an account is required. For a converted transaction, the receipts would be as the following:

- (a) From the card scheme, the uplifted value less IRF in the home currency of the foreign credit card;
- (b) From FCC,
  - (i) The transaction value in the local (ie Singapore) currency; and
  - (ii) The commission of in accordance to the Multicurrency Exchange Agreement.

29 The outgoings would be the following:

- (a) To the merchant, the transaction value less MDR in the local (ie Singapore) currency;
- (b) To FCC, the uplifted amount in the home currency of the foreign credit card;
- (c) Direct costs and expenses which UOB incurred in using the FCC system; and
- (d) Indirect costs and expenses.

30 It is therefore possible for me to deal with the related summonses in Summons 3805 and 3876 of 2010, and Summons 1232 of 2011 together. Summons 3805 of 2010 was filed before pleadings were ordered and it sought to determine the preliminary issue of the scope of profits which is accountable. After pleadings were filed, Summons 1232 of 2011 was filed which basically re-cast the same issues in the framework of a striking out application. Summons 3876 of 2010 is an application seeking directions for the drawing up of a set of accounts from which the quantum accountable as profits may be determined.

31 During submissions, it was argued by UOB that the only accountable profit was the commission. Attempts were made to show that the rest of the flow of funds was accounted for. As noted in the summary of how the FCC system works, the flow of funds took place in different currencies, unlike a

typical cross-border transaction which did not make use of the FCC system (which I shall refer to as an unconverted transaction). In an unconverted transaction, the receipts and outgoings were all settled in the local (ie Singapore) currency. This made it possible to net off matching receipts and outgoing flows of funds.

32 For converted transactions, I do not think that this is possible for various reasons. First, receipts and outgoings were made in different currencies. Second, receipts and outgoings took place on different days. To my mind, I do not think that it is possible to ignore the daily fluctuations of exchange rates, especially given the potentially large amounts involved. No expert evidence had been proffered at this stage to provide a basis to support the argument that it is acceptable accounting practice to net off matching receipts and outgoings *notwithstanding that they are in different currencies and they take place at different times*. However, I would not at this point make any firm determination that netting off of matching receipts and outgoings cannot be made in this case. If UOB is able to provide a method of netting off matching receipts and outgoings, taking into account the differences in time, currencies and foreign currency exchange rates, and which accords with acceptable accounting practice, I am prepared to entertain submissions. This can be dealt with when they draw up the accounts.

33 I turn now to the specifics of the striking out application. There were three main heads of claim for accounting that UOB applied to strike out: (a) Uplift, (b) variance and (c) MDR from new and retained merchants attributable to the FCC system. For the Uplift, I think that the position is clear based on the reasons set out in the preceding paragraphs. The portions of the statement of case are to stand as the Uplift is accountable as part of the receipts.

34 There was also a claim for variance which is one of the subject matter of the striking out application. UOB had proffered the explanation that this head of claim probably arose from Mainline's mis-reading of certain passages in affidavits filed by UOB. After clarification of the facts, Mainline had, in oral arguments, all but abandoned this head of claim for accounting. Hence, I ordered that this head of claim for accounting be struck off.

35 Finally, Mainline had also made a claim for profits arising from MDR earned from new merchants and existing merchants who were retained by virtue of the multicurrency exchange facility provided through the FCC system. This head of claim should be allowed to stand. However, the ambit is restricted to an accounting of the profits which are derived from infringement. In other words, MDR that were earned from unconverted transactions cannot be claimed. Further, the mere offer of the FCC system for use would not, to my mind, result in any profits. Even if new merchants were recruited or existing merchants retained, no profits, *which are accountable by reason of infringement*, will arise until the merchant uses the FCC system. Offering for use may be an infringing activity giving rise to damages, but we are now concerned with ascertaining what profits were derived from the activity. The position may be different had damages been sought from UOB. Be that as it may, this head of claim is allowed to stand as it falls within the scope of accounting that has been ordered.

36 I now turn to summons 3876 of 2010. This is Mainline's application for an account to be drawn up by UOB. The overall scope of the account must fall within the scope of liability established in Tay Yong Kwang J's judgment on liability as upheld in the Court of Appeal. Hence, only converted transactions will come within the scope of the accounts to be drawn up by UOB. The time period is from the date on which UOB had knowledge of the infringement until the date when UOB stopped using the FCC system. The ambit of receipts and outgoings which should be drawn up have been set out in paragraphs 28 and 29 above, subject to confirmation as to whether it is acceptable accounting practice to net off matching receipts and outgoings which take place in different currencies.

37 Lastly, an issue was raised as to whether the accountable profits may be apportioned. The argument was that since only a certain part of FCC's system is infringing, not all profits from converted transactions are accountable. Hence, counsel for defendants wished to reserve the right to make submissions on this point at the accounting of profits hearing. I had noted that apportionment is one of two ways in which the quantum accountable as profits may be reduced. As the issue of apportionment was not fully argued before me, this reservation was duly noted. At the accounting of profits hearing, submissions may be made on whether there can be apportionment and, if possible, the appropriate basis for apportionment.

38 UOB was directed to lodge its account once it has been drawn up in accordance to the order made above; and the account has to be duly verified by affidavit. Mainline and FCC will thereafter file notices of objections to specific items in the accounts or omissions from the accounts. These will be duly supported by affidavits. Thereafter, further directions will be given for the accounting of profits hearing.

### **Infringing use outside jurisdiction**

39 In this final part, I deal with issues relating to the claim for damages against FCC.

40 Mainline's claim against FCC is for damages arising from the infringement, and not for an account of profits. FCC had applied to strike out Mainline's claim for infringing use of the FCC system outside Singapore. After considering further submissions, I allowed the application and ordered that this head of damage be struck out.

41 Mainline's attempt to expand the scope of the judgment on liability is mischievous. I adopt fully the submissions made by counsel for defendants. In essence, the ambit of damages to be assessed in this post-liability stage of the proceedings is determined by the scope of infringement determined during the trial on liability. The trial judge cannot at law give judgment for matters not pleaded. Claims for infringing use outside jurisdiction, in particular by a bank in Thailand, is nowhere to be found in Mainline's pleadings for the trial on liability. Neither the issue of use by foreign banks nor the offer for use by FCC to foreign banks was raised at the trial on liability. Based on the evidence adduced at the trial, liability (as against FCC) that was established is limited to the use by FCC and offer for use by FCC to UOB.

42 There is also the doctrine of merger under which FCC's cause of action has merged with the judgment on liability. At this post-liability stage of the proceedings, I cannot exceed the four corners of the order on liability made by the trial court. Hence, I ordered that this head of damage be struck out.

### **Aggravated or exemplary damages**

43 Finally, FCC also applied to strike out the head of claim for aggravated or exemplary damages. For the purpose of deciding this interlocutory application, I do not think that I need to recite in detail the arguments put forth by both sides. I summarise the gist of the arguments that each side has put forward.

44 Mainline's claim for aggravated or exemplary damages – as pleaded in its Statement of Case against FCC – is based on the nature, gravity, mode and extent of FCC's infringing conduct. The strongest basis for Mainline's claim, as I see it, appears to be based on a passage from *Terrell on the Law of Patents* (17<sup>th</sup> Edition), where it was noted, at 19–58, that:

... [I]t has been held that a claim for exemplary damages is not available to a claimant. However this decision may no longer be good law having regard to the subsequent decision of the House of Lords in *Kuddas v Chief Constable of Leicestershire* [2002] 2 AC 122 (overruling *AB v South West Water Services* [1993] QB 507). Thus exemplary damages may be available in a patent infringement action where the case falls within one of the three categories referred to by Lord Devlin in *Rookes v Barnard*, namely: (1) Oppressive, arbitrary or unconstitutional actions by the servants of government, (2) *Where the defendant's conduct has been calculated by him to make a profit for himself which may well exceed the compensation payable to the plaintiff*, or (3) Where a statute expressly authorises the same. [Emphasis mine.]

45 Mainline had sought an account of profits from UOB and damages from UOB. From the preceding account of how the FCC system works, it is evident that the larger share of the profits may well reside with FCC, and not UOB. Hence, the quantum of damages which Mainline may eventually recover may not be as significant as it had originally envisaged, when it made the election of remedies. It is therefore not inconceivable that Mainline is now seeking to make out the argument that falls within the second category identified in *Terrell*.

46 FCC, argues against this on the basis of *Catnic Components Ltd v Hill & Smith Ltd (No 2)* [1983] FSR 512, which is the same case cited by the authors of *Terrell* to have held that claims for exemplary damages were not available to claimants in patent actions. FCC argues that since *Catnic* was decided after the 1964 case of *Rookes v Barnard* – on which the authors of *Terrell* depend for their classification of when exemplary damages may be awarded – exemplary damages are not available for patent infringement. Further, FCC argues that there is no room for a common law right to exemplary damages under the Patent Act.

47 The authors of *Terrell* considered both *Catnic* and *Kuddus* in the passage cited above. Without expressing any views on this issue, I am not convinced that Mainline's claim for aggravated or exemplary should be struck out at this stage. On balance, I see this to be a legal issue which ought properly to be ruled on at the accounting of profits hearing, after the relevant facts have been established and full arguments on the law. Therefore, I did not think that this head of damage should be struck out and accordingly, I dismissed this prayer.

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