

United States District Court,
D. Massachusetts.

Joseph Kwame OKOR, Pro Se,
Plaintiff.

v.

ATARI GAMES CORP., Bandai Co. Ltd., Capcom Entertainment Inc., Jaleco USA Inc., Konami of America Inc., Midway Games Inc., Namco of America Inc., Sega Enterprises Inc. (USA), Sammy USA Corp., and Taito Corporation,
Defendants.

Joseph Kwame OKOR, Pro Se,
Plaintiff.

v.

ACCLAIM ENTERTAINMENT INC., Best Buy Co. Inc., Blockbuster Inc., Electronic Arts Inc., Electronics Boutique Holdings Corp., Kmart Corporation, Nintendo of America Inc., Sega of America Dreamcast Inc., Sony Corporation of America, Tele-Communications Inc., Toys R US, and Wal-Mart Stores Inc,
Defendants.

Nos. Civ.A.00-11503-DPW, Civ.A. 00-11504-DPW, Civ.A. 01-10610-DPW

March 26, 2002.

MEMORANDUM AND ORDER

WOODLOCK, J.

In these three cases, *pro se* plaintiff Joseph Okor alleges, and in some instances re-alleges, infringement of his patents by a wide range of parties associated with the video game industry.

In Civil Action Nos. 00-11503 and 00-11504, Okor alleges infringement respectively of United States Patent Nos. 4,126,851 (the " '851 patent") and 4,127,849 (the " '849 patent") by a number of arcade game manufacturers.

The '851 patent relates to a programmable television game system. The '849 patent relates to a "data converter system" that can convert coded input data into display output data. In three prior cases litigated before me, Okor alleged infringement of the same patents by three manufacturers of home video game consoles: Sega of America, Inc. ("Sega"), Nintendo of America, Inc. ("Nintendo"), and Sony Computer Entertainments America, Inc. ("Sony"). I granted summary judgment of non-infringement, as to both the '851 and '849 patents, to those three defendants.

In Civil Action No. 01-10610, Okor now re-alleges infringement of the '851 patent by Sega, FN1 Nintendo and Sony. FN2 Okor also alleges related infringement of the '851 patent by nine additional parties.

FN1. As reflected in the case caption, Sega of America, Inc. recently changed its name to Sega of America Dreamcast, Inc.

FN2. In the present action, Okor names a different Sony entity (Sony Corporation of America) than that named in the previous litigation (Sony Computer Entertainments America, Inc.). As the parties do, I will treat the two entities, which are part of the same corporate family, as the same.

Before me are dispositive motions in the three new cases. I will dispose of the pending motions in this single memorandum.

I. BACKGROUND

A. *Prior Decisions of this Court*

In Civil Action No. 97-12418, Okor sued Sega and Nintendo for infringement of the '851 patent. By Memorandum and Order dated June 19, 2000, I granted summary judgment to both defendants ("*Okor I*").

At issue in *Okor I* was claim 1 of the '851 patent, which reads as follows:

A system for generating and controlling symbol-producing signals for display on the screen of a television receiver, comprising:

- (a) a multiplexer,
- (b) a plurality of manual control units operatively connected to said multiplexer for operation by individual players, and including symbol position and control means for generating and transmitting symbol position and control signals,
- (c) a plurality of light pens operatively connected to said multiplexer for operation by individual players, each of said pens including light responsive means and pulse producing means responsive to said light responsive means,
- (d) a display unit adapted to be located remotely from and responsive to a control unit, said display unit adapted to receive said symbol position and control signals from said control units,
- (e) changeable memory means providing program instruction,
- (f) a modem providing an interface between said memory means and said display unit,
- (g) timing control means operatively connected to said multiplexer for cyclically scanning said multiplexer,
- (h) said display unit including symbol generator means for generating symbols for display on said screen, modulator means connecting between said receiver and said symbol generator means responsive to said symbol generator means and said light pens for generating positional information, and computer means operatively connected to said symbol generator means, said background generator means and said

multiplexer for controlling the operation thereof.

Sega and Nintendo's defense of their accused home video game consoles focused on limitations (b), (c), and (f) of the claim. In my analysis, I construed the "modem" of limitation (f) to mean:

a device "the function of which is to convert the discrete digital signals of computers into analogue signals suitable for transmission over telephone line, and at the receiving end, to convert the analogue signal back to digital signals which can be 'read' by the receiving computer."

Okor I at 15 (quoting *Codex Corp. v. Milgo Elec. Corp.*, 534 F.Supp 418, 421 (D.Mass.1982)). I found the accused products did not for the most part include such a device. I did, however, identify a genuine issue of material fact with respect to two particular configurations of Sega game consoles (in connection with either the "X-Band Modem" or the "Sega Channel"). *Id.* at 18-19. I also found a genuine issue of material fact as to whether the use of an interchangeable game cartridge with a wire connection, common to all of the accused products, might be *equivalent* to the modem of Okor's claim. *Id.* at 19-21.

I nevertheless granted summary judgment of non-infringement to both Sega and Nintendo, because I did not find any of their accused products to have been configured with *both* the plurality of manual control units and the plurality of light pens required by limitations (b) and (c), respectively, and declined to consider any configuration featuring less than such a dual plurality as potentially equivalent. *Id.* at 23-24. In reaching my decision, I did note that, in his objection to the Report and Recommendation of the Magistrate Judge below, Okor had argued that a single light "gun" combined a manual control with a light pen (and thus, that a plurality of such light guns alone could satisfy the limitations of his claim). I found, however, that Okor had failed to provide evidence that any of the accused products had ever actually been configured with two light guns that combined the manual control and the light pen of his patent claim. FN3 *Id.* at 24.

FN3. My determination was based on the facts that: (i) Okor's argument was not originally presented to the Magistrate Judge, (ii) no evidence had been offered to support the technological contention that a light gun might combine the manual control and the light pen of Okor's patent claim, and (iii) no evidence had been offered that any of the accused products had ever actually been configured with two such light guns, beyond the assertion that Konami, Inc. sold a game that permitted the use of two light guns. *Id.* at 24. I added that even if Okor had submitted evidence that an accused product had been so configured by parties other than Sega or Nintendo, there was nothing to suggest that either might have induced or aided and abetted such hypothetical infringement. *Id.*

In Civil Action No. 98-12177, Okor alleged infringement of the '851 patent by a third manufacturer of home video game consoles, Sony. By Memorandum and Order dated March 29, 2001, I granted summary judgment to Sony as well ("*Okor II* "), for essentially the same reason as in *Okor I*. In *Okor II*, the plaintiff specifically argued that the manual control of Sony's accused "Playstation" console, even in the absence of any light responsive element, was equivalent to a light pen, and that the plurality of such manual controls (known as "game pads") was thus equivalent to the pluralities of both manual controls and light pens required by claim 1. I rejected the argument, again holding that infringement of the '851 patent, either literally or under the doctrine of equivalents, would require a plurality of the manual controls of limitation (b) together with a plurality of the light pens of limitation (c). *Okor II* at 32-33.

By my March 29, 2001 Memorandum and Order, I also awarded summary judgment of non-infringement in

a third case brought by Okor, Civil Action No. 98-12176, alleging infringement of the '849 patent by Sega, Nintendo, and Sony ("*Okor III*"). FN4 Again, only the first claim was at issue. It reads as follows:

FN4. In my March 29, 2001 Memorandum and Order, I disposed of the '851 patent claim from Civil Action No. 98-12177 and the '849 patent claims from Civil Action No. 98-12176 in a single document. For ease of reference in the instant Memorandum and Order, I will treat the March 29, 2001 Memorandum's discussion of the '851 patent as *Okor II*, and its discussion of the '849 patent as *Okor III*.

A system for converting coded data signals for presentation as display symbols on a display device comprising:

(a) an input computer adapted to store three-dimensional data with respect to a symbol to be displayed and generate signals corresponding to a two-dimensional display representation of said symbol,

(b) symbol defining means connected to and providing input data to said input computer,

(c) a display computer connected to and receiving the output of said input computer,

(d) at least one dot generator connected to said display computer and controlled thereby, said dot generator adapted to generate a dot producing signal at the beginning of the horizontal position of each symbol,

(e) at least one symbol generator connected to said generator and to said display computer and adapted to generate symbol producing signals at locations indicated by said dot generator, and,

(f) a video combiner connected to said symbol generator and to said display computer for processing said symbol producing signals and delivering them to a selected display device,

(g) said dot generator including x and y comparators and x and y stacks operatively connected to one another and to said display computer, said x and y comparators receiving, respectively, x and y counts corresponding to the x and y addresses of said symbols.

The defendants' defense of their accused products-the same home video game consoles alleged to infringe the '851 patent-focused on limitations (a), (d), (f) and (g) of the '849 patent's above claim. My constructions of those limitations did not render the question of infringement a close one. I construed limitation (a) based on its text as well as the patent's specification and prosecution history, as requiring capability for storage of three-dimensional display data (based upon which two-dimensional representations would be computed). FN5 *Okor III* at 26-30. Of all the accused products, I found only Sony's Playstation console to function in this manner. I construed limitation (f)-again on the basis of text, specification, and prosecution history-as requiring the capability of attachment to multiple display devices, as well as the capability to project different images on those different display devices. *Id.* at 21-23. I found the various Sega and Nintendo consoles accused to possess neither capability, and the Sony Playstation to possess only the former.

FN5. In formulating this construction, I specifically rejected Okor's suggestion that limitation (a) might be met by the display of "pre-computed" data stored in terms of two axes alone. *Okor III* at 29-30.

Finally, I construed limitation (g)-specifically added (by letter of amendment) in response to the patent

examiner's initial rejection of the claim-as confined to the particular memory architecture therein described for the dot generator of limitation (d). *Id.* at 14-16. Accordingly, I considered whether any of the accused products contained a dot generator that utilized a "stack" memory architecture-storing image data, as explained by Okor's amendment letter, in memory variably proportional to the number of symbols to be displayed, rather than as fixed by the resolution of the display screen. I found none of the products to do so. FN6 *Id.* at 16-18.

FN6. In reaching this conclusion, I rejected Okor's attempt to equate the bit-map display systems variously featured in Sega, Nintendo, and Sony's consoles-whether utilizing a line or frame buffer approach-literally with a stack memory architecture. *Id.* at 16-18.

B. Appellate Proceedings

Okor I's grant of summary judgment against Okor's suit (Civil Action No. 97-12418) alleging infringement of the '851 patent by Sega and Nintendo was affirmed without opinion by the Federal Circuit in *Okor v. Sega of America, Inc., et al.*, 2001 WL 125908 (Fed.Cir., February 13, 2001).

Okor III's grant of summary judgment against Okor's suit (Civil Action No. 98-12176) alleging infringement of the '849 patent by Sega, Nintendo and Sony was affirmed in a *per curiam* opinion by the Federal Circuit after oral argument before me on the instant motions. *Okor v. Sega of America, Inc., et al.*, 2002 WL 343415 (Fed.Cir., March 5, 2002) ("*Okor IV*"). The Federal Circuit concluded in *Okor IV* that "the district court correctly granted summary judgment with respect to section (f) of claim 1, and we do not reach the other two grounds relied upon by the district court." *Id.* at 2.

Okor II's grant of summary judgment against Okor's suit (Civil Action No. 98-12177) alleging infringement of the '851 patent by Sony is still pending on appeal to the Federal Circuit at this time.

C. Instant Cases

In Civil Action No. 00-11503, Okor alleges infringement of the '851 patent by ten arcade game manufacturers: Atari Games Corp. ("Atari"), FN7 Bandai Co., Ltd. ("Bandai"), Capcom Entertainment, Inc. ("Capcom"), Jaleco USA, Inc. ("Jaleco"), Konami of America, Inc. ("Konami"), Midway Games, Inc. ("Midway"), Namco of America, Inc. ("Namco"), Sega Enterprises (USA), Inc. ("Sega"), FN8 Sammy USA Corp. ("Sammy"), and Taito Corporation ("Taito").

FN7. Atari is now known as Midway Games West, Inc. ("MGW") and is represented in the submissions of Midway Games, Inc.

FN8. Although Sega Enterprises (USA), Inc. is a different Sega entity than that which manufactures home video game consoles (Sega of America Dreamcast, Inc.), I will treat the two entities, which are part of the same corporate family, as the same.

In Civil Action No. 00-11504, Okor alleges infringement of the '849 patent by the same ten parties. At the hearing on the instant motions on February 20, 2002, Okor reported that, despite my directions in connection with the Scheduling Order of April 23, 2001, he had not taken the necessary steps to serve two Japanese

parties, Bandai and Taito, successfully under the Hague Convention. I will dismiss those parties from this case for failure of the plaintiff to prosecute the claims against them by effecting service. The other eight have filed answers to Okor's two suits, and now move for summary judgment as to both. Okor has cross-moved for summary judgment in response.

In Civil Action No. 01-10610, Okor re-alleges infringement of the '851 patent by Sega, Nintendo, and Sony-Sega and Nintendo as manufacturers of home video game consoles, and Sony as a software developer for a particular Nintendo console. Okor also alleges infringement of the '851 patent by nine additional parties: six retailers FN9 (for having sold Sega and Nintendo's accused products), two software licensees FN10 (for having developed software for the same), and one media company FN11 (which Okor apparently believes to have been involved in the operation of the cable broadcast "Sega Channel"). In my April 23 Scheduling Order, I relieved Okor of the obligation to serve these additional parties at this time, leaving the case to be considered initially as against Sega, Nintendo, and Sony alone. Those three defendants have moved for dismissal, on grounds of *res judicata*, and injunctive relief. They also seek reimbursement of attorneys' fees and expenses.

FN9. Best Buy Co., Inc., Blockbuster, Inc., Electronics Boutique Holdings Corp., KMART Corporation, Toys R Us, and Wal-Mart Stores, Inc.

FN10. Acclaim Entertainment, Inc. and Electronic Arts, Inc.

FN11. Tele-Communications, Inc. (since merged with AT & T).

II. CIVIL ACTION NOS. 00-11503 AND 00-11504

I begin with Okor's two suits alleging infringement of his '851 and '849 patents by arcade game manufacturers. In each case, defendants Capcom, Jaleco, Konami, Midway, MGW (formerly Atari), Namco, Sega, and Sammy have moved for summary judgment as to the respective patents. Okor has filed cross motions for summary judgment.

A. Summary Judgment Standard

Summary judgment is appropriate when "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits ... show that there is no genuine issue of material fact and that the moving party is entitled to a judgment as a matter of law." Fed.R.Civ.P. 56(c). "Thus, summary judgment may be granted when no reasonable jury could return a verdict for the nonmoving party." *United States Gypsum Co. v. National Gypsum Co.*, 74 F.3d 1209, 1212 (Fed.Cir.1996) (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)). Or, in other words, "summary adjudication may be appropriate if, with all factual inferences drawn in favor of the nonmovant, the movant would nonetheless be entitled to judgment as a matter of law." *Young Dental Manufacturing Co., Inc. v. O3 Special Products, Inc.*, 112 F.3d 1137, 1141 (Fed.Cir.1997).

B. Infringement Standard

Deciding whether a patent is infringed is a two-step process. "The first step is claim construction, which

involves ascertaining the scope and meaning of the claims at issue, while the second step involves determining whether the claims as construed read on the accused device." *Streamfeeder, L.L.C. v. Sure-Feed Sys., Inc.*, 175 F.3d 974, 981 (Fed.Cir.1999). Claim construction is a question of law solely within the province of the court. *Cybor Corporation v. FAS Technology, Inc.*, 138 F.3d 1448, 1454 (Fed.Cir.1998). Whether a given claim as construed reads on the accused device, on the other hand, is a question of fact. *General Mills, Inc. v. Hunt-Wesson, Inc.*, 103 F.3d 978, 981 (Fed.Cir.1997). This latter inquiry is quite precise: "To show infringement, the plaintiff must establish that the accused device includes every limitation of the claim or an equivalent of each limitation." *Dolly, Inc. v. Spalding & Evenflo Companies, Inc.*, 16 F.3d 394, 397 (Fed.Cir.1994).

C. Civil Action No. 00-11503: The '851 Patent

Okor divides the arcade games he accuses of infringing the '851 patent into three categories: (i) non-shooter games (ii) shooter games that use "joysticks" and (iii) "shooter" games that use light guns.

1. Games without light guns (categories (i) & (ii))

I can summarily dispose of Okor's infringement claim with respect to arcade games in categories (i) and (ii) involving no light responsive feature at all. As Okor himself acknowledges, my decision in *Okor II* precisely held-consistent with my decision in *Okor I*-that a manual control unit with no light responsive element (like a joystick) is not equivalent to the light pen described at limitation (c) of claim 1 of the patent, and that a plurality of such manual control units thus cannot be deemed equivalent to the pluralities of *both* manual controls and light pens that claim 1 requires. My prior resolution of this issue has preclusive effect against Okor as to the instant case.

The First Circuit requires the following elements for a successful application of issue preclusion: FN12 (1) there must be an identity of issues; (2) there must have been actual litigation of the relevant issue in the prior action; (3) there must have been determination of the issue by a valid and binding final judgment; (4) the resolution of the issue must have been essential to that judgment; (5) the party defending against preclusion must be identical to or in privity with the party in the prior action. *See generally* *Boston Scientific Corp. v. Schneider (Europe) AG*, 983 F.Supp. 245, 255 (D.Mass.1997). In addition, the party against whom issue preclusion is to be applied must have had a "full and fair opportunity" in the prior action to litigate the issue. *Id.* at 256 (internal citations omitted).

FN12. I look to the law of the regional circuit for general principles of issue preclusion, insofar as they are not unique to patent law. *Pharmacia & Upjohn Company v. Mylan Pharmaceuticals, Inc.*, 170 F.3d 1373, 1381 n. 4 (Fed.Cir.1999).

Okor himself does not dispute that the above conditions are met here. Rather, he merely suggests that my present disposition is estopped by his pending appeal of *Okor II* to the Federal Circuit. That suggestion is negated by First Circuit law deeming a judgment to be sufficiently "final" for preclusion purposes even while under appeal. *Kane v. Town of Harpswell*, 254 F.3d 325, 328 (1st Cir.2001). In any event, I can find no reason to revisit and modify the reasoning upon which *Okor II* rests.

Applying my prior judgment, then, I find those accused arcade games that lack a light responsive feature not to infringe the '851 patent.

2. Games with light guns (category iii)

I turn next to arcade games that use a plurality of light guns—devices that, according to Okor, combine the manual control and light pen of his patent claim. Based on submissions required of both Okor and the various defendants by my April 23 Scheduling Order, it appears that the following games fall under this category (and were sold during the relevant time period, FN13 April 15, 1994 to November 21, 1995): Jaleco's "Alien Command"; FN14 Konami's "Crypt Killer" and "Lethal Enforcers II"; Midway's "Revolution X"; MGW's "Area 51"; FN15 Namco's "Point Blank Game"; and Sega's "Virtua Cop" and "Virtua Cop II." FN16

FN13. Within the statute of limitations, yet prior to the expiration of the '851 patent.

FN14. As admitted by Jaleco itself, notwithstanding the absence of this game on Okor's list of those that use a plurality of light guns.

FN15. Okor also lists MGW's "Cops" as an arcade game that uses a plurality of light guns, but there is uncontroverted evidence that "Cops" is a single player game that features only one light gun, together with one steering wheel.

FN16. Okor includes various versions of these two games in his listing of six Sega games as using a plurality of light guns.

While Okor asserts that Sammy's "Zombie Raid" also uses a plurality of light guns, he offers nothing to rebut Sammy's evidence that the game employs no light responsive feature at all. FN17 Furthermore, Okor does not even assert that any Capcom game uses light guns. Accordingly, I may grant summary judgment of non-infringement of the '851 patent to Sammy and Capcom without further analysis.

FN17. As a general matter, I note that Okor has failed to proffer *any* evidence in support of his dual patent claims against the arcade game manufacturers. By this omission, he leaves me no choice but to credit whatever evidence the defendants supply. A party opposing summary judgment bears the burden, after all, of demonstrating the existence of a genuine issue of material fact with specific, provable evidence; mere assertions will not suffice. *See, e.g., Brennan v. Hendrigan*, 888 F.2d 189, 191 (1st Cir.1989).

I begin my evaluation of those arcade games that do, by common consensus, use a plurality of light guns by addressing the question whether my treatment of Okor's light gun argument in *Okor I* also has issue preclusive effect. I find that it does not. Although I noted in *Okor I* Okor's failure to offer evidence in support of his technological contention that a light gun can be deemed a combination of manual control and light pen, within the terms of claim 1 of his patent, that was but one alternative basis for my determination that Okor had failed to provide evidence that any of Sega and Nintendo's accused home video game consoles had ever actually been configured with two light guns meeting that description. *Cf. Restatement (Second) of Judgments* s. 27 cmt. i (1982) ("If a judgment of a court of first instance is based on determinations of two issues, either of which standing independently would be sufficient to support the

result, the judgment is not conclusive with respect to either judgment standing alone.") The affirmance of *Okor I* without opinion leaves this *status quo* unchanged. *Cf. id.* at cmt. o.FN18

FN18. Neither can the somewhat broader protection of claim preclusion here be claimed by Sega, insofar as the presently accused products (arcade games) are different from the Sega products at issue in the prior suit (home video game consoles). *See Massachusetts School of Law at Andover, Inc. v. American Bar Association*, 142 F.3d 26, 38 (1st Cir.1998) (claim preclusion depends on the two causes of action "aris[ing] out of a common nucleus of operative facts").

Independently analyzing, then, Okor's light gun argument in its current form, I note that it is now buttressed with additional explanation. Specifically, Okor contends that a single switch on a light gun (like the trigger switch) "can be used to generate the position of a symbol-by setting other parameters to a constant value, and using the switch to control the motion generator[.]" and that it similarly "can also provide control information." Thus, he concludes, a light gun so configured would combine the manual control contemplated by limitation (b) of his patent claim with the light pen of limitation (c).

Okor fails to specify, however, which of the accused products employ light guns configured as he contends to be *possible*- *i.e.* which of the relevant light guns contain a switch that is actually capable of "generating and transmitting symbol position and control signals," in the language of limitation (b), either under his above stated theory or otherwise. In fact, Jaleco, Konami, Midway, MGW, Namco and Sega each submits evidence that their light guns are *not* configured with switches that possess such ability. The record thus does not support viewing the light gun switches of the accused products other than as merely generating and transmitting pulse signals that are actively transformed into symbol position and control signals by separate circuitry.FN19

FN19. In addition, I note that Jaleco has submitted evidence that its "Alien Command" game features light guns that do not function by receiving light from the display screen, as do the light pens of Okor's claim, but rather function by emitting light to separately located light sensors.

To the extent that Okor attempts to counter this point, it is simply by seeking treatment of the operation of light gun switches coupled with separate circuitry as functionally equivalent to that of the manual controls claimed by his patent. His reach for the doctrine of equivalents is fatally undercut, however, by the fact that his amendment of claim 1 of the '851 patent-so as to avoid the patent examiner's initial rejection thereof-narrowed limitation (b) precisely to specify the inclusion, *within* his claimed manual control units, of "symbol position and control means for generating and transmitting symbol position and control signals." FN20 As the Federal Circuit recently has made clear, a narrowing amendment made for a reason related to patentability forecloses any equivalents for the limitation in question. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558 (Fed.Cir.2000) (en banc), *cert. granted*, 121 S.Ct. 2519 (2001).

FN20. Although Okor's accompanying amendment letter notes that "mathematical transformations [may be applied] to the output of the control box [such as] to generate a new set of parameters," it is directed at clarifying that the manual controls of his patent claim could independently generate such "parameters" in the first place.

Accordingly, on the evidence before me and without relying upon the application of *res judicata* principles, I will grant summary judgment of non-infringement of the '851 patent also with respect to those arcade games that feature a plurality of light guns.

3. Arcade games generally

The parties' briefs also have addressed limitations of claim 1 other than limitations (b) and (c), thus considering the accused arcade games more generally, irrespective of whether configured with light guns or not. Okor's analysis in this regard is not differentiated as between particular games, but rather involves the generic application of his asserted claim constructions. To supplement my preceding analysis, I consider these additional claim limitations below.

a. "display unit"

Limitations (d) and (h) of claim 1 contemplate a display unit adapted to receive symbol position and control signals from the manual control units of limitation (b), and serving to generate symbols for display on a *separate* display screen. As a matter of claim construction, two points are at issue: (i) whether the display unit's transmission of video information to the display screen must be by *radio frequency*, FN21 and (ii) whether the display unit must be capable of receiving symbol positions and control signals from manual controls *located remotely*.

FN21. Some of the defendants frame the question in terms of the capabilities of the receiving *display screen*. A proper reading of claim 1, however, requires that the inquiry is focused on the transmitting *display unit* expressly claimed.

The defendant arcade game manufacturers raise the first question because video display in their games is accomplished, as Okor concedes, not by means of radio-frequency ("RF") transmission to a television screen, but by cable hook-up to an ordinary monitor (which is incapable of receiving broadcast signals). In pressing a claim construction that limits the display unit of Okor's invention to one which transmits rf signals to a television receiver, the defendants particularly emphasize the statement in the '851 patent's specification that: "If the video is to be transmitted to the display device [i.e. screen], then the modulator [of the display unit] must include an RF transmitter." '851 Patent, column 6, lines 3-5.

Notwithstanding this statement, I do not construe the '851 patent's display unit to be limited to RF transmission. Elsewhere in the specification, a configuration for Okor's invention is contemplated that would not involve RF transmission but rather would involve a cable television connection: "The display module [i.e. unit] could be located at the cable TV head end and the players could 'tune-in' to their game by tuning to the correct channel on the cable." '851 Patent, column 2, lines 55-58. Of course, in this configuration, one might say video would still be "transmitted." But the inartfulness of the conditional "If the video is to be transmitted" should not alone cause the "requirement" of an RF transmitter to be imported from the specification into claim 1, without regard to the non-RF scenario the specification also contemplates.

The defendants also argue that the '851 patent's display unit is circumscribed by language added to limitation (d) by Okor's 1977 amendment, specifying a display unit "adapted to be located remotely from" the manual control units sending it symbol position and control signals. Okor counters by noting that, in *Okor I*, I declined to construe the modem of limitation (f) as one that need facilitate communication between two remote users. In particular, the opinion reads: "While Okor has designed a system that allows two users to

compete remotely, he did not actually incorporate into his claims the limitation of a modem that enabled the communication of the data." *Okor I* at 18.

What Okor fails to account for, however, is the fact that limitation (f) makes no reference to remote capabilities, while limitation (d) expressly does. Limitation (d) precisely describes a display unit that is adapted to receive information from remote manual controls. That the claim neglects to specify *how* information from such sources may be conveyed does not negate clear language to the effect that the display unit must be capable of receiving it.

I therefore construe the '851 patent's display unit as one capable of receiving symbol position and control signals from manual controls located remotely. Okor does not contend that any of the self-contained arcade games he has accused features such capability. Accordingly, I will grant summary judgment of non-infringement of the '851 patent as to all of the accused arcade games on this alternative ground.

b. "changeable memory means"

In *Okor I*, I found there to be a genuine issue of material fact as to whether the use of an interchangeable game cartridge with a wire connection might be *equivalent* to the modem of limitation (f). *Okor I* at 19-21. Some of the defendant arcade game manufacturers now argue that the connection of a fixed, "read only" memory (which all of their accused games uncontestedly feature) to display circuitry simply cannot be viewed as likewise potentially equivalent, even in the hospitable context of summary judgment evaluation. Without necessarily endorsing that view, I note instead more pointed grounds for evaluating the fixed nature of an arcade game's memory source. In particular, limitation (e) of claim 1 contemplates "changeable memory means providing program instruction." Okor concedes that changing the memory of an arcade game would necessitate taking the device apart, but argues that, even with such difficulty, the memory remains technically interchangeable. I decline to adopt so broad a reading of his patent claim. It is impossible to read limitation (e) as being unaffected by the emphasis placed in the patent specification on the easy interchangeability of programs enabled by Okor's invention. Indeed, the very object of the invention is stated as one of providing "means [whereby] participating players may engage in any one of a variety of different games." '851 Patent, column 1, lines 41-46. The interchangeability contemplated by limitation (e) cannot be divorced from this practical meaning.FN22

FN22. At the hearing on the instant motions, Okor argued that interchangeability of games by participating players is constrained in the embodiment of his invention where the display unit is located at the cable TV head. While this may be true relative to when participating players have direct access to the display unit, I note that interchangeability of games at the cable TV head-which players presumably may request-remains quite simple and entails no structural reconfiguration of the display unit.

None of the accused games has been shown to feature the easy interchangeability contemplated by the '851 patent. This provides yet another alternative ground to award summary judgment of non-infringement as to them all.

D. Civil Action No. 00-11504: The '849 Patent

In *Okor III*, I awarded summary judgment of non-infringement of the '849 patent as to Sega, Nintendo, and Sony's accused home video game consoles on two alternate grounds: (i) on the basis of my construction of limitation (f) of claim 1 as requiring the capability of attachment to multiple display devices, as well as the

capability to project different images on those different display devices, *Okor III* at 21-23, and (ii) on the basis of my construction of limitation (g) as confined to the particular "stack" memory architecture therein described for the dot generator of limitation (d). *Id.* at 14-16. Additionally, I found Sega and Nintendo to merit summary judgment of non-infringement on yet a third ground, my construction of limitation (a) as requiring capability for storage of three-dimensional display data. *Id.* at 26-30.

The defendants to the present action have briefed all three of my claim constructions in *Okor III* as relevant to the arcade games now accused, and I will consider the current application of each construction in turn. As a preliminary matter, I note that in its affirmance of *Okor III*, the Federal Circuit specifically upheld my construction of limitation (f), and did not reach my other constructions. *Okor IV* at 1. Accordingly, I may treat only my construction of limitation (f) as having issue preclusive effect. *See* Restatement (Second) of Judgments s. 27 cmt. o (if appellate court affirms on one ground and passes on the other, then "the judgment is conclusive [only] as to the first determination").

1. Limitation (f)

In *Okor III*, I found none of the accused products to read upon my construction of limitation (f)- *i.e.* none to be capable of attachment to multiple display devices, as well as of projecting different images on those different display devices-insofar as (i) none except Sony's accused game and some early versions of Nintendo's accused games featured more than a single display output port, and (ii) the remaining games that did feature multiple display output ports were not configured as to permit the sort of selection decisions necessary for projecting differentiated images on multiple display devices. *Okor III* at 24-25. On appeal, Okor sought definition of "capability" at a higher level of abstraction, arguing that "the capability to display symbols on multiple display devices is inherent in any sprite-based device that uses priority." *Okor IV* at 2. The Federal Circuit declined to read "capability" so broadly, instead requiring some evidence-which Okor did not produce-that the accused games were actually configured as to permit them to make the necessary selection decisions (assuming multiple display devices to be available). *Id.* (citing *High Tech Med. Instrumentation, Inc. v. New Image Indus., Inc.*, 49 F.3d 1551, 1555 (Fed.Cir.1995) ("[A] device does not infringe simply because it is possible to alter it in a way that would satisfy all the limitations of a patent claim.")).

All that appears new or further developed in Okor's present argument is his contention that the use of multiple frame buffers-which can contain different images at any one time-might permit an arcade game to project differentiated images on multiple display devices if each frame buffer were connected to a different display device. As an initial matter, I note that this contention is inapplicable to those accused arcade games-listed in Okor's briefing materials under the heading of "Group C"-that Okor acknowledges do not feature multiple frame buffers (comprising all of the accused games of Capcom, Jaleco, Konami, and Sammy). More importantly, I find that Okor has again failed to provide evidence that a single accused game is actually configured-beyond its use of a sprite-based device that uses priority-in such manner as to permit the necessary selection decisions, either by means of multiple frame buffers connected to different display devices or otherwise. Indeed, he has even failed to provide evidence that a single accused game permits connection to multiple display devices in the first place.

As it happens, however, two of the defendants, Midway and Namco, admit that some of their accused games do permit connection to multiple display devices. Midway, for one, admits that Midway's "Cruis'n USA" and MGW's "T-Mek" and "Hard Drivin' Airborne" feature an output port that permits the game to be attached to an external display monitor. Midway nevertheless also presents uncontroverted evidence that

these games cannot thereby transmit differentiated image data. Namco, on the other hand, appears to acknowledge that at least two of its accused games, "Galaxian 3" and "Zolgear Game," may project differentiated images on multiple display devices.

Accordingly, I will grant summary judgment of non-infringement of the '849 patent on this ground-failure of their accused products to read upon limitation (f) of claim 1-to all of the defendants except for Namco.

2. Limitation (g)

In *Okor III*, I found that the accused products' bit-map display systems (whether utilizing a line or frame buffer approach) did not literally read upon the stack memory architecture described for claim 1's dot generator at limitation (g) (which I had construed as confined to the particular memory architecture disclosed). *Okor III* at 16-18. The defendants seek a similar finding here, where Okor acknowledges that the display systems of all of the accused arcade games operate by means of frame buffers.

In this regard, I note that while my construction of limitation (g) in *Okor III* was not addressed by the Federal Circuit in *Okor IV*, and thus does not have issue preclusive effect, there is nothing in the Federal Circuit's decision that casts a negative light upon it. Furthermore, Okor does not now challenge my construction, nor appear to suggest that a frame buffer display system ought to be read as literally reading upon the claim limitation. Accordingly, I adhere to my prior reasoning in noting that the arcade games accused here do not literally read upon limitation (g).

It remains for me to consider the argument that Okor does now make, namely that I ought to consider whether frame buffer display systems are *equivalent* to the dot generator of limitation (d), notwithstanding the particular memory architecture disclosed at limitation (g).

This was an argument that Okor expressly disclaimed in the prior litigation. I do not find it persuasive now. The gist of Okor's position is that the doctrine recently stated in *Festo*- *i.e.*, that a narrowing amendment made for a reason related to patentability forecloses any equivalents for the limitation in question-does not apply because the addition of limitation (g), the sole amendment to his originally rejected claim, was not made for a reason related to patentability. This flies directly in the face of Okor's own amendment letter of January 11, 1977, which stated that the addition of limitation (g) would help to "define the invention more clearly over the art." Okor's self-serving attempt to undermine that prosecution history now falters on two grounds. First, it is countered by the Federal Circuit's view that the public record of a patent's prosecution is the only indicia of whether a claim was narrowed for a reason "related to patentability ." *Pioneer Magnetics, Inc. v. Micro Linear Corporation*, 238 F.3d 1341, 1345 (Fed.Cir.2001) (citing *Festo*, 234 F.3d at 586). Second, it is not effective on its own terms because Okor admits that importing limitation (g) from a dependent claim into independent claim 1 FN23 "helped to make claim 1 a lot easier to understand."

FN23. This is the same factual circumstance as in *Festo* and subsequent Federal Circuit applications of its doctrine. *See, e.g.*, *Mycogen Plant Science, Inc. v. Monsanto Company*, 261 F.3d 1345, 1349-50 (Fed.Cir.2001).

Accordingly, I will grant summary judgment of non-infringement of the '849 patent on this ground to all of the defendants, including Namco.

3. Limitation (a)

In *Okor III*, I found Sega and Nintendo to merit summary judgment of non-infringement on the basis of my construction of limitation (a) as requiring capability for storage of three-dimensional display data. *Okor III* at 26-30. As with my prior construction of limitation (g), this construction of limitation (a) was not addressed by the Federal Circuit in *Okor IV*, and thus does not have issue preclusive effect. Again, however, the Federal Circuit's decision does not otherwise undermine my construction, and Okor has suggested no reason for me to rethink my view. Accordingly, I consider summary judgment of non-infringement of the '849 patent also to be available on this ground as to those accused arcade games that Okor acknowledges as incapable of storing three-dimensional display data (listed in Okor's briefing materials under the heading of "Group C," and comprising all of the accused games of Capcom, Jaleco, Konami, and Sammy).FN24

FN24. I note that Midway, MGW and Namco admit that certain of their timely accused arcade games can store three-dimensional display data. Sega, meanwhile, does not contend that its games cannot do the same.

III. CIVIL ACTION NO. 01-10610

In my April 23 Scheduling Order, I relieved Okor from serving any parties but Sega, Nintendo, and Sony in this action alleging infringement of the '851 patent, and will consider the case initially as against these three defendants alone (out of twelve overall) because my resolution of the case against them is potentially dispositive as to all. The three active defendants have jointly moved for dismissal, on grounds of *res judicata*, and injunctive relief. They also seek reimbursement of attorneys' fees and expenses.

A. Motion to Dismiss Standard

I may grant Sega, Nintendo, and Sony's joint motion only if, "accepting all well-pleaded facts as true and drawing all reasonable inferences in favor of the plaintiff, the complaint 'fails to state a claim upon which relief can be granted.'" *Clorax Company Puerto Rico v. Proctor & Gamble Commercial Company*, 228 F.3d 24, 30 (1st Cir.2000) (quoting Fed.R.Civ.P. 12(b)(6)). In other words, "the complaint is properly dismissed only when the allegations are such that the plaintiff can prove no set of facts to support [the] claim for relief." *Id.* (internal quotation omitted).

B. Claim Preclusion

In moving to dismiss on grounds of *res judicata*, Sega, Nintendo and Sony more specifically mean to assert the doctrine of claim preclusion, at least as applied to them. In the First Circuit, as elsewhere, claim preclusion attaches where there together exist:

(1) a final judgment on the merits in an earlier suit, (2) sufficient identity between the causes of action asserted in the earlier and later suits, and (3) sufficient identity between the parties in the two suits.

Massachusetts School of Law at Andover, Inc. v. American Bar Association, 142 F.3d 26, 37 (1st Cir.1998) (internal citation omitted). This circuit has adopted a "transactional" approach to the inquiry, seeking to uncover whether the "causes of action arise out of a common nucleus of operative facts." *Id.* at 38.

All three factors for claim preclusion are met with respect to Okor's new claims against Sega and Nintendo, sued on the basis of the very same home video game consoles I found not to infringe the '851 patent in *Okor*

I. In particular, I am not persuaded by Okor's attempt to distinguish his new claims against Sega and Nintendo as not alleging *direct* infringement, but rather inducement of infringement by others. In the first place, I do not find credible Okor's suggestion that my decision in *Okor I* has served to identify formerly unknown "Game Players" whom Okor may now sue for direct infringement of his patent. Okor fails to identify such "Game Players" with any degree of particularity, and indeed, does not name any such party in his complaint. Furthermore, even if Okor were now to present evidence of configurations of Sega and Nintendo consoles that infringe his patent, it is too late in the day to pin such infringement on either party. The doctrine of claim preclusion operates precisely to prevent the open-ended litigation to which Okor aspires. Okor had an full and fair opportunity to press the claim that Sega and Nintendo induced infringement of his patent in his original suit, and in fact, I effectively disposed of that issue in my prior opinion. Altogether, even if Okor were now to supply new evidence of infringement-something in point of fact he has not done-or posit a new theory of infringement, my prior grant of summary judgment of non-infringement of the '851 patent to Sega and Nintendo cannot be re-opened. *See* Massachusetts School of Law, 142 F.3d at 39; *Kale v. Combined Insurance Company of America*, 924 F.2d 1161, 1166 (1st Cir.1991) (litigant must assert all his various legal theories and factually related allegations the first time he brings suit) (internal citation omitted); *see also* *Mars Inc. v. Nippon Conlux Kabushiki-Kaisha*, 58 F.3d 616, 619-20 (Fed.Cir.1995). I will grant the joint motion to dismiss with respect to movants Sega and Nintendo on this ground.

If Okor had sued Sony again on the basis of its Playstation console, the above analysis would similarly apply. However, Okor has not done so, choosing instead to allege that Sony infringed his patent in its capacity as a software developer for a particular Nintendo console. Accordingly, as with the nine additional defendants Okor names in his present suit, the conditions for claim preclusion are not met.

C. Issue Preclusion

Okor's instant claims against Sony falter on grounds of issue preclusion instead (as would his claims against the nine additional defendants, were they to be considered at the present time). As earlier noted, my judgment in *Okor I* was premised on my determination that Okor had failed to provide evidence that any of Sega and Nintendo's accused home video game consoles had ever actually been configured in a potentially infringing manner, either with two light guns that combined the manual control and light pen of claim 1 of his patent, or otherwise. *Okor I* at 23-24. Notably, Okor remains unable to proffer such evidence. Even if he were able to do so, however, it again would be too late. Okor nowhere suggests that he was denied "a fair opportunity procedurally, substantively and evidentially to pursue his claim the first time," *Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation*, 402 U.S. 313, 333 (1971) (internal quotation omitted), and the record of the several proceedings is clear that no such opportunity has been denied him. Accordingly, I will grant the joint motion to dismiss with respect to movant Sony as well.

D. Sanctions

In addition to dismissal of Okor's claims against them, Sega, Nintendo, and Sony seek injunctive relief, specifically requesting me to enjoin Okor from filing, without first obtaining leave of the court, any further action for alleged infringement of the '851 and '849 patents by them and a host of affiliated parties (including the nine additional defendants named in Okor's suit).

Sega, Nintendo, and Sony also seek the award of reasonable attorneys' fees and expenses under 35 U.S.C. s. 285, which provides that such award may be granted the prevailing party in "exceptional" patent cases. The Federal Circuit has explained that "[a]mong the types of conduct which can form a basis for finding a case

exceptional are ... vexatious or unjustified litigation, and frivolous suit," where supported by "clear and convincing" evidence. *Hoffmann-La Roche, Inc. v. Invamed Inc.*, 213 F.3d 1359, 1365 (Fed.Cir.2000) (internal quotation omitted).

As grounds, the defendants note the general history of Okor's litigation of his patent claims against them, but more specifically emphasize the extensive efforts made prior to Okor's serving of his complaint to inform him of the doctrine of *res judicata*, both in the sense of claim and of issue preclusion, and of the potential consequences of his suit. Correspondence clearly expressing both points was sent on March 13, 2001, March 21, 2001, and March 29, 2001, respectively. In addition, I endeavored to caution Okor as to these issues at the joint Status Conference of April 23, 2001. There is ample basis to conclude that Okor either knew or deployed a "studied ignorance" as to the baselessness of his claims. *See Eltech Systems Corp. v. PPG Industries, Inc.*, 903 F.2d 805, 810 (Fed.Cir.1990).

Nevertheless, I decline at this point to take the extraordinary step of either injunction or awarding attorneys' fees and expenses under 35 U.S.C. s. 285. As this Memorandum makes plain, the relevant doctrines of *res judicata* require significant explanation even for legal professionals. Okor, as a *pro se* litigant, cannot be expected to have absorbed their impact before the issuance of this Memorandum. I will, therefore, leave the defendants to the recovery only of their previously recognized costs, *see generally* 28 U.S.C. s. 1920, which in themselves should impose a rather substantial burden on the plaintiff.

But this Memorandum will stand as full and fair warning to the plaintiff that any future litigation against these same defendants arising out of either the '851 or the '849 patents must be viewed as indisputably vexatious and frivolous, and subject not only to peremptory dismissal but also to the imposition of an injunctive decree and monetary awards against him.

IV. CONCLUSION

For the reasons set forth more fully above;

As to Civil Action No. 00-11503, alleging infringement of the '851 patent by ten arcade game manufacturers, I GRANT summary judgment of non-infringement to the eight defendants, duly served, who have so moved (Capcom, Jaleco, Konami, Midway, MGW, Namco, Sega, and Sammy) and direct dismissal of the case against Bandai and Taito for want of prosecution in undertaking service upon them. I DENY plaintiff Okor's cross-motion for summary judgment.

As to Civil Action No. 00-11504, alleging infringement of the '849 patent by the same ten arcade game manufacturers, I GRANT summary judgment of non-infringement to the eight defendants, duly served, who have so moved (Capcom, Jaleco, Konami, Midway, MGW, Namco, Sega, and Sammy), and direct dismissal of the case against Bandai and Taito for want of prosecution in undertaking service upon them. I DENY plaintiff Okor's cross-motion for summary judgment.

As to Civil Action No. 01-10610, alleging infringement of the '851 patent by repeat defendants Sega, Nintendo and Sony, and nine additional parties, I GRANT Sega, Nintendo and Sony's motion to dismiss. Because the disposition of the motion is necessarily applicable to the remaining defendants as well, I direct the clerk to dismiss the case against them as well. I decline to grant movants Sega, Nintendo and Sony injunctive relief, or to award them reasonable attorneys' fees and expenses.

D.Mass.,2002.
Okor v. Atari Games Corp.

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