

United States District Court
For the Northern District of California

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

FUNAI ELECTRIC COMPANY, LTD.,

No. C-04-01830 JCS

Plaintiff,

v.

ORDER RE POST-TRIAL MOTIONS
[Docket Nos. 699, 710, 712, 714, 716]

DAEWOO ELECTRONICS CORP., ET AL.,

Defendants.

I. INTRODUCTION

In its complaint, Plaintiff Funai Electric Company, Ltd. (“Funai”) alleged that various Daewoo entities infringed the following six patents: 1) United States Patent No. 6,021,018 (“’018 patent”); 2) United States Patent No. 6,064,538 (“’538 patent”); 3) United States Patent No. RE37,332 (“’332 patent”); 4) United States Patent No. 6,421,210 (“’210 patent”); 5) United States Patent No. 5,815,218 (“’218 patent”), and 6) United States Patent No. 5,987,209 (“’209 patent”). Two Daewoo entities, Daewoo Electronics Corp., Ltd. and Daewoo Electronics Corp. of America, defaulted and default judgment was entered against them. The remaining defendants, Daewoo Electronics Corporation (“DEC”) and Daewoo Electronics America, Inc. (“DEAM”), continued to defend the action.¹

On summary judgment, the Court held that the ‘332, ‘218 and ‘209 patents were not infringed, either literally or under the doctrine of equivalents. Questions relating to infringement and invalidity of the remaining patents, as well as the questions of willfulness and damages, were

¹Hereinafter, the Court refers to DEC and DEAM collectively as “Daewoo.”

1 presented to a jury in a 15-day jury trial. The jury found that Daewoo willfully infringed the ‘018,
2 ‘210 and ‘538 patents and that the ‘210 and ‘538 patents were not invalid. Based on the
3 infringement, the jury awarded \$7,216,698.00 in damages against DEC and \$2,298,590.00 against
4 DEAM.

5 Daewoo now brings a Motion for Judgment as a Matter of Law or, in the Alternative, A New
6 Trial (the “JMOL Motion”). Funai, in turn, brings post-trial motions seeking: 1) entry of a
7 permanent injunction; 2) enhanced damages; 3) attorneys’ fees; and 4) costs and prejudgment
8 interest. The Court’s rulings on the Motions are set forth below.²

9 **II. THE JMOL MOTION**

10 In the JMOL Motion, Daewoo seeks judgment as a matter of law, or in the alternative, a new
11 trial, on the following grounds: 1) the Court erred in finding, on summary judgment, that Daewoo’s
12 products literally infringed the ‘018 patent; 2) no reasonable jury could find, based on the evidence
13 presented at trial, that the accused products infringed the ‘210 patent under the doctrine of
14 equivalents; 3) claims 1, 3, and 4 of the ‘538 patent are indefinite under 35 U.S.C. § 112 and claim 5
15 is either indefinite or not infringed or both; 4) the jury’s damages award is speculative and
16 unsupported by the evidence; 5) there was insufficient evidence from which a jury could have
17 concluded that Daewoo willfully infringed the patents at issue.

18 **A. Legal Standard on Motion for Judgment as a Matter of Law**

19 Pursuant to Rule 50 of the Federal Rules of Civil Procedure, a court may grant a motion for
20 judgment as a matter of law (“JMOL”) against a party on a claim or issue where the party has been
21 “fully heard on [that] issue during a jury trial” and the court finds that a “reasonable jury would not
22 have a legally sufficient evidentiary basis” to find for that party. Fed.R. Civ. P. 50(a) & (b). Where
23 a party moves for JMOL in a case that has been tried to a jury, the court must determine whether
24 “there exists evidence of record upon which a jury might properly have returned a verdict in [the
25 non-movant’s] favor when *the correct legal standard is applied.*” *Markman v. Westview*
26 *Instruments, Inc.*, 52 F.3d 967, 975 (Fed. Cir. 1995) (quoting *Jamesbury Corp. v. Litton Indus.*

27 ²The parties have consented to the jurisdiction of a United States Magistrate Judge pursuant to
28 28 U.S.C. § 636(c).

1 *Prods., Inc.*, 756 F.2d 1556, 1560 (Fed. Cir. 1985) (emphasis added in *Markman*)); *see also White v.*
2 *Ford Motor Co.*, 312 F.3d 998, 1010 (9th Cir. 2002)(holding that on a Rule 50 motion, “[t]he test is
3 whether the evidence, construed in the light most favorable to the nonmoving party, permits only
4 one reasonable conclusion, and that conclusion is contrary to that of the jury). Thus, the court must
5 conduct two inquiries. *Markman*, 52 F.3d at 975. First, the court must determine the correct law.
6 *Id.* Next, the Court must review the jury’s factual findings to determine whether they are supported
7 by substantial evidence. *Id.* While the jury’s factual findings are given “substantial deference,” the
8 legal standards the jury applies are considered *de novo* to determine, as a matter of law, whether the
9 correct standards have been used. *Id.*

10 **B. Legal Standard on Motion for New Trial**

11 Even where the court finds that JMOL is not appropriate, it may order a new trial under Rule
12 59 of the Federal Rules of Civil Procedure. Rule 59 provides that a court may, following a jury trial,
13 order a new trial “for any reason for which a new trial has heretofore been granted in an action at
14 law in federal court.” Fed.R.Civ.P. 59(a)(1)(A). “Historically recognized grounds include but are
15 not limited to ‘claims that the verdict is against the weight of the evidence, that the damages are
16 excessive, or that, for other reasons, the trial was not fair to the party moving.’” *Molski v. M.J.*
17 *Cable, Inc.*, 481 F.3d 724, 729 (9th Cir. 2007)(quoting *Montgomery Ward & Co. v. Duncan*, 311 U.S.
18 243, 251 (1940)).

19 The Ninth Circuit has held that a new trial may be granted “‘only if the verdict is contrary to
20 the clear weight of the evidence, is based upon false or perjurious evidence, or to prevent a
21 miscarriage of justice.’” *Id.* (quoting *Passantino v. Johnson & Johnson Consumer Prods.*, 212 F.3d
22 493, 510 n.15 (9th Cir. 2000)). In contrast to JMOL motions, in determining whether a verdict is
23 contrary to the clear weight of the evidence, the court “has ‘the duty . . . to weigh the evidence as
24 [the court] saw it’” and may set aside the verdict even if it is supported by substantial evidence. *Id.*
25 at 729 (quoting *Murphy v. City of Long Beach*, 914 F.2d 183, 187 (9th Cir. 1990)).

26 An award of damages may be set aside where it is “‘grossly excessive or monstrous, clearly
27 not supported by the evidence or based only on speculation or guesswork.’” *DSU Medical Corp. v.*
28 *JMS Co., Ltd.*, 471 F.3d 1293, 1309 (9th Cir. 2006). Where the court determines that a damage award

1 is excessive, the court may either grant the motion for a new trial or deny the motion conditional on
2 the plaintiff accepting a remittitur, that is, agreeing to pay a lesser amount of damages that the court
3 considers justified. *Fenner v. Dependable Trucking, Co., Inc.*, 716 F.2d 598, 603 (9th Cir. 1983).

4 “The proper amount of a remittitur is the maximum amount sustainable by the evidence.”

5 *Prendeville v. Singer*, 155 Fed. Appx. 303, 304-305 (9th Cir. 2005).

6 **C. The ‘018 Patent**

7 **1. Background**

8 The ‘018 patent is entitled, “Loading Mechanism for a Video Cassette” and “discloses a
9 mechanical subsystem for a VCR that performs loading and eject operations – that is, the subsystem
10 opens and closes the door of a VCR, and moves the unit’s cassette holder to and from the operating
11 position.” Memorandum and Order, filed December 20, 2006 (“2006 Summary Judgment Order”) at
12 1-2. Daewoo’s challenge to the jury’s verdict of infringement on the ‘018 patent turns on the
13 Court’s construction of the claim term “opened,” as that term is used in claims 1 and 2 of the patent.
14 In particular, Daewoo argues that the Court erred in finding, on summary judgment, that the
15 “opened” claim limitation was met by Daewoo’s T-Mecha loading mechanism because its reasoning
16 was inconsistent with its own construction of that claim term. As a result, Daewoo argues, the
17 question of whether this claim limitation was infringed – either literally or under the doctrine of
18 equivalents – was never presented to the jury. Nor was evidence introduced establishing
19 infringement of that claim term, Daewoo asserts. Consequently, Daewoo argues, the jury’s verdict
20 of infringement of the ‘018 patent is not supported by substantial evidence or alternatively, that it is
21 against the weight of the evidence.

22 Claim 1 of the ‘018 patent requires the elements of (1) a door, (2) a cassette holder, (3) a
23 slide arm, (4) a holder gear drive, and (5) a door arm. Claim 1 provides, in part, “said door is
24 opened before said cassette holder is moved when said cassette holder is moved to said initial
25 position.” ‘018 patent col. 8:28-56. Claim 2 is dependent on claim 1 and adds a cam mechanism on
26 the slide arm for driving the door arm. In its claim construction order, the Court construed the term
27 “opened” in claims 1 and 2 of the ‘018 patent to mean, “moved from a closed position such that the
28

1 door has cleared the cassette so that ejecting the cassette will not interfere with the door.” Claim
2 Construction Order at 10.

3 In adopting this construction, the Court rejected as overly narrow Daewoo’s proposed
4 construction of “opened” as meaning “fully opened.” *Id.* at 7. The Court reasoned that Daewoo
5 confused “opened” with “moved” and that nothing in the claims precluded the door from additional
6 movement after the door was “opened.” *Id.* at 8. The Court acknowledged that in the preferred
7 embodiment, there appeared to be no further movement of the door after it was “opened” but
8 concluded that this was not a sufficient basis for finding that the claim term meant “fully opened.”
9 *Id.*

10 On the other hand, the Court rejected as overly broad Funai’s assertion that “opened” meant
11 “to move from a closed position.” *Id.* at 8. Noting that one object of the patent was to prevent the
12 problem of the cassette interfering with the door during the ejection sequence, the Court concluded
13 that there would have to be at least enough movement of the door to ensure that it did not interfere
14 with the cassette during ejection. *Id.*

15 In its 2006 Summary Judgment Order, the Court concluded that Daewoo’s T-Mecha loading
16 mechanism literally infringed the “opened limitation” of the ‘018 patent, rejecting Daewoo’s
17 assertion that in the T-Mecha, this requirement was not met because it works by moving the holder
18 from an initial position to an intermediate position and *then* to the play position. In rejecting
19 Daewoo’s position, the Court reasoned as follows:

20 Funai correctly argues that the T-Mecha device meets the second disputed limitation.
21 Daewoo’s reasoning that “the door is not ‘opened’ before the cassette holder is moved”
22 misreads the claim. The limitation simply requires that the door be “opened” – that is, that it
23 begins to open – before the holder moves towards the initial position. . . . The accused
24 products, in which the motion occurs in two steps, fulfills this limitation. It does not matter
25 that the door does not move before the holder shifts from the play position to the
26 intermediate position. The critical point, not disputed by the parties, is that when the holder
27 is moved towards the initial position from the intermediate position, the door has already
28 begun its opening motion. It bears repeating that the door does not need to have completely
opened by this point, it only needs to have started to open.

26 *Id.* at 13.

27 In the JMOL Motion, Daewoo argues that the Court erred on summary judgment in finding
28 that the “opened” limitation was infringed even though the door of the T-Mecha does not move

1 before the holder shifts from the play position to the intermediate position. Daewoo states, “the
2 ‘opening’ limitation, with its sequence of operations, is the ‘essence’ of the patent claim [and]
3 [t]here can be no literal infringement of the claim element if the door remains closed – or at best,
4 only begins to open – before the cassette holder moves from the play position to the initial position
5 (approximately one to two millimeters).” JMOL Motion at 5. In addition, Daewoo asserts that
6 “[t]he Court’s statement that ‘the door does not need to have completely opened by this point, it only
7 needs to have started to open’ is further legal error because it directly contradicts the Court’s own
8 construction of ‘opened’ – namely, ‘moved from a closed position such that the door has cleared the
9 cassette so that ejecting the cassette will not interfere with the door.’” JMOL Motion at 6. Finally,
10 Daewoo argues that it is entitled to JMOL on this issue because prosecution history estoppel bars a
11 finding of infringement under the doctrine of equivalents.

12 Funai asserts that Daewoo’s challenge is procedurally improper, that the Court was correct in
13 finding that the “opened” limitation was literally met by the T-Mecha mechanism and that even if
14 the it were not met, the doctrine of prosecution history estoppel does not bar a finding of
15 infringement under the doctrine of equivalents.

16 2. Whether the JMOL Motion is Procedurally Proper

17 Funai asserts that Daewoo’s motion is procedurally improper because it is not a challenge to
18 any finding made by the jury and therefore, it is outside the purview of Rule 50. Funai points to
19 subsection (a)(1) of Rule 50, which allows courts to enter JMOL on issues that have been “fully
20 heard” by the jury. Funai also cites the 2006 Advisory Committee Note, which explains that a
21 JMOL motion is “only a renewal of the preverdict motion,” the purpose of which is to “inform[] the
22 opposing party of a challenge to the sufficiency of the evidence and afford[] a clear opportunity to
23 provide additional evidence that may be available.”

24 Daewoo, on the other hand, cites to *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323
25 (Fed. Cir. 2008) in support of its assertion that its request for JMOL on the basis of the Court’s legal
26 error in the claim construction and summary judgment orders is proper. In *Finisar*, the Federal
27 Circuit held that it could reverse the district court’s denial of a JMOL motion where the jury’s
28 verdict was based on jury instructions regarding the construction of particular claim terms that the

1 Federal Circuit found to be incorrect. 523 F.3d at 1333. The Federal Circuit reiterated the holding
2 of *Finisar* in *800 Adept, Inc. v. Murex Securities, Ltd.*, 539 F.3d 1354, 1366 (Fed. Cir. 2008), stating:

3 When a patent infringement verdict is based on an incorrect claim construction, we reverse
4 the trial court’s denial of a motion for judgment as a matter of law if no reasonable jury could
5 have found infringement under the proper claim construction.

6 In *800 Adept*, as in *Finisar*, the court found that the jury’s verdict of infringement was a result, in
7 part, of its reliance on an incorrect construction of a claim term.

8 Here, in contrast to *Finisar* and *800 Adept*, Daewoo’s challenge to the jury’s verdict of
9 infringement of the ‘018 patent is not based on the jury’s application of an improper claim
10 construction to the evidence presented. Rather, Daewoo challenges the court’s legal conclusion that
11 a claim element was met, the result of which was that that issue was not presented to the jury at all.
12 The question before the Court, then, is whether a jury verdict based on an improper claim
13 construction may be challenged in a JMOL motion even though the jury did not actually apply the
14 incorrect construction to the evidence in finding infringement. While neither Daewoo nor Funai has
15 cited a case that is directly on point – and the Court has found none – the Court concludes that Rule
16 50 permits such a motion. As discussed above, it is established that a JMOL motion may be granted
17 *either* to set aside a verdict based on insufficient evidence or to set aside a verdict based on an
18 incorrect claim construction. The situation here falls within the latter scenario. Although it is true
19 that the specific question of whether the “opened” limitation was met by the accused products was
20 not “fully heard” by the jury, the jury *was* presented with the broader issue of whether Daewoo
21 infringed the ‘018 patent. Accordingly, the Court concludes that Daewoo’s JMOL Motion is proper
22 as to the ‘018 patent.

23 **3. Whether the Court Erred on Summary Judgment in Finding Literal
24 Infringement of the “Opened” Claim Limitation**

25 Daewoo challenges the Court’s conclusion on summary judgment that the T-Mecha literally
26 meets the “opened” limitation of claims 1 and 2, asserting that the sequence of operations that is
27 achieved through this limitation is the “essence” of the patent and cannot be met “if the door remains
28 closed – or at best, only begins to open – before the cassette holder moves from the play position to
the initial position (approximately one to two millimeters).” JMOL Motion at 5. Daewoo also

1 suggests the Court applied a construction that was inconsistent with its earlier claim construction
2 when it stated in its 2006 Summary Judgment Order that “the door does not need to have completely
3 opened by this point, it only needs to have started to open.” The Court is not persuaded by
4 Daewoo’s arguments.

5 First, the Court rejects Daewoo’s argument that the T-Mecha cannot infringe the “opened”
6 limitation because its loading mechanism moves the tape from the play position before the door is
7 opened. Daewoo’s position is based on the use of the words “from said play position” in claim 1,
8 which it argues should be construed to require that the door must be “opened” before the cassette is
9 moved at all, that is, before it is moved from the play position to the intermediate position in the T-
10 Mecha. When read as a whole, however, claim 1 does not impose such a requirement. Rather, it
11 only requires that the holder drive gear start to drive the cassette holder from the play position “so
12 that said door is opened befor[e] said cassette casset[t]e holder is moved when said cassette holder is
13 moved to said initial position.” Therefore, the Court concludes that the finding of literal
14 infringement on summary judgment was correct.

15 Nor is the Court persuaded by Daewoo’s assertion that the Court applied an inconsistent
16 construction of the term “opened” in its 2006 Summary Judgment Order. This assertion appears to
17 be based on the fact that the Court stated in its order that the door needed only to have started to
18 open when the holder in the T-Mecha is moved toward the initial position from the intermediate
19 position. Yet this statement is not inconsistent with the Court’s construction of the claim term,
20 which construes “opened” as meaning “moved from a closed position such that the door has cleared
21 the cassette so that ejecting the cassette will not interfere with the door.” Further, while the parties
22 appear to disagree as to whether, as a factual matter, the door is “fully opened” in the T-Mecha, they
23 do not dispute that when the holder is moved from the intermediate to the initial position, the door is
24 opened sufficiently to ensure that the cassette does not interfere with the door.

25 Therefore, the Court rejects Daewoo’s challenge to the jury’s verdict finding infringement of
26 the ‘018 patent.³

27 _____
28 ³Because the Court finds that the “opened” limitation was literally met it need not address the
question of whether prosecution history estoppel precluded Funai from asserting that the T-Mecha
infringed under the doctrine of equivalents.

1 **D. The ‘210 Patent**

2 **1. Background**

3 The ‘210 patent is entitled “Mechanism for Preventing Propagation of Driving Motor Noise
4 and Vibration on a Tape Deck and Tape Deck Having the Same.” The ‘210 patent describes a
5 structure used in VCRs to reduce the noise originating in the capstan motor. The capstan motor
6 draws the tape past the video head so that the VCR can convert the information stored on the tape
7 into an image displayed on television. The electrical noise produced by this motor, however, can
8 degrade the video quality. To address this problem, the ‘210 patent describes a structure that uses a
9 bearing holder made of “insulating material.” ‘210 patent, claims 1, 2, 5, 7 and 9.

10 In its Claim Construction Order, the Court construed the term “insulating material” as “a
11 material with poor electrical conduction that acts to suppress switching noise generated by pulse
12 width modulation control of the direct driving motor, thereby suppressing the video screen and audio
13 noise caused by electrical noise produced by the capstan motor.” Claim Construction Order at 23.
14 In adopting this construction, the court rejected Daewoo’s argument that an “insulating material”
15 must have specific resistance (resistivity) of 10^7 Ohm-cm or greater. *Id.* at 21-23. The court also
16 declined to adopt Funai’s proposed construction, which defined “insulating material” as “a material
17 that exhibits sufficiently poor conduction of electricity to suppress switching noise generated by
18 pulse width modulation control of the direct driving motor.” *Id.*

19 Subsequently, the parties brought cross-motions for summary judgment on the question of
20 infringement of the ‘210 patent. In particular, Daewoo requested summary judgment of non-
21 infringement on the basis that the accused products did not infringe literally or under the doctrine of
22 equivalents. Funai requested summary judgment only as to literal infringement. The Court held that
23 the Lexan bearing holders that were used in Daewoo’s accused products did not literally infringe. In
24 reaching this conclusion, the Court rejected Funai’s assertion that the Court’s construction of the
25 term “insulating material” was purely functional, that is, so long as the bearing holders suppressed
26 switching noise, they must be made of an “insulating material.” Rather, the Court found that the
27 claim construction required *both* that the bearing holders be made from material with poor electrical
28 conduction *and* that they act to suppress switching noise. Because Funai had not cited to any

1 evidence that Daewoo’s bearing holders had “poor electrical conduction” whereas Daewoo had
2 pointed to testimony by its own expert that its bearing holders were made of conductive material, the
3 Court concluded that this limitation was not literally met. On the other hand, the Court found that
4 the question of infringement of the ‘210 patent under the doctrine of equivalents turned on disputed
5 facts and therefore denied summary judgment on that question.

6 The question of whether the ‘210 patent was infringed under the doctrine of equivalents was
7 presented to the jury and the jury found that it was. Daewoo now challenges that finding, asserting
8 that the jury’s finding is not supported by substantial evidence or alternatively, is against the weight
9 of the evidence. According to Daewoo, the bulk of Funai’s evidence went to whether the Lexan
10 bearing holders suppress switching noise rather than whether they have poor electrical conduction.
11 Daewoo further asserts that the evidence showed that the Lexan bearing holders had “slight
12 electrical conductivity” and that a person of ordinary skill in the art would not have found such
13 bearing holders to be equivalent to bearing holders with “poor electrical conductivity.”

14 **2. Whether the Jury’s Verdict Was Supported by Substantial Evidence or**
15 **Was Against the Weight of the Evidence**

16 **a. Legal Standard Under Doctrine of Equivalents**

17 A device may infringe under the doctrine of equivalents “if every limitation of the asserted
18 claim, or its ‘equivalent,’ is found in the accused subject matter, where an ‘equivalent’ differs from
19 the claimed limitation only insubstantially.” *Ethicon Endo-Surgery, Inc. v. United States Surgical*
20 *Corp.*, 149 F.3d 1309, 1315 (Fed. Cir. 1998). In determining equivalence, Courts often consider
21 “[w]hether a component in the accused subject matter performs substantially the same function as
22 the claimed limitation in substantially the same way to achieve substantially the same result.” *Id.*
23 However, “[e]quivalence . . . is not the prisoner of a formula and is not an absolute to be considered
24 in a vacuum.” *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 24-25 (1997)
25 (quoting *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 609 (1950)). In *Graver*
26 *Tank*, the Court described the equivalence inquiry as follows:

27 What constitutes equivalency must be determined against the context
28 of the patent, the prior art, and the particular circumstances of the
case. . . . In determining equivalents, things equal to the same thing

1 may not be equal to each other and, by the same token, things for most
2 purposes different may sometimes be equivalents. Consideration must
3 be given to the purpose for which an ingredient is used in a patent, the
4 qualities it has when combined with the other ingredients, and the
5 function which it is intended to perform. An important factor is
6 whether persons reasonably skilled in the art would have known of the
7 interchangeability of an ingredient not contained in the patent with one
8 that was.

9 *Id.* (quoting *Graver Tank*, 339 U.S. at 609).

10 The doctrine of equivalents may not be applied where it would “erase ‘meaningful structural
11 and functional limitations of the claim on which the public is entitled to rely in avoiding
12 infringement.’” *Conopco, Inc. v. May Dep’t Stores Co.*, 46 F.3d 1556, 1562 (Fed. Cir. 1994)
13 (quoting *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 935 (Fed. Cir. 1987)). Failure to
14 meet a claim limitation, by itself, is not necessarily enough to “erase” or “vitate” that claim element.
15 *Ethicon*, 149 F.3d at 1317. As the *Ethicon* court noted, “any analysis of infringement under the
16 doctrine of equivalents *necessarily* deals with subject matter that is ‘beyond,’ ‘ignored’ by, and not
17 included in the literal scope of a claim.” *Id.* (emphasis in original). Thus, the relevant inquiry is
18 whether the subject matter is “specifically excluded” from coverage such that its inclusion under the
19 doctrine of equivalents is “somehow inconsistent with the language of the claim.” *Id.*

20 **b. Evidence of Equivalence**

21 In order to find that the accused products infringed the ‘210 patent, the jury had to find that
22 the Lexan bearings used in those products were equivalent to bearings that used insulating materials.
23 Daewoo argues that this finding was not supported by substantial evidence or alternatively, was
24 against the weight of the evidence. It points to testimony by Funai’s expert, Dr. Kazerooni, that the
25 Lexan bearings were “slightly conductive.” *See* Trial Transcript at 699: 24-25. It also cites
26 testimony by the inventor, Dr. Higuchi, that “it would be a problem” if there were electrical
27 conduction between the printed circuit board and the deck chassis, asserting that this means there
28 cannot be *any* conduction between the two components. *See* Trial Transcript at 467: 1-5. The Court
29 rejects Daewoo’s arguments and finds that the jury’s finding is supported by substantial evidence
30 and is not against the weight of the evidence.

1 First, the Court notes that Daewoo mischaracterizes Funai’s burden, suggesting that Funai
2 was required to show that the Lexan bearing holders in the accused products have no conductivity
3 whatsoever or, at a minimum, that Funai was required to show that the Lexan bearing holders had a
4 resistivity of at least 10^8 Ohm-cm – the level of resistivity that is undisputedly considered
5 “insulating.” See JMOL Motion at 12; JMOL Reply at 5. As to the former, there is no support for
6 such a standard. The Court’s construction of “insulating” did not require that there be *no* conduction
7 but rather, that there be *poor* conduction. Nor does Dr. Higuchi’s testimony indicate that there
8 could be *no* conduction. Contrary to Daewoo’s assertion, Dr. Higuchi did not state that it would be a
9 problem “if there was *any* conduction between the metal printed circuit board and the metal deck
10 chassis.” JMOL Reply at 5 (emphasis in original). Rather, he simply testified that it would be a
11 problem if there were conduction between the two components. This testimony is not inconsistent
12 with the Court’s claim construction requiring an “insulating material” to have poor conduction.

13 Further, Daewoo’s argument that Lexan does not meet the “insulating material” limitation
14 because its resistivity is 1 to 100 Ohm-cm rather than 10^8 Ohm-cm is incorrect because Funai was
15 not required to demonstrate that Daewoo’s devices *literally* infringed. Rather, Funai was required
16 only to demonstrate that the accused bearings were made of a material that is *equivalent* to an
17 insulating material. Applying this standard, the jury’s finding was supported by substantial evidence
18 and was not against the weight of the evidence.

19 Dr. Kazerooni testified at length regarding his conclusion that the T-Mecha’s bearings
20 infringed the ‘210 patent and explained why he concluded that the Lexan bearings were equivalent
21 to bearings with poor electrical conduction. Dr. Kazerooni testified that the ‘210 inventor solved the
22 problem of noise associated with PWM control by replacing bearings that were usually made from
23 metal with bearings made from a resin. Trial Transcript at 656-659, 672. He then explained what it
24 means to have “poor electrical conduction,” testifying as follows:

25 Dr. Kazerooni: Poor – electrical conductivity is usually being presented by a word called
26 resistivity, so it’s [the] inverse of – resistivity of a material is really high [if]
27 it resists to electrical conduct, that means poor electrical conductivity. If you
28 have materials [in which] resistivity [is] really low, that means they are good
conductive.

1 Counsel: Now, in terms of resistivity, is this a black and white quality, either you've
2 got a very high resistivity or very low resistivity? Could you just describe the
possible values a material could have?

3 Dr. Kazerooni: Materials show different behaviors, and they have a whole spectrum of
4 numbers in terms of resistivity. Some materials have very, very small
5 resistivity. . . . These are good conductors. Like metallic stuff, they have very
6 low resistivity. . . . So resistivity of the materials is a range, is a spectrum. You
can't come up to say conductive, not conductive. It's a range of numbers. It
is [a] pretty large range.

7 Trial Transcript at 695-696.

8 Dr. Kazerooni illustrated his point with a chart reflecting the continuum of resistivity levels,
9 from lowest (on the left side) to highest (on right side). *Id.* at 121 & Trial Exhibit 447. Dr.
10 Kazerooni testified that metal, which is a "great" conductor of electricity, has a very low resistivity
11 of 10^{-6} Ohm-cm. Trial Transcript at 698. Moving to the right side of the chart, the resistivity levels
12 increase, first to materials with "good electrical conduction," then to materials that "have a slight
13 electrical conductivity" and then to materials with no conductivity at all. *Id.* Dr. Kazerooni
14 explained that materials with "slight electrical conductivity" "show a very large resistivity." *Id.*

15 Turning to the specific properties of Lexan, Dr. Kazerooni testified that it has a resistivity of
16 1 to 100 Ohm-cm and thus fell on the right-hand side of the chart, in the category of materials with
17 "slight electrical conductivity." *Id.* at 699-700. He testified further that "that means the resistivity
18 of a Lexan is about a million or a hundred million times more than metal. So that's what . . . puts
19 Lexan materials way on the right-hand side." *Id.* at 700.

20 Dr. Kazerooni also cited to a National Science Foundation report – introduced into evidence
21 as Trial Exhibit 86 – in which it is stated that "conductive resins with [electrical resistivity] ranging
22 from approximately 10^2 to the second power Ohm-cm to 10^7 the minus one power Ohm-cm are used
23 for slightly electrically conducting applications." *Id.* at 703. Dr. Kazerooni testified that the
24 National Science Foundation report was important to him because Lexan was a resin that fell within
25 the range set forth in the report, further supporting his conclusion that Lexan is equivalent to a
26 material with low electrical conduction. *Id.* at 704-705.

27 In addition to his testimony regarding Lexan's electrical resistivity, Dr. Kazerooni also
28 testified about the tests he conducted to determine whether the Lexan bearings achieved a reduction

1 in PWM noise. *See* Trial Transcript at 705-718. According to Dr. Kazerooni, he replaced the Lexan
2 bearings with metallic bearings and compared the level of PWM noise. *Id.* He reported that the
3 metallic bearings were noisy whereas the PWM noise went away when the Lexan bearings were
4 used. *Id.* at 715-716.

5 Daewoo does not point to evidence that rebuts Dr. Kazerooni’s testimony, either as to the
6 relative resistivity of Lexan as compared to metal or as to the noise suppression achieved by
7 replacing metal bearings with Lexan bearings. The only evidence it cites is testimony by its own
8 expert, Dr. Rice, that it is generally agreed that insulating materials have a resistivity of 10^8 Ohm-cm
9 and that Dr. Rice did not believe a material with resistivity of 10^0 to 10^2 Ohm-cm resistivity would
10 be substantially similar in terms of its insulating properties. *See* Trial Transcript at 1664-1665.

11 The Court concludes that the testimony of Dr. Kazerooni regarding the Lexan bearings used
12 in the accused products provides substantial evidence to support the jury’s verdict and, in particular,
13 its finding that the Lexan bearings met the “insulating material” limitation under the doctrine of
14 equivalents. Accordingly, the Court rejects Daewoo’s request for JMOL that the ‘210 patent was
15 not infringed. On the same basis, the Court concludes that the jury’s finding is not against the
16 weight of the evidence.

17 **E. The ‘538 Patent**

18 **1. Background**

19 The ‘538 patent is entitled “Biasing/Erasing Oscillation Circuit for Magnetic Tape Recording
20 Apparatus.” The invention described in the ‘538 patent relates to the magnetic heads that are used in
21 VCRs to record, play, and erase the video information stored on the magnetic tape in the video
22 cassette. The ‘538 patent contains six claims. Claims 1 and 5 are independent claims, while the
23 remaining claims are dependent claims. Funai asserted that the accused products infringe, both
24 literally and under the doctrine of equivalents, all the claims of the ‘538 patent except claim 2. The
25 jury agreed, finding that Daewoo infringed claims 1, 3, 4 and 5 of the ‘538 patent.

26 In the JMOL Motion, Daewoo argues that JMOL should be entered in its favor on the basis
27 that claims 1, 3 and 4 of the ‘538 patent are indefinite under 35 U.S.C. § 112 and that claim 5 is
28 either indefinite or not infringed. Daewoo’s position is based on the Court’s construction of the

1 “series junction point” language found in claims 1 and 5 of the ‘538 patent, which Daewoo asserts is
2 incorrect. Claim 1 calls for a “series junction point at least between said linear record erasing head
3 and one of the entire-width erasing head and an inductive element.” Claim 5 calls for a “series
4 circuit connecting in series through a series junction point said entire-width erasing head and said
5 linear record erasing head.” The Court construed the language in claim 1 as follows:

6 a point on said series circuit between (1) the linear record erasing head and the entire-width
7 erasing head, (2) the linear record erasing head and an inductance element, or (3) the linear
record erasing head and both the entire-width erasing head and an inductance element.

8 Claim Construction Order at 18. In its summary judgment order, the Court held that the “series
9 junction point” language in claim 5 “does not require that the series junction point must be *between*
10 the two heads, but only that all three must be in series.” November 26, 2007 Summary Judgment
11 Order at 68.

12 Funai argues that the Court already rejected Daewoo’s invalidity attack on claim 1 (and thus
13 dependent claims 3 and 4 as well) at the claim construction stage of the case and should do so again.
14 Further, to the extent Daewoo challenges the validity of claims 1, 3 and 4 based on theories it did not
15 raise before, Funai argues, these arguments have been waived. With respect to claim 5, Funai argues
16 that Daewoo waived its right to bring an invalidity challenge when it expressly agreed prior to trial
17 that it would not assert such a challenge. According to Funai, it relied on this representation when it
18 agreed to withdraw claim 6 from the trial. Even if the Court were to consider Daewoo’s challenge
19 on the merits, Funai argues, claim 5 is not invalid and is infringed.

20 2. Legal Standard on Indefiniteness

21 The requirement that claims be sufficiently “definite” is set forth in 35 U.S.C. § 112, ¶ 2,
22 which provides that, “[t]he specification shall conclude with one or more claims particularly
23 pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”
24 “The definiteness inquiry focuses on whether those skilled in the art would understand the scope of
25 the claim when the claim is read in light of the rest of the specification.” *Union Pacific Resources*
26 *Co. v. Chesapeake Energy Corp.*, 236 F.3d 684, 692 (Fed. Cir. 2001). In order to “accord respect to
27 the statutory presumption of patent validity,” a claim should be found indefinite “only if reasonable
28 efforts at claim construction prove futile.” *Exxon Research and Engineering Co. v. United States*,

1 265 F.3d 1371, 1375 (Fed. Cir. 2001). Thus, a claim is not indefinite simply because its meaning is
2 not ascertainable from the face of the claim. *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d
3 1311, 1342 (Fed. Cir. 2003). A claim is indefinite, however, if it is “insolubly ambiguous, and no
4 narrowing construction can properly be adopted.” *Id.* (citations omitted); *see also Omega*
5 *Engineering, Inc. v. Cole-Parmer Instrument Co.*, 198 F. Supp. 2d 152 (D.C. Conn. 2002)(holding
6 that where dependent claims required a center dot but independent claims from which they were
7 derived precluded a center dot, former claims were invalid for failure to satisfy the definiteness
8 requirement because claims were logically contradictory).

9 **3. Claims 1, 3 and 4**

10 Daewoo’s argument that claims 1, 3 and 4 are indefinite rests on two grounds. First, Daewoo
11 asserts that the Court’s construction of the “series junction point” language is incorrect because it
12 does not make sense grammatically. Second, it challenges the Court’s construction of the term
13 based on the doctrine of claim differentiation, asserting that under the Court’s construction the scope
14 of claim 2 is the same as claim 1. The Court finds both arguments to be unpersuasive.

15 In construing “series junction point’ in claim 1, the Court looked beyond the claim language
16 to the prosecution history as well as the specification to determine that the words “at least” modify
17 the words “one of” in claim 1. On this basis, the Court concluded that the claim language, though
18 awkward, would be understood by one of ordinary skill in the art and was not insolubly ambiguous.
19 The Court finds the reasoning offered in the claim construction order to be sound. Further, to the
20 extent that Daewoo now presents an entirely new ground for arguing that claims 1, 3 and 4 are
21 indefinite, based on the doctrine of claim differentiation, that argument is waived by Daewoo’s
22 failure to include this theory in its invalidity contentions, as required under the Patent Local Rules.
23 Daewoo’s theory turns on construction not only of claim 1 but also claim 2 of the ‘538 patent – a
24 claim that has not been construed and was not addressed at trial. Therefore, the Court rejects
25 Daewoo’s request for JMOL on the grounds of indefiniteness as to claims 1, 3 and 4.

26 **4. Claim 5**

27 Daewoo asks the Court to find that claim 5 of the ‘538 patent is invalid as indefinite and
28 therefore, that that claim is not infringed. Daewoo does not dispute, however, that at the pre-trial

1 conference meet-and-confer it agreed that it was not asserting invalidity based on indefiniteness as to
2 claim 5. This agreement is evidenced by emails by both parties dated December 10, 2007. *See*
3 Declaration of Michael J. Lyons in Support of Funai’s Opposition to Daewoo’s Post-Trial Motion
4 for Judgment as a Matter of Law or a New Trial (“Lyons Decl.”), Exs. D & E. Given that Funai
5 relied on this agreement in asserting only claims 1, 3 and 4 at trial, it would be improper for this
6 Court to consider Daewoo’s challenge to claim 5. Accordingly, the Court rejects Daewoo’s
7 argument as to claim 5.

8 **F. The Damages Award**

9 **1. Background**

10 At trial, Funai’s damages expert presented two possible methods of determining Funai’s
11 damages. The first was a “mixed” framework that included a lost profit component and a reasonable
12 royalty component, giving rise to total alleged damages in the amount of 11.3 million dollars. *See*
13 Lyons Decl., Ex. Q. The lost profit component of the mixed framework was based on evidence
14 Daewoo sold 1.14 million accused units to Target and .24 million accused units to other customers,
15 sales that Funai asserts it would have been able to make but for Daewoo’s infringement of its
16 patents. Trial Transcript at 1284-85, 1327-1300. The statistic for sales to other customers was
17 derived by Funai’s expert, who used a market share approach under which he estimated that Funai’s
18 sales of VCRs in the United States account for 30% of all VCR sales. *Id* at 1329. The alternative
19 framework offered to the jury was based on reasonable royalties only, giving rise to total alleged
20 damages in the amount of 2.5 million dollars. *See* Lyons Decl., Ex. S. Funai’s damage calculation
21 used October 25, 2002 as the starting point for the calculation and spanned through 2006. The jury
22 awarded \$7,216,698.00 dollars in damages against DEC and \$2,298,590.00 against DEAM.

23 Daewoo challenges the jury’s damages award on the following grounds: 1) to the extent the
24 jury’s award was based on alleged lost profits, it is not supported by the evidence in the record; 2) to
25 the extent the jury’s award was based on a reasonable royalty theory, it is not supported by the
26 evidence in the record; 3) the award must be reduced in light of evidence showing that Funai failed
27 to comply with the marking requirement under 35 U.S.C. § 287(a) and actual notice of infringement
28 was not given, as to some accused products, until the complaint was filed in this action.

1 **2. Lost Profits**

2 **a. Legal Standard**

3 To recover lost profits, a patent holder must demonstrate that “there was a reasonable
4 probability that, but for the infringement, it would have made the infringer’s sales.” *Minnesota*
5 *Mining and Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1577 (Fed. Cir.
6 1992). In *Grain Processing Corp. v. American Maize-Products Co.*, the Federal Circuit explained
7 that this causation inquiry requires a “reconstruction of the market, as it would have developed
8 absent the infringing product to determine what the patentee would have made.” 185 F.3d 1341,
9 1350 (Fed. Cir. 1999) (citation omitted). The court continued:

10 Reconstructing the market, by definition a hypothetical enterprise, requires the patentee to
11 project economic results that did not occur. To prevent the hypothetical from lapsing into
12 pure speculation, this court requires sound economic proof of the nature of the market and
13 likely outcomes with infringement factored out of the economic picture. . . . Within this
14 framework, trial courts, with this court's approval, consistently permit patentees to present
15 market reconstruction theories showing all of the ways in which they would have been better
16 off in the “but for world,” and accordingly to recover lost profits in a wide variety of forms.

17 *Id.*

18 A patent holder may demonstrate lost profits by proving the following: (1) demand for the
19 patented product, (2) absence of acceptable noninfringing substitutes, (3) its manufacturing and
20 marketing capability to exploit the demand, and (4) the amount of profit it would have made.

21 *Minnesota Mining*, 976 F.2d at 1577.

22 Daewoo argues that Funai failed to prove the first, second and fourth factors, that is, demand
23 for the patented product, absence of acceptable noninfringing alternatives and the amount of profits.

24 **b. Demand for Patented Product**

25 At trial, Funai sought lost profits on the accused products on the basis that consumer demand
26 in the VCR market was attributable to the advantages that were offered by the patented inventions,
27 invoking the “entire market value rule” in support of this approach. Under the “entire market value
28 rule,” where an apparatus contains several features, a patent holder may recover damages based on
the value of the entire apparatus where it can show that the basis for customer demand is the
patented feature. *Imonex Services, Inc. v. W.H. Munzprufer Dietmar Trenner GmbH*, 408 F.3d 1374,
1379 (Fed. Cir. 2005); *see also Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538 (Fed. Cir. 1995).

1 Daewoo challenges Funai’s lost profit analysis on the basis of Funai’s “complete failure to tie
2 specific customer demand for the features actually claimed in the asserted patents,” that is, the
3 sequential VCR load system claimed in the ‘018 patent, the use of PWM motor claimed in the ‘210
4 patent and the use of the biasing/erasing oscillation circuit claimed in the ‘538 patent. The Court
5 finds Daewoo’s argument unpersuasive.

6 As a preliminary matter, Daewoo applies the entire market value rule too narrowly. The
7 cases on which Daewoo relies – *Imonex* and *Rite-Hite* – require that the patent holder demonstrate
8 that demand is based on the “patented feature.” They do not hold that demand must be based on the
9 specific device set forth in the claims. In other words, if customer demand is based on the
10 advantages that arise from the claimed device, that is sufficient. Here, the jury’s verdict is supported
11 by substantial evidence of such demand and is not inconsistent with the weight of the evidence.

12 First, with respect to the ‘018 patent, Funai presented substantial evidence that demand for
13 the accused products was based on the reduction in depth of the video cassette deck, which is one of
14 the objects of the invention. *See* ‘018 patent, cols. 1:66 -2:3. In particular, Funai offered testimony
15 that use of the sequential loading mechanism in the accused products allowed Daewoo to reduce the
16 size of both its combination and stand-alone VCRs. *See, e.g.*, Trial Transcript at 1696-97 (testimony
17 of Dr. Kazerooni that practicing the ‘018 invention allows for a smaller housing and that if Daewoo
18 were not allowed to use the ‘018 invention in the T-Mecha, the housing would have to be bigger);
19 1134-38 (testimony of Funai IP Chief, Mr. Hida, that use of ‘018 patented invention allows for
20 smaller printed circuit board and chassis in both stand-alone and combination VCRs). Funai also
21 offered testimony that this reduction in size was the basis for customer demand. *See, e.g.*, Trial
22 Transcript at 1182, 1184 (testimony of Funai VP of Sales and Marketing, Mr. Padalino, that the
23 small size of its VCRs was important to customers like Target, in part because of the limited space
24 available in stores for electronics, and that if you didn’t have this feature, you would be
25 disqualified); 317-18 (testimony of Funai’s VP of Marketing, Mr. Hashimoto, that size of VCR is a
26 very important consideration for buyers because more VCRs could be fit in a crate if they were
27 smaller).

28 Second, Funai presented substantial evidence as to the ‘210 patent that customer demand

1 was based on the high-speed rewind capability that is an object of the patent. *See* ‘210 patent, col. 1:
2 16-22 (referring to “speed-up” as an object of the patent). The inventor, Mr. Higuchi, testified that
3 by using insulated bearing holders with a PWM motor, he was able to cut the time required to
4 rewind from four minutes to two minutes. Trial Transcript at 454. He also testified that he had
5 received requests for a high-speed rewind feature from customers such as Sharp, Mitsubishi, Hitachi
6 and Philips. *Id.* at 452-453. Mr. Padalino also testified that the quick rewind feature was important
7 to Funai’s customers. *Id.* at 1182. Similarly, Daewoo’s research engineer , Mr. Choi, testified that at
8 the time the T-Mecha was being sold, “high speed rewind was required in the market.” *Id.* at 1430.
9 Finally, Funai presented testimony by a retired general manager of Funai’s IP department, Mr.
10 Mizoo, that Funai stopped using the ‘210 invention only because it developed a cheaper high speed
11 linear motor that could rewind as quickly as the PWM motor. *Id.* at 1090.

12 With respect to the ‘538 patent, Funai presented substantial evidence that customer demand
13 was based on the cost reduction achieved by eliminating the need for an oscillating coil, an object of
14 the ‘538 patent. *See* ‘538 patent, col 2: 34-36. In particular, Funai’s expert, Mr. Bristow, testified
15 that one of the primary benefits of the ‘210 invention was the cost savings it allowed, Trial
16 Transcript at 921, while Mr. Hashimoto testified as to the extreme price sensitivity of the VCR
17 market. *Id.* at 384. The Court finds that evidence is sufficient to support a finding that the cost
18 reduction achieved by using the invention was a basis for demand.

19 In sum, the Court concludes that there is substantial evidence in the record from which a jury
20 could conclude that the patented features of the ‘018, ‘210 and ‘538 patents were the basis for
21 customer demand and that such a finding is not against the weight of the evidence.

22 **c. Availability of Non-Infringing Alternatives**

23 Daewoo argues that Funai did not prove that there were no non-infringing alternatives as to
24 the three patents the jury found were infringed and therefore did not prove that it was entitled to lost
25 profits. The Court disagrees. For the reasons stated below, a reasonable jury could conclude that
26 there were no available non-infringing alternatives. Such a conclusion is supported by substantial
27 evidence and is not contrary to the weight of the evidence.
28

1 In *Grain Processing*, the Federal Circuit explained that, in reconstructing a hypothetical
2 “but-for” market, “alternative actions the infringer foreseeably would have undertaken had he not
3 infringed” should be considered. 185 F.3d at 1350-51. The reason for this inquiry is as follows:

4 Without the infringing product, a rational would-be infringer is likely to offer an acceptable
5 noninfringing alternative, if available, to compete with the patent owner rather than leave the
6 market altogether. The competitor in the “but for” marketplace is hardly likely to surrender
7 its complete market share when faced with a patent, if it can compete in some other lawful
8 manner. Moreover, only by comparing the patented invention to its next-best available
9 alternative(s) - regardless of whether the alternative(s) were actually produced and sold
10 during the infringement - can the court discern the market value of the patent owner's
11 exclusive right, and therefore his expected profit or reward, had the infringer's activities not
12 prevented him from taking full economic advantage of this right.

13 *Id.* at 1351 (citations omitted). The relevant period for determining whether there was a non-
14 infringing alternative is the period of infringement for which the patent owner claims damages, that
15 is, the “accounting period.” *Id.* at 1353.

16 Here, Funai presented evidence that there were no non-infringing alternatives as to all three
17 of the patented inventions. As to the ‘018 patent, Funai pointed to the following evidence: 1) Dr.
18 Hamahata’s testimony that in conventional VCRs, the movement of the door and the cassette
19 housing was simultaneous and that as a result, VCRs that did not use the ‘018 invention (using a
20 sequential mechanism) could not be made more compact because the door would collide with the
21 cassette (*see* Trial Transcript at 400-403); 2) a side-by-side comparison of the accused products
22 (using the sequential loading mechanism of the invention) with the FM-Mecha, which uses the
23 sequential mechanism (*see* Trial Exhibits 26 and 1087); and 3) deposition testimony by Mr. Kang
24 that while Daewoo created a design around that did not use the ‘018 invention, it did not use it
25 because it was not economical to do so (*see* Trial Transcript at 573). Based on this evidence, the
26 Court concludes that a jury could reasonably find an absence of non-infringing alternatives as to the
27 ‘018 patent.

28 With respect to the ‘210 patent, Funai points to testimony by the inventor, Mr. Higuchi, that
the PWM motor was twice as fast with respect to rewind speed as the motors that were being used in
conventional VCRs. *See* Trial Transcript at 452-454. Funai also points to Mr. Huguchi’s testimony
that a linear motor with an equally fast rewind speed was not available at the time of the ‘210
invention and that although he subsequently invented one himself, he did so with difficulty. Trial

1 Transcript at 453-454. Also, according to Mr. Higuchi, at the time of the '210 invention, no other
2 company had been able to use PWM motors in their VCRs because they had been unable to solve
3 the noise problems associated with such motors. *Id.* at 461. Finally, Funai points to the testimony of
4 Mr. Kang that during the time that Funai was accusing Daewoo of infringing the '210 patent,
5 Daewoo never replaced its Lexan bearing holders with metal bearing holders. *See id.* at 1631.
6 Based on this evidence, the Court concludes that a jury could reasonably find an absence of non-
7 infringing alternatives as to the '210 patent.

8 As to the '538 patent, Funai points to Mr. Hashimoto's testimony that the VCR market was
9 very cost sensitive in support of its assertion that there were no acceptable non-infringing
10 alternatives. *See* Trial Transcript at 384. Based on this evidence, the Court concludes that a jury
11 could reasonably find an absence of non-infringing alternatives as to the '538 patent.

12 **d. Amount of Lost Profits**

13 Daewoo argues that Funai has not established the amount of lost profits by substantial
14 evidence. In particular, Daewoo asserts that the evidence shows that Target chose Daewoo over
15 Funai to supply its VCRs *not* because Daewoo infringed Funai's patents but because Daewoo
16 offered the most attractive package of products (many of which are not alleged to have infringed
17 Funai's patents) at the best price. In addition, Daewoo asserts, the evidence showed that Target
18 consistently chose Daewoo over Funai for several years and that relations between Funai and Target
19 were strained. Daewoo also challenges the market-share approach that Funai's expert, Mr. Meyer,
20 used in calculating damages. According to Daewoo, Mr. Meyer assumed that Funai's market share
21 for all of its VCR products – both stand-alone and combination VCRs – was 30% but the evidence in
22 the record showing a 30% market share related only to stand-alone VCRs. The Court finds that
23 Funai has pointed to substantial evidence with respect to the amount of lost profits, and that the
24 jury's determination of lost profits is not contrary to the weight of the evidence.

25 First, Funai presented substantial evidence of the products it would have sold to Target but
26 for the infringement. In particular, it offered extensive testimony by its Vice President of Sales and
27 Marketing, Ernest Padalino, regarding the loss of the Target account to Daewoo. *See* Trial
28 Transcript at 1170-1210. Second, with respect to Daewoo's sales to other customers, Daewoo has

1 not demonstrated that Funai’s market share approach is not supported by substantial evidence. At
2 trial, Meyer testified that Funai’s market share “generally” is about 30%, citing to Funai’s sale of
3 stand-alone VCRs as an example. *See* Trial Transcript at 1329. The fact that Mr. Meyer used stand-
4 alone VCRs as an example to illustrate the 30% figure does not persuade the Court that the
5 unrebutted opinion of Funai’s expert as to Funai’s *general* market share should be rejected as having
6 no basis in fact.

7 **3. Reasonably Royalty**

8 Pursuant to 35 U.S.C. § 284, a patent holder is entitled to no less than a reasonable royalty on
9 an infringer’s sales for which the patentee has not established lost profits. *Rite-Hite Corp. v. Kelley*
10 *Co., Inc.*, 56 F.3d 1538, 1554 (Fed. Cir. 1995). If there is no established royalty, the amount of a
11 reasonable royalty may be determined with reference to a hypothetical negotiation. *Id.* “The
12 hypothetical negotiation requires the court to envision the terms of a licensing agreement reached as
13 the result of a supposed meeting between the patentee and the infringer at the time infringement
14 began.” *Id.*

15 Daewoo argues that Funai’s reasonable royalty analysis is not supported by the record for
16 three reasons: 1) Funai did not present sufficient evidence in support of its expert’s use of the Fall of
17 2002 as a point of reference for the hypothetical negotiation; 2) Funai did not present sufficient
18 evidence that use of the ‘210 patent offered any cost savings and therefore, the royalty rate of ten
19 cents per unit that was used by Funai’s expert should be ignored; and 3) the evidence presented by
20 Funai supports only a reasonable royalty of six cents per unit as to the ‘538 patent rather than the ten
21 cents per unit used by Funai’s damages expert. The Court finds Daewoo’s arguments to be
22 unpersuasive.

23 First, Funai points to evidence that DEC took over the sale of infringing products in October
24 2002, which supports the use of the Fall of 2002 as a point of reference for a hypothetical
25 negotiation. Second, while Funai did not offer evidence of cost savings as to the ‘210 patent, it *did*
26 offer testimony by its expert that cost savings are just one component of determining a reasonable
27 royalty. Trial Transcript at 1340. Mr. Meyer testified that another factor that influences the amount
28 a licensee is willing to pay is greater ability to obtain national accounts on products on the basis that

1 they incorporate the patented technology. *Id.* This testimony supports Mr. Meyer’s determination
2 that a reasonable royalty for the ‘210 patent was ten cents per unit. Finally, as to the ‘538 patent,
3 although Daewoo presented evidence at trial that it was paying six cents per oscillator coil, *see* Trial
4 Transcript at 1153, Funai’s witness, Mr. Hida, testified that he had determined through his own
5 investigation that the average cost was ten cents. *Id.* at 1151. When asked why Daewoo was paying
6 only six cents for the same part, Mr. Hida responded that the cost varies depending on the supplier,
7 the quantity ordered, the delivery schedule and the qualities of the coil itself. *Id.* at 1154. Based on
8 this evidence, the Court finds that there is substantial evidence to support a reasonable royalty rate
9 for the ‘538 patent of ten cents per unit and that such a finding is not against the weight of the
10 evidence.

11 4. Notice

12 Under 35 U.S.C. § 287(a), a patentees is required to give constructive notice of its invention
13 to the public by marking products that use the patented invention. In particular, Section 287(a)
14 provides, in part, as follows:

15 Patentees, and persons making, offering for sale, or selling within the United States any
16 patented article for or under them, or importing any patented article into the United States,
17 may give notice to the public that the same is patented, either by fixing thereon the word
18 “patent” or the abbreviation “pat.,” together with the number of the patent, or when, from the
19 character of the article, this can not be done, by fixing to it, or to the package wherein one or
20 more of them is contained, a label containing a like notice. . .

21 35 U.S.C. § 287(a). Section 287(a) further provides that where a patentee fails to mark its products
22 that practice an invention, damages for infringement may be awarded only for infringement after the
23 infringer has been given actual notice of the infringement. *Id.* The Federal Circuit has construed
24 section 287(a) as requiring that where a patentee uses the patented invention, marking must be
25 “substantially consistent and continuous.” *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1111 (Fed. Cir.
26 2006) (holding that marking requirement was satisfied even though 5% of product that was sold by
27 licensees was not marked). This requirement applies also to licensees. *Id.* Where a third party that
28 does not have a relationship with the patentee is practicing the invention, a “rule of reason” approach
is applied. *Id.* Under that approach, the third party’s failure to comply is not conclusive of whether
a patentee’s marking is “substantially consistent and continuous.” *Id.* Rather, the question is

1 whether reasonable efforts were made to ensure compliance. *Id.* Compliance with section 287(a) is
2 a question of fact. *Id.*

3 Here, Daewoo argues that Funai did not comply with the marking requirement as to any of
4 the three patents at issue. Daewoo further asserts that Funai’s damages must be limited because it
5 did not give actual notice of infringement until April 3, 2003 and then, only listed two products as
6 infringing in its letter to Daewoo.

7 **a. ‘018 patent**

8 Funai presented evidence that 100% of its own products that used the ‘018 invention were
9 marked. Trial Transcript at 1051 (Mizoo testimony). Its Original Equipment Manufacture (“OEM”)
10 customers, however, did not mark their products, even though they contained the patented
11 technologies at issue in this case. *Id.* at 1051. According to Funai’s witness, Mr. Mizoo, this was
12 because OEM customers controlled their packaging and OEMs are “very nervous about the
13 differentiation between the products.” *Id.* Mr. Mizoo further testified that after 2001, OEMs
14 accounted for only 9 to 13 % of Funai’s yearly sales. The Court concludes that this evidence
15 constitutes substantial evidence from which the jury could find that Funai’s marking of products that
16 incorporated the ‘018 invention was “substantially consistent and continuous.” The Court further
17 concludes that the jury’s finding was not contrary to the weight of the evidence.

18 **b. ‘210 Patent**

19 Daewoo asserts that Funai’s damages also must be limited because there is no evidence that
20 it marked its products that used the ‘210 patent. It is undisputed, however, that Funai did not sell
21 products that used the ‘210 patent after 2000 and as a result, the marking requirement does not apply
22 as to that patent. Accordingly, the Court rejects Daewoo’s argument that Funai was required to give
23 actual notice as to the ‘210 patent.

24 **c. ‘538 Patent**

25 Daewoo argues that there is no evidence in the record that Funai complied with the marking
26 requirement as to the ‘538 patent during the accounting period. Funai does not dispute that it failed
27 to mark its products that practiced the ‘538 invention during the accounting period. Rather, it asserts
28 that this does not justify granting JMOL as to the jury’s damage award or ordering a new trial. The

1 Court agrees.

2 As discussed above, where a patentee does not mark its products that contain the invention,
3 damages for infringement may be awarded only from the time when the infringer received actual
4 notice. Here, Funai gave actual notice of infringement of the ‘538 patent in April 2003, when it sent
5 a letter to Daewoo notifying it that its products infringed the ‘538 patent, among others. *See* Trial
6 Exhibit 112. On this basis, the jury was instructed that it should calculate damages for the ‘538
7 patent as of April 3, 2003. *See* Final Jury Instructions, No. 39. Funai also offered expert testimony
8 at trial in which its expert divided his damages calculations into the following three periods: (1) the
9 fourth quarter of 2002 through the first quarter of 2003; (2) the second quarter of 2003 through the
10 first quarter of 2004; and (3) the second quarter of 2004 through the fourth quarter of 2006. *See*
11 Trial Exhibit 700-12. This evidence provided a sufficient basis for the jury to calculate damages for
12 infringement of the ‘538 patent beginning in April 2003. Therefore, the Court rejects Daewoo’s
13 argument that Funai’s failure to mark as to the ‘538 patent justifies entry of JMOL or a new trial on
14 damages.

15 **G. Evidence of Willfulness**

16 Daewoo asserts that Funai failed to establish willful infringement under the standard
17 announced in *In re Seagate Technology, LLC*, 497 F.3d 1360 (Fed. Cir. 2007). In that case, the
18 Federal Circuit held that to show willful infringement, a patent holder must show by clear and
19 convincing evidence that “the infringer acted despite an objectively high likelihood that its actions
20 constituted infringement of a valid patent.” *Id.* at 1371. Daewoo points in particular to its reliance
21 on opinion letters provided to it by the AJU Patent Law Firm opining that Daewoo was not
22 infringing Funai’s patents. It also points out that no letters were sent to DEAM giving actual notice
23 of possible infringement. Finally, Daewoo complains that questions relating to whether Daewoo
24 obtained a patent opinion from a U.S. law firm were so prejudicial that a new trial on willfulness is
25 required. The Court rejects Daewoo’s arguments. Having reviewed the entire record, the Court
26 concludes that Funai presented substantial evidence for the jury to conclude, by clear and convincing
27 evidence, that Daewoo acted willfully when it infringed the ‘018, ‘210 and ‘538 patents. Similarly,
28 the jury’s finding of willfulness is not against the weight of the evidence.

1 **H. CONCLUSION**

2 For the reasons stated above, the JMOL Motion is DENIED.

3 **III. MOTION FOR PERMANENT INJUNCTION**

4 **A. Background**

5 Although Funai requested injunctive relief in its original complaint, it dropped its request for
6 injunctive relief at trial, requesting only damages, based on the belief that Daewoo had discontinued
7 its infringing sales in 2006. Subsequently, Funai found a page on DEAM’s website advertising an
8 infringing VCR. *See* Declaration of Lorraine M. Casto in Support of Funai Electric Company, Ltd.’s
9 Motion for Permanent Injunction (“Casto Decl.”), Ex. B (May 9, 2008 letter from Funai’s counsel to
10 Daewoo’s counsel with print-out of DEAM web page showing infringing item attached). As a
11 consequence, Funai concluded that injunctive relief was necessary as to the three patents that the
12 jury found were willfully infringed, the ‘018, ‘210 and ‘538 patents. The parties met and conferred
13 on the matter and apparently were close to agreement on a stipulation but could not agree whether
14 the injunction should be characterized as permanent or preliminary. Casto Decl., ¶ 6. Therefore,
15 Funai filed a motion seeking a permanent injunction prohibiting Daewoo from making, using,
16 selling, offering for sale, or importing into the United States any of the products found to infringe
17 the ‘018, ‘210 and ‘538 patents.

18 Daewoo does not dispute that an infringing VCR was advertised on DEAM’s website in May
19 2008 but states that it was merely an “obsolete webpage that had inadvertently remained
20 operational” and which remained operational due to “clerical error.” *See* Declaration of Jenny Lee
21 in Support of Daewoo’s Opposition to Funai’s Motions for Attorneys Fees and Expenses,
22 Enhancement, and Costs and Interest (“Lee Decl.”), Ex. 9 (Declaration of Min-Yong Song dated
23 June 17, 2008 (“Song Decl.”)). According to Mr. Song, Daewoo has not sold any products accused
24 of infringing the patents asserted in this case since July 8, 2006. Mr. Song further states that DEAM
25 has not sold any products accused of infringing the patents in this case since October 9, 2006. On
26 the basis of Mr. Song’s Declaration, Daewoo argues that a permanent injunction is not warranted
27 because its reform is “irrefutably demonstrated and total” and therefore, the motion is moot.

28

1 Daewoo further asserts that injunctive relief is not warranted because monetary damages will
2 adequately compensate Funai for the harm caused by Daewoo’s infringement.

3 Funai asserts that the Song Declaration is not sufficient to show that Funai’s request for
4 injunctive relief is moot, both because it is false on its face and because Mr. Song makes no
5 representations about Daewoo’s future conduct. With respect to the former assertion, Funai points
6 to evidence that Daewoo made infringing sales after October 9, 2006, contrary to Mr. Song’s
7 statement. *See* Declaration of Lorraine M. Casto in Support of Funai’s Replies to Daewoo’s
8 Oppositions to Funai’s Post-Trial Motions (“Casto Reply Decl.”), Ex. A (invoices showing
9 infringing sales in November and December 2006). Funai also rejects Daewoo’s assertion that
10 money damages provide an adequate remedy and therefore, that injunctive relief should not be
11 granted. Rather, Funai argues that Daewoo’s infringement has given rise to irreparable injury
12 because it has resulted in loss of market share and forced Funai to assist its competitor.

13 **B. Legal Standard**

14 The decision to grant or deny a permanent injunction is an act of equitable discretion by the
15 district court. *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388, 391 (2006). A permanent injunction
16 may be entered where the plaintiff has established “(1) that it has suffered an irreparable injury; (2)
17 that remedies available at law, such as monetary damages, are inadequate to compensate for that
18 injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy
19 in equity is warranted; and (4) that the public interest would not be disserved by a permanent
20 injunction.” *Id.* While cessation of unlawful conduct may render a request for injunctive relief
21 moot, “the reform of the defendant must be irrefutable and total.” *Polo Fashions, Inc. v. Dick*
22 *Bruhn, Inc.*, 793 F.2d 1132, 1135 (9th Cir. 1986)(quoting 2 J. McCarthy, *Trademarks and Unfair*
23 *Competition* § 30:6, at 471(2d ed. 1984)); *see also Friends of the Earth, Inc. v. Laidlaw*
24 *Environmental Services, Inc.*, 528 U.S. 167, 190 (2000) (“[A] defendant claiming its voluntary
25 compliance moots a case bears the formidable burden of showing that it is absolutely clear the
26 allegedly wrongful behavior could not reasonably be expected to recur”).

27 In *Polo Fashions*, the Court of Appeals reversed the district court’s denial of a permanent
28 injunction where the district court had based its holding on the plaintiff’s failure to present specific

1 evidence that the defendants were likely to violate the plaintiff's trademark rights in the future. *Id.*
2 The Court of Appeals held that where the district court already had found willful violation of the
3 plaintiff's trademark rights, and where the defendants refused to stop violating those rights until the
4 plaintiff filed a lawsuit in federal district court, the plaintiff was entitled to entry of a permanent
5 injunction against the defendant without making any further showing regarding future violations. *Id.*

6 **C. Analysis**

7 Following the traditional, four-part test set forth in *eBay*, the Court concludes that entry of a
8 permanent injunction against Daewoo is appropriate. First, the evidence in the record establishes
9 that Funai has suffered irreparable harm in the form of loss of market share, particularly with respect
10 to the impact Daewoo's infringement had on Funai's relationship with Target. *See Smith & Nephew,*
11 *Inc. v. Sythes (USA)*, 466 F. Supp. 2d 978, 982 (W.D. Tenn. 2006) (holding that plaintiff in patent
12 infringement action had established irreparable injury based on evidence that infringement by direct
13 competitor resulted in loss of market share). Funai also suffered irreparable harm to the extent that
14 Daewoo's infringement put Funai in the position of aiding a direct competitor and denied it the right
15 to exclude that a patent is intended to afford. *Id.* at 984. For the same reasons, remedies available at
16 law are not adequate to compensate Funai for Daewoo's infringement.

17 The balance of the hardships also tips in favor of granting Funai's request for a permanent
18 injunction. Entry of a permanent injunction against Daewoo will not give rise to any meaningful
19 hardship, given that Daewoo has already asserted that it does not intend to engage in any further
20 infringement. Further, there is no reason why a permanent injunction would result in a more severe
21 stigma than that associated with the jury's verdict that Daewoo willfully infringed Funai's patents.
22 On the other hand, in the absence of a permanent injunction, Funai will be forced to engage in
23 further litigation if Daewoo infringes its patents again. Nor has Daewoo pointed to any reason why
24 entry of a permanent injunction would not be in the public interest. To the contrary, protection of
25 the rights of patent holders is generally in the public interest and is in the public interest in this case.

26 The Court rejects Daewoo's assertion that a permanent injunction should be denied because
27 it has "irrefutably and totally" reformed. In addition to the fact that Daewoo was found to have
28 willfully infringed Funai's patents, there is evidence that raises the possibility of future

1 infringement. First, Funai has pointed to evidence that DEC continues to sell VCRs outside of the
2 United States. *See* Casto Decl., Ex. B (print-out of DEC web pages showing VCRs sold by DEC
3 outside of United States). In light of evidence presented at trial that the infringing T-Mecha is the
4 only deck produced by DEC, *see* Trial Transcript at 1442-43, there is a reasonable possibility that
5 Daewoo continues to sell VCRs that fall within the scope of the patent claims that are at issue in this
6 case. As a result, it would not be difficult for Daewoo to resume its infringing conduct. Second,
7 Funai has pointed to evidence that in recent months, Daewoo has offered for sale in the United
8 States a VCR that was found by the jury in this case to infringe. Third, the declaration of Mr. Song
9 does not provide sufficient assurances of future compliance to persuade the Court that it is
10 “absolutely clear” Daewoo will not infringe in the future. In particular, Funai has presented
11 evidence showing that Mr. Song’s statement regarding the dates that DEC and DEAM stopped
12 selling infringing VCRs is incorrect, rendering suspect his statement that the web page cited by
13 Funai was the result of a clerical error and that no sales were made from this page after October 9,
14 2006. In addition, Mr. Song does not make any representations regarding Daewoo’s future
15 compliance. In short, Daewoo has not established that it has “irrefutably and totally” reformed.

16 Funai’s Motion for Injunctive Relief is GRANTED.

17 **IV. MOTION FOR ENHANCED DAMAGES**

18 **A. Background**

19 In its Motion for Enhanced Damages, Funai seeks treble damages under 35 U.S.C. § 284,
20 which gives courts discretion to award damages up to three times the amount assessed by the jury
21 where there has been a finding of willfulness. Funai argues that treble damages are justified in light
22 of the nine factors articulated in *Read Corp. v. Portec, Inc.*, 970 F.3d 816, 826 (Fed. Cir. 1992). In
23 particular, Funai argues that treble damages should be awarded for the following reasons: 1) the
24 evidence shows that Daewoo deliberately copied Funai’s inventions; 2) the evidence shows that
25 Daewoo had notice of Funai’s patents and continued to sell the accused devices without a good faith
26 basis to believe it did not infringe; 3) Daewoo engaged in bad faith behavior during the litigation; 4)
27 Daewoo is a large multinational conglomerate whose ongoing business far exceeds the amount of
28 the jury verdict; 5) overwhelming evidence supports the jury’s verdict; 6) Daewoo continued to

1 infringe for years after it had notice of the infringement; 7) Daewoo did not take any remedial action
2 as to the '018 and '210 patents; 8) Daewoo was motivated to use Funai's patented technology to take
3 Funai's business; and 9) Daewoo attempted to conceal its infringement through discovery
4 misconduct.

5 Daewoo asserts that the evidence does not support the jury's willfulness finding and further,
6 the *Read* factors do not support an award of enhanced damages.

7 **B. Legal Standard**

8 Under 35 U.S.C. § 284, in a patent infringement action, a court may "increase the damages
9 up to three times the amount found or assessed" by the jury. While § 284 does not articulate a
10 standard for determining when it is appropriate to award enhanced damages, the Federal Circuit has
11 held that an award of enhanced damages under § 284 requires a showing of willful infringement. *In*
12 *re Seagate Technology, LLC*, 497 F.3d 1360, 1368 (Fed. Cir. 2007). For infringement to be
13 considered willful, in turn, it must be "objectively reckless," that is, the patentee must "show by
14 clear and convincing evidence that the infringer acted despite an objectively high likelihood that its
15 actions constituted infringement of a valid patent." *Id.* A finding of willfulness, however, does not
16 require that damages be enhanced. *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 826 (Fed. Cir. 1992),
17 abrogated on other grounds. Rather, to determine whether to exercise its discretion to award
18 enhanced damages, the court must consider the "egregiousness of the defendant's conduct based on
19 all the facts and circumstances." *Id.* In *Read*, the Federal Circuit set forth the following nine factors
20 which may be considered in determining whether enhanced damages should be awarded:

- 21 1. Whether the infringer deliberately copied the ideas or designs of another;
- 22 2. Whether the infringer, when he knew of the other's patent protection investigated the
23 scope of the patent and formed a good-faith belief that it was invalid or that it was not
24 infringed;
- 25 3. The infringer's behavior as a party to the litigation;
- 26 4. Defendant's size and financial condition;
- 27 5. Closeness of the case;
- 28 6. Duration of the defendant's misconduct;

- 1 7. Remedial action by the defendant;
- 2 8. The defendant’s motivation for harm; and
- 3 9. Whether the defendant attempted to conceal its misconduct.

4 *Id.* at 827.

5 **C. Analysis**

6 As stated above, in connection with Daewoo’s JMOL Motion, the Court finds that the jury’s
7 willfulness finding is supported by substantial evidence. Therefore, the Court turns to a
8 consideration of the *Read* factors.

9 **1. Whether Daewoo Deliberately Copied Funai’s Ideas**

10 Funai points to evidence that Daewoo deliberately copied its inventions, arguing that this
11 factor supports an award of enhanced damages. Daewoo, on the other hand, asserts that Funai has
12 distorted the evidence, which simply shows that Daewoo, like many companies, acquired and
13 analyzed other companies’ products. The Court concludes that while there is some evidence of
14 copying, this factor only weakly supports an award of enhanced damages.

15 At trial, Funai presented evidence that Daewoo had access to Funai’s products containing the
16 infringing devices prior to incorporating those technologies in its own VCRs. In particular, Funai
17 sold VCRs containing the ‘018 technology in 1997, the ‘210 technology in 1999 and the ‘538
18 technology in 1998. Declaration of H. F. Doscher in Support of Funai’s Post-Trial Motions for
19 Attorneys’ Fees and Expenses, Enhancement, and Costs (“Doscher Decl.”), Ex. 45 (Trial Transcript)
20 at 419-420, 467-468; Ex. 48 (Funai Sales Spreadsheet). In 1999, Daewoo began to sell infringing
21 VCRs. *Id.*, Ex. 49. Daewoo also admitted that it routinely acquired and analyzed the products of its
22 competitors. *See* Doscher Decl., Ex. 32 (Deposition Excerpt of Dong-Han Kang at 53); Ex. 45
23 (reflecting that Kang deposition testimony was played at trial). Daewoo, on the other hand, cites to
24 no evidence suggesting that it did *not* copy Funai’s inventions, such as evidence regarding its own
25 independent efforts to develop the technologies at issue. *See, e.g., State Industries Inc. v. A.O.*
26 *Smith Corp.*, 751 F.2d 1226, 1235 (Fed. Cir. 1985)(reversing district court’s finding of willful
27 infringement where there was affirmative evidence in the record showing that the defendant did not
28 copy the plaintiff’s technology but rather, developed the accused technology on its own).

1 The Court finds that the evidence of copying was sufficient to support the jury's finding of
2 willful infringement but that it was also largely circumstantial. The Court finds that the evidence of
3 copying favors an award of enhanced damages, but only slightly.

4 **2. Whether the infringer, when he knew of the other's patent protection,**
5 **investigated the scope of the patent and formed a good-faith belief that it**
6 **was invalid or that it was not infringed**

7 Funai argues that damages should be enhanced because Daewoo continued to sell the
8 infringing VCRs long after it received actual notice of the infringement and acted in bad faith by
9 failing to obtain a competent opinion of counsel as to the asserted patents. Daewoo counters that it
10 acted diligently to investigate the scope of the claims and therefore, that this factor does not favor an
11 award of enhanced damages. The Court concludes that this factor favors an award of enhanced
12 damages.

13 Funai points to evidence that it sent a letter to Daewoo in April 2003 alerting Daewoo that its
14 VCRs infringed Funai's patents. *See* Doscher Decl., Ex. 6 (April 3, 2003 Letter). In June 2003,
15 Funai sent Daewoo a detailed claim chart illustrating how Funai believed Daewoo's VCRs infringed
16 its patents. *Id.*, Ex. 63. Rather than obtain the opinion of competent outside patent counsel, Daewoo
17 had its own employees, Mr. Song and Mr. Kang, investigate whether Daewoo was infringing
18 Funai's patents. Doscher Decl., Ex. 62. It is undisputed that these individuals are not experts in
19 U.S. patent law. In a report provided to Funai in September 2003, Mr. Song and Mr. Kang
20 concluded that Daewoo's VCRs did not infringe the '018 patent and that the '018 patent was invalid
21 as anticipated. *Id.* They found that Daewoo's VCRs did infringe the '210 patent but that that patent
22 also was invalid on the basis that it was anticipated by prior art. *Id.* Mr. Song and Mr. Kang stated
23 that they were investigating the possibility that the '538 was invalid but they did not express any
24 opinion as to whether that patent was infringed or invalid. *Id.* In the meantime, Daewoo continued
25 to sell the accused devices.

26 At trial, Daewoo's witness, Mr. Song, conceded that it did not seek any outside opinion of
27 counsel until Funai insisted it do so. Doscher Decl., Ex. 45 at 1468-1469. However, rather than
28 obtain an opinion from a firm competent to render an opinion on U.S. patent law, as Funai had
requested, Daewoo retained a South Korean law firm without training in U.S. patent law. Doscher

1 Decl., Ex. 39 at 194. Daewoo did not obtain any opinions from U.S. counsel until after this action
2 was initiated, and then only obtained opinions as to the '018 and '538 patents. Doscher Decl., Exs.
3 64, 65. Further, Mr. Song testified that he did not consider any of the opinion letters in deciding to
4 continue selling the infringed VCRs. Doscher Decl., Ex. 39 at 206, 260.

5 This factor, therefore, supports an award of enhanced damages.

6 **3. The infringer's behavior as a party to the litigation**

7 Funai argues that Daewoo's conduct in this litigation favors an award of enhanced damages.
8 It asserts that Daewoo unnecessarily prolonged licensing negotiations prior to the litigation, engaged
9 in discovery misconduct that resulted in sanctions on several occasions, improperly altered a
10 translation to change a key word in its favor, acted unprofessionally at depositions, failed to make a
11 key witness reasonably available and capitalized on its corporate reorganization to withhold
12 evidence relating to liability. Daewoo argues that its conduct was reasonable and that it should not
13 be punished a second time for conduct that was already subjected to sanctions. The Court finds that
14 this factor does not support an award of enhanced damages.

15 First, the Court cannot determine based on the record before it that Daewoo intentionally
16 drew out the licensing negotiations that preceded Funai's lawsuit. Second, while the Court has
17 imposed sanctions on Daewoo in this action, the Court finds that the conduct on which those
18 sanctions were based is not so severe as to justify an award of enhanced damages. This factor,
19 therefore, does not support an enhancement of damages.

20 **4. Defendant's size and financial condition**

21 Funai argues that damages should be enhanced because DEC continues to be a large
22 multinational entity that has sales equivalent to over 2 billion dollars a year. *See* Doscher Decl., Ex.
23 47 (Dunn & Bradstreet Report). The same report on which Funai relies, however, also shows that
24 DEC has not shown a profit since 2004, that it has cash reserves of just over \$8 million dollars, and
25 that DEAM's net income in 2005 was only \$112,813.00. The Court concludes that although
26 Daewoo continues to have substantial net worth, it's financial condition is relatively weak. This
27 factor does not favor an award of enhanced damages.

28

1 **5. Closeness of the case**

2 Funai argues that enhanced damages should be awarded because the evidence supporting its
3 infringement claims was “overwhelming.” Daewoo counters that as to the ‘018 and ‘210 patents, the
4 jury found infringement under the doctrine of equivalents and that this factor therefore points away
5 from an award of enhanced damages. *See WMS Gaming, Inc. v. International Game Technology*,
6 184 F.3d 1339, 1354-55 (Fed. Cir. 1999) (“while it is not a rule of law that infringement that is not
7 literal can never be sufficiently culpable to warrant enhanced damages, avoidance of literal
8 infringement is a fact to be considered in determining whether there has been willful infringement”).
9 It also points out that the Court found on summary judgment that three of Funai’s patents were not
10 infringed.

11 Having reviewed the entire record, the Court concludes that the jury’s finding of willfulness
12 is amply supported by the evidence. On the other hand, Daewoo prevailed as to three out of the six
13 patents asserted in this action. The Court finds that this factor does not favor awarding enhanced
14 damages.

15 **6. Duration of the defendant’s misconduct**

16 Funai argues that this factor favors an award of enhanced damages because Daewoo
17 continued to infringe from 2003, when it received notice of the infringement, until at least 2006,
18 when Daewoo exited the VCR market. Funai also points to the evidence (discussed above)
19 suggesting that Daewoo may still be selling infringing VCRs. Daewoo, on the other hand, argues
20 that this factor only applies where the court has warned a defendant not to infringe pending appeal
21 even while it has stayed an injunction. For the reasons stated below, the Court finds that this factor
22 does not favor an enhancement of damages.

23 In *Read*, the Federal Circuit cited only a single case in support of this factor, *Bott v. Four*
24 *Star Corp.*, 229 USPQ 241, 255 (E.D. Mich.1985), 1985 WL 6071, with the parenthetical: “For sales
25 prior to the appellate court’s affirmance of the liability judgment, damages increased by 20%; for
26 sales after the affirmance, damages doubled.” 970 F.2d 816, 827 (Fed. Cir. 1992). In *Bott*, the
27 district court entered a judgment against the alleged infringer and an injunction enjoining further
28 infringement of the asserted patents. 1985 WL 6071, * 1. The court subsequently agreed to stay the

1 injunction upon the posting by the defendant of a \$100,000.00 bond, pending appeal. *Id.* at *6. The
2 defendant continued to make infringing sales, not only prior to determination of the appeal but also
3 for three months *after* the appeal was decided in the patentee’s favor. *Id.* at * 7. The court reasoned
4 that a 20% multiplier was appropriate for the former period, given that the defendant had already
5 been found to infringe by the district court, and that damages should be doubled as to infringement
6 after the Federal Circuit affirmed the district court’s ruling. *Id.* at 19.

7 In light of the *Read* court’s reliance on *Bott*, the Court concludes that the focus of this factor
8 is whether or not the infringer has continued to infringe *after* there has been a judicial finding that a
9 particular device infringes the asserted patent. Here, the only evidence offered showing that
10 Daewoo has continued to infringe *after* a judicial determination of infringement is the evidence that
11 Funai submitted in support of entry of a permanent injunction, namely, the web page showing an
12 infringing device in May of 2008. While troubling, this evidence is not sufficient, by itself, to
13 persuade the Court of the need for an enhancement, particularly as Funai has not presented any
14 evidence of actual *sales* of infringing devices since the jury entered its verdict. Therefore, the Court
15 concludes that this factor does not support an award of enhanced damages.

16 **7. Remedial action by the defendant**

17 The parties dispute whether Daewoo’s efforts to design around the patents at issue in this
18 case support an award of enhanced damages. It is undisputed that Daewoo implemented design-
19 arounds for four of the six patents at issue in this case: the ‘218 patent, the ‘209 patent, the ‘332
20 patent and the ‘538 patent. The design-around for the ‘538 patent was implemented in December
21 2003. It is also undisputed that Daewoo did not implement design-arounds for the ‘018 and ‘210
22 patents. As to the ‘018 patent, Daewoo points to evidence that it investigated possible design-
23 arounds but decided that implementing a design-around was not economically feasible in light of the
24 shrinking U.S. market and the possibility that Daewoo might have to discontinue its sales of VCRs
25 in the U.S. *See Lee Decl., Ex. 3 (Kang Depo.)* at 538-40. As to the ‘210 patent, Daewoo concedes
26 that it did not attempt to design around the technology but asserts that its decision was justified
27 because the Japanese counterpart had been found invalid and therefore, it was reasonable to believe
28 the ‘210 patent would be found invalid as well. Funai argues at length that Daewoo’s reliance on the

1 decision of the Japanese Patent Office was not reasonable.

2 The Court concludes that this factor favors an award of enhanced damages. Daewoo has
3 admitted that it did not implement design-arounds or take any other remedial action as to two out of
4 the three patents that the jury found were infringed. The fact that its excuses for failing to do so may
5 (or may not) be reasonable is beside the point.

6 **8. The defendant’s motivation for harm**

7 Funai argues that where, as here, the infringer engages in infringing conduct to gain an edge
8 over the patentee in a competitive market, this factor favors an award of enhanced damages. The
9 Court agrees. *See Domestic Fabrics Corp. v. Sears, Roebuck & Co.*, 326 F. Supp. 2d 694, 700
10 (E.D.N.C. 2004) (“A company intentionally undertaking the risk of importing infringing products
11 and engaging in an aggressive strategy unsupported by competent advice of counsel is exactly the
12 type of activity the increased damage reference in the patent law seeks to prevent”). The evidence at
13 trial showed that Daewoo’s incorporation of Funai’s patented technologies into its own VCRs
14 allowed it to directly compete for Target’s business, resulting in the loss of a major Target contract
15 to Daewoo. This factor supports an award of enhanced damages.

16 **9. Whether the defendant attempted to conceal its misconduct**

17 Funai argues that Daewoo used its corporate reorganization to withhold and/or destroy
18 relevant evidence in this case, as evidenced by the multiple awards of sanctions against Daewoo on
19 the basis of discovery conduct. While Daewoo has been subject to sanctions on more than one
20 occasion, this does not provide a sufficient basis for concluding that it actually concealed and/or
21 destroyed relevant evidence. The Court finds that this factor does not favor an award of enhanced
22 damages.

23 **10. Conclusion**

24 Although a close call, considering all of the factors discussed above, the Court concludes that
25 an award of enhanced damages is not warranted in this case. The request for enhanced damages is
26 DENIED.

27
28

1 **V. MOTION FOR ATTORNEYS' FEES**

2 **A. Background**

3 In its Motion for Attorneys' Fees, Funai requests an award of attorneys' fees under 35 U.S.C.
4 § 285 on the basis that this action constitutes an "exceptional case." In support of this assertion,
5 Funai points to the jury's finding that Daewoo wilfully infringed the '018, '210 and '538 patents and
6 to Daewoo's alleged litigation misconduct. Funai further requests an award of its expert witness
7 fees on the basis that Daewoo's misconduct is so extreme that it renders the case "very exceptional"
8 and therefore warrants the exercise of the Court's inherent authority.

9 Daewoo argues that this case is not exceptional and therefore, that the Court should not
10 award attorneys' fees or witness fees. It points out that only three of the six patents at issue were
11 found to have been infringed and argues that even as to those that were found to have been
12 infringed, Daewoo's defenses were offered in good faith. Daewoo further argues that it did not
13 engage in litigation misconduct that would justify an award of attorneys' fees or expert witness fees.
14 Finally, Daewoo argues that the motion should be denied because Funai did not identify the fees that
15 it is seeking or establish that the fees sought are reasonable.

16 **B. Legal Standard**

17 Under 35 U.S.C. § 285, the district court may award attorneys' fees in "exceptional cases."
18 A finding of willfulness is a sufficient basis for an award of attorneys' fees under § 285. *Modine*
19 *Mfg. Co. v. Allen Group, Inc.*, 917 F.2d 538, 543 (Fed. Cir. 1990). While the district court is not
20 required to award attorneys' fees where such a finding has been made, it is an abuse of discretion to
21 deny attorneys' fees in cases of willful infringement unless the court explains why the case is *not*
22 exceptional. *Id.* In addition, the court may find a case to be exceptional on the basis of litigation
23 misconduct. *See Imonex Services, Inc. v. W.H. Munzprufer Dietmar Trenner GMBH*, 408 F.3d
24 1374, 1378 (Fed. Cir. 2005).

25 Expert witness fees are not available under § 285 but may be awarded under the Court's
26 inherent power to sanction fraud or abuse of the judicial process. *See Amsted Industries Inc. v.*
27 *Buckeye Steel Castings Co.*, 23 F.3d 374, 377-78 (Fed. Cir. 1994).

28

1 **C. Analysis**

2 There is substantial evidence in the record showing that Daewoo willfully infringed three of
3 Funai’s patents. This evidence supports the conclusion that Funai should be awarded attorneys’ fees
4 as to the three patents that were found infringed at trial. On the other hand, three of the patents that
5 Funai asserted were found by the Court not to have been infringed. Therefore, Daewoo should not
6 be required to pay attorneys’ fees that are attributable to litigation relating to those patents. Because
7 Funai has not yet documented the fees it seeks, the Court is not in a position to determine the
8 specific amount to which Funai is entitled.

9 The Court declines to award expert witness fees under its inherent power because the
10 conduct that Funai complains of does not rise to the level of fraud or abuse of the judicial process.

11 The Court, therefore, GRANTS in part the Motion as to attorneys’ fees and related expenses
12 available under § 285 and DENIES the Motion as to Funai’s request for expert witness fees.

13 **VI. MOTION FOR COSTS AND PREJUDGMENT INTEREST**

14 **A. Background**

15 In its Motion for Costs and Prejudgment Interest, Funai seeks an award of prejudgment
16 interest on the jury award, calculated from the date of first infringement through the date of
17 judgment. Funai asserts that it is entitled to prejudgment interest from the date of first infringement,
18 that is, as to DEC, October 25, 2002, and as to DEAM, January 1, 2003. Funai also requests
19 prejudgment interest on its attorneys’ fees and expenses on the basis of Daewoo’s “outrageous”
20 behavior.

21 Dawoo argues that Funai’s request should be denied because it failed to file a bill of costs, as
22 required under the Local Rules, and its motion fails to include an accounting of the costs it seeks. In
23 addition, Daewoo asserts that Funai has waived any claim it may have had to prejudgment interest
24 because it waited four years to file its infringement suit against Daewoo. Because of the prejudice
25 that resulted from this delay, Daewoo argues, prejudgment interest should be calculated from the
26 date the lawsuit was filed (rather than the date of first infringement), if at all. Finally, Daewoo
27 rejects Funai’s assertion that prejudgment interest should be awarded on attorneys’ fees and
28 expenses as well as on the jury award. Daewoo argues that such an award would be inconsistent

1 with 35 U.S.C. § 284, which is intended to compensate patentees rather than punish infringers.
2 According to Daewoo, if prejudgment interest is awarded, the Court should calculate the amount
3 using May 7, 2004 as the starting date and the T-bill rate as the applicable interest rate.

4 **B. Legal Standard**

5 Under 35 U.S.C. § 284, a patentee who prevails in an infringement action is entitled to
6 “damages adequate to compensate for the infringement . . . together with interest and costs as fixed
7 by the court.” The Supreme Court has held that under this provision prejudgment interest “should
8 ordinarily be awarded absent some justification for withholding such an award.” *General Motors*
9 *Corp. v. Devex Corp.*, 461 U.S. 648, 657 (1983). This rule is based on the principle that the
10 patentee should be put in as good a position as he would have been had the infringer entered into a
11 reasonable royalty agreement. *Id.* The Court explained that one reason prejudgment interest might
12 be denied is undue delay in prosecuting the lawsuit, and that there might be other reasons as well.
13 *Id.*

14 **C. Analysis**

15 **1. Costs**

16 Having prevailed on its infringement claims, Funai is entitled to an award of costs under §
17 284. The Court rejects Daewoo’s assertion that Funai has waived its right to seek costs by failing to
18 file a bill of costs with the Clerk after trial. Local Rule 54-1(a) requires that a bill of costs be filed
19 within 14 days of entry of judgment. As judgment has not yet been entered in this action, Funai has
20 not violated the Local Rule 54-1(a) and has not waived its right to seek an award of costs. The
21 Court notes, however, that it will not address specific disputes relating to Funai’s costs until the
22 parties have complied with the procedures set forth in the Local Rules relating to the determination
23 of costs.

24 **2. Prejudgment Interest**

25 Funai is also entitled to an award of prejudgment interest. The Court rejects Daewoo’s
26 assertion that prejudgment interest should be awarded only as of the date this action was filed
27 because Funai unreasonably delayed initiating this action. The record before the Court does not
28 reflect that Funai unreasonably delayed initiating the action. On the other hand, the Court declines

1 to award prejudgment interest on attorneys' fees and expenses. Such an award could be based only
2 on the Court's inherent power and, as noted above, the Court does not find that Daewoo's conduct
3 warrants such a sanction.

4 **VII. CONCLUSION**

5 Daewoo's JMOL Motion is **DENIED**. The Court rules as follows on Funai's Post-Trial
6 Motions:

- 7 (1) Motion for Permanent Injunction: **GRANTED**.
8 (2) Motion for Enhanced Damages under 35 U.S.C. § 284: **DENIED**.
9 (3) Motion for Attorneys' Fees and Expenses Under 35 U.S.C. § 285: **GRANTED** at to
10 attorneys' fees, **DENIED** as to expert witness fees.
11 (4) Motion for Costs and Prejudgment interest: **GRANTED** as to costs and prejudgment
12 interest, from date of first infringement, on damage award; **DENIED** as to prejudgment
13 interest on attorneys' fees and expenses.

14 The parties are directed to meet and confer, within thirty (30) days of the date of this order,
15 regarding the amount of attorneys' fees, as well as calculation of prejudgment interest. If they are
16 unable to agree on the amounts, Funai shall submit papers supporting its request for attorneys' fees
17 and prejudgment interest no later than **February 13, 2009**. Daewoo's Opposition shall be filed by
18 **March 6, 2009**. Funai's Reply shall be filed by **March 20, 2009**. If the Court determines that a
19 hearing is necessary, a hearing shall be set after the parties have submitted their briefs. In addition,
20 Funai shall submit to the Court, within fourteen (14) days of the date of this order, a proposed form
21 of order with respect to the injunctive relief to be afforded.

22 IT IS SO ORDERED.

23

24 Dated: January 5, 2009

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JOSEPH C. SPERO
United States Magistrate Judge