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A-121-21

2023 FCA 115

dTechs EPM Ltd. (Appellant)

v.

**British Columbia Hydro and Power Authority and Awesense Wireless Inc.
(Respondents)**

INDEXED AS: DTECHS EPM LTD. V. BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

Federal Court of Appeal, Gauthier, Mactavish and LeBlanc JJ.A.— Calgary, October 27, 2022; Ottawa, May 26, 2023.

Patents — Infringement — Appeal from Federal Court judgment dismissing appellant's claim for infringement of its Canadian Patent No. 2,549,087 ('087 Patent) against respondents, declaring claims at issue invalid on grounds of anticipation, obviousness — '087 Patent relating to monitoring usage of electrical utilities, to system of detection of patterns indicative of theft of electrical utilities — Appellant claimed that while respondent Awesense Wireless Inc. (Awesense) did not perform any of the steps included in methods described in '087 Patent, Awesense liable for inducing or procuring its customers to infringe '087 Patent — Also alleged that Awesense liable under doctrine of common design — Each party relied on expert evidence — Federal Court held that respondents had not infringed asserted claims of '087 Patent — Found that respondent British Columbia Hydro and Power Authority's (BC Hydro) prior use anticipated all claims except for dependent claims 4 and 22 — After original filing of notice of appeal, appellant brought motion seeking order admitting new evidence, i.e. working agreement, invoices of BC Hydro's expert, to amend notice of appeal to include ground that Federal Court erred in admitting or giving any weight to BC Hydro's expert evidence — Appellant argued that BC Hydro's expert evidence not independent, should have been excluded or given no weight — Sought, inter alia, judgment granting infringement action in its favour — BC Hydro in counterclaims seeking declaration of invalidity in respect of dependent claim 4 — Main issues whether new evidence having sufficient probative value to support allegation that BC Hydro's expert evidence was inadmissible or should have been given no weight; if so, whether, in light of other evidence adduced at trial, it might have led to granting of infringement action, dismissal of invalidity allegations — Appeal in respect of infringement action against respondents dismissed — No reasonable basis for Federal Court to refuse to admit BC Hydro's expert evidence simply because first drafts of reports were penned by counsel after many hours of consultation with expert — New evidence could not have affected result of infringement action but could have affected findings that dependent claim 4 was anticipated, obvious — Federal Court's ultimate conclusion that neither respondents infringed asserted claims not affected by new evidence — This conclusion relating to construction of claims, not involving any expert evidence — Despite conclusion that infringement action would still be dismissed based on other evidence adduced at trial, legal findings of Federal Court, validity findings examined because of counterclaims — New evidence not affecting

finding on anticipation by prior use, BC Hydro's prior use meeting requirements set out in Patent Act, s. 28.2 even without expert's evidence — Issue of obviousness relating to claim 4, being factual question informed by expert evidence, to be redetermined, if need be, by Federal Court — Although new evidence might have had some impact on weight afforded to BC Hydro's expert evidence, it could not have affected result of infringement action per se — Action would still have been dismissed on basis of undisturbed legal, factual findings of Federal Court — Appeal allowed in part.

Patents — Practice — Expert evidence — Federal Court dismissing appellant's claim for infringement of its Canadian Patent No. 2,549,087 against respondents — After original filing of notice of appeal, appellant brought motion seeking order admitting new evidence, i.e. working agreement, invoices of respondent British Columbia Hydro and Power Authority's (BC Hydro) expert, for consideration on this appeal, to amend notice of appeal to include ground that Federal Court erred in admitting or giving any weight to BC Hydro's expert evidence — Appellant argued that BC Hydro's expert evidence was not independent, should have been excluded or given no weight — No reasonable basis for Federal Court to refuse to admit BC Hydro's expert evidence simply because first drafts of reports were penned by counsel after many hours of consultation with expert — In patent cases, not unusual for expert reports to be prepared in close collaboration with counsel in effort to present expert's substantive opinion in manner, format helpful to Court — This involvement not inevitably meaning that drafts not reflecting expert's substantive, objective opinion — However, involvement of counsel having limits — Litigators involved in patent cases ought to be alert and alive to their duty to verify whether those limits were infringed by obtaining, through cross-examination, information necessary for Court to assess if opinion presented by expert is truly their own objective opinion — Interest of justice, its proper administration would not be served if one could simply wait to review expert's invoices after trial to argue that new trial should take place — Federal Court did not accept in its entirety any of expert's evidence in respect of construction — No known authority suggesting that trial judge was obliged to follow entirety of evidence of one party or other, could not reach own conclusion.

Practice — Pleadings — Amendments — Federal Court dismissing appellant's claim for infringement of its Canadian Patent No. 2,549,087 against respondents — Appeal herein illustrating how care must be taken in dealing with motion for leave to file new evidence before Federal Court of Appeal — After original filing of notice of appeal, appellant's position changed based on new evidence (expert working agreement, invoices) obtained in context of assessment of respondent British Columbia Hydro and Power Authority's (BC Hydro) costs — Appellant brought motion in writing seeking order admitting BC Hydro's expert's new evidence for consideration on this appeal to establish that expert was not independent, to amend notice of appeal to include ground that Federal Court erred in admitting or giving any weight to this evidence — Respondent argued that motion should be disposed of by motion judge in writing prior to hearing as per Federal Court Rules, r. 369.2 — Motion Judge immediately allowed appellant to advance this new ground of appeal, concluding that it was not bound to fail — Simply considered whether in theory new evidence could have reasonably affected result of trial, focusing on its relevance as to admissibility, weight of BC Hydro's expert evidence — Held that whether new evidence was sufficient to support appellant's claim, whether BC Hydro's expert's credibility was undermined such that his evidence should have been held inadmissible or given much less weight, and if so, whether Federal Court's decision would have been the same were matters best left to appeal panel — Rules of procedure, case law of most provincial courts of appeal clearly spelling out that motions to admit new evidence on appeal should only be heard by panel or panel hearing merits of appeal — Appellant's assertion, based on Supreme Court decision in R. v. Stolar (Stolar), that motion Judge's order bound panel, limited its remedy-granting ability to either granting appeal, entering judgment in its favour, or ordering new trial on all issues, ill-founded — Two-step process in Stolar not directly applicable in cases like this one, where motion to file new evidence was dealt with by single judge, without benefit of all evidence adduced at trial, where proposed new evidence tendered in support of new ground of appeal not having clear bearing on all of Federal Court's findings, ultimate outcome of trial — No precedent from Federal Court of Appeal for limiting remedies that may be granted by appeal panel in light of motion judge's order admitting new evidence.

STATUTES AND REGULATIONS CITED

Code of Civil Procedure, CQLR c. C-25.01, art. 380.

Federal Court Rules, SOR/98-106, r. 52.2, 52.6, 369.2, 420, Sch.

Patent Act, R.S.C., 1985, c. P-4, s. 28.2.

CASES CITED

APPLIED:

White Burgess Langille Inman v. Abbott and Haliburton Co., 2015 SCC 23, [2015] 2 S.C.R. 182.

DISTINGUISHED:

R. v. Stolar, [1988] 1 S.C.R. 480.

CONSIDERED:

dTechs epm Ltd. v. British Columbia Hydro and Power Authority, 2021 FC 357; *Palmer v. The Queen*, [1980] 1 S.C.R. 759; *Medimmune Ltd. v. Novartis Pharmaceuticals UK Ltd.*, [2011] EWHC 1669 (Pat.); *Moore v. Getahun*, 2015 ONCA 55 (CanLII), 124 O.R. (3d) 321; *Tensar Technologies, Limited v. Enviro-Pro Geosynthetics, Ltd.*, 2021 FCA 3; *Biogen Canada Inc. v. Pharmascience Inc.*, 2022 FCA 143, 196 C.P.R. (4th) 120; *Cobalt Pharmaceuticals Company v. Bayer Inc.*, 2015 FCA 116, 474 N.R. 311, [2015] 4 F.C.R. D-1.

REFERRED TO:

Syndicat des copropriétaires du Square Champlain II c. Syndicat des copropriétaires du Samuel de Champlain, 2018 QCCA 1538 (CanLII); *Duchesneau c. Ville de Montréal*, 2019 QCCA 1955 (CanLII); *Simon c. Haccoun*, 2020 QCCA 64 (CanLII); *Apotex Inc. v. Jenssen Pharmaceutica Inc.*, 2001 FCA 247, [2002] 1 F.C. 393; *Whirlpool Corp. v. Camco Inc.*, 2000 SCC 67, [2000] 2 S.C.R. 1067.

APPEAL from a judgment of the Federal Court (2021 FC 190) dismissing the appellant's claim for infringement of its Canadian Patent No. 2,549,087 against the respondents and declaring the claims at issue invalid on the grounds of anticipation and obviousness. Appeal allowed in part.

APPEARANCES

Christian J. Popowich and *Alex McKay* for appellant.

Michael Crichton, *R. Nelson Godfrey* and *Claire Stempien* for respondent British Columbia Hydro and Power Authority.

Vincent M. de Grandpré and *Kenza Salah* for respondent Awesense Wireless Inc.

SOLICITORS OF RECORD

Code Hunter LLP, Calgary, for appellant.

Gowling WLG (Canada) LLP, Ottawa, for respondent British Columbia Hydro and Power Authority.

Osler, Hoskin & Harcourt LLP, Toronto, for respondent Awesense Wireless Inc.

The following are the reasons for judgment rendered in English by

[1] GAUTHIER J.A.: This is an appeal from a judgment of the Federal Court ([2021 FC 190, 183 C.P.R. (4th) 1] *per* Fothergill J.) (the FC Decision) dismissing dTechs EPM Ltd.'s (dTechs) claim for infringement of its Canadian Patent No. 2,549,087 (the '087 Patent) against the respondents British Columbia Hydro and Power Authority (BC Hydro) and Awesense Wireless Inc. (Awesense). The Federal Court also declared the claims at issue invalid on the grounds of anticipation and obviousness.

[2] This matter is somewhat unusual in that originally, the appellant was contesting almost all of the conclusions of the Federal Court in respect of the construction of the '087 Patent, the validity of the claims, and the findings of non-infringement. However, since the original filing of the notice of appeal, the appellant's position has changed based on new evidence obtained in the context of the assessment of BC Hydro's costs (expert working agreement and invoices), which it was granted leave to file by a motion judge of this Court. The appellant was also granted leave to amend this notice of appeal to include that the Federal Court erred in admitting or giving any weight to the evidence of BC Hydro's expert.

[3] In its Memorandum of Fact and Law, and before us, the appellant effectively abandoned all of the other grounds of appeal listed in its amended notice of appeal. Its position is now premised entirely on the proposition that the evidence of BC Hydro expert's should have been excluded or given no weight because he did not provide independent expert evidence. If so, the appellant contends that it would have succeeded at trial. On that basis, the appellant seeks a judgment of this Court granting the infringement action in its favour and declaring the asserted claims valid, or, alternatively, an order directing a new trial, subject to strict conditions, namely that the parties be precluded from adducing new expert evidence. In both cases, the appellant seeks all the costs incurred below, as well as the costs in the present appeal.

[4] At the outset of the hearing, counsel for the appellant made it very clear that he agreed that the role of this panel was limited to two questions:

- (a) Whether the new evidence (i.e., working agreement and invoices of BC Hydro's expert) has sufficient probative value to support the appellant's position that the evidence of BC Hydro's expert was inadmissible or should have been given no weight whatsoever;
- (b) If so, whether in light of the other evidence adduced at trial, such a finding might have led to the granting of the infringement action and the dismissal of the defence and counterclaims based on invalidity.

[5] It was also agreed that in respect of the second question, this Court was to take into account the legal and factual findings of the Federal Court that were unaffected by the evidence of BC Hydro's expert, for these were no longer contested *per se* on this appeal. Obviously, this also means that these reasons should not be construed as confirming these findings as this is not our task in this appeal.

[6] After the hearing, the appellant seemingly changed its mind as to this Court's role in this appeal, which it now says is limited by the Supreme Court's decision in *R. v.*

Stolar, [1988] 1 S.C.R. 480 (*Stolar*) and the order of the motion Judge in this case. I deal with this argument at paragraphs 20 to 31 of these reasons.

[7] In the end, this matter requires the application of known principles to a very unusual set of facts. It illustrates how care must be taken in dealing with a motion for leave to file new evidence before this Court, so that there is no misunderstanding as to the impact of an eventual order by a motion judge granting such leave. It also emphasizes the need for lawyers involved in patent cases to thoroughly consider and assess the admissibility of an expert report before this evidence is actually admitted at trial or, at the very least, before the end of the testimony of said expert.

[8] It is also important to immediately clarify that dTechs' decision not to pursue its other grounds of appeal has a direct impact on its ability to succeed against Awesense. By the end of the trial, the appellant's claim against this respondent was solely based on allegations of indirect infringement through inducement or common design. In light of the specific findings in the FC Decision, at paragraphs 176 to 179, the new evidence can have absolutely no bearing whatsoever on the liability of this respondent/defendant. Consequently, the appeal in respect of the infringement action against Awesense ought to be dismissed.

[9] As will be explained in these reasons, I would also dismiss the appeal in respect of the infringement action against BC Hydro. However, I would allow the appeal as it relates to the declaration of invalidity sought in the counterclaims in respect of dependent claim 4 because of the potential impact of the new evidence on the Federal Court's findings regarding that claim. Should BC Hydro decide to pursue its counterclaim with respect to dependent claim 4 on the grounds of anticipation or obviousness, or on any other grounds the Federal Court did not deem necessary to rule on, it will have to do so by way of a new trial before the same judge. Moreover, as the new evidence is not conclusive of anything other than the fact that Mr. Shepherd did not write the first drafts of his reports, it will be for the Federal Court to determine its impact on the weight of Mr. Shepherd's evidence, if any, on the issues that need to be redetermined.

[10] The judgment before us did not award costs. It left this matter to be determined in a distinct order. In fact, costs were awarded and instructions were given as to how they were to be assessed in an order (*per* Fothergill J.), dated April 22, 2021 (2021 FC 357). The awarding of costs involved various matters, including the application of rule 420 of the *Federal Court Rules*, SOR/98-106 (the Rules). The final costs were assessed by an assessment officer in a confidential order, dated May 11, 2022. None of these orders were appealed. In the circumstances, I cannot see on what basis this Court could deal with the issue of the costs in the Federal Court.

I. Background

[11] The '087 Patent is entitled "Electrical Profile Monitoring System for Detection of Atypical Consumption" and relates generally to "monitoring usage of utilities, such as electrical, for alteration in normal patterns of consumption of utilities and, more specifically, to a system of detection of patterns indicative of theft of electrical utilities, such as in the indoor cultivation of marijuana". All the claims are directed to methods; none cover an apparatus. The appellant is the owner of the '087 Patent issued on January 20, 2009. The appellant's application was published on August 10, 2007. Mr.

Morrison, a former sergeant with the Calgary Police Service, is the inventor listed therein. He is the founder of dTechs, which he incorporated on May 24, 2006. How he came to develop his invention is described at paragraphs 90 to 100 of the FC Decision.

[12] BC Hydro is a Crown corporation and electrical utility, and Awesense is a start-up company that supplied the wireless ammeters and energy meters to BC Hydro that were used on the primary supply line, together with supporting software. As mentioned, by the end of the trial, the appellant claimed that while Awesense does not perform any of the steps included in the methods described in the '087 Patent, it is liable for inducing or procuring its customers to infringe the '087 Patent. It also alleged that Awesense is liable under the doctrine of common design.

[13] Each party relied on the following expert evidence: (i) dTechs' expert was Mr. LaPlace; (ii) BC Hydro's expert was Mr. Shepherd; and (iii) Awesense's expert was Mr. Bennett. These experts opined on issues related to the construction of the claims in issue, including identifying the person of ordinary skill in the art (POSITA) to whom the patent is addressed and the relevant common general knowledge (CGK), as well as on infringement. Only Mr. Shepherd and Mr. LaPlace provided evidence on issues related to the validity of the claims.

[14] The admissibility of the reports of the above-mentioned experts was not challenged at any time before the FC Decision was issued. In fact, the reports of all three experts were filed on consent, and they were qualified to opine on the matters contained in their reports.

[15] However, as noted by the Federal Court, each party made criticisms regarding the qualifications or approaches of the expert witnesses tendered in these proceedings to diminish the weight that should be attributed to their evidence. The Court found that while some of these criticisms were valid, none of them were sufficient to undermine any of the witnesses' evidence in their entirety. At paragraph 89 of the FC Decision, the Court indicated that its reasons for preferring some witnesses' evidence over others were explained therein.

[16] The Federal Court held that neither BC Hydro nor Awesense, individually or together, had infringed the asserted claims of the '087 Patent. It found that there was no evidence that BC Hydro compares metered consumption on the primary supply line with known consumption patterns, i.e., historical or predicted consumption patterns, an essential element of independent claims 1 and 21 (FC Decision, at paragraphs 174–175). It also found that Awesense: (i) did not itself infringe the asserted claims, as it did not perform any of the steps of the method described in the '087 Patent, (ii) exercised no control over the manner in which BC Hydro used its software, and (iii) that there was no evidence that Awesense ever induced BC Hydro to infringe the asserted claims, or to support an allegation of infringement by common design (FC Decision, at paragraphs 177–179).

[17] The Federal Court found that BC Hydro's prior use, established through the testimony of lay witnesses, would have infringed the '087 Patent (FC Decision, at paragraphs 186–203). It concluded that this use anticipated all the claims still at issue at the end of the trial, except for dependent claims 4 and 22. The Court also found that two publications, referred to as the OLO Reference and the De Reference, anticipated most

of the asserted claims. However, only the De Reference was found to anticipate claim 4. Finally, the Federal Court found that all the asserted claims were obvious.

[18] At this stage, there is no need to say more about the FC Decision, which is more than 80 pages long. I will refer to the most relevant portions in my analysis. It is nevertheless important to note that the Federal Court's construction of the terms "known consumption patterns", part of an essential element of all the claims at issue, was critical to its ultimate conclusions. Indeed, this construction was ultimately what led the Federal Court to conclude that BC Hydro does not infringe the '087 Patent.

II. Claims

[19] All the claims that were originally at issue are reproduced in the FC Decision, at paragraphs 47 to 71. For the sake of understanding the present reasons, I need only to reproduce claims 1, 4 and 22 of the '087 Patent:

1. A method for detection of atypical electrical consumption patterns comprising:

providing a meter for detecting consumption of electricity from a utility;

connecting the meter to a primary supply line, the primary supply line supplying electricity to a plurality of transformers, each transformer feeding the electricity to a plurality of structures, the meter having a resolution for detecting variation from known consumption patterns in the primary supply line;

monitoring the primary supply line at predetermined time intervals for consumption of electricity;

collecting data for determining measures indicative of patterns of consumption;

comparing the patterns of consumption to known consumption patterns for identifying suspect consumption patterns; and

when a suspect consumption pattern is identified, notifying the utility of the identified suspect consumption pattern in the primary line, the utility thereafter monitoring characteristics of the plurality of transformers for identifying a suspect transformer; and

load testing at least one of a plurality of secondary lines from the suspect transformer to each of the plurality of structures for identifying a suspect structure.

[...]

4. The method of claim 1, 2 or 3 further having a smart meter connected to secondary lines at each structure for determining consumption at each of the structures, the method further comprising:

comparing electrical supply at the primary supply line to a sum of the consumption at all of the secondary lines for reconciling consumption to supply.

[...]

22. The method of claim 21 wherein the monitoring characteristics of the plurality of transformers further comprises:

notifying a monitoring agency of the suspect consumption pattern in the primary line, wherein the monitoring agency then monitors the characteristics of the plurality of transformers. [My emphasis.]

III. The Motion to Amend the Notice of Appeal and to File New Evidence

[20] The appellant brought a motion in writing seeking an order admitting the working agreement and invoices of BC Hydro's expert for consideration on this appeal for the purpose of establishing that this expert was not independent, and to amend the notice of appeal to include the ground that the Federal Court erred in admitting or giving any weight to the evidence of Mr. Shepherd. It requested that the admissibility of the new evidence be determined by the panel hearing the appeal on the merits in the context of all evidence from the trial and full argument on the merits of the ground of appeal. BC Hydro opposed the appellant's request, arguing that the motion should be disposed of by a motion judge prior to the hearing as it would determine the scope of the issues and grounds of appeal it would need to address in the appeal. In the respondent's view, there was no reason to treat this motion other than in writing, as per rule 369.2 of the Rules. According to the appellant, granting BC Hydro's request to dismiss the motion on an interlocutory basis would end the appeal, as this was the sole remaining ground argued in the appellant's Memorandum of Fact and Law. dTechs never raised the issue that the motion Judge would be binding the panel hearing the appeal on its merits, as argued in its post-hearing submissions on the basis of *Stolar*.

[21] The motion Judge appears to have sought to satisfy all the parties by immediately allowing the appellant to advance this new ground of appeal. In order to do so, he had to conclude that the appeal on this new ground was not bound to fail. This could only be so if the new evidence the appellant was seeking to rely on was admitted for consideration by the panel hearing the merits of the appeal. However, the motion Judge appears to have had some difficulty with the second issue of whether he could admit the evidence on the basis of the record before him, especially considering that the Appeal Book had not yet been filed, and that Awesense had argued that the evidence of its own expert, Mr. Bennett would have to be considered, even if the expert evidence of Mr. Shepherd was excluded or given no weight.

[22] It is worth recalling at this stage that the fourth criterion of the test for admitting new evidence on appeal stated in *Palmer v. The Queen*, [1980] 1 S.C.R. 759 (*Palmer*), at page 775, involves determining, once the evidence meets the first three criteria, whether "when taken with the other evidence adduced at trial", this evidence might have affected the result of the trial.

[23] Thus, although the motion Judge purported to apply the *Palmer* test, he did what motion judges of this Court usually do when dealing with such motions. While it could have been stated more clearly, he simply considered whether in theory the new evidence could have reasonably affected the result of the trial, focusing on its relevance as to the admissibility and weight of BC Hydro's expert evidence.

[24] Obviously, a motion judge cannot usurp the role of the panel hearing the appeal on its merits by looking at each finding of the trial court, and the supporting evidentiary record to determine how this new evidence might actually affect each of them. That is simply not the role of a motion judge.

[25] That is the context in which the motion Judge stated that whether the new evidence will be sufficient to support the appellant's claim goes to the merits of the appeal and is best left to the panel which will hear it. He also noted that whether, on the basis of the new evidence, the credibility of BC Hydro's expert had been undermined

such that his evidence should have been held inadmissible or should have been given much less weight was also a matter for the appeal panel to determine.

[26] Even more importantly, the motion Judge clearly stated that “[w]hether the Federal Court’s decision would have been the same and its ultimate findings undisturbed had BC Hydro’s expert credibility been impugned is a matter best left to the panel hearing the appeal”.

[27] It is also worth noting that the rules of procedure and/or the case law of most provincial courts of appeal clearly spell out that motions to admit new evidence on appeal should only be heard by a panel or the panel hearing the merits of the appeal. In Quebec, the statutory requirement that the new evidence be indispensable (article 380 of the *Code of Civil Procedure*, CQLR c. C-25.01) has been construed in a manner consistent with the *Palmer* test. Only a panel can deal with such a motion, and it is common practice for said panel to allow the evidence to be included in the appeal record, and to defer to the panel hearing the merits of the appeal the determination on its admissibility and impact—akin to the approach taken by the motion Judge in the present case (*Syndicat des copropriétaires du Square Champlain II c. Syndicat des copropriétaires du Samuel de Champlain*, 2018 QCCA 1538 (CanLII); *Duchesneau c. Ville de Montréal*, 2019 QCCA 1955 (CanLII); *Simon c. Haccoun*, 2020 QCCA 64 (CanLII)).

[28] Despite my view that this submission was improperly made after the hearing (see paragraph 38), I ought to say the following. The appellant’s assertion, based on *Stolar*, that the motion Judge’s order binds this panel and limits its remedy-granting ability to either granting the appeal and entering judgment in favour of the appellant, or ordering a new trial on all issues, is ill-founded. The two-step process described in *Stolar* (in the context of a criminal trial) cannot be directly applied in cases like this one, where the motion to file new evidence was dealt with by a single motion judge, without the benefit of all the evidence adduced at trial, and where the proposed new evidence was tendered in support of a new ground of appeal that did not have a clear bearing on all of the Federal Court’s findings and the ultimate outcome of the trial. To construe it otherwise would defy the logic of the Supreme Court’s teachings in *Stolar*.

[29] As a matter of practice in this Court, motion judges are normally expected to deal with more obvious cases where, for example, the new evidence proposed does not meet the first three criteria of the *Palmer* test, or where the interests of justice warrants the exercise of a motion judge’s residual discretion to include it in the record, subject to a determination of the impact of that evidence on the findings of the trial court by the panel hearing the merits, informed by a comprehensive appeal record. There is no precedent from this Court for limiting the remedies that may be granted by the appeal panel in light of a motion judge’s order admitting new evidence.

[30] I agree with the appellant that the motion Judge properly made a final determination as to whether the appellant met the first criteria of the *Palmer* test, i.e., due diligence. In that respect, this Court is not sitting in appeal of this determination. There was no dispute that the new evidence, *per se*, was not in the possession of dTechs. The argument raised by the respondents was whether the appellant should, in any event, have fully canvassed the issue of how the report was prepared during the trial.

[31] In the circumstances, I nevertheless ought to include some general comments regarding the particularities of expert evidence in patent cases.

A. General Comments

[32] In patent cases, it is not unusual for expert reports to be prepared in close collaboration with counsel in an effort to present the substantive opinion of the expert in a manner and format that is helpful to the Court in light of the complexity of the issues raised. Here, I am not only referring to the technical issues, *per se*, but to the complex questions that need to be answered because of the particular role of experts in patent cases. It is very rare indeed that technical experts will know how to present a claim analysis or be familiar with the legal principles applicable to matters such as claim construction, anticipation or obviousness.

[33] As a practical matter, it is known that extensive notes are taken during meetings with experts to help prepare the draft reports, and that counsel are actively involved in putting these reports together. This does not inevitably mean that those drafts do not reflect the substantive and objective opinion expressed by the expert during those meetings. The preparation of those reports is often a long, tedious, and iterative process. It is obviously a difficult task for counsel to ensure that the independence and credibility of the expert is not diminished by this well-known and necessary practice in this particular field. I must reiterate that I am only dealing with patent cases here.

[34] I agree with the appellant that there are, however, limits to the involvement of counsel. The Court must ultimately be presented with the substantive and objective opinion of the expert. This is why experts are very clearly put on notice of their duty towards the Federal Court when they agree to abide by the Code of Conduct for Expert Witnesses. I know of no cases where an expert report was excluded in a patent case on the sole ground that the first draft of said report was penned by counsel after meetings with the expert to discuss their opinions in detail. While counsel may make mistakes and overstep the bounds of what is permissible involvement, this will normally be revealed on cross-examination at trial, and will be considered by trial courts in assessing the evidence (*Medimmune Ltd. v. Novartis Pharmaceuticals UK Ltd.*, [2011] EWHC 1669 (Pat.) (*Medimmune*)).

[35] Thus, litigators involved in patent cases ought to be alert and alive to their duty to verify whether those limits were infringed by obtaining, through cross-examination, the information necessary for the Court to assess if the opinion presented by the expert is truly their own objective opinion.

[36] As noted in *Moore v. Getahun*, 2015 ONCA 55 (CanLII), 124 O.R. (3d) 321 (*Moore*), at paragraph 61 (citing *Medimmune*, at paragraph 111), partisan expert evidence is almost always exposed as such in cross-examination. In patent cases, often, a simple review of the structure and wording of the report or the answers given in cross-examination will give an air of reality to the suggestion that counsel improperly influenced an expert witness.

[37] The interest of justice and its proper administration would not be served if one could simply wait to review an expert's invoices after the trial to argue that a new trial should take place on the basis of information contained therein. Naturally, there may be exceptional cases, but these should be rare.

B. *Post-hearing submissions*

[38] Turning back to the appellant's submissions after the hearing of this appeal, a few observations are in order. This Court never asked for submissions like those filed by the appellant after the hearing. It asked the parties to provide additional authorities (highlighted copies of cases only) where courts of appeal have admitted new evidence tendered in support of an alleged error on an issue that was not raised before the trial court (here, the inadmissibility of this expert's reports). It made it very clear that it did not want to receive any written submissions, and the parties agreed. Despite this Court's express instructions, dTechs took this as an opportunity to put forward a novel position, one that is entirely contrary to that expressed at the hearing, by filing nine pages of written submissions titled "Remedies", in which it even went so far as to request that the new trial be before a different judge, a remedy it had never raised. It did so under the pretext that, in its view, our request indicated that the Court was asking itself the wrong question. While I understand the passion with which litigators defend their client's position, especially when the deficiencies in that position are revealed at the hearing, I simply cannot condone such practices. Therefore, I will consider this appeal on the basis of the appellant's position as presented in its memorandum and at the hearing.

IV. The issues

[39] In the present circumstances, there are only two issues properly before us:

- A. Whether the new evidence has sufficient probative value to support the allegation that the evidence of BC Hydro's expert was inadmissible or should have been given no weight (new ground of appeal);
- B. If so, whether, in light of the other evidence adduced at trial, it might have led to the granting of the infringement action and the dismissal of the invalidity allegations.

V. Analysis

A. *Nature and probative value of the new evidence*

[40] As mentioned, the new evidence consists of a working agreement signed by Mr. Curtis E. Falany, the President of J.B. Shepherd & Company, Inc. (J.B. Shepherd), for the services of Mr. Brad Shepherd as an expert witness, and the related invoices describing the work completed in fulfilment of said agreement between April 14, 2020, and November 25, 2020.

[41] There is no reason to doubt the veracity and the credibility of these documents. dTechs alleges that this evidence supports its allegation that Mr. Shepherd was not an independent and unbiased witness because he did not author his reports, and that the involvement of Mr. Falany indicates that the reports may have been ghostwritten by him.

[42] From the first document, it is clear that the expert whose opinions are to be provided was Mr. Shepherd. The agreement expressly states that:

J.B. Shepherd & Company, Inc. represented by Brad Shepherd (Expert), understands that Client is interested in obtaining Expert's honest, independent expert opinion on matters at issue in the dispute. Expert understands that Expert has an overriding duty to assist the

Court impartially on matters relevant to Expert's area of expertise, and that this duty overrides any duty to Client or to Client's client. Expert agrees to abide by and to execute the Federal Court of Canada's Expert Code of Conduct, a copy of which the Client will provide the Expert.

[43] Mr. Shepherd did review this Code of Conduct and sign the certificate referred to at rule 52.2 of the Rules.

[44] Turning to the invoices, there are indeed no time entries which explicitly relate to the actual writing of the first drafts of these reports by Mr. Shepherd following Zoom meetings with BC Hydro's counsel. There are many entries indicating that Mr. Shepherd read, reviewed, and commented on the first drafts of the reports he received, in addition to researching and reviewing various documents provided by counsel. There are also no entries for any writing by Mr. Falany either.

[45] Considering that the drafts revised by Mr. Shepherd were received after various Zoom conferences with BC Hydro's counsel, the only reasonable inference that might be made is that the drafts were penned by said counsel after discussing the matters at issue with Mr. Shepherd.

[46] The time entries are consistent with the way Mr. Shepherd describes how he performed his mandate in each of his reports. See for example, paragraphs 12 to 16 of his report on construction and validity, where he describes how he sequentially reviewed documents provided by counsel, and the answers he provided to the specific questions he was asked by counsel, as well as the headings under which they can be found in the report (Shepherd Report on Construction and Validity, Appeal Book, Vol. 2, Tab 136, pp. 4128–4129).

[47] dTechs admitted that the role of Mr. Falany in drafting the report or in forming the ultimate opinion is not known (Appellant's Memorandum, at paragraph 150). Nonetheless, the appellant theorizes that Mr. Falany's presence at those conferences indicates that he may have ghostwritten or co-authored the reports. Such a proposition is not supported by the invoices, and is nothing more than mere speculation. I can think of many reasons why Mr. Falany, as the President of this American company, would choose to attend those meetings with the client and not bill for his time. For example, his firm would benefit from a better understanding of the particularities of patent files, as this would appear to have been a new type of litigation for the firm. However, Mr. Falany signed a contract, which clearly stipulates that it is the expertise and opinion of Mr. Shepherd alone that BC Hydro was paying for.

[48] Mr. Falany's attendance at the Zoom conferences between Mr. Shepherd and BC Hydro's counsel would be insufficient to support a reasonable inference by a trial judge that he ghostwrote the reports.

[49] In *White Burgess Langille Inman v. Abbott and Haliburton Co.*, 2015 SCC 23, [2015] 2 S.C.R. 182, the Supreme Court of Canada enunciated the principle that it is only in clear cases where the proposed expert is unable or unwilling to comply with the duty to give fair, objective and non-partisan opinion evidence that concerns raised by the opposing party will go to admissibility. Anything less than clear unwillingness or inability to do so will go to the weight of the evidence of that expert.

[50] Although the Supreme Court was dealing with a question of independence based on bias, it also rejected, at paragraph 61, the argument that the expert in that case was not independent because she had incorporated some of the work done by others in her firm.

[51] Though he may not have written the first drafts of these reports, it is clear from his cross-examination that Mr. Shepherd did consider the opinions expressed therein as his own. I see nothing in the invoices that could support a reasonable inference that Mr. Shepherd's reports, as signed and presented to the Court, do not represent his objective and non-partisan opinions.

[52] As mentioned earlier, for at least 20 years, this Court has acknowledged that it is not unusual, in patent cases, for counsel to prepare the first draft of an expert's affidavits or statements (*Apotex Inc. v. Jenssen Pharmaceutica Inc.*, 2001 FCA 247, [2002] 1 F.C. 393, at paragraph 53). Contrary to the appellant's contention at the hearing, expert affidavits are no different than the reports before us. In fact, the Rules use the terms "affidavit" or "statement" to refer to such evidence, even though they are commonly referred to as reports.

[53] Even the Ontario Court of Appeal recognized the need, in some highly technical areas such as patent law, for a high level of instruction by the lawyers to expert witnesses, which may require a high degree of consultation involving an iterative process through a number of drafts (*Moore*, at paragraph 55).

[54] I note that although the technology was not particularly complex and Mr. Shepherd had acted as an expert witness in a number of civil cases in the United States, he had no experience whatsoever in patents cases either in Canada or in the United States. Therefore, he would clearly need guidance in order to answer the particular type of questions an expert is expected to address in patent cases (see paragraph 32, above).

[55] The Federal Court could not conclude that there was a reasonable basis for refusing to admit Mr. Shepherd's expert evidence simply because the first drafts of his reports were penned by counsel after many hours of consultation with him.

[56] The Federal Court could have, however, considered whatever argument dTechs might have raised regarding the drafting of the reports when assessing the weight to be given to this evidence, in which case it would have assessed the validity of such arguments having the benefit of the oral evidence given by this expert witness. The weight to be given to Mr. Shepherd's evidence is not a matter for this Court to determine.

[57] However, the conclusion that the new evidence might have had an impact on the weight given to Mr. Shepherd's expert evidence does not end the inquiry. This Court must determine whether, based on the other evidence adduced at trial, the distinct findings and conclusions of the Federal Court would remain unchanged, such that the outcome of the trial would not be affected.

[58] For the purpose of this determination, I will assume the best scenario possible for dTechs—that is, that no weight would have been given to any of Mr. Shepherd's

evidence. This should not be construed to mean that I do in fact think that in the present circumstances, it should or would likely have been given no weight.

B. Considered in light of the other evidence adduced at trial, could the Federal Court have been led to the granting of the infringement action and the dismissal of the allegations of invalidity?

[59] In this portion of the analysis, I will review the potential impact of giving no weight to Mr. Shepherd's evidence on three distinct issues. First, on the construction of the words "known consumption patterns", which is relevant to all the asserted claims. Second, on the Federal Court's finding of non-infringement by BC Hydro and Awesense. Third, on the Federal Court's conclusions with respect to anticipation by prior use, and on the conclusion that the De Reference anticipated claims 4 and 22. Finally, if necessary to dispose of this appeal, I will comment on the findings as to obviousness in respect of these two claims.

[60] Before doing so, I must first deal with dTechs' argument regarding construction and infringement, that the Federal Court would have had no choice but to accept the evidence of its own expert, Mr. LaPlace. This argument is based on dTechs' submission that the Federal Court could not give any weight whatsoever to the evidence of Awesense's expert, Mr. Bennett, who also opined on matters relating to construction and infringement. It would thus have had to rely on and accept Mr. LaPlace's evidence as to the meaning of "known consumption patterns".

[61] dTechs' arguments can essentially be summarized as follows: Mr. Bennett was not an independent expert because he merely agreed with the opinion of Mr. Shepherd. Without Mr. Shepherd's evidence, Mr. Bennett's evidence would have carried no weight. I cannot agree.

[62] First, a simple review of Mr. Bennett's report indicates that this is an inaccurate description of Mr. Bennett's evidence. Moreover and importantly, the argument that Mr. Bennett's evidence should be given no weight because he simply agreed and relied on the opinion of Mr. Shepherd was raised before the Federal Court. The Federal Court did not find it sufficient to give no weight to Mr. Bennett's evidence; instead, it clearly considered and relied on Mr. Bennett's evidence (see, for example, FC Decision, at paragraph 132).

[63] Second, Mr. Bennett's report was filed on August 26, 2020, after both Mr. LaPlace and Mr. Shepherd had filed their own main reports. It was responding to Mr. LaPlace's reports on construction and infringement.

[64] The Code of Conduct for Expert Witnesses to which Mr. Bennett agreed to abide (paragraph 52.2(1)(c) [of the Rules]), provides that the expert has an overriding duty to assist the Court impartially on matters relevant to his or her area of expertise. It also states at paragraph 3(f) [of the schedule of the Rules] that the expert's report shall include:

Experts' Reports

3 ...

(f) [I]n the case of a report that is provided in response to another expert's report, an

indication of the points of agreement and of disagreement with the other expert's opinions;

[65] Although strictly speaking, Mr. Bennett was not responding to Mr. Shepherd's report on construction, it is evident that he had been provided with that report, and tried to express his agreement and disagreement with the opinions contained therein, as noted at paragraph 17 of his report (Bennett Report, Appeal Book, Vol. 2, Tab 146, p. 6099). It is easy to understand the benefit of including this same kind of information about this other expert's view in his report. In fact, it is best practice to do so.

[66] The Rules were amended in 2010 to include rule 52.6, which ensures that when matters on which there is disagreement are not made sufficiently clear in the expert reports, the Courts could ask all the experts to meet in order to narrow the issues and identify points on which their views differ. There is no doubt that in patent cases it is necessary for trial judges to understand where experts agree and disagree, especially when determining the content of the CGK of the POSITA and the construction of the technical terms in the asserted claims. This is why it is important for experts to be as clear as possible in that respect in their reports.

[67] That said, the Federal Court made its own assessment as to the weight to be given to Mr. Bennett and Mr. LaPlace's evidence. It was open to the Federal Court to select which aspects of the experts' evidence it favoured, based on its own analysis of the claims. In this case, it is clear that the Federal Court did not accept in its entirety any of the expert's evidence in respect of construction. As noted in *Tensar Technologies, Limited v. Enviro-Pro Geosynthetics, Ltd.*, 2021 FCA 3 (*Tensar Technologies*), at paragraph 33, I know of no authority, and the appellants cited none, that would suggest that the trial judge was obliged to follow the entirety of the evidence of one party or the other, and could not reach his own conclusion, especially in respect of matters of law like claim construction to which I now turn.

(1) Construction of "known consumption patterns" in the claims

[68] It is important to recall that the construction of claims is ultimately a matter of law, and that the role of experts in that respect is more limited than the one suggested by dTechs in this case.

[69] Although the Federal Court in this case did not have the benefit of our Court's decision in *Biogen Canada Inc. v. Pharmascience Inc.*, 2022 FCA 143, 196 C.P.R. (4th) 120, I believe that it is worth reproducing the following paragraphs [72 and 73]:

As noted in *Whirlpool* at paragraph 49(e), interpreting a patent is like interpreting a regulation. Purposive claim construction involves looking at words of the claims in context. This includes in the claims individually and as a whole, considering their purpose as well as the description. As noted by the Federal Court, the entire patent must be considered, but adherence to the claim language allows the claims to be read in a way in which the inventor is presumed to have intended, thereby promoting fairness and predictability (FC Decision at para. 78).

In *Whirlpool* at paragraph 49(f), the Supreme Court reminded us that this is so because the point of the analysis is to interpret and respect the inventors' objective intention as manifested in the words he used. This is why the whole disclosure must be reviewed, even for words that would appear at first glance to be simple and unambiguous when reading only the claims. Indeed, one of the reasons for reviewing the disclosure is to determine

whether the inventor actually defines particular words that could appear plain and simple even to a POSITA when reading only the claims (*Whirlpool* at para. 52 & 54, definitional assistance). Obviously, and as is well-known by those in the field of intellectual property law, the technical terms or so-called terms of the art must be read through the lens of the POSITA. However, as also noted by the Supreme Court in *Whirlpool* at paragraph 61, a Court is entitled to differ from the construction put forth by either side for it is its task to construe the claims as a matter of law. This is because the role of the expert is not to interpret the patent claims per se, “but to put the trial judge in the position of being able to do so in a knowledgeable way” (*Whirlpool* at para 57).

[70] dTechs argues that the Federal Court did not conduct its own analysis of these words or of the claims. In its view, the Court simply accepted Mr. Shepherd’s opinions as a whole, including particularly on the interpretation of claim 4. It asserts that the FC Decision is in fact nonsensical. I again disagree. Reasons do not need to be perfect. When the FC Decision is read in the context of the arguments put forth by the parties and the record before it, it becomes clear and intelligible. In fact, in its analysis, the Federal Court did exactly what this Court said it should do, based on the Supreme Court’s directions in *Whirlpool Corp. v. Camco Inc.*, 2000 SCC 67, [2000] 2 S.C.R. 1067. It construed the claims purposively, by looking at the wording in its entire context. It clearly considered the opinion of the experts as to the CGK of the POSITA (FC Decision, at paragraphs 122–123) and the technical meaning, if any, of the words “known consumption patterns”. It was appropriate for the Federal Court to focus the construction of the claims in its reasons on the issues in dispute between the parties, centering the analysis “where the shoe pinches” (*Cobalt Pharmaceuticals Company v. Bayer Inc.*, 2015 FCA 116, 474 N.R. 311, [2015] 4 F.C.R. D-1, at paragraph 83). Doing so does not mean that the Court did not carry out its own construction of the claims.

[71] It was common ground among all three experts that “known consumption patterns” would normally refer to historical data collected by the meter on the primary supply line, and would include predicted consumption patterns. This would remain common ground between Mr. Bennett and Mr. LaPlace, even without considering at all the evidence of Mr. Shepherd.

[72] As mentioned by the Federal Court, the dispute with respect to “known consumption patterns” concerned whether the POSITA would understand this expression in the independent claims to also include same-time consumption patterns measured on secondary lines because of the wording of claim 4. This construction, which was advanced by Mr. LaPlace, was not based on the generally understood technical meaning of “known consumption patterns”, but on his view that claim 4 would be understood as giving additional meaning to claim 1 by specifying that the comparison referred to in claim 1 could include same-time consumption patterns measured on secondary lines. It is not disputed that the energy balance or reconciliation referred to in claim 4 is a known concept which is performed to identify discrepancies between the input from the primary line and the output metered on all the secondary lines (FC Decision, at subparagraph 122(b)).

[73] Mr. Bennett also gave evidence as to his interpretation of claim 4, and why it would have no impact on how the POSITA would understand “known consumption patterns” in claim 1. Thus, the dispute referred to by the Federal Court at paragraph 134 would remain one to be determined, even in the absence of Mr. Shepherd’s evidence, for as mentioned, as a matter of law, the words “known consumption patterns” had to be construed in their context.

[74] It is in response to the construction proposed by Mr. LaPlace in his report on construction (Appeal Book, Vol. 1, Tab 58, pp. 800–801) that the Federal Court had to make a conclusion at law in respect of the particular meaning and effect of the words “further comprising” in claim 4 of the ‘087 Patent, as was its duty. While Mr. LaPlace opined that “further comprising” in claim 4 simply added specificity or specified how the comparison step with “known consumption patterns” in claim 1 is to be performed, something akin to the use of “wherein” in other dependent claims, the Federal Court found that “further comprising” in claim 4 added an additional step to the method set out in claim 1 (an open claim defining the method as “comprising”). It held that the additional step covered by claim 4 was not an alternative to the comparison step described in claim 1 (FC Decision, at paragraph 145).

[75] In his oral testimony, Mr. LaPlace provided more details as to why he understood comparison with same-time data should be included in the words “known consumption patterns”. The following excerpt from the transcript of Mr. LaPlace’s cross-examination is of particular interest to better understand the relationship between the words “known consumption patterns” and same-time data derived from one or many reconciliations using smart meters:

MR. CRICHTON: I just need to confirm, you’re saying that the comparison of same-time smart meter data to primary line measurements, that’s a concurrent comparison; that’s not a comparison with something that was previously known.

MR. LaPLACE: Right, it’s same-time, that’s why we say - - I don’t want to use the word historical. If it was known it would be historical, but it’s not; it’s same-time.

...

And, it just depends. I mean, I guess it’s - - the point of same-time is that the measurements are taken at the same time, not whether the measurements are old or new or expected or known; they’re taken at the same time. That’s the useful information. Very powerful, you know, in terms of determining unbalance, or imbalance with the energy calculations.

[76] It appears that the question in Mr. LaPlace’s mind was not so much whether the POSITA would commonly understand “known consumption patterns” as including same-time data, as it was clearly not the same thing.

[77] This further excerpt from the transcript of Mr. LaPlace’s examination in chief clarifies that what Mr. LaPlace was in fact proposing was to replace the step of “comparing ... to known consumption patterns” in claim 1 with the reconciliation step in independent claim 4 because it was more reliable:

MR. MOYSE: Well, let me ask you this; what, if anything, would a skilled person think of doing two separate comparisons; one for the purpose of determining or comparing against historical data to find theft, and then another comparing against same-time consumption for locating just technical losses but not theft? What would the skilled person think of that?

MR. LaPLACE: I don’t think it would make much sense to him. The more reliable calculation would be same-time so it wouldn’t make any sense to - - and, also, why would you have two comparisons? When you have the best comparison already there’s no point in having two separate comparisons, you know. So it makes no sense, in my opinion.

[78] It is of interest to note that during Mr. LaPlace's cross-examination regarding the meaning of "further comprising", the trial judge stated the following (Appeal Book, Vol. 3, Tab 159, p. 8151):

Well, certainly claim construction is a matter for the Court, and I'm not sure that terms like "further" or "wherein" require the input of an expert witness. In any event, that's not really the expertise of Mr. LaPlace....

[79] In light of this remark, dTechs' counsel expressly suggested, during the cross-examination of Mr. Shepherd, that the construction of these words did not require any specialized knowledge beyond that of an ordinary person (Appeal Book, Vol 3, Tab 167, pp. 8931–8933). This was acknowledged by Mr. Shepherd.

[80] I fully agree with the trial judge that if the words "further comprising" are terms of the art, it is in the art of claim drafting, one that none of the experts were qualified to opine on, and in respect of which the judge did not require expert guidance. This makes it evident that although the Federal Court referred to expert evidence, it construed the claims on the basis of its own analysis.

[81] In construing claim 4, the Federal Court could and did consider the portion of the disclosure describing the purpose and advantages of the reconciliation and of using smart meters (FC Decision, at paragraphs 148–149). The disclosure made no allusion to the fact that such reconciliation with smart meters could be used instead of the comparison with "known consumption patterns".

[82] Although this Court is not tasked with determining if the Federal Court erred in law in its construction of the claims (that distinct ground of appeal was abandoned), there is little doubt that the words "further comprising" as used in claim 4 are meant to add an essential element to the combination of elements found to be essentials in claim 1. The Federal Court held that this construction was in line with the purpose of the invention set out in claim 1, as well as the purpose and advantages of adding the additional step disclosed in claim 4. The Court simply could not re-write the claims as proposed by Mr. LaPlace to capture what he felt would make more sense. The Federal Court rejected Mr. LaPlace's construction on the basis of its own purposive construction of the claims. This was a legal finding that could not be affected by the new evidence and its potential impact on the evidence of Mr. Shepherd.

(2) Infringement

[83] The Federal Court concluded that there was no evidence that BC Hydro compared any primary line readings to "known consumption patterns", an essential element of all the asserted claims as properly construed (FC Decision, at paragraph 174). It is worth noting that this factual finding was not challenged by the appellant in its original notice of appeal, nor as the appeal stood after it filed its Memorandum of Fact and Law. This finding of the Federal Court is part of those this Court must take into account (in any event, he also had the benefit of the detailed evidence of Mr. Bennett as well as Mr. LaPlace's oral acknowledgment during his cross-examination: Appeal Book, Vol. 3, Tab 159, p. 8055).

[84] As the Federal Court's legal finding on the construction of the claims could not be affected, whatever weight was attributed to Mr. Shepherd's evidence, its conclusion that there was no such evidence would necessarily remain unchanged.

[85] Although this was not strictly necessary to dispose of the infringement action, the Federal Court went on to consider the specific allegations of indirect infringement against Awesense on the basis of inducement or under the doctrine of common design. As mentioned, by the end of the trial, these were the only remaining allegations against Awesense. Indeed, dTechs was no longer arguing that Awesense performed any of the steps of the method claimed in the '087 Patent.

[86] Also as previously mentioned, the Federal Court concluded that there was no evidence that Awesense ever induced BC Hydro to infringe the asserted claims, or to support an allegation of infringement by common design (FC Decision, at paragraph 177–179). As this additional conclusion did not involve any expert evidence, the proposed new evidence and its potential impact on Mr. Shepherd's evidence could not have any bearing on it.

[87] I therefore conclude that the Federal Court's ultimate conclusion that neither BC Hydro nor Awesense, individually or together, infringed the asserted claims could not be affected by the new evidence.

(3) Validity

[88] Despite my conclusion that the infringement action would still be dismissed based on the other evidence adduced at trial and the legal findings of the Federal Court, I still need to examine its validity findings because of the counterclaims.

(a) *Anticipation by public prior use*

[89] I will deal with the Federal Court's first conclusion that all the asserted claims, except for dependent claims 4 and 22, were anticipated by BC Hydro's prior use before 2006, and that the details of its investigative techniques were made available to the public.

[90] It is worth noting that dTechs' main arguments in respect of BC Hydro's prior use did not strictly rely on the expert evidence of Mr. LaPlace, whose opinion on the matter was extremely limited. In fact, the Federal Court noted, at paragraph 204, that Mr. LaPlace had not disputed that BC Hydro's prior use could anticipate the asserted claims, except by noting that BC Hydro's investigative techniques did not involve comparison with "same-time consumption patterns" (LaPlace Responding Report on Validity at paragraph 30, Appeal Book, Vol. 1, Tab 60, pp. 1324-1325). Mr. LaPlace went even further in his cross-examination, opining that BC Hydro's prior use "does anticipate" (my emphasis) (Appeal Book, Vol. 3, Tab 159, p. 8011).

[91] Mr. Trustham testified, as a lay witness, about the method used by BC Hydro to conduct technical losses or energy theft investigations at the relevant time (claims date). The Federal Court found him to be a credible and reliable witness who established the facts set out at paragraphs 188 to 189 of the FC Decision. It also found that Mr. Trustham's testimony was corroborated by the testimony of Mr. Shaigec, a witness called on behalf of Awesense, and the affidavit of Mr. Heilkema, President of SensorLink Corporation, which was entered as an exhibit on consent (FC Decision, at paragraphs 198–200).

[92] The Federal Court held that it was satisfied that the investigative steps performed by BC Hydro personnel, as described by Mr. Trustham, would infringe the '087 Patent (FC Decision, at paragraph 192). The Court also made additional factual findings on the basis of the evidence of these lay witnesses in paragraphs 199 to 203 including that the VARcorder meter used by BC Hydro had a resolution of 0.1A. Thus, high resolution digital recording ammeters (DRAs) were in fact available and used to measure current on primary lines before 2006.

[93] All these factual findings would remain unchanged and must be taken into account by this Court in determining the possible impact of Mr. Shepherd's evidence being given no weight.

[94] Although the Federal Court referred generally to Mr. Shepherd's undisputed opinion in the very last paragraph of this portion of the FC Decision, I cannot make any inference that this evidence was necessary to its conclusion in respect of independent claims 1 and 21 because of the other evidence adduced, including that of Mr. LaPlace. This is also the case for the dependent claims regarding which the Federal Court made express factual findings, such as those specifying the use of infrared devices and those referring to the resolution of the meters and DRAs in a range of less than 1 amp or of about 0.01 to about 0.1 amp or that BC Hydro used the method where the suspect consumption pattern was greater than the known consumption pattern (FC Decision, at subparagraph 188(d)). It is also clear from the factual findings that the prior use described by Mr. Trustham did not involve an independent monitoring agency. Thus, it could not anticipate claim 22. Finally, because the method used by BC Hydro's personnel did not include the use of same-time data for reconciliation (no finding in that respect), it could not anticipate claim 4.

[95] In light of the Federal Court's construction of the claims, its aforementioned undisturbed factual findings and the other evidence, including that of Mr. LaPlace as to the technical characteristics of the VARcorder, I cannot agree with dTechs that the Court's conclusion that BC Hydro's prior use met the requirements set out in section 28.2 of the *Patent Act*, R.S.C., 1985, c. P-4 could not have been the same because BC Hydro would have failed to meet its burden of proof in the absence of Mr. Shepherd's evidence.

[96] Where anticipation is alleged on the basis of disclosure by prior use, satisfying one's onus of proof may indeed require expert evidence in cases where, for example, such evidence would establish that the particular compound used falls within the technical description of a species or genus covered by the claim. This would not be within the realm of the judge's knowledge. However, it may not be essential for a plaintiff in counterclaim to adduce expert evidence on validity *per se* where, as in this case, the Court had the benefit of the opinions of two other experts (Mr. Bennett on CGK and construction and Mr. LaPlace), and where it readily understood and construed the basic and pragmatic steps covered by the patented method (See, for example, FC Decision, at paragraphs 13–23, taken from the overview provided by Mr. LaPlace and generally describing power distribution and detection of electrical losses, and paragraphs 122–123 describing the CGK). This is especially so when there is no dispute that such use could indeed anticipate the asserted claims, and where the CGK for the purpose of anticipation was the same as the CGK used for the purpose of

construction (LaPlace Validity Report, at paragraph 41, Appeal Book, Vol. 1, Tab 60, pp. 1332–1333).

[97] Mr. Shepherd had no personal knowledge whatsoever regarding BC Hydro's prior use. He was simply asked to assume the facts that were later established at trial by other witnesses. In my view, this explains why his evidence is only referred to briefly in the last paragraph of the portion of the FC Decision on anticipation based on BC Hydro's prior use (FC Decision, at paragraph 204), well after the Federal Court found that it would infringe the '087 Patent (FC Decision, at paragraph 192).

[98] Mr. Shepherd's evidence may well have facilitated the Federal Court's task, but once it had construed the claims that raised any controversy among the parties, including determining their essential elements, and made findings of fact on the basis of the evidence of lay witnesses on facts that would readily fall within each of those elements, it would have had to conclude that BC Hydro's prior use anticipated independent claims 1 and 21, as well as the asserted dependent claims, except for claims 4 and 22. This is so because the Court was entitled to consider all the evidence adduced, including that of the experts tendered by other parties, in determining whether it was satisfied of a particular fact.

[99] In light of my conclusion that the Federal Court's finding on anticipation by prior use in respect of all claims except claims 4 and 22 could not be affected by the new evidence and its potential impact on the evidence of Mr. Shepherd, the only issue remaining to be examined is whether those two claims were either anticipated by published prior art or obvious.

(b) Anticipation by published prior art

[100] As previously stated, only the De Reference was held by the Federal Court to anticipate claims 4 and 22. I will thus limit my comments to that document.

[101] Claim 4 covers a method which included all the essential elements of claim 1, plus a reconciliation using same-time data obtained from smart meters connected to secondary lines to compare the electrical supply at the primary supply line to a sum of consumption at all of the secondary lines. Claim 22's only addition to independent claim 21 is the use of an independent monitoring agency.

[102] The parties did not provide detailed submissions as to the validity of these two claims. dTechs simply argued that it was apparent that the Federal Court relied heavily on the evidence of Mr. Shepherd in that respect, and thus, that it would necessarily be impacted by the effect of the new evidence on that of Mr. Shepherd.

[103] Awesense, who had limited resources and attended the hearing before us through Zoom (hybrid hearing), did not address the validity of these claims in its memorandum, instead relying on BC Hydro's submissions on the matter, which are essentially limited to those found at paragraph 73 of its memorandum, and which were not particularly helpful.

[104] The Federal Court found [at paragraph 228] that:

All expert witnesses agreed that the De Reference discloses metering on the primary line to identify variations from known (*i.e.*, historical) consumption patterns in order to detect suspicious deviations. The De Reference uses the term “base profile”, but this is the same as “known consumption patterns” in the 087 Patent. Similar to the 087 Patent, the De Reference teaches the use of a threshold for triggering an investigation (10-15% over an expected value in the De Reference, compared to 25% in the 087 Patent). [My emphasis.]

[105] This finding reflects the Federal Court’s assessment of Mr. LaPlace’s evidence. Considering that this assessment is not challenged in the appeal before us, it must be considered by this Court as unchanged.

[106] There was no dispute that the De Reference included the use of smart meters for the purpose of reconciliation as an additional advantage (or improvement). At paragraph 28 of his validity report, Mr. LaPlace refers to the following sentence at page 657 of the De Reference (Appeal Book, Vol. 1, Tab 60, p. 1323):

In addition, bulk metering on the main supply to the building allows reconciliation between the total metering and all the individual domestic meters. [My emphasis.]

[107] The Federal Court relied on this passage as supporting its conclusion that the De Reference disclosed the additional step set out in claim 4. However, Mr. LaPlace’s evidence was that the system disclosed in the De Reference, including the above sentence, would not be clearly understood by the POSITA in the manner suggested by Mr. Shepherd and adopted by the Federal Court (FC Decision at paragraph 231).

[108] At subparagraph 28(d) of his validity report, and in his cross-examination by BC Hydro’s counsel (Appeal Book, Vol. 3, Tab 161, pp. 8267–8273), Mr. LaPlace insisted that the sentence quote above and alluded to at paragraph 231 of the FC Decision as describing an additional advantage of the system disclosed in the De Reference, would not clearly refer to a reconciliation with the metered data at the primary line. In fact, it could refer to a reconciliation with the data metered at the distribution transformer level only.

[109] Unlike the assessment of anticipation by prior use discussed above, expert evidence as to how a POSITA would read and understand a particular printed publication is necessary, unless the wording of the document is very clear. The Federal Court provided no explanation as to why it did not consider Mr. LaPlace’s evidence on that point and how it could construe this sentence otherwise, except by relying on Mr. Shepherd’s evidence. Therefore, I am not satisfied that the Court’s findings based on its reading of this prior art, which must be done through the eyes of a POSITA, would remain undisturbed if no weight was given to the evidence of Mr. Shepherd.

[110] Insofar as claim 22 is concerned, the method described in the De Reference requires the distribution utility to send a “vigilance team” to verify the reasons for the deviation and take appropriate actions. The Federal Court does not discuss whether a “vigilance team” would be understood by a POSITA as referring to personnel of the utility or personnel of another entity. However, it is clear that the Court had already adopted Mr. LaPlace’s view that a POSITA would understand that “the claimed process would work exactly the same way regardless of whether the utility or a non-utility performs each step” (LaPlace Responding Report on Validity at paragraph 24, Appeal Book, Vol. 1, Tab 60, p. 1319). It is on that basis that it construed the step of “notifying the utility” in claim 1 as non-essential.

[111] There was nothing in Mr. Shepherd's opinion on this claim other than a reference to the POSITA's common understanding that a "vigilance team" could be an entity other than the utility (Shepherd Report on Construction and Validity, Appeal Book, Vol. 2, Tab 136, p. 4184). It is thus not surprising that Mr. LaPlace never raised any issues as to whether the De Reference anticipated claim 22 (LaPlace Responding Report on Validity, at paragraph 28, Appeal Book, Vol. 1, Tab 60, pp. 1321–1322).

[112] In such circumstances, and in light of the Federal Court's findings at paragraphs 225 and 227, as well as Mr. LaPlace's concession referred to at paragraph 232, I am satisfied that the Federal Court could not have changed its conclusion in respect of claim 22 had it decided to give no weight to Mr. Shepherd's evidence.

(c) *Obviousness*

[113] Considering my conclusion in respect of anticipation, I will limit my discussion on obviousness to claim 4.

[114] The bulk of the Federal Court's analysis on this issue is directed at all the essential elements of the independent claims (FC Decision, at paragraph. 250–253), particularly the use of meters on the primary line to detect atypical consumptions, which was one of the key differences between the state of the art and the inventive concept of those claims identified by Mr. LaPlace (FC Decision, at paragraph 247).

[115] It appears from paragraph 253 that the Federal Court relied on Mr. Shepherd's evidence to say that all the essential elements of claims 1 and 21 would be within the CGK of the POSITA. The description of that CGK goes further than the CGK described at paragraphs 122 and 123 of the FC Decision. If this evidence was given no weight, it might have impacted the Court's conclusion in that respect.

[116] The additional essential element of dependent claim 4 is only discussed in paragraph 254 of the FC Decision. In that paragraph, instead of simply referring to the CGK on which there was little disagreement between the parties' experts as described at paragraphs 122 and 123 (see FC Decision, at paragraph 240), again the Federal Court expressly referred to the CGK of the POSITA as set out in Mr. Shepherd's report on construction and validity. The description of the CGK as it relates to the essential element of this claim appears to go somewhat further than what is described at subparagraphs 122(b) and (h) of the FC Decision.

[117] In the circumstances, I also find it more appropriate to have the issue of obviousness redetermined, if need be, by the Federal Court, as it is a factual question heavily informed by expert evidence. This is especially so given that if the Federal Court attributes some weight to Mr. Shepherd's evidence despite the new evidence (as opposed to the scenario I have used in these reasons), it may uphold its previous findings.

VI. Conclusion

[118] In light of the above, I conclude that although the new evidence might have had some impact on the weight afforded to BC Hydro's expert, it could not have affected the result of the infringement action *per se*. It would still have been dismissed on the basis of the undisturbed legal and factual findings of the Federal Court.

[119] In the circumstances, I propose that this Court dismiss the appeal in respect of the infringement action, and confirm the Federal Court judgment that:

1. Neither British Columbia Hydro and Power Authority nor Awesense Wireless Inc, individually or together, infringes the asserted claims of Canadian Patent 2,549,087 ('087 Patent).

[120] With respect to the counterclaims alleging invalidity, I am satisfied that, based on the other evidence adduced at trial, the following findings of the Federal Court could not be affected by the new evidence: (i) that the asserted claims were anticipated by BC Hydro's prior use, except for claims 4 and 22, (ii) that dependent claim 22 was anticipated by the De Reference. However, I agree that the new evidence could have had an impact on the Court's findings that dependent claim 4 was anticipated by the De Reference and obvious. As such, I would allow the appeal in part, and amend the judgment accordingly.

[121] With respect to costs, dTechs had agreed with the respondents on the amount of costs it would pay should the appeal be dismissed. In my view, the arguments raised before us reveal no valid basis for pursuing this appeal against Awesense. I would therefore award costs in the agreed amount of \$15,000.00. However, I would award costs to BC Hydro in a slightly reduced amount of \$10,000.00.

[122] As only the counterclaims are affected by my conclusions regarding the Federal Court's findings on validity, the respondents/plaintiffs by counterclaim should be entitled to seek a redetermination as to the validity of dependent claim 4, if they so choose, including on any outstanding grounds on which the Federal Court did not rule. This would require a new trial before the same judge, on the basis of all the evidence already adduced before the Federal Court, together with the new evidence, which is only admitted for the purpose of dealing with the validity of claim 4, as well as such further evidence as the Court deems appropriate to consider in the circumstances. Of course, it would be open to the Federal Court to deal with the impact of the new evidence on the weight attributed to Mr. Shepherd's evidence as a preliminary issue so that the parties may limit the costs arising from a full redetermination of the remaining issues.

[123] Given that no costs were actually awarded in the judgment that is the subject of the appeal before us, and that neither the order awarding said costs nor the order quantifying them have been appealed, this Court, in my view, has no jurisdiction to deal with any costs awarded by the Federal Court in this matter.

MACTAVISH J.A.: I agree.

LEBLANC J.A.: I agree.