

## SUPERIOR COURT

CANADA  
PROVINCE OF QUEBEC  
DISTRICT OF MONTREAL

N° : 500-05-070786-023

DATE : January 10, 2020

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**PRESIDING: THE HONOURABLE GARY D.D. MORRISON, J.S.C.**

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**HEWLETT-PACKARD FRANCE**  
Plaintiff

v.

**MATROX GRAPHICS INC.**  
Defendant

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### JUDGMENT

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#### 1- **OVERVIEW**<sup>1</sup>

[1] Plaintiff Hewlett-Packard France ("HPF") seeks an award of damages in the amount of \$24,665,429.30, representing the Canadian dollar equivalent of US\$15,523,588.20, against Matrox Graphics Inc. ("Matrox") in relation to the sale of defective computer graphics cards.

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<sup>1</sup> A Table of Contents is annexed to the judgment, forming part thereof.

[2] Matrox does not dispute the fact that the graphic cards it sold to HPF contained a defective memory component ("EEPROM")<sup>2</sup>, which it had acquired from STMicroelectronics Inc. ("STM").<sup>3</sup>

[3] It is also not in dispute that as a result of the defective component, certain Matrox graphic cards installed in Hewlett-Packard computers on a worldwide basis malfunctioned.

[4] What is essentially in dispute is the calculation and recoverability of the damages suffered by HPF as a result of the defective Matrox graphic cards.

## **2- CONTEXT**

[5] The legal saga involving the parties began in early 1998 when HPF sent a request for quotation<sup>4</sup> to Matrox for graphic cards to be used in its new Kayak and Vectra personal computers. Matrox replied with a proposal for its G-100 and G-200 graphic cards<sup>5</sup>. Those graphic cards contained STM's EEPROM component.

[6] HPF is the corporate entity which sought the Matrox proposal. It was the Hewlett-Packard subsidiary then responsible for the worldwide Business Desktop Division ("BDD"), operating primarily in Grenoble, France. BDD was the division principally responsible for Hewlett-Packard's Kayak and Vectra computers that are central to the present litigation.

[7] Thus began, starting in late 1998, the installation worldwide of Matrox's G-100 and G-200 graphic cards in certain Hewlett-Packard personal computers.

[8] In the Spring of 1999, HPF reported that a high number of failures were occurring on an unpredictable random basis, with certain Kayak and Vectra computer screens suddenly going totally black. By June 1999, HPF considered the problem to be "epidemic".

[9] As early as May 2000, HPF sent Matrox a letter of demand containing a monetary claim<sup>6</sup> identifying damages at US\$6.2 million.

[10] An initial law suit against Matrox as regards the graphic cards was taken before the United States District Court, Eastern District of California, but it was replaced by the

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<sup>2</sup> Electronically Erasable Read Only Memory Device, known as an EEPROM.

<sup>3</sup> The claim by Matrox against STM has been settled out of court prior to being heard on the merits.

<sup>4</sup> Exhibit P-1.

<sup>5</sup> Exhibit P-2.

<sup>6</sup> Exhibit P-4.

present action after a successful jurisdictional debate in favour of Quebec as an alternative forum.

### **3- QUESTIONS TO BE DECIDED**

[11] What the Court need decide is essentially whether or not to award damages and, if so, for what amount.

[12] This entails a determination of the following issues:

- the applicable law;
- the evaluation of damages, and the conflicting views of the experts;
- the right of HPF to claim worldwide damages;
- the duty to mitigate;
- foreign currency conversion date;
- interest and indemnity starting date;
- claim for compound interest; and
- recovery of expert fees.

[13] Prior to commencing its analysis as to the evaluation of damages, the court will determine the applicable law. Then, it will need to decide an objection raised by Matrox as regards the production of extracts from an HPF database, which is crucial to the calculation of damages.

[14] The objection also touches in part upon the duty to preserve evidence, and this given that the database in question no longer exists. Matrox argues that since the database no longer exists and cannot be examined by all experts, HPF's claim should be dismissed outright.

### **4- APPLICABLE LAW**

[15] HPF frames its claim on the basis of the Quebec *Act respecting the United Nations Convention on Contracts for the International Sale of Goods*<sup>7</sup>. Article 1 of the *Act* states that the U.N. Convention ("CISG"), which was originally adopted in 1980, has force of law in Quebec and has effect from the date determined under its provisions.

[16] According to the United Nations Commission on International Trade Law (UNCITRAL), Canada accessioned to the CISG in April 1991, with it coming into effect as of May 1, 1992.<sup>8</sup>

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<sup>7</sup> CQLR, c. C-67.01.

<sup>8</sup> Internet site: [www.uncitral.org/uncitral/en/uncitral\\_texts/sale\\_goods/1980CISG\\_status.html](http://www.uncitral.org/uncitral/en/uncitral_texts/sale_goods/1980CISG_status.html); See also : *Mazzetta Company, I.I.c. v. Dégust-Mer inc.*, 2011 QCCA 717, at para. 16.

[17] Quebec was not included in Canada's original declaration of April 1991. The Quebec Act only came into effect on December 18, 1991.<sup>9</sup> Thereafter, Canada extended the application of CISG to Quebec by means of a subsequent declaration to UNCITRAL in April 1992<sup>10</sup>.

[18] Notwithstanding the number of years which have since passed, there appears to be little Canadian or Quebec case law, particularly in relation to the analysis of damage claims.

[19] As regards the applicability of the CISG, Article 1 (1) (a) thereof states as follows:

*This Convention applies to contracts of sale of goods between parties whose places of business are in different States:*

*(a) When the States are Contracting States;*

[20] In addition to Canada, France is also a Contracting State, and the CISG has been in effect as part of its local law since January 1, 1998.<sup>11</sup> The application of the CISG to the present matter is not contested.

[21] In the event that the seller fails to perform any of his obligations under the contract or the CISG, particularly as regards the provisions of Articles 35 and following, Article 45 thereof provides that the buyer may exercise certain stipulated rights and, as well, may claim damages as provided in Articles 74 to 77.

[22] Article 74 CISG reads as follows:

*Damages for breach of contract by one party consist of a sum equal to the loss, including loss of profit, suffered by the other party as a consequence of the breach. Such damages may not exceed the loss which the party in breach foresaw or ought to have foreseen at the time of the conclusion of the contract, in the light of the facts and matters of which he then knew or ought to have known, as a possible consequence of the breach of contract.*

[23] The parties have been unable to identify and submit Quebec case law regarding the application of Article 74. However, there does exist some case law and doctrine emanating from various contracting states to the CISG.

[24] Article 74 CISG is recognized as a general formula intended to provide full compensation for all foreseeable losses suffered as a consequence of a breach.<sup>12</sup>

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<sup>9</sup> Tableau des entrées en vigueur, [legisquebec.gouv.qc.ca/PDF/TEEV19782007fr.pdf](http://legisquebec.gouv.qc.ca/PDF/TEEV19782007fr.pdf).

<sup>10</sup> UNCITRAL Internet site, *supra* note 8.

<sup>11</sup> *Ibid.*

[25] In this regard, the CISG Advisory Council (“CISG-AC”)<sup>13</sup> has expressed the opinion that Article 74 indeed establishes the principle of full compensation and, accordingly, should be liberally construed so as to compensate the aggrieved party for all disadvantages suffered as a result of the breach.<sup>14</sup>

[26] That opinion is in keeping with the guiding principles stipulated at Article 7 (1) CISG, which reads as follows:

*In the interpretation of this Convention, regard is to be had to its international character and to the need to promote uniformity in its application and the observance of good faith in international trade.*

[27] By referring to the international character of CISG and the need to promote uniformity in its application, the clear objective is to adopt an independent regime not founded on a given State’s otherwise standard private international law.

[28] Should the Contracting States have only intended to continue to apply their forum law, there would have been no need to negotiate and sign the CISG. So too the local legislators who have adopted the CISG as part of their local law.

[29] As determined by the Quebec Court of Appeal<sup>15</sup>, in cases where the CSIG applies, the analysis of the issues must be made based on it and not, for example, on the Civil Code.

[30] As to the nature of the recoverable damages, although Article 74 provides for monetary awards in damages, including loss of profit, the nature or type of losses to be compensated is not restricted by the text of the article, so long as both causation and foreseeability exist.

[31] A broad array of damages have been recognized and awarded by foreign courts applying Article 74, including additional costs reasonably incurred as a result of defective goods being sold and delivered. In other words, the damages must result from the breach. Costs which would have been incurred “in any event” were excluded

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<sup>12</sup> *UNCITRAL Digest of Case Law on the United Nations Convention on Contracts for the International Sale of Goods*, 2016 Edition, United Nations, p. 331 (Items 2 and 5), p. 334 (Items 1, 3 and 10).

<sup>13</sup> The CISG Advisory Council is a private initiative supported by the Institute of International Commercial Law at Pace University School of Law and the Centre for Commercial Law Studies, Queen Mary, University of London.

<sup>14</sup> CISG Advisory Council Opinion No. 6, Calculation of Damages under CISG Article 74, Rapporteur: Professor John Y. Gotanda, Villanova University School of Law, Villanova, Pennsylvania, U.S.A., p. 2 (Items 1.1 and 1.2).

<sup>15</sup> *Mazzetta Company, I.I.c. v. Dégust-Mer inc.*, 2011 QCCA 717.

in an Australian decision<sup>16</sup>, but the parties do not appear to have identified a great deal of case law on that specific principle.

[32] In the Court's view, what need be established in order to successfully claim damages is that the loss must actually have been suffered and, further, been a consequence of the breach. The expression "consequence of the breach" can be used interchangeably with the expression "result of the breach", since the word "resulting" is used at Article 77 CISG (which is reproduced below at paragraph 37).

[33] As regards the burden of proof, the party claiming damages must establish both his entitlement thereto and the amount thereof.

[34] CISG-AC Opinion No. 6, expresses the following view in this regard:

*2. The aggrieved party has the burden to prove, with reasonable certainty, that it suffered loss. The aggrieved party also has the burden to prove the extent of the loss, but need not do so with mathematical precision.*<sup>17</sup>

[35] In keeping with the principle of full compensation as established by Article 74, the said opinion reflects the proper approach to be applied in Quebec to claims thereunder. A claimant must satisfy its burden of proof, but only at a level of reasonable certainty without mathematical precision. This responds fairly and equitably to the complexity of international contracts of sale.

[36] As regards the weight to be given to evidence, the dominant view is that it is not governed by the CISG and, therefore, is a matter of domestic law<sup>18</sup>, a view shared by this Court. This is particularly important in relation to expert opinion.

[37] In addition to Article 74, there is also Article 77 CISG as regards mitigation of damages, which reads as follows:

*A party who relies on a breach of contract must take such measures as are reasonable in the circumstances to mitigate the loss, including loss of profit, resulting from the breach. If he fails to take such measures, the party in breach may claim a reduction in the damages in the amount by which the loss should have been mitigated.*

[38] The burden of proof is on the defendant, the breaching party, who must actively seek a reduction in damages by establishing his entitlement thereto and the amount of

<sup>16</sup> CLOUT case No. 1132 [Federal Court of Australia (Full Court), Victoria District Registry, 20 April 2011] (*Castel Electronics Pty Ltd. v. Toshiba Singapore Pte Ltd.*) [2011] FCAFC 55, paras. 233-234.

<sup>17</sup> CISG Advisory Council Opinion No. 6, *supra* note 14 (Item 2).

<sup>18</sup> *UNCITRAL Digest of Case Law*, *supra* note 12, p. 332 (Item 12).

the reduction.<sup>19</sup> This is in keeping with the principle under the CISG that the reduction must be claimed and is, accordingly, not applied automatically.

[39] As for interest, it is provided for at Article 78 CISG, but that only relates to the price and other sums that are in arrears, which is said to be “*without prejudice to any claim for damages recoverable under article 74*”. The Court understands from Article 78 that the issue of interest payable on an award for damages, including any provision related thereto such as additional indemnity, is governed by domestic law.

[40] This is in keeping with the principle that recourse to the CISG prevails over recourse to the forum’s other domestic substantive law, although the latter shall apply where the subject matter is not governed specifically or alternatively through the general principles set forth in the CISG.

[41] In this regard, it is useful to consider Article 7 (2) CISG, which reads as follows:

*Questions concerning matters governed by this Convention which are not expressly settled in it are to be settled in conformity with the general principles on which it is based or, in the absence of such principles, in conformity with the law applicable by virtue of the rules of private international law.*

[42] Ultimately, an award in damages under the CISG will depend on a court’s evaluation of the proof on a case-by-case basis.

## **5- MATROX’S OBJECTION TO EXHIBITS P-9 TO P-9.3**

[43] At the heart of HPF’s claim are Exhibits P-9 to P-9.3, being extracts from its Grenoble Automatic CSO Evaluation System database (“GRACES”) pertaining to customer service orders (“CSO”s).

[44] The GRACES database was not created for the purposes of HPF’s claim against Matrox, nor to otherwise calculate damages. It was a database used by HPF in the normal course of business. It served as an analytical business tool for the Customer Satisfaction Group of Hewlett-Packard’s global BDD business<sup>20</sup>, based in Grenoble, France and operated by HPF. GRACES was designed to provide a warranty cost-per-unit assessment, and this so as to reduce costs, assign expenses internally and fix per-unit warranty costs, including for both of BDD’s product lines Vectra and Kayak. Monthly warranty reports would be issued through the database.

[45] In fact, HPF realized that there were problems with the Matrox graphic cards due to the data it was noticing in the GRACES reports.

<sup>19</sup> *Ibid*; see also: CLOUT case No. 1132, supra note 16, p. 48, at paras. 321-328.

<sup>20</sup> Exhibit P-71.

[46] The GRACES database no longer exists. It was retired, destroyed or migrated into another database around the time when Hewlett-Packard merged with Compaq in 2004. At that time, many related work functions were transferred from France to Texas, U.S.A.

[47] According to witness Vincent Cauchepin, a third-party consultant assigned to HPF with responsibility for GRACES, it is not certain that HPF just stopped using GRACES per se, but rather it may have been migrated into a much larger program. Whether that is correct or not, the fact is that the database as it was when the exhibits were extracted, no longer exists.

[48] During the trial on the merits, Matrox objected on a wide-range of grounds to the filing of the said exhibits as evidence. The Court has taken this under advisement, with related testimony being received under reserve of the umbrella objection.

[49] So as to understand the issue, the appropriate starting point is the description of the exhibits in question.

[50] The exhibits in question are described by HPF as follows:

Exhibit P-9: Extract of HP's database for the CSOs in relation with G100 and G200 graphic cards for the period of February 1999 to March 2002 (contained in Excel files (...), Matrox nbr of CSO per month and Matrox SUMMARY).

Exhibit P-9.1: Extract of HP's database for the CSOs in relation with G100 and G200 graphic cards, for the period of February 1999 to March 2002 (same as P-9) but including the additional fields, namely "CUST\_CMNT\_TX" (customer comments) and "RPR\_DTL\_TX" (repair details) (G100–BANQUE DE DONNÉES COMPLÈTE and G200–BANQUE DE DONNÉES COMPLÈTE).

Exhibit P-9.2: Same extract of HP's database as Exhibit 9.1 for the G100 cards but modified by Vincent Cauchepin in order to add two columns (AA et AB) indicating the date of production using the serial number of the computers and graphics indicating the CSO dates in relation to the months and weeks of production of the computers (G100-from P-9.1 modified by Vincent Cauchepin on 2005-12-01.xls).

Exhibit P-9.3: Same extract of HP's database as Exhibit 9.1 for the G200 cards but modified by Vincent Cauchepin in order to add two columns (AA et AB) indicating the date of production using the serial number of the computers and graphics indicating the CSO dates in relation to the months and weeks of production of the computers (G200 from P-9.1 modified by Vincent Cauchepin on 2005-12-01.xls).



[51] So, as can be seen from the above descriptions, Exhibit P-9 is the basic extract from HPF's GRACES database used by HPF, whereas Exhibit P-9.1 includes additional fields relating to customer comments and repair details for both the G100 and the G200 graphic cards. Exhibits P-9.2 and P-9.3 are further modified to add two extra columns (AA and AB) regarding the production dates for the G100 and G200 graphic cards respectively. All these exhibits are sometimes referred to as the "CSO Report".

[52] It should be understood that the exhibits covered by the Matrox objection were provided to it many years ago, when the GRACES database still existed. It is not a case where an exhibit is filed at the last minute before or during trial without any prior disclosure.

[53] What is the specific basis of Matrox's objection?

[54] As early as 2013, Matrox refused to admit the genuineness of the GRACES extracts, calling upon the authors thereof to testify. In other words, everyone who ever contributed any data, from anywhere in the World, would need testify.

[55] In the *New Joint Declaration* signed by the parties in February 2018, at item 6, Matrox identified as a specific question whether the CSO Report is admissible and the underlying database reliable and complete. Hence, both the GRACES database, if not other databases which feed into it, and the extracts therefrom are at issue.

[56] In Matrox's *Summary Overview of Defendant's Case*, a working document dated March 7, 2019, unilaterally submitted to the present judge to explain its position ahead of trial, three specific arguments are raised at its paragraph 48 regarding Exhibits P-9.2 and P-9.3 (without mention as regards P-9.1). They cover both admissibility and probative value, and are described as follows:

1. the lack of any source documents;
2. the replacement of the various databases formerly used by HPF which no longer exist;
3. the impossibility to access and audit these databases to ensure that the information they contain has not been altered, has been maintained in its entirety and, further, the medium formerly used provided the required stability and longevity of the information it contained.

[57] At trial, Matrox argued that the database was destroyed and that the extracts were incomplete, lacked reliability and did not ensure integrity, even though it agreed to a limited or partial admissibility thereof.

## 5.1 Applicable Rules of Evidence

[58] For the purposes of this analysis, one need keep in mind the rules applicable to evidence. Book Seven of the *Civil Code of Quebec* ("C.C.Q.") contains most of those rules.

[59] As regards admissibility, Article 2857 C.C.Q. states as follows:

*Evidence of any fact relevant to a dispute is admissible and may be produced by any means.*

[60] In the present case, the exhibits in issue are certain documentary and electronic extracts resulting from a technology transfer out of the GRACES database.

[61] It is important to recall that these extracts are not being used to evidence title or a juridical act but rather to establish facts which serve as a basis for calculating damages.

[62] Article 2832 C.C.Q. stipulates how such writings can be used in evidence:

*A writing that is neither authentic nor semi-authentic that relates a fact may be admitted into evidence as testimony or as an admission against its author, subject to the rules of this Book.*

[63] The applicable rules in this matter include those pertaining to admissibility, being Articles 2857 and following C.C.Q.

[64] Article 2870 C.C.Q. stipulates the manner in which documents drawn up in the ordinary course of business can be entered into evidence when the person who entered the facts does not testify:

*A statement made by a person who does not appear as a witness, concerning facts to which he could have legally testified, is admissible as testimony on application and after notice is given to the adverse party, provided the court authorizes it.*

*The court shall, however, ascertain that it is impossible for the declarant to appear as a witness, or that it is unreasonable to require him to do so, and that the reliability of the statement is sufficiently guaranteed by the circumstances in which it is made.*

*Reliability is presumed to be sufficiently guaranteed with respect in particular to documents drawn up in the ordinary course of business of an enterprise, to documents entered in a register required by law to be kept, and spontaneous statements that are contemporaneous to the occurrence of the facts.*

[65] In this regard, Matrox argues that HPF has failed to make the necessary application to the Court for the purposes of filing the exhibits as testimony.

[66] That argument seems to be based on the premise that a certain form of application must be used and, further, that HPF has failed to use that necessary form.

[67] But there is no such formal requirement as to the manner in which the application is to be made. What is necessary is that, absent consent, the matter be raised before the Court for adjudication and that the opposing party be given ample notice so as to prepare a contestation. It is an analysis to be performed by the Court on a case-by-case basis.

[68] In the Court's view, both of these requirements have been met in the present case.

[69] Matrox has known for years that the exhibits in question are central to the HPF claim, so much so that it makes multiple references to Exhibit P-9 in its *Plea* and *Amended Plea* (without stating it was inadmissible). In fact, the issue of access to the GRACES data and extracts goes back to the KPMG mandate which Matrox cancelled.

[70] So, Matrox has had ample time to prepare and even adapt its opposition to the filing of the exhibits. It was certainly not taken by surprise by the production of those exhibits.

[71] As regards the more substantive elements of Article 2870, the Court is satisfied from the preponderance of proof that it would be entirely unreasonable to require the attendance as witnesses of all those people located around the world who during the years 1999 to 2003 entered data into the various databases which flowed into GRACES, which data now forms part of Exhibits P-9 to P-9.3. To require same would be to ignore the complexity normally involved in international sales, particularly of computers and their multitude of parts from various suppliers. This would not only be unreasonable in a general sense, but it would also run contrary to the guiding principles stated at Article 7 (1) CISG, as cited above.

[72] Moreover, as regards reliability, as indicated above, Article 2870 stipulates reliability is presumed to be sufficiently guaranteed in particular to documents drawn up in the ordinary course of business of an enterprise, which is in fact what the proof establishes the GRACES database was.

[73] Notwithstanding the foregoing, Matrox argues against admissibility given the lack of source documents, the fact that the GRACES database no longer exists and the inability to ensure that the database information has not been altered and, as well, its integrity.

## 5.2 Duty to Preserve Evidence

[74] Article 20 C.C.P. stipulates a duty to preserve evidence. However, that statutory duty only came into effect in 2015 and therefore did not exist at the relevant time period when the GRACES database ceased to exist.

[75] That said, the courts have recognized that Article 20 has simply codified a pre-existing implicit rule of procedure based on good faith<sup>21</sup>.

[76] The law applicable to preserving evidence prior to the coming into force of Article 20 C.C.P. was described as follows by Justice Dominique Bélanger of the Quebec Superior Court, as she then was, in the matter of *Jacques v. Ultramar*<sup>22</sup>:

[26] *L'état du droit au Québec serait donc le suivant :*

1. *Il n'existe aucune obligation explicite de préserver la preuve dans un dossier litigieux, pas plus qu'il n'existe d'obligation de produire à l'adversaire une liste de documents pertinents au litige.*
2. *L'obligation implicite de préserver la preuve existe et découle d'une obligation générale de bonne foi; en conséquence, cette obligation couvrirait les cas les plus graves de spoliation seulement.*
3. *La maxime omnia praesumuntur contra spoliatores (toutes choses sont présumées contre le spoliateur) a trouvé une application fort limitée jusqu'à maintenant<sup>23</sup>.*
4. *L'obligation implicite de conservation de la preuve, basée sur la bonne foi, a comme conséquence que lorsqu'une partie se départit par erreur ou de bonne foi d'une preuve, aucune inférence négative ne peut en découler.*
5. *La bonne foi se présume et apporter la preuve de la mauvaise foi constitue un lourd fardeau.*
6. *La conséquence à la spoliation est une inférence négative et l'inférence négative n'a pas conduit, jusqu'à maintenant, au rejet d'un recours ou d'une défense, après une audition au fond.*
7. *En l'absence d'une obligation formelle de conserver la preuve et en présence d'une obligation implicite de ce faire, si une personne désire obtenir une ordonnance formelle de conserver la preuve, c'est au moyen d'une*

<sup>21</sup> *Mag Energy Solutions Inc. v. Falconer Cloutier*, 2016 QCCS 2830, at para. 24.

<sup>22</sup> 2011 QCCS 6020, at para. 26; see also *Mag Energy Solutions Inc.*, *Ibid.*, and *Beaudin v. Philippe*, 2017 QCCS 5386, at para. 48.

<sup>23</sup> *St-Louis c. Canada*, (1896) 25 S.C.R. 649

*ordonnance d'injonction ou d'une demande de sauvegarde qu'elle doit procéder et selon les critères spécifiques prévus par ces recours.*

[77] Accordingly, in the event that there is proof of bad faith in the intentional “spoliation” or destruction of the proof, a negative inference would result, one which would lead to the conclusion that the destroyed information would be contrary to the interests of the destroying party.

[78] However, in the present matter, the preponderance of proof does not establish such bad faith. To the contrary, in fact.

[79] As mentioned above, the GRACES database was essentially retired, destroyed or migrated around the time Hewlett-Packard merged with Compaq, when responsibility and functions moved from France to Texas. There is no proof whatsoever that HPF intended, in bad faith, to destroy proof so as to promote its claim or otherwise gain an advantage. Rather, it was a business decision made for reasons totally unrelated to the HPF claim against Matrox. Moreover, as will be analyzed in more detail, Matrox had all the access it could have wanted prior to GRACES ceasing to exist.

[80] Accordingly, given the circumstances as of the present case, the failure to have preserved the GRACES database in 2004 would be insufficient to convince the Court to exclude the exhibits or to otherwise impose a negative inference.

### **5.3 The Lack of Source Documents and Inability to Ensure That The Information Has Not Been Altered**

[81] The absence of source documents and the inability to now access and audit the non-existing underlying database are issues which are upstream of the reliability and integrity of the specific extracts that comprise the exhibits which are the subject of the objection.

[82] The underlying information which was found in GRACES came from a multitude of various sources, all seemingly used in the normal course of HPF’s global BDD business. Those sources would include:

- information generated automatically;
- information entered by call-centre operators who received customer calls;
- basic data input by service engineers who entered various codes, dates and time relating to their services for a given CSO;
- free text field entries by service engineers regarding repair details; and

- CSO associated costs, calculated automatically on set rates programmed into the database.

[83] Certain information was entered into GRACES through other electronic systems, as opposed to directly.<sup>24</sup>

[84] A variety of technical documents demonstrating the information process, including flow charts and decision trees, were filed into evidence<sup>25</sup>, along with testimony to explain certain elements relating to the databases.

[85] The principal algorithm at the heart of GRACES, and its various decision trees<sup>26</sup>, establish the “Hard Coded Business Rules” (“HCBR”) intended to identify the CSO information which could be entered into GRACES without editing.

[86] For information which was considered “editable”, it would be processed by other rules, defined by the end-users needs at BDD. Those rules were known as “User Defined Business Rules” (“UDBR”). They were arbitrary rules, not intended to validate data, but rather to seemingly determine whether operational objectives and expense amounts were being met. Editing would be required to qualify CSO failures and evaluate where repair costs were greater than \$2,000.

[87] Even though the UDBR rules were defined by the end-users, they could only be edited by two or three persons in the IT department. The proof, however, does not establish the number of applicable rules or how often they may have been changed.

[88] A number of unexplained incoherencies in the extract Exhibit P-9.2 were identified by HPF’s witness Vincent Cauchepin, for example where a code for a CSO shows “no part” (an AO code in column AM of the exhibit) yet a part is identified and a cost shown for it. Another example where a “no part” code is shown, yet a part cost and a travel and labour charge is identified.

[89] These incoherencies in the data, as argued by Matrox, could not be explained. However, the number thereof was minimal, and the Court was not provided with any opinion or estimate as to the dollar value of the discrepancies or how they might otherwise impact a claim calculation.

[90] For the purposes of the objection, the Court is of the view that those discrepancies are insufficient to set aside the Article 2870 presumption of reliability and to refuse admitting the exhibits into evidence. The discrepancies would be more an issue relating to probative value, if that.

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<sup>24</sup> For example : Exhibits P-84 and P-86.

<sup>25</sup> For example : P-71, P-74, P-81 to P-91, P-114.

<sup>26</sup> Exhibits P-88 to P-90.

[91] What of the position that Matrox cannot verify the supporting documents or ensure that the source information has not been altered?

[92] Firstly, it is not without significant importance that years before the GRACES database was retired, Matrox and HPF had jointly retained the services of expert consultants at KPMG with a view to preparing an audit plan for the purposes of analyzing alleged damages suffered by HPF as a result of Matrox's defective graphic cards.

[93] In order to obtain information so as to enable it to prepare an audit plan, KPMG sought to obtain information from HPF. Simonnet, HPF's then Warranty Manager for BDD business, apparently insisted that KPMG's experts attend at Grenoble, France in order to obtain the supporting information.

[94] A three-day session was organized in September 2000, in Grenoble. Julie Pépin and Paul Levine then of KPMG prepared a list of documents they sought to obtain, as identified in their letter dated August 30, 2000<sup>27</sup>. The preponderance of proof establishes that a group of documents was prepared for them (the "KPMG Binder")<sup>28</sup> including information from GRACES, and, further, that during their meetings, HPF employees, including Simonnet and Céline Barral, responded to their questions, provided documents and, further, explained to them the manner in which HPF functioned.

[95] Simonnet testified that he thinks KPMG had access directly to GRACES. Although direct access seems unlikely, as the proof demonstrates that obtaining data directly from GRACES was not something that just anyone could do, nothing prevented KPMG and Matrox from requesting any and all information they required in order to audit the damage claim. In fact, the late Edward Dwyer, one time Executive Vice-President of Matrox, admitted that KPMG did have access to data in GRACES<sup>29</sup>. Furthermore, KPMG was provided certain data from GRACES.<sup>30</sup>

[96] This sense of cooperation and transparency is understandable, since as part of the joint expertise agreement at that time, HPF had undertaken to support Matrox in its claim against STM.<sup>31</sup>

[97] Subsequent to those meetings with HPF in Grenoble, KPMG prepared an *Audit Plan*.<sup>32</sup> On the return of Pépin and Levine to Montreal, they were to meet with Matrox.

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<sup>27</sup> Exhibit P-136.

<sup>28</sup> Exhibits P-110 and P-80.

<sup>29</sup> Exhibit P-116, Question 193. See also Exhibit P-4.

<sup>30</sup> Exhibit P-110, p. 25-30.

<sup>31</sup> Exhibit P-8 and P-8.1.

<sup>32</sup> Exhibit P-120.

They actually attended at the latter's offices and, while waiting to meet with Matrox to explain their *Audit Plan*, someone came into the conference room, simply cancelled the meeting and told them their services were no longer required.

[98] Why is all this relevant?

[99] The Court concludes from the preponderance of evidence that Matrox had the clear opportunity to obtain information from GRACES during a four-year period prior to the database being "retired". HPF had been very cooperative in sharing financial information upon request. For reasons unknown, Matrox voluntarily chose not to go further in that regard.

[100] Why was the mandate to KPMG terminated? Why did Matrox not proceed to audit the HPF damages as per the KPMG audit plan or, in some other manner? Why not request access to GRACES and the data contained therein? Why wait years before retaining another expert?

[101] No explanations have been provided in this regard. According to the late Edward Dwyer of Matrox, it was one of the two Matrox shareholders, and not HPF, who decided to put an end to the KPMG mandate. In any event, parties are entitled to adopt litigation strategies as they see fit, so long as they are not abusive or otherwise illegal. However, in the Court's view, Matrox cannot now be heard to plead that this information is inadmissible due to the fact that it no longer exists in its original form and cannot now be verified. Matrox made a strategic decision in 2000 and must now continue to live with it.

[102] Clearly, it would have been prudent for HPF to have retained a copy of its databases for the purposes of its claim against Matrox. But, it was not created to establish that claim. In the present case, its failure to do so does not render the GRACES extracts inadmissible.

#### **5.4 The "Integrity" of the Extracts**

[103] Beyond the presumption of "reliability", Matrox argues that the exhibits in question are technology based and therefore certain special rules apply relating to "integrity", which rules it argues HPF has failed to satisfy.

[104] As mentioned, in the present case, the exhibits are documentary and electronic versions of extracts or transfers of data from the GRACES database to another technology.

[105] However, the necessity to ensure the integrity of a copy of a technology-based document so as to make proof in the same way as a paper document only applies to very specific documents.



[106] Article 2838 C.C.Q. reads as follows:

*In addition to meeting all other requirements of the law, the integrity of a copy of a statute, an authentic writing, a semi-authentic writing or a private writing drawn up in a medium based on information technology must be ensured for it to make proof in the same way as a writing of the same kind drawn up as a paper-based document.*

[107] Accordingly, even as regards technology based documents, the “integrity” requirement is not stated to apply to writings or copies of writings which are to be admitted into evidence as testimony pursuant to Article 2832 C.C.Q. This is consistent with the second paragraph of Article 2839 C.C.Q. which stipulates that where the integrity of a document cannot be established, the document may, depending on the circumstances, be admitted as testimonial evidence. In other words, the proof can be contradicted and the Court can evaluate its probative value.

[108] Such is the case, as mentioned above, with documents drawn up systematically in the ordinary course of business. As observed by the author Catherine Piché:<sup>33</sup>

*Ainsi, un document technologique reproduisant des données relatives au nombre d'heures travaillées par des employés est recevable si ces données ont été inscrites de façon systématique et dans le cours des activités d'une entreprise.*

[109] Hence, for such purposes, it is not necessary to establish all the elements required to ensure integrity, as set forth in Articles 2838, 2839 and 2840 C.C.Q.

[110] Since the integrity of documents, such as the relevant extracts, which will only serve as testimonial proof need not be established as regards their admissibility, it would be inconsistent and contradictory to apply sections 12 and 17 of an *Act to Establish a Legal Framework for Information Technology*<sup>34</sup> (“LCCJTI”). The object of that *Act* focuses on documentary communications<sup>35</sup>, not testimonial evidence pursuant to Article 2832 C.C.Q.

[111] The interpretation of legislation should be done so as to give meaning to the intention of the Legislators and not to create contradictions. This is particularly relevant in this case, as the pertinent provisions of both the Civil Code and the LCCJTI refer to information technology.

<sup>33</sup> Catherine PICHÉ, *La Preuve civile*, 5<sup>e</sup> éd., Éditions Yvon Blais, 2016, p. 368.

<sup>34</sup> CQLR, c. C-1.1; French version : *Loi concernant le cadre juridique des technologies de l'information*.

<sup>35</sup> Section 1, LCCJTI.

[112] The functional purpose of the proof, distinguishing between its use as testimony as opposed to other purposes, has already been recognized by the Quebec Court of Appeal.<sup>36</sup>

[113] That said, although the principle of “integrity” is inapplicable for admissibility purposes in the present matter, the Court is of the view that the preponderance of proof demonstrates that the integrity of the extracts has nevertheless been established, that the information contained in them has not been altered and has been maintained and further, that the medium used provides stability and required perennity. The passage of so many years since the creation of the extracts speaks favourably to stability and perennity.

[114] To so conclude, the Court takes into consideration the affidavits, and in some cases the testimony of Jim Mackanic<sup>37</sup>, Pascale Nady<sup>38</sup>, Christele Peronnard-Perrot<sup>39</sup>, Nicole Sarao<sup>40</sup>, Ingrid Walckiers<sup>41</sup> and Steve Wilkins.<sup>42</sup>

[115] In this regard, the fact that certain original source data in Japanese and/or Korean could not, as per witness Ingrid Walckiers, be easily read in GRACES and could not be modified either therein or in the extracts so as to become more legible, speaks strongly in favour of the stability, reliability and integrity of the extracts.

[116] All of the above proof establishes that the actual transfer of information has been sufficiently explained. It establishes that the extracts contain the same information for the same subjects as in GRACES. Moreover, the fact that the extracts do not repeat all the information contained in the GRACES database does not make them less admissible. It merely demonstrates that the person effecting the extract did not believe that certain data was being requested or might eventually be useful. That is insufficient to exclude the exhibits.

[117] For all the reasons mentioned above, the Court is of the view that Matrox’s objection to the filing of Exhibits P-9 to P-9.3 is not well founded. Those exhibits may be produced as evidence pursuant to Articles 2832 and 2870 C.C.Q. and, accordingly, all the related testimonial proof pertaining thereto is receivable.

## **6- EVALUATION OF DAMAGES**

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<sup>36</sup> *Benisty v. Kloda*, 2018 QCCA 608, at paras. 56-59.

<sup>37</sup> Exhibits P-148 and P-20.

<sup>38</sup> Exhibit P-151.

<sup>39</sup> Exhibit P-149.

<sup>40</sup> Exhibit P-152.

<sup>41</sup> Exhibit P-150.

<sup>42</sup> Exhibits P-137, P-137A and P-138.

[118] The amount claimed by Plaintiff is actually greater than that advanced by the expert it has presented.

[119] HPF is claiming the Canadian equivalent of US\$15,523,588.20, whereas its expert, who had been retained as a joint expert, is recommending US\$5,292,436, based on a full-cost approach.

[120] Matrox's expert is of the view that the claim is grossly exaggerated, unsubstantiated and, at most, could be for an amount of US\$1,823,033, based on an incremental-cost approach. That said, Matrox does not argue that the damages were unforeseeable.

[121] It is useful to note that the calculation of HPF's claim as framed in its proceedings was not prepared by an expert, but rather by HPF's own employees. The primary representative responsible for the internal evaluation of damages was Simonnet.

[122] In order to evaluate HPF's damages, he used, amongst other sources, the GRACES database described in detail above.

[123] HPF sued Matrox in Quebec in February of 2002, without having retained an independent expert to evaluate damages.

[124] It was not until September 2004 that the parties agreed to retain the services of LBC International Investigative Accounting Inc. ("LBC"), particularly Arthur Lavigne, to express an independent opinion as to the actual damages sustained by HPF as a result of the problematic graphic cards<sup>43</sup> and to ascertain the reasonableness of the claimed costs.<sup>44</sup> Accountant Eleni Chilakos of LBC worked with Mr. Lavigne on the mandate. LBC was appointed as a joint expert by way of judgment dated October 21, 2004, and the cost of the expertise was to be shared on a one-third basis for each of HPF, Matrox and STM.

[125] In order to assist it during the damage-evaluation process to be conducted by the joint expert LBC, Matrox retained the services of Richter Advisory Group ("Richter"), in particular Andrew Michelin and Pascale Gaudreault.

[126] At no time, to the Court's knowledge, was Richter mandated to actually provide the Court with an evaluation of the damages allegedly suffered by HPF. Before the Court, Richter's role was essentially to critique the methodology, reports and opinions of LBC, whose reports were issued in 2010, and to underscore the absence of documentation.

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<sup>43</sup> Exhibit P-94D, p. 3, item 10.

<sup>44</sup> *Ibid.*, p. 6.

[127] STM also retained an accounting expert for its own purposes during LBC's work as joint expert, but its expert did not participate in the trial.

[128] For the years that followed the issuance of LBC's reports in 2010, Matrox neither openly accepted the reports nor filed any contestation to them. It was not until February 2015 that the Richter report<sup>45</sup> was filed on behalf of Matrox.

[129] In preparation for trial, the Court insisted that Pascale Gaudreault of Richter and accountant Eleni Chilakos, presently of Chilakos Consulting and previously of LBC, meet and prepare a joint report, identifying their points of agreement and of disagreement. A joint report of a certain nature did result.<sup>46</sup> Neither expert supports the amount claimed by HPF in its proceedings.

[130] What the Court need decide is whether the claim as framed by HPF actually represents its damages. If not, what award in damages is appropriate in the present case, if any?

[131] It is worth repeating that the analysis of damages in this case must be made on the basis of the CSIG and its underlying principle of full compensation which is to be liberally construed so as to compensate the claimant for all damages it has suffered resulting from a breach.

[132] That said, the items forming part of HPF's in-house claim are the following:

- a) Parts and labour intervention costs relating to abnormal failure rates for both G-100 and G-200 graphic cards, as of March 31, 2002: .....US\$11,636,543.88
- b) Call-centre costs: .....US\$ 2,141,099.72
- c) Escalation costs for engineer services: .....US\$82,500.00
- d) Division epidemic costs: .....US\$80,495.00
- Plus loss of reputation and customer satisfaction: .....US\$ 1,500,000.00
- And, employees time loss managing the epidemic problems: .....US\$82,950.00
- Total: US\$15,523,588.20

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<sup>45</sup> Exhibit D-24.

<sup>46</sup> Exhibit P-135.

[133] It is worth confirming, HPF does not claim any loss of profit.

[134] As for LBC, it prepared its "*Summary of Loss Claim*"<sup>47</sup> while acting as the joint expert. Its assessment is divided into two sections, one being "full costs" while the other is "incremental costs", as there has been disagreement between the parties on which to use. Within each of those two sections, LBC provided three estimates, being "A", "B" and "C", the major difference between them being the number of CSOs which are to be used so as to identify the number of graphic cards that had to be repaired and/or replaced. These various estimates are also compared to HPF's in-house claim on an itemized basis. So as to enable a better understanding of the damage assessment, the *Summary of Loss* is attached to the present judgment as Annex 1, forming part hereof.

[135] Expert Chilakos favours Estimate "C", on a full-cost basis, hence an amount of US\$5,292,436.

[136] As mentioned, Richter adopts the position that of these options, Estimate "A", on an incremental-cost basis, would represent "at most" the damages HPF might have suffered, being an amount of US\$1,823,033. During trial, however, expert Gaudreault expressed the view, and this for the first time, that in her opinion the proof only establishes damages in the amount of US\$119,394.

[137] Richter's position is based to a great extent on its view that there is an absence of evidence establishing the factual components critical to calculating damages. That is repeated as regards all aspects of HPF's claim. It is rather difficult to distinguish between Richter's arguments and those of Matrox's counsel as to the absence of proof. Their view is that the CSO Report, as contained in GRACES and other database feeds, is not reliable, with the result being a general lack of documentary evidence.

[138] Nonetheless, Matrox does acknowledge that HPF is a publicly traded company subject to strict reporting requirements, that the GRACES database was used by HPF in the ordinary course of business to perform important management activities and that a few components thereof are useful to assess the number of interventions relating to replacing defective graphic cards.

[139] For the reasons expressed regarding Matrox's objection to proof, the Court is of the view that the GRACES database is reliable. It is sufficiently so for the purposes of establishing various facts necessary to calculating damages. And although not without certain discrepancies, the Court considers the extracts from GRACES to have probative value.

[140] In this regard, LBC contends that recognized accounting principles require the recording of warranty costs and reserves for balance sheet purposes, which

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<sup>47</sup> Exhibit P-95B, Schedule 1.

demonstrates the need for companies to gather important data, such as the GRACES database. The preponderance of proof supports that principle in the present case.

### **6.1 The Number of Repaired and Replaced Graphic Cards**

[141] The two type of graphic cards in issue are Matrox's G-100 and G-200 models. Both need be considered for the purposes of calculating damages.

[142] It is useful to know that Matrox and related entities are generally thought to have shipped 913,112 G-100 graphic cards to HPF and 276,476 G-200 graphic cards.<sup>48</sup> Whether those numbers are precise or not, they provide a good bases for understanding that not all the Matrox graphic cards actually failed, although possibly all of them eventually could have.

[143] There exists no separate document containing a complete list of all the card repairs and replacements conducted on HPF computers. In order to assess that number, LBC has relied on the CSO data from GRACES.

[144] The CSOs were created by the phone technicians located in call-centres worldwide. The specific content, including the detail provided and the words used, comes from numerous sources worldwide, as identified above. The content is not always consistent. This is so, notwithstanding internal guidelines, which is not surprising given the global context. As a result, the parties have interpreted the CSO data differently as to whether or not the issues contained in them refer to problems with Matrox graphic cards.

[145] Accordingly, as already mentioned, LBC has created three different categories of estimates, being "A", "B" and "C", with "A" including the least number of CSOs and "C" containing the most.

[146] As regards the G-100 cards, LBC concluded that the database contains 59,322<sup>49</sup> CSO reports. From that number, LBC has deducted a variety of CSOs, thereby reducing the number to 57,911.<sup>50</sup> These CSOs are eliminated due to a variety of reasons, including the absence of a serial number and the risk of duplication. A further 1,376 CSOs have been excluded due to disagreement amongst the parties as to whether they actually relate to Matrox graphic card failures and repairs during the appropriate time frame (categories 3A, 5 and 9<sup>51</sup>).

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<sup>48</sup> Exhibits P-95A, p. 8, and P-94B, Schedules 1 and 2.

<sup>49</sup> Exhibits P-94A, p. 39; P-94B, Schedule 14.

<sup>50</sup> Exhibits P-94A, p. 42; P-94B, Schedule 14.

<sup>51</sup> A description of the nine categories can be found in the expert's joint report, Exhibit P-135, p. 5.

[147] From the resulting 56,535 CSOs for the G100 cards, LBC deducted an additional 4,621 CSO's, representing the normal contract failure rate at 0.5%.<sup>52</sup> The resulting 51,914 CSOs are considered by LBC to be CSOs related to excess failure rates of the G-100 graphic cards, based on the assumption that only one graphic card would be involved in an actual repair and replacement intervention. It is the number used in LBC's damage Estimate "C".

[148] As for G-200 cards, using a similar methodology<sup>53</sup>, LBC has used 14,194 as the number of excess G-200 cards repaired or replaced for its Estimate "C" calculation.

[149] As regards Estimate "B", the number of CSOs is lower, as that estimate generally excludes CSOs which contain no key technical words which describe the specific cause of failure.

[150] Accordingly, using the same methodology, LBC concluded that for Estimate "B" 39,784 G-100 graphic cards<sup>54</sup> were repaired and/or replaced. As for G-200 cards, the number is 11,118.

[151] The lowest number of CSOs are identified at Estimate "A". That estimate reflects the highest number of excluded units. It only includes CSO categories 1A, 1B, some of 2 and 50% of category 4, with all identified discrepancies being excluded, along with 50% of the "preventative" interventions. In fact, CSOs which make no specific mention of the graphic or video card are excluded even if the word "video" is mentioned.

[152] It represents the most conservative approach reflective of comments by Matrox and STM, and their own respective accounting consultants, during the analysis by LBC as joint expert. Without providing a precise number of its own, Matrox considers that the numbers should actually be reduced further. In any event, LBC refers to 26,262<sup>55</sup> as the number of G-100 cards for which CSOs were made under Estimate "A". The number for G-200 cards is 8,924.<sup>56</sup>

[153] During trial, expert Chilakos<sup>57</sup> opined that both Estimate "A" and "B" are not reasonable in that too many CSOs were unnecessarily removed in order to reflect the positions expressed by Matrox and STM.

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<sup>52</sup> P-94A, p. 64.

<sup>53</sup> Exhibits P-95B, Schedule 1; P-94B, Schedule 26; P-94A, p. 64.

<sup>54</sup> Exhibits P-95B, Schedule 1; P-94A, p. 64.

<sup>55</sup> Exhibits P-94A, p. 64; P-95B, Schedule 1 (it shows as 26,262).

<sup>56</sup> Exhibits P-94A, p. 64; P-95B, Schedule 1.

<sup>57</sup> It should be noted that expert Arthur Lavigne, a well-known accounting expert for many years, died prior to the commencement of trial. Accordingly, only Eleni Chilakos testified in support of the LBC reports.

[154] By way of example, Matrox and Richter oppose including any costs for “preventative” repairs of the graphic cards. However, Matrox is not presently well-placed to argue that such repairs should be excluded and that only actual failures should be considered. The late Edward Dwyer of Matrox admitted during Discovery<sup>58</sup> that the graphic cards could fail at any time and, further, that even Matrox voluntarily replaced graphic cards which had not yet failed, as for example at H&R Block and at a Japanese bank. This is entirely understandable given the preponderance of proof to the effect that the failure of the graphic cards was totally unpredictable, not only also to which ones would fail but also as to when they would fail.

[155] As a result, certain clients refused to run the risk of future failures and insisted on complete replacement of the graphic cards. In fact, these client “hot sites” were not always reflected in CSOs. Important clients would not pass through the call centres, but rather would call their contacts at HPF in order to obtain a solution. Those calls would not result in a CSO being prepared. In this context, the number of CSOs does not reflect all interventions relating to Matrox’s defective graphic cards.

[156] The preponderance of proof illustrates that every Matrox G-100 and G-200 graphic card was actually or potentially defective. The parties have not pleaded the issue of a product recall in this matter and the Court need not decide that issue. Nonetheless, the insidious and unpredictable nature of the defect was such that the position of Matrox and Richter to the effect that preventive repairs should not be recoverable is unrealistic and unacceptable, especially considering that even Matrox itself conducted such repairs.

[157] Moreover, contrary to Matrox’s suggestion, the proof does not support the position that LBC created Estimate “C” at the request of HPF.

[158] As for the fact that Matrox, at its own expense, replaced or repaired approximately 61,000 graphic cards, that does not unto itself render LBC’s estimate unreasonable, keeping in mind that over 913,000 G-100 cards alone were made and approximately 924,123 relevant personal computers were manufactured, and this by August 1999.

[159] In fact, as indicated by LBC and Chilakos, there is a serious argument to be made that the number of cards used for replacement or repair was more likely closer to 88,700, comprising approximately of 62,800 G-100 cards and 25,900 G-200 cards.<sup>59</sup> This explanation takes into account the number of graphic cards repaired internally by Matrox, those repaired by Matrox service providers, repairs by Matrox at certain client “hot-sites”, new cards purchased by HPF and cards identified in HPF’s inventory

<sup>58</sup> Exhibits P-115, p. 100, Question 392 and P-142, Question 615 and ff; P-116, p. 69-70 and P-116.1, Undertaking 17.

<sup>59</sup> Exhibit P-94C, Schedule 46.1.



records. This explanation further confirms that the use of Estimate “C” is entirely reasonable and best reflects the CSO volumes pertaining to HPF’s alleged damages.

[160] In other words, Matrox’s and Richter’s position that only Estimate “A” should be considered (for a total of approximately 35,000 failures) does not reasonably reflect the actual damages suffered by Matrox.

[161] The Court has taken into consideration the views and opinions of LBC/Chilakos and those of Richter in this regard, as expressed at trial, in their respective reports, and in the joint report, and concludes in favour of those expressed by LBC/Chilakos in light of the preponderance of proof. They reflect an acceptable analysis applicable to damage claims under Article 74 CISG<sup>60</sup>, as does the use of Estimate “C”.

[162] The Court does not accept Richter’s view that Estimate “C” goes against the proof. Richter’s views in this regard flow from its highly conservative and legalistic reading of the content of the CSO reports, an approach which the Court considers contrary to the recovery principles set forth in the CISG.

## **6.2 Costing Generally**

[163] Simonnet testified in support of HPF’s in-house calculations.

[164] Suffice it to say that not even LBC has supported all of the amounts advanced by Simonnet. LBC/Chilakos are of the view that the GRACES database costing data is not entirely reliable for costing purposes since there was not a sufficient level of detail. Accordingly, LBC calculated damages differently.

[165] Oddly, Céline Barral, previously of HPF, stated that she did had additional related data but seemingly no one asked her for it. If that is indeed so, it would probably have been advisable for HPF to have accessed it in support of Simonnet’s calculations.

[166] That said, LBC looked elsewhere for its damage calculations. It used various sources of information and estimates to accomplish that.

[167] The Court will now analyze each category of the damage claim.

## **6.3 Part Costs**

[168] HPF claims that as a result of the epidemic of defective graphic cards, and prior to Matrox acknowledging the seriousness of the problem, it was required to purchase new graphic cards. For those cards, costs were allegedly incurred, including not only

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<sup>60</sup> Paragraph 25 of the present judgment.

the purchase price but also certain related transport, warehousing and distribution costs.

[169] In order to establish the number of cards purchased and a price per unit, LBC considered the available data. There was no available itemized list. The methodology used by LBC is found at Schedule 14 of its costing report.<sup>61</sup>

[170] To calculate the amount, it used various information sources, including enterprise standard cost (ESC)<sup>62</sup>, Matrox sales data and certain distribution centres cost allocation (DCCA) rates<sup>63</sup>. In this regard, certain direct material costs were added to the ESC costs, but were also deducted from the DCCA rate.

[171] Matrox records show that approximately 23,700 new cards were sold to HPF from August 1999 to February 2001, being after HPF had ceased manufacturing the computers in August 1999. LBC rightly considered this as extremely relevant.

[172] Based on its analysis, LBC has estimated that HP purchased for repair purposes 22,637 G-100 cards and 3,100 G-200 cards.<sup>64</sup> An additional 429 non-Matrox cards were purchased by HP for repairs. All other cards for repairs were provided by Matrox free of charge. Given that HPF was normally required to keep in inventory a number of replacement cards for the computers it sold, those were deducted from the damage calculation.<sup>65</sup> The end result is an estimated 22,218 G-100 cards and 2,932 G-200 cards purchased by HPF due to the defective cards.

[173] LBC then pro-rated the costs. Accordingly, for the estimated material only cost, LBC determined that each G-100 graphic card purchased by HPF cost an average of US\$31.26. As for G-200 cards, the average cost was determined by LBC to be US\$60.03.

[174] For calculation purposes, LBC assumed that every CSO containing a repair in the order of \$30 related to a graphic card repair even if not so stated. At the same time, LBC treated each CSO as representing only one intervention even if many more were indicated and, further, it assumed that only one graphic card was replaced per applicable CSO even if numerous parts were mentioned.

[175] Richter expresses the view that there should be supporting documents, and therefore no need to rely on estimates. Moreover, it adopts the position that since Matrox repaired more graphic cards than CSO failures in Categories A and B, then HPF

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<sup>61</sup> Exhibit P-95B.

<sup>62</sup> Exhibits P-75 and P-76.

<sup>63</sup> Exhibit P-77.

<sup>64</sup> Exhibit P-95B, Schedules 7 and 8.

<sup>65</sup> Exhibit P-95B, Schedules 14 and 16; P-95.1, Attachment « T ».

did not need to purchase any new cards. This position is contradicted by the late Edward Dwyer of Matrox who admitted<sup>66</sup> that it was cheaper for HPF to purchase new cards than to pay shipping costs related to shipping defective cards to Matrox for repair and redistribute them.

[176] In the Court's view, Richter's position is unrealistic. In any event, it has been determined that Estimate "C" applies. The approach adopted by LBC is reasonable in the circumstances as to both the number of cards purchased and the per-unit cost.

[177] The calculation set forth in Schedule 14 of the costing report demonstrates the following total part costs:

G-100 cards at US\$31.26 per card:

- Estimate "A": 11,849 cards .....	\$370,400
- Estimate "B": 17,037 cards .....	\$532,577
- Estimate "B": 21,690 cards .....	\$678,029

G-200 cards at US\$60.03 per card:

- Estimate "A": 1,828 cards .....	\$109,735
- Estimate "B": 2,237 cards .....	\$134,287
- Estimate "C": 2,810 cards .....	\$168,684

[178] These elements combined give rise to the amounts identified at Schedule 1 of the costing report<sup>67</sup>, being as follows:

- Estimate "A": .....	US\$480,135
- Estimate "B": .....	US\$666,864
- Estimate "C": .....	US\$846,713

[179] These amounts are not modified by the debate as to full costs and incremental costs. They remain the same regardless.

[180] The Estimate "C" amount of US\$846,713 is a reasonable evaluation of HPF's damages, one which reflects the recovery objectives of the CISG.

#### 6.4 Parts – Overhead Costs

[181] This claim relates to overhead costs incurred in the warehousing and distribution of the graphic cards required for repairs.

<sup>66</sup> Exhibit P-115, p. 100-101, Question 397.

<sup>67</sup> Exhibit P-95B.

[182] LBC argues that such costs apply not only to graphic cards purchased by HPF but also to those supplied to it free of charge by Matrox, since the same handling costs would be incurred. That said, however, LBC acknowledges that such costs would not apply to the approximately 61,026 to 63,007 graphic cards<sup>68</sup> actually installed in the computers of HPF's clients directly by Matrox or its service providers like AZ Electronics.

[183] LBC has considered HPF's supply chain costs, over and above the parts costs, including freight incurred in shipping parts (to/from clients and to/from warehousing/storage centres), warehousing costs, network logistics costs, packaging of parts, purchasing and planning costs, as well as certain country costs. These DCCA costs form part of HPF's regular cost allocation method, known as DCCA rates, in relation to warranty repairs. Those rates are revised every six months for establishing the standard cost by product line and by country.

[184] In other words, these DCCA costs and rates are a normal part of HPF's business methods for calculating its warranty costs and is not a special method to calculate damages for the purposes of the present law suit.

[185] The various DCCA costs and rates for the period covering August 1999 to July 2000 were summarized and explained by LBC.<sup>69</sup> For that time period, the average DCCA rate used by Hewlett-Packard was 121.05% of the costs. However, in applying the overall costs to France, LBC explains that the unit costs rate increased from US\$24.95 to US\$28.52, whereas the DCCA rate decreased from 121% to 93.4%. LBC claims to have reduced the resulting costs further due to the lack of certain documentation and explanations from HPF.

[186] The result is that the parts overhead cost are reduced to US\$13.88 per unit. According to LBC, it estimates that the amount comprises 69% of fixed costs (US\$9.58/unit) and 31% of variable costs (US\$4.30/unit).

[187] As a result of the foregoing, LBC has estimated, based on the number of graphic cards to be considered, that the total overhead costs for the parts varies from US\$488,382 to US\$917,579 (Estimates "A", "B" and "C") based on a full-costs assessment as opposed to a range of US\$151,300 to US\$284,264 based on an incremental costs evaluation.<sup>70</sup>

[188] The Court considers LBC's evaluations to be more realistic than those of HPF in-house. The latter relies on the costing components in the GRACES database which contains insufficient detail for a damage claim at law.

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<sup>68</sup> Exhibit P-94C, Schedule 46.1.

<sup>69</sup> Exhibits P-95A, p. 18-20; P-95B, Schedules 17 and 18; P-95.1, Attachment "V".

<sup>70</sup> Exhibit P-95B, Schedule 1.

[189] As for Richter, it disagrees for a variety of reasons with LBC's assessment, primarily based on its position that there is an absence of proof, and that LBC has overstated the number of replacement cards and related costs. Once again Richter's position is based on its view as to the unreliability of HPF's CSO Report and, further, that it has failed to establish a causal link.<sup>71</sup>

[190] The Court understands the evidence differently. The preponderance of proof supports LBC's position as regards the number of graphic cards and the related costs. That proof does not support Richter's view that HPF incurred no damages with respect to the cost of graphic cards.<sup>72</sup> The LBC's assessment is in keeping with full compensation principle expressed in the CSIG.

[191] As regards the issue of full costs versus incremental costs, that issue will be addressed later in the present judgment.

## **6.5 Labour and Travel Costs**

[192] In addition to the acquisition of new graphic cards and related overhead, LBC has also assessed HPF's claim for labour and travel costs allegedly associated with repairs effected by it as a result of the graphic cards defect.

[193] As for labour costs, HPF calculated a rate of US\$177 per intervention, whereas LBC estimated an average unit cost of US\$113.55 per CSO. In doing so, it relied on fixed labour costs (FLC) relating to HP engineers and subcontracted engineers performing repairs at customer locations, which vary by country, type of intervention and the type of computer.<sup>73</sup> It also did some sample testing.

[194] LBC acknowledged that it was unable to reconcile some of HPF's LFC rates or to calculate an overall rate for France and Germany. As a result, it applied a reduced rate equal to 58.7% of its estimate, resulting in an average estimated FLC of US\$66.65 per CSO. Of that, 58.9% is a variable cost portion (US\$39.25) and 41.1% is fixed (US\$27.40).

[195] The amounts set forth in LBC's Estimates "A", "B" and "C", and this for both the full cost and incremental cost calculations, are set forth in a table comprising part of Exhibit P-95A.<sup>74</sup>

[196] Insofar as related travel costs are concerned, LBC has expressed the view that HPF's claimed amount of US\$166,203 is in fact a duplication, being already covered in

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<sup>71</sup> *Ibid*, p. 51-52.

<sup>72</sup> Exhibit D-24, p. 47.

<sup>73</sup> Exhibits P-95B, Schedules 19-20; P-43, P-39, P-95.1, P-75, P-76 and P-80.

<sup>74</sup> Page 27; see also P-95B, Schedules 21-25.

labour costs, and that given the absence of further explanations, no separate amount for travel costs should be awarded.

[197] Accordingly, LBC has concluded that the total cost of repair/replacement for graphic cards ranges from US\$1,712,714 at the low end (Estimate "A") of the incremental cost method to US\$4,884,075 at the high end (Estimate "C") according to the full costs method. These amounts are far below the US\$11,636,543 calculated in-house by HPF. In the Court's view, LBC's methodology demonstrates that HPF's own claim is either excessive or simply not supported by the facts before the Court.

[198] As for Richter, it again considers that LBC has used far too many CSOs, as in its view many are not clearly established to be in relation to graphic card problems. Moreover, it again argues that there is no documentary evidence to support the estimated labour costs. For example, no invoices from subcontractors were produced, although such costs were an important part of FLC costs. Moreover, as regards both the parts overhead costs and the labour costs, Richter opines that using the full-cost method is otherwise inappropriate.

[199] As previously mentioned, the issue of full costs versus incremental costs will be analyzed later in the present judgment.

[200] Subject to the resolution of that issue, the Court is of the view LBC's analysis of repair/replacement costs is based on sufficient information and data as to constitute a reasonable assessment of parts labour damages, in keeping with the principles set forth in Article 74 CISG.

## **6.6 Call-Centre Costs**

[201] The claim for call-centre costs is based on the premise that the graphic card defect resulted in increased telephone calls by HPF customers. Countries have their own call centre and, as well, there are major regional call centres, such as in Amsterdam.

[202] LBC has assumed that the CSOs, created when a customer calls a HPF call centre, involve only one call per customer, even if a given customer could have called more often. Moreover, if no CSO was created, it would mean that the call-centre technician resolved the issue during the call. Such calls are not included in the claim. Also not included in this portion of the claim were on-site preventative repairs since in those cases, the call was probably not related to the graphic card defect.

[203] HPF's in-house calculation gives rise to a claim in the amount of US\$2,141,000, based on 70,117 CSOs at an average cost of US\$30.54 per call.

[204] LBC also analyzed the average length of call assessment by HPF and concurs that the average length was 9.17 minutes. That is based on the data provided for the period of May 1999 to July 2000<sup>75</sup>, which assists in measuring time spent by call-centre agents.

[205] LBC also took into consideration a draft report prepared by Anderson Consulting entitled "*Hardware Warranty Benchmark Study*", dated September 26, 2000, which refers to average call-centre calls. The study involved ten major IT companies, including Hewlett-Packard. LBC has expressed the view that the study demonstrates a relevant call range of 9.1 to 11.1 minutes.<sup>76</sup> As a result, LBC has accepted HPF's assessment of 9.17 minutes per call even though it has not been provided the supporting documentation.

[206] However, the opinion of LBC as to the per-minute cost, at US\$0.43, differs greatly from HPF's at US\$3.33. The result is that LBC estimated the per-call cost to be US\$3.94 as opposed to HPF's claim of US\$30.54.<sup>77</sup> This difference is based on a lack of certain information combined with certain discrepancies observed by LBC.<sup>78</sup> As well, certain costs included by HPF in its per-minute cost assessment are also included in the CSO fixed labour costs. Although HPF contests any duplication, LBC asserts that it was provided no documentation in support thereof and accordingly has excluded those elements.

[207] Of its US\$0.43 cost per minute, LBC has estimated that there is a fixed cost portion of US\$0.05.

[208] Basing itself on a total of 43,551 defective card replacements<sup>79</sup> for Estimate "B" at full cost, as an example, LBC calculated the excess costs to be US\$171,726. The remaining amounts, varying between Estimates "A" to "C", and incremental versus full cost methods, are expressed at Schedule 1, Exhibit P-95B.

[209] Richter opposes the HPF and LBC calculations again primarily on the bases of the lack of supporting documentation, including invoices for any third-party service providers. In this regard, the proof demonstrates that approximately 35% of call-centre agents are sub-contractors. As well, for the call-centre employees, as opposed to sub-contractors, their salaries should be considered as fixed costs and therefore, not recoverable.

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<sup>75</sup> Exhibit P-12;

<sup>76</sup> Exhibit P-95B, Schedule 27.

<sup>77</sup> Exhibits P-95A, p. 35 and 43; and P-12.

<sup>78</sup> Exhibit P-95A, p. 41-42.

<sup>79</sup> *Ibid.*, p. 44 and Exhibit P-95B, Schedule 15.

[210] Moreover, Richter opines that a comparative analysis should have been conducted by LBC of the call-centre costs before, during and after the defect period in order to determine the reasonableness of the claim.

[211] Once again, the issue of fixed versus incremental costs is deferred to a later section in the present judgment. Subject to that determination, LBC's calculations in relation to call-centre costs as a result of the graphic card defect are reasonable and in keeping with the principles set forth in Article 74 CISG.

## **6.7 Engineering**

[212] HPF claims US\$82,500 in relation to the time of their full-time engineer, Salvatore Martinez, who is said to have spent approximately 25% of his time between April 1, 1999 and November 30, 2000 dealing with the graphic card problem. The amount claimed for the engineer's time is US\$62,500.

[213] Details of the calculation are found in the LBC costing report.<sup>80</sup> HPF is using not only the engineer's gross salary and benefit costs, being US\$82,361 per year, but it also increases that amount by overhead costs identified as being US\$66,791 per year. That represents an overhead cost rate of 81%. The amount claimed is 25% of the combined total over the 20-month period identified above.

[214] LBC has analyzed the revenue data for the engineer and concluded that 25% would yield an amount of US\$34,317 for that same period.

[215] As for the overhead costs, it received no documentation and accordingly used an "arbitrary" rate of 30%, resulting in a total amount of US\$44,612. LBC treats this as a full cost item only, expressing no incremental amount.

[216] As regards this particular claim, Richter again underscores the absence of documentation in relation to the 25% rate alleged as reflective of Mr. Martinez's time. LBC assumed it to be reasonable. As for the use of a 30% rate for related overhead cost, again Richter simply notes the absence of documentation. Essentially, Richter concludes that no additional employee costs were incurred and the claim, therefore, should be dismissed.

[217] As for the two percentage rates used by HPF and which LBC opined were reasonable, Richter simply dismissed them without opining as to what would be more appropriate from an accounting perspective.

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<sup>80</sup> Exhibit P-95A, p. 46-47.



[218] In the Court's view, LBC's damage assessment is a reasonable calculation in relation to engineer Martinez, the whole subject however to the Court deciding whether the use of a full-cost approach is appropriate.

[219] The second component of the engineering claim relates to the alleged buy-back of systems from certain customers. The amount claimed by HPF is US\$20,000. Since it is difficult to even understand the factual elements of this claim and, further, given that not even LBC recognizes it, the Court does not consider that HPF has satisfied its burden of proof in this regard. No amount will be awarded for that item.

### **6.8 Division Management and Employee Costs**

[220] HPF claims labour costs in the amount of US\$80,495 for division management and a further amount of \$82,950 for other employees in relation to time spent in dealing with and investigating the graphic card "epidemic". Details are provided at in LBC's costing report.<sup>81</sup>

[221] HPF's calculation for management costs, which is essentially based on two people, appears to take into account an estimated US\$75 per meeting and per review of documentation, and further amounts of US\$3,000 per week for a field application engineer and US\$4,000 per week for a solution (BIOS) qualification.

[222] LBC has used a full-cost approach, with no alternative incremental cost. It adopted the \$75/hr amount but not the per week field engineer amount, relying on the salary of engineer Martinez which was available for review. Instead of US\$3,000 per week, LBC used US\$1,500 per week. As for the BIOS qualification, LBC used an amount of US\$2,000 per week instead of HPF's US\$4,000 per week.<sup>82</sup>

[223] In addition, it calculated an estimated 30% overhead costs with respect to that labour charge, which gives rise to an amount of US\$92,294 for division management costs during the period from April 1999 to November 2000.

[224] As for the employee costs claim, it covers the subsequent period from December 2000 to April 2002.

[225] HPF claims US\$82,950 in that regard. By using a lower weekly cost based on engineer Martinez's salary, as mentioned above, LBC evaluated the damages in the amount of US\$42,497, plus a 30% overhead cost, yielding a total of US\$55,247.<sup>83</sup>

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<sup>81</sup> Exhibit P-95A, p. 49-53.

<sup>82</sup> Exhibit P-95B, Schedule 32.

<sup>83</sup> Exhibits P-95B, Schedule 32 and P-95A, p. 53.

[226] According to Richter, no additional employee costs, such as overtime, have been established and, accordingly, no damages should be awarded for this highly subjective and unsupported portion of the claim.

[227] For the reasons expressed above in relation to the engineering claim, the Court is of the view that LBC's calculations in relation to management and employee time dealing with the epidemic defect problem are reasonable *per se*, being reflective of the recovery principles in CISG. However, the use of a full-cost approach will be analyzed separately.

### **6.9 Loss of Reputation**

[228] HPF claims US\$1.5 million for an alleged loss of reputation as a result of the defect problem.

[229] No specific proof is submitted in this regard. Moreover, the proof demonstrates that other computer manufacturers encountered similar problems due to the defective graphic cards, which would render even more difficult the evaluation of HPF's alleged loss of reputation.

[230] In fact, the proof demonstrates<sup>84</sup> that Hewlett-Packard was in the average range for satisfaction and product cost, and nothing demonstrates that the graphic card problem altered its position.

[231] Understandably, neither LBC nor Richter recognized any amount of damages in this regard. Nor does the Court. HPF has simply failed to meet its burden of proof.

### **6.10 Full Cost versus Incremental Cost**

[232] To summarize, LBC's evaluation of damages includes three items which have both a full-cost and a separate incremental-cost calculation (parts overhead costs, labour and travel costs and call-centre costs), as well as three other items where there is no corresponding incremental-cost calculation (engineering costs, division management costs and employee costs).

[233] LBC described the two cost categories as follows<sup>85</sup>:

- Recovery of existing cost (i.e. overhead, intercompany recharges, salaries, etc.);
- Incremental cost resulting from the alleged problem(s).

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<sup>84</sup> Exhibits P-48, P-48.1, P-49, and P-61.

<sup>85</sup> Exhibits P-95A, p. 3, item 6; P-135, p. 13, item 4.

[234] Expressing both full and incremental costs in its reports was not done for trial purposes. It was included in the mandate given to LBC by HPF and Matrox, with support from STM.

[235] According to LBC, it is appropriate to use the “full-cost method” when claiming costs and expenses, as in the present case, as opposed to loss of profit. In these latter claims, adding certain costs of a fixed nature results in duplicate or double indemnity recovery of these fixed costs.

[236] Both Richter and Matrox’s counsel argue that damages should only be those which put a claimant in the same situation it would have been “but for” the alleged problem. According to Richter, accounting practice standards have not been used by LBC.<sup>86</sup> The « full cost » method is inappropriate in that it includes certain costs that would have been incurred regardless of the graphic card problem.

[237] So, on what specific basis is HPF presenting its claim for so-called full costs?

[238] According to expert Chilakos, it was her late co-expert, Mr. Lavigne, who argued that such costs can be awarded in cases where no profit is sought, relying on the *Blais* decision<sup>87</sup> in support thereof. Respectfully, that is insufficient to convince the Court that its full-cost method should apply here.

[239] In fact, in *Blais*<sup>88</sup>, it was recognized that overhead costs are reduced or entirely refused when there is insufficient proof and a failure to demonstrate that the accounting is in accordance with recognized principles. Such is the case in the present matter.

[240] The objective of compensatory damages is to indemnify a party for its loss. That requires a case by case assessment of the facts, including any applicable accounting principles, and the governing law.

[241] As noted above, pursuant to Article 74 CISG, the damages must be foreseeable and result from the seller’s breach.

[242] In the Court’s view, and subject to the exceptions that follow, HPF has failed to establish that the use of LBC’s “full cost” approach is in keeping with applicable accounting principles or with Article 74 CISG and accordingly, only those damages calculated in accordance with its “incremental cost” approach will be awarded.

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<sup>86</sup> Exhibits P-135, p. 13-14; D-24, p. 43.

<sup>87</sup> *Canadian Pacific Railway Company v. Blais*, [1969] C.S. 446, p. 450-451.

<sup>88</sup> *Ibid.*, p. 451.

[243] Nevertheless, the Court is prepared to recognize a limited portion of full costs, being those relating to certain management and employee costs where no incremental assessment has been determined.

[244] It is not unusual to include a certain amount in damages to reflect the time that a company's management and employees must dedicate to a crisis resulting from a third party's product or conduct. Clearly the graphic card epidemic imposed such a time burden on HPF management and employees, including engineer Martinez.

[245] One must acknowledge that "but for" the defective graphic cards, HPF's management would have been focusing on its regular business functions and on seeking ways to improve the business. It is gratuitous for a third party supplier of a defective product to assert that no damage is suffered because there is no "but for" increase in management and employees time involvement and that the salary has not been shown to change or overtime to have been paid. Those damages were caused by its defective product.

[246] In the present case, not only was HPF required to acquire additional graphic cards at a cost for a period of time and to coordinate transport, warehousing and repairs, it also participated actively in testing and finalizing the BIOS System solution to the Matrox defect.

[247] It would be inappropriate for Matrox to benefit at no cost for such additional business activity caused by the problems with Matrox's graphic cards.

[248] The Court has a certain discretion in awarding damages, and that is certainly no less true in relation to the full compensation principle envisaged by Article 74 CSIG. And as stated above, mathematical precision is certainly not required under the CISG.

[249] Considering the actual amounts claimed, the proof and the analysis performed by LBC as regards employees, engineer Martinez and division management, the Court considers that a global award of US\$75,000 would be justified in this regard and in keeping with the proof and the principles expressed in CSIG.

[250] All other headings of damages will only be treated on an incremental-costs basis as expressed in LBC's Schedule 1, Exhibit P-95B

#### **6.11 HPF's Legal Right to Claim Damages Worldwide**

[251] Although HPF had a global business responsibility within Hewlett-Packard for the BDD business unit, its legal responsibility was different.

[252] HP Corporate of the USA granted licenses to a number of its computer factories located in different world regions. Only one of those was located in France.<sup>89</sup>

[253] In addition to the factories, there were commercial entities, which handled sales and field services throughout the various regions. The commercial entities located in a specific region transacted with a factory located in that region.

[254] Those commercial entities were remunerated by means of a contractual mark-up, generally around 10%. That mark-up was guaranteed by the regional factory, payable through inter-company transfers.<sup>90</sup> In Europe, it was the HPF factory that was responsible to ensure payment of the fixed mark-up to the commercial entities throughout all of Europe.<sup>91</sup>

[255] According to the preponderance of proof, as costs increase for the commercial entities due to a warranty problem, like the Matrox graphic cards, the regional factory was required to compensate them financially in order to ensure that they still benefit from their fixed mark-up.

[256] According to Tarik Kandil, responsible for legal accounting in USA for Hewlett-Packard Corporate in California, as well as for statutory tax accounting in France, the French factory's liability for the commercial entities located throughout Europe were reflected in HPF's financial statements<sup>92</sup>, based on HPF's ledgers.<sup>93</sup> Kandil explained that HPF incurred the costs of the French and Netherlands factories for all commercial entities throughout Europe as a result of the graphic card defects.

[257] However, HPF did not incur all of the global financial damages resulting from the Matrox graphic card defects. Other regional factories, such as in Asia and the U.S.A., would have incurred damages. HPF was not responsible to compensate those factories even though it was responsible for the global BDD business.

[258] Kandil explained that HPF only assumed approximately 56% of the global loss, the remaining damages having been incurred by other Hewlett-Packard entities not parties to the present action.

[259] In fact, the precise percentage allocation is 52.26%, blended for G-100 and G-200 cards, throughout Europe, including the two factories located in France and the

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<sup>89</sup> Exhibits P-95B, Schedule 4; P-41.

<sup>90</sup> Exhibit P-41; see also P-98 and P-101.

<sup>91</sup> Exhibits P-41, P-98, P-101 and P-41.

<sup>92</sup> Exhibits P-102 to P-105.

<sup>93</sup> Exhibits P-46, P-47, P-96, P-97, P-99 and P-100.

Netherlands.<sup>94</sup> Accordingly, only 52.26% of the established damages are recoverable by HPF.

[260] Having decided that the damages are to be determined according to Estimate “C”, using the “incremental cost” method, plus the US\$75,000 amount for management costs, the total damage calculation is US\$3,114,468. HPF’s share thereof is US\$1,627,620.90.

## **7- MITIGATION OF DAMAGES**

[261] The parties mandated LBC to not only evaluate damages but also to comment on mitigation of damages.<sup>95</sup>

[262] The issue essentially is to determine the point in time when Matrox provided a solution to the graphic card problem such that no further graphic card replacements would have had to be performed. Any claim by HPF for costs incurred after that time should not, according to Matrox, be awarded.

[263] LBC and Richter differ as to the appropriate date to use past which no further graphic card replacements were required. In essence, this is not really an accounting issue but a legal one.

[264] As mentioned above, the CISG stipulates at Article 77 that it is the defendant vendor who has the burden to prove a failure to mitigate damages as well as the amount by which the claim should be reduced as a result.

[265] In the Court’s view, Matrox has failed to meet its burden.

[266] Matrox did not advise HPF that there were problems with graphic cards. HPF informed Matrox of the problem. Matrox eventually reacted to HPF’s complaints regarding the high failure rates being noticed in the G100 and G200 cards during the summer of 1999, even though at first it was reticent to acknowledge a defect.

[267] In addition to repairing cards, Matrox then acquired EEPROMs from a different supplier than STM. Some of those were sold to HPF and others were given to it free of charge.

[268] In September 1999, Matrox developed a discovery disk which could restore the graphic card from a black screen to a normal view. But it was a temporary measure<sup>96</sup> which did not prevent the failure from reoccurring after approximately two weeks. When

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<sup>94</sup> Exhibit P-95B, Schedule 4.

<sup>95</sup> Exhibits P-94A, P-135 and P-141.

<sup>96</sup> Exhibit P-29.

that happened, the client would have to run the disk again. HPF offered it to its customers as a temporary fix, but not everyone accepted it. In any event it was not a permanent solution.

[269] At the end of September, early October 1999, Matrox proposed a Beta version of a BIOSGuard patch. Matrox claims that another of its customers, Compaq, used it and made no further complaints.

[270] HPF did not accept it as a viable solution. HPF attempted to validate the BIOS Guard patch, but it failed to pass the company's internal validation tests.<sup>97</sup>

[271] In the Court's view, none of the foregoing attempts by Matrox are of such a final nature as to require HPF to impose it as a viable solution on its customers and to, accordingly, cease replacing graphic cards when their customers insisted on receiving same. In fact, even Matrox, around February 2000, set up a rework network using a contractor, AZ Electronics of Grenoble, to replace defective parts. As well, Matrox was shipping free graphic cards for replacement purposes in February and March 2000.

[272] The ultimate solution came in the form of a BIOS System which could be installed directly on the computer's mother-board, and not just on the graphic card as was the case with the BIOSGuard patch. That represented a permanent fix to the problem.

[273] The BIOS System was developed jointly between HPF and Matrox. This solution was accepted by HPF in October 1999. It began informing customers of it as a method of resolving the graphic card problem. HPF actually pushed its use, with implementation in March 2000 for G-100 cards and April 2000 for G-200 cards. But once again not all of its clients accepted a "fix". They wanted the graphic cards replaced.

[274] Even if HPF could have acted sooner and put an end more quickly to replacing cards, it was not obliged to conduct itself perfectly with a view to saving money for Matrox. It was entitled to reasonably satisfy its customers' needs, or even desires, to avoid as much as possible any long-term impact on its reputation resulting from the defect affecting Matrox's graphic cards. In the Court's view, the preponderance of proof establishes that HPF acted reasonably and did not fail to mitigate its damages. Matrox has failed to satisfy its burden under Article 77 CISG in this regard.

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<sup>97</sup> Exhibit P-6, p. 22-25.

## 8- CONVERSION FROM AMERICAN TO CANADIAN CURRENCY

[275] Given that the amounts have been quantified in American currency, it is necessary to convert the judgment award into Canadian currency for the purposes of execution.<sup>98</sup>

[276] HPF seeks to apply the exchange rate of 1.5889, which existed as of February 20, 2002, when the proceedings against Matrox were instituted. That rate is said to be the one which was published by the Bank of Canada as at that date. This is acknowledged by Matrox.

[277] The CISG does not provide either a specific provision or a generalized principle in this regard. Therefore recourse should be had to domestic law. Quebec courts have generally recognized that the choice of the conversion date, and hence the most favorable rate, belongs to the creditor.

[278] This principle was described as follows by the Quebec Court of Appeal in *Cohen v. Hill Samuel & Co.*<sup>99</sup>

*Le créancier, dans telle situation, doit faire la preuve d'un taux de conversion. Si sa réclamation est reconnue comme justifiée, il peut bénéficier de la date qui lui semble la plus favorable. Après tout, le débiteur pouvait toujours payer plus tôt. Une réserve nécessaire serait le cas où l'inaction ou la négligence du créancier porterait préjudice au débiteur, en raison de l'évolution du taux des changes.*

[279] Matrox argues that not only should HPF's claim be dismissed with costs, but that if any part of the case is to be granted, the appropriate exchange rate date should be that of the judgment given that HPF has been negligent in pursuing its case, thereby causing damages to the defendant as debtor.

[280] In that regard, the court record contains no indication that HPF acted in a negligent manner thereby causing harm to Matrox. It does show a seriously long delay between the institution of proceedings and the merits hearing, but that is not due to wilful negligence on the part of HPF. In fact, the latter on more than one occasion decried how its claim was being held back due to the lawsuits between Matrox and STM. Ultimately, the Court decided to disjoin both Matrox's warranty action and parallel action against STM from the HPF lawsuit as it had become a serious access to justice issue.

[281] In the present matter, the Court accepts HPF's choice as to the applicable date for the conversion rate and, accordingly, fixes that rate at 1.5889.

<sup>98</sup> *Currency Act*, R.S.C., 1985, c. C-52, s. 12.

<sup>99</sup> [1989] R.J.Q. 2078, p. 2083.



[282] Given that HPF's damages have been established for an amount of US\$1,627,620.90, the conversion into Canadian dollars equates to \$2,586,126.80.

## 9- INTEREST AND INDEMNITY

[283] HPF claims interest and the additional indemnity provided by Article 1619 C.C.Q., calculated as of May 29, 2000. It also demands that the accrued interest itself bear interest at the same rate plus the said additional indemnity.

[284] In that regard, Article 1620 C.C.Q. reads as follows:

*Interest accrued on principal does not itself bear interest except where that is provided by agreement or by law or where additional interest is expressly demanded in a suit.*

[285] Compound interest is being sought in the present matter on the basis of a specific demand in the law suit, not by reason of contract or by law.

[286] The purpose of compound interest is to reflect the time-value of money, not only on the principal but also on the interest, and this with a view to compensating a lender for the decrease in value of all the money due but not yet paid.

[287] The Supreme Court of Canada, in *Bank of America v. Mutual Trust*<sup>100</sup>, explains the concept as follows:

*[23] Simple interest and compound interest each measure the time value of the initial sum of money, the principal. The difference is that compound interest reflects the time-value component to interest payments while simple interest does not. Interest owed today but paid in the future will have decreased in value in the interim just as the dollar example described in paras. 21-22. Compound interest compensates a lender for the decrease in value of all money which is due but as yet unpaid because unpaid interest is treated as unpaid principal.*

*[24] Simple interest makes an artificial distinction between money owed as principal and money owed as interest. Compound interest treats a dollar as a dollar and is therefore a more precise measure of the value of possessing money for a period of time. Compound interest is the norm in the banking and financial systems in Canada and the western world and is the standard practice of both the appellant and respondent.*

[288] Matrox pleads that the Court should not award either additional indemnity or compound interest, in large part due to what it describes as HPF's pattern of conduct

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<sup>100</sup> [2002] 2 S.C.R. 601, at paras. 23 and 24.

that includes a lack of transparency, diligence and good faith combined with gross negligence which has allegedly prejudiced Matrox's rights.

[289] The Court sees no valid basis in the proof for Matrox's position, and it certainly has not established that it has been prejudiced.

[290] To the extent that HPF's claim has not been established for any specific item or heading of damage, it has been reduced accordingly. The fact that a claim is reduced does not mean that valid portions of the claim should automatically exclude the additional indemnity. Moreover, the Court is unaware of any serious attempts by Matrox to settle this matter over the course of almost 20 years since the problems surfaced or to seriously advance the proceeding so that they could be heard earlier. And Matrox has not alleged nor made the case of abusive proceedings.

[291] It is perplexing to say the least that Matrox invites the Court to view it as a victim of HPF's bad faith. It is a view that is not supported by the facts. From the time of KPMG's mandate being terminated right through the trial, Matrox seems to have adopted a strategy of forcing HPF to prove every single element of its financial claim without much in the way of useful admissions. So be it. But, it cannot now avoid paying the additional indemnity provided by law.

[292] In the Court's view, the additional indemnity should be awarded.

[293] What is the appropriate starting date?

[294] The appropriate starting date for both interest and the additional indemnity is the one advanced by HPF, being May 29, 2000, a few days following the May 26, 2000 send-date of its demand letter to Matrox.<sup>101</sup>

[295] The preponderance of proof demonstrates that a valid demand letter was sent, even if the word "*Draft*" appears on it. That word appears to have no meaning as regard the demand letter in the present matter. The demand was for Matrox to pay US\$3.1 million, being one-half of the damages HPF claimed to have suffered at that point, adding that it was prepared to cover one-half of the costs because of what it had invested in the relationship with Matrox.

[296] It constitutes a letter of demand. Matrox chose to not pay what was claimed. Even had it considered the amount claimed to be excessive, it could have tendered and deposited in court some other amount which it considered to be reasonable. It never did so during the course of the ensuing 19 years.

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<sup>101</sup> Exhibit P-4.

[297] That said, however, the Court will not award compound interest.

[298] Essentially, HPF advances no serious justification for claiming compound interest.

[299] Moreover, compound interest is intended to be calculated on interest which has accrued at the time of instituting a law suit, not the interest awarded thereafter.<sup>102</sup> The CISG does not provide for it either in cases such as this one. Compound interest is not appropriate in the present matter.

## **10- EXPERTS COSTS**

[300] As part of its judicial costs, HPF claims experts' fees relating to LBC and expert Chilakos.

[301] There are two different time frames to be considered in this regard.

[302] Firstly, there is the time frame between 2004 and 2010 when LBC was acting as joint expert. As mentioned, LBC was jointly mandated September 28, 2004<sup>103</sup> and was shortly thereafter appointed by the Court, which ordered that both HPF and Matrox were at liberty to file the LBC reports as their own expert report, while also reserving their rights to contest such reports and to file counter expertise. HPF assumed one-third of the joint experts costs<sup>104</sup>. It seeks to be reimbursed its share of those costs.

[303] The next time frame commenced in mid-2017, as the case was moving towards trial. It was at this stage that Eleni Chilakos was consulted by Plaintiff's counsel in order to give expert evidence at trial. Her billings<sup>105</sup> for these purposes were only directed to HPF.

[304] The total amount billed by both LBC and Chilakos Consulting to HPF, directly or through counsel, is \$536,514.79. That HPF has paid such costs is not contested.

[305] Pursuant to Article 339 C.C.P., given the usefulness of the experts' work product and testimony to the outcome of the present matter, the Court concludes that the entire amount paid by HPF is to be included in the costs award.

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<sup>102</sup> *Hébert c. Centre hospitalier affilié universitaire de Québec - Hôpital de l'Enfant-Jésus*, 2011 QCCA 1521, at paras. 100-108.

<sup>103</sup> Exhibit P-94D.

<sup>104</sup> Exhibit P-140.

<sup>105</sup> Exhibits P-140, P-140A and P-140B.

**FOR THESE REASONS, THE COURT:**

**GRANTS** in part Plaintiff's action;

**CONDEMNNS** Defendant to pay Plaintiff the sum of \$2,586,126.80 plus interest and the additional indemnity provided by Article 1619 C.C.Q., calculated as of May 29, 2000.

**THE WHOLE** with legal costs, including an amount of \$536,514.79 in expert fees.

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Dates of Hearing :    March 13, 14, 18, 19, 20, 21, 25, 26, 27 and 28, 2019  
                                 May 6, 7, 9, 13, 14, 15, 21, 22 and 23, 2019