IN THE UNITED STATES DISTRICT COURT

FOR THE WESTERN DISTRICT OF WISCONSIN

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RICOH COMPANY, LTD.,

OPINION AND ORDER

Plaintiff,

06-C-462-C

v.

QUANTA COMPUTER, INC., QUANTA STORAGE, INC., QUANTA COMPUTER USA, INC., NEW UNIVERSE TECHNOLOGY, INC. and NU TECHNOLOGY, INC.,

Defendants,

and

QUANTA STORAGE, INC.,

Third-Party Plaintiff,

v.

PHILIPS TAIWAN, LTD., BUSINESS LINE DATA, and PHILIPS OPTICAL STORAGE,

Third-Party Defendants.

- -

Defendants Quanta Computer, Inc., Quanta Storage, Inc., Quanta Computer USA, Inc. and NU Technology sell optical disc drives that read and record CDs and DVDs. In this civil action, plaintiff Ricoh Company, Ltd. contends that defendants are infringing four of its patents that disclose methods for recording discs such as CDs and DVDs. Plaintiff is a Japanese corporation. Defendants Quanta Storage and Quanta Computer, Inc. are Taiwanese corporations. Defendants Quanta Computer USA and NU Technology are California corporations.

After a rather tumultuous discovery process, defendants' motion for summary judgment is now ripe for review. The motion will be granted with respect to U.S. Patent Nos. 6,631,109 and 6,172,955 because claims 1 and 4 of the '109 patent are invalid for obviousness under 35 U.S.C. § 103 and because plaintiff has failed to adduce any evidence that the accused devices include the limitation of "starting a formatting process . . . as a background process" so as to infringe claims 8-12 of the '955 patent. Although I conclude that there are genuine issues of material fact with respect to the question whether the accused devices perform the patented methods of the asserted claims from U.S. Patent Nos. 6,661,755 and 5,063,552, I must grant defendants' motion for summary judgment with respect to those claims as well because plaintiff has failed to adduce evidence that defendants engaged in acts necessary to support a finding in its favor for any of the three theories of infringement under 35 U.S.C. § 271.

Because I am dismissing all of plaintiff's claims against defendants, this necessarily means that I must dismiss as moot defendants' claims against third-party defendants Philips Taiwan, Ltd., Philips Optical Storage and Business Line Data. Defendants are suing third party defendants for the purpose of indemnification only. If there is no infringement, there can be no damages, and therefore, no need for indemnification.

I begin with a note on the structure of the opinion. I will consider first whether the accused devices infringe the asserted claims and whether any of the claims are invalid. Next, I will consider whether defendants engaged in any conduct for which they may be held liable under 35 U.S.C. § 271. For the purpose of readability, I have structured the opinion by patent, with a separate statement of undisputed facts for each one. Further, to limit the size of an already lengthy opinion, I have not included facts that are not related to issues in dispute. For example, in many situations, the parties discussed only one or two elements in their arguments regarding infringement and invalidity. In those situations, I have construed the silence as a concession that the other elements are present and have limited discussion of the facts accordingly.

I. U.S. PATENT NO. 6,631,109

Invention: Using a particular pattern of laser pulses, or "write strategy," to prevent overheating during recording process

Accused Devices: SBW-081, SBW- 161, SBW-141, SBW-242, SBW-242C, SBW-243, SBW-245, SDW-041, SDW- 042, SDW-082, SDW-082K, SDW-085 and SDW-086

Asserted Claims: 1 and 4

A. The Claims[1]

Claim 1 of the '109 patent discloses:

An optical recording method which records a sequence of data blocks onto a recording layer of an optical recording medium by emitting light to the recording layer of the medium and changing a phase of a recording material of the recording layer, comprising the steps of:

applying a light source driving power to a light source to control emission of a light beam to the recording layer of the medium, the driving power including a sequence of mark and space portions, each mark portion having a pulse width that corresponds to a multiple of a period T of a write clock based on a write data modulation method;

setting a multi-pulse waveform of each mark portion of the driving power that includes a front-end portion, a multi-pulse portion and a tail-end portion, the front-end portion having a first pulse width t1 with a high-power write level Pw and starting from a middle-power erase level Pe, the multi-pulse portion including a sequence of write pulses each having a second pulse width t2 with the write level Pw and a third pulse width t3 with a low-power base level Pb, the multi-pulse portion having a given duty ratio z = t2/(t2 +t3), and the tail-end portion having a fourth pulse width t4 with the base level Pb and ending at the erase level Pe;

setting a linear velocity of rotation of the medium at a controlled speed;

and controlling the waveform when **the linear velocity of rotation of the medium**

[1] Elements relevant to this opinion are in bold.

is set in a high-speed range from 5 m/s to 28 m/s, such that the first pulse width t1 of the front-end portion ranges 0.1T to 1T and the fourth pulse width t4 of the tail-end portion ranges 0.2T to 1.3T.

Claim 4 discloses:

An optical recording method which records a sequence of data blocks onto a recording layer of a rewritable optical recording medium by emitting light to the recording layer of the medium and changing a phase of a recording material of the recording layer, comprising the steps of:

applying a light source driving power to a light source to control emission of a light beam to the recording layer of the medium, the driving power including a sequence of mark and space portions, each mark portion having a pulse width that corresponds to a multiple of a period T of a write clock based on a pulse width modulation method;

setting a multi-pulse waveform of each mark portion of the driving power that includes a front-end portion, a multi-pulse portion and a tail-end portion, the front-end portion having a first pulse width t1 with a high-power write level Pw and starting from a middle-power erase level Pe, the multi-pulse portion including a sequence of write pulses each having a second pulse width t2 with the write level Pw and a third pulse width t3 with a low-power base level Pb, the multi-pulse portion having a given duty ratio z = t2/(t2 +t3), and the tail-end portion having a fourth pulse width t4 with the base level Pb and ending at the erase level Pe;

setting a linear velocity of rotation of the medium at a controlled speed; and

controlling the waveform when **the linear velocity of rotation of the medium is set in a high-speed range from 5 m/s to 28 m/s**, such that the first pulse width t1 of the front-end portion ranges 0.1T to 1T and the fourth pulse width t4 of the tail-end portion ranges 0.2T to 1.3T.

B. Background

Rewritable CDs and DVDs store information along their tracks in a layer of "phase

change" material, usually a metal alloy. It is possible to change the structure of the "phase change" material from a relatively "crystalline" phase having a more ordered arrangement of atoms to a relatively "amorphous" phase having a less ordered arrangement of atoms, and back, with the appropriate application of heat from the laser source.

The phase transformation on the recordable optical disc results in differences in the light reflected from the layer, making it possible for the laser to distinguish (amorphous) marks from (crystalline) spaces written along the track. To produce an amorphous mark on the rewritable optical disc, a series of laser pulses alternating between a relatively high power and a relatively low power is applied, which causes the phase-change material to melt and then solidify quickly, before the atoms can settle into their more orderly crystalline state. To erase an amorphous mark on a rewritable optical disc and to write a crystalline space, the material is heated with a laser beam at a (usually constant) intermediate power, which heats the material in a different way that increases the mobility of the atoms to allow them to settle into their crystalline state.

C. Prior Art

The application for European Patent EP 0 898 272 was published on February 24, 1999. The application for European Patent EP 0 737 962 was published on October 16, 1996. The '272 patent and the '962 patent disclose an optical recording method that

records by emitting light and changing a phase of a recording material.

The '272 patent discusses setting the linear velocity of rotation at a nominal CD speed of 4X. A nominal CD speed of 4X corresponds to a linear velocity of 4.8 to 5.6 m/s. In the description of the preferred embodiments of the '272 patent, it is noted that "satisfactory signal properties cannot be obtained" at speeds greater than 5.0 m/s.

The '962 patent discusses setting the linear velocity of rotation in the range from 1.2 m/s to 5.6 m/s. None of the embodiments of the '962 patent use recording speeds within the range of the '109 patent.

The '109 patent was issued on October 7, 2003 and has a U.S. filing date of March 1, 2001.

OPINION

The focus of the parties' arguments regarding the '109 patent is whether claims 1 and 4 are invalid under the prior art. Under 35 U.S.C. § 102(b), a patent is anticipated "if the invention was patented or described in a printed publication in this or a foreign country . . . more than one year prior to the date of the application for patent in the United States." Under 35 U.S.C. § 103(a), a patent is invalid "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in

the art to which said subject matter pertains." The burden is on defendants to show invalidity by clear and convincing evidence. Monsanto Co. v. Scruggs, 459 F.3d 1328, 1336-37 (Fed. Cir. 2006).

Defendants identify two European patents that they believe render claims 1 and 4 invalid as obvious or anticipated: European Patent EP 0 898 272 (application published February 1999) or European Patent EP 0 737 962 (application published October 1996). (The parties agree that these patents are prior art because their applications were published more than one year prior to March 1, 2001). The only element of claims 1 and 4 that plaintiff says these prior art references do not have is "a linear velocity of 5 m/s to 28 m/s." Accordingly, I will consider that question only.

Defendants point out that the European patents disclosed speeds up to 5.6 m/s. With respect to anticipation, defendants cite Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 782 (Fed. Cir. 1985), in which the court held that "when, as by a recitation of ranges or otherwise, a claim covers several compositions, the claim is 'anticipated' if *one* of them is in the prior art." With respect to obviousness, defendants cite Ormco Corp. v. Align Technology, Inc., 463 F.3d 1299, 1311 (Fed. Cir. 2006), which held, "Where a claimed range overlaps with a range disclosed in the prior art, there is a presumption of obviousness."

Plaintiff has a number of objections to defendants' reliance on Titanium Metals and Ormco. First, plaintiff says that those cases have no relevance because the prior art

references do not actually teach any of the same speeds as claims 1 and 4 of the '109 patent. In support of this curious argument, plaintiff cites an untimely filed report of its expert, who says that neither of the European patents disclose recording speeds of 5 m/s or greater because the embodiments discussed in the European '962 patent all used speeds below 5 m/s and the specification of the European '272 patent states that when the recording speed "exceeds 5.0 m/s . . . satisfactory signals cannot be obtained." Further, plaintiff points out that the teachings of a prior reference are a question of fact and argues that its expert's opinion prevents the court from deciding this issue as a matter of law.

I disagree with plaintiff on two counts. First, conflicting expert opinions in a patent case do not automatically require a conclusion that the court must deny a motion for summary judgment. If that were the case, summary judgment motions would be a pointless exercise in patent cases; it is rare to see one that does not involve dueling expert opinions. The question on summary judgment is whether there are any "*genuine* issues of material fact," Fed. R. Civ. P. 56, or, in other words, whether a reasonable jury could find in favor of the nonmoving party. Long Island Savings Bank, FSB v. United States, 476 F.3d 917, 925 (Fed. Cir. 2007).

In this case, no reasonable jury could side with plaintiff's expert because his opinion is directly contrary to the claim language in the European patents. Claim 1 of the '272 patent discloses a recording speed "in a range of 2.4 to 5.6 m/s," and claim 9 of the '962

patent discloses a recording speed of "not less than 1.2 m/s and not more than 5.6 m/s." Although the embodiments discussed in the '962 patent do not use speeds greater than 5.0 m/s, as plaintiff well knows from its arguments related to infringement, a claim is not limited to its embodiments, even when all described embodiments include the same limitation. Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 906 (Fed. Cir. 2004). Further, plaintiff cites no authority for its proposition that an earlier patent counts as prior art only if it reports perfect results using the disclosed methods.

In any event, the European '272 patent does report success with results up to *and including* speeds of 5.0 m/s, which means that the '109 patent and the European '272 patent overlap even under plaintiff's view. Arguably, under Titanium, the '272 patent anticipates the '109 patent. Cf. Hewlett-Packard Co. v. Mustek Systems, Inc., 340 F.3d 1314, 1326 (Fed. Cir. 2003) (accused device infringes even if it only sometimes embodies the claim). At the least, the overlap raises a presumption of obviousness under Ormco, shifting the burden to plaintiff to show that the method of the '109 patent is not obvious; the overlap need not be substantial to trigger the presumption. In re Geisler, 116 F.3d 1465, 1469 (Fed. Cir. 1997) (acknowledging that claimed invention was rendered prima facie obvious by prior art reference when disclosed range (50-100 Angstroms) overlapped claimed range (100-600 Angstroms)); In re Woodruff, 919 F.2d 1575, 1578 (Fed. Cir. 1990) (concluding that claimed invention was rendered obvious by prior art reference whose disclosed range ("about

1-5%" carbon monoxide) abutted claimed range ("more than 5% to about 25%" carbon monoxide)).

Under Federal Circuit law, the presumption of obviousness can be rebutted if it can be shown that the prior art teaches away from the claimed range, or the claimed range produces new and unexpected results. Iron Grip Barbell Co. v. USA Sports, Inc., 392 F.3d 1317, 1322 (Fed. Cir. 2004). Although this exception to a finding of obviousness may no longer apply after KSR Internation Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741-42 (2007) (holding that Federal Circuit's standard for obviousness incorrectly required that prior art include specific teaching to solve particular problem at issue), even under the Federal Circuit cases, plaintiff has failed to overcome the presumption because it fails to explain how the prior art "teaches away" from its '109 patent or how the '109 patent provides "new and unexpected results." Rather, plaintiff simply makes conclusory assertions that they do.

Accordingly, I conclude that claims 1 and 4 of the '109 patent are obvious. This conclusion makes it unnecessary to decide whether some of the accused devices do not infringe because they do not have the pulse width required by the claims.

II. U.S. PATENT NO. 6,172,955

Invention: Allowing a disk to be recorded before formatting is completed by making the formatting a background process during recording

Asserted Claims: 8-12

Accused Devices: SDW-041, SDW- 042, SDBvT082, SDW-082K, SDW-085 and SDW-086

UNDISPUTED FACTS

A. The Claims

_____Claim 8 of the '955 patent discloses:

_____A formatting method for formatting a rewritable optical disc, data being recorded on said optical disc by using a fixed packet write method, said formatting method comprising the steps of:

starting a formatting process for said optical disc as a background process, the formatting process being performed so as to fill a recording area of said optical disc by packets having a fixed length;

enabling execution of at least one of a recording process and a reproducing process by interrupting the formatting process and resuming the formatting process after the at least one of the recording process and the reproducing process is ended;

and ending the formatting process after the recording area to be formatted has been filled by the packets having the fixed length.

Claim 9 discloses:

A formatting method for formatting a rewritable optical disc, data being recorded on said optical disc by using fixed packet write method, said formatting method comprising the steps of:

starting a formatting process for said optical disc as a background process, the formatting process being performed so as to fill a recording area of said optical disc

by packets having a fixed length;

enabling execution of another process while the formatted process is being performed;

and ending the formatting process after the recording area to be formatted has been filled by the packets having the fixed length, wherein the step of enabling comprises the step of notifying completion of the formatting process before the formatting process is completed.

Claim 10 discloses:

The formatting method as claimed in claim 9, further comprising the steps of:

interrupting the formatting process when a request for recording user data is made;

recording the user data on said optical disc;

and resuming the formatting process after the user data has been recorded.

Claim 11 discloses:

The formatting method as claimed in claim 10, wherein the step of resuming includes the step of excluding an area in which the user data has been recorded from among areas to be formatted when the packets having the fixed length are not yet recorded in the area in which the user data has been recorded.

Claim 12 discloses:

The formatting method as claimed in claim 9, further comprising the steps of:

interrupting the formatting process when a request for reproducing data recorded in a designated area is made;

reproducing the data in said designated area;

and resuming the formatting process after the data in said designated area has been reproduced.

B. Background

Data can be written to an optical disc in units called "packets." To help write user data in fixed sized packets, a rewritable CD or DVD may be formatted. Formatting consists of filling the recording area on the disc with packets (usually, packets containing zeroes) so that the system can give an address to each packet and quickly access the packet locations on the disc for later reading and writing operations. Formatting an optical disc can take 30 minutes to an hour.

C. The Accused Devices

Plaintiff tested the accused devices to determine whether they performed the methods disclosed in claims 8-12. During testing, plaintiff sent the format command to the drive at counter 420. (Although the parties do not explain what a "counter" is, presumably it is a timing device.) At counter 475 (17 seconds later), the drive showed as being busy and unable to accept read or write requests. The first time plaintiff saw that the drive was able to accept read or write commands was at counter 690, 1 minute and 29 seconds after sending the format command.

In another testing, plaintiff sent the format unit command to the drive at counter 27. At counter 33 (6 seconds later), the drive showed as being busy and unable to accept read

or write requests. Plaintiff determined the drive was able to accept read or write commands at counter 50, 21 seconds after the format command.

OPINION

The parties agree that a "background process" as that term is used in claims 8 -12 of plaintiff's '955 patent can be interrupted at *any* time to allow another, higher priority process to be performed. It is also undisputed that when formatting begins in the accused devices, there is a period of time when formatting cannot be interrupted. Thus, it should follow that the parties agree that the accused devices do not include the limitation of "starting a formatting process for said optical disc as a background process" required by independent claims 8 and 9 and dependent claims 10, 11 and 12.

Unfortunately, the parties do not agree on the last point. Instead, plaintiff makes a number of tortured arguments in an attempt to avoid the plain language of the patent. First, plaintiff makes the irrelevant argument that the '955 patent does not require the formatting to remain in the background at all times. Because the question is only whether formatting in the accused devices "start[s]" as a background process, this argument is a red herring.

Second, plaintiff maintains the puzzling position it took at the claim construction hearing that "starting a formatting process . . . as a background process" can mean that the formatting process does *not* start as a background process. According to plaintiff, the claim

means only that "one must start a background process to format a portion of the disc." But if this were the intended meaning, the inventor could have written, "starting a formatting process, which may become a background process at some point." Of course, that is not what the claim says. The claim clearly requires that the formatting process be started *as* a background process. Any argument to the contrary is, as plaintiff would say, "a strained verbal quibble." Plt.'s Br., dkt. #262, at 37.

"But wait!" plaintiff says, even if "starting" actually means starting, claims 8 and 9 use the word "comprising," which means that there could be other steps not recited in the claims. Amgen Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d 1313, 1345 (Fed. Cir. 2003). In particular, plaintiff says, there could be an undisclosed formatting process that begins *before* the step recited in the claim and the earlier formatting process might not start as a background process. Even if this is true, it does not show infringement. Plaintiff must still show that the accused products "star[t] a formatting process . . . as a background process." Because the only evidence in the record is that the formatting in the accused products *never* starts as a background process, this element is missing.

All of the asserted claims in the '955 patent include the limitation of "starting a formatting process . . . as a background process." Because plaintiff has failed to adduce any evidence that the accused devices include this limitation, I must grant defendants' motion for summary judgment with respect to the '955 patent. This conclusion makes it

unnecessary to decide whether the accused devices include a "notifying completion" limitation or "fixed packets" limitation or whether claim 8 was anticipated by the prior art.

III. U.S. PATENT NO. 6,661,755

Invention: Creates a "buffer" during recording process by pausing the recording process when data runs out; this prevents the disk from becoming unusable.

Disputed Claims: 1-3

Accused Devices: SBW-081, SBW- 161, SBMT241, SBW-242, SBW-242C, SBW-243, SBW-245, SDW-041, SDW-042, SDW-082, SDW-082K, SDW-085 and SDW-086

UNDISPUTED FACTS

A. The Claims

Claim 1 of the '755 patent discloses:

> A method of recording on an optical disc recording media, said method comprising the steps of:
>
> transferring stored input information to an encoder; transferring encoded information to a record circuit;
>
> causing an input buffer to contain less than a threshold amount of said input information;
>
> and when said input buffer contains less than the threshold amount of said input information, pausing said transferring of said encoded information, to stop said

record circuit at a first point on said optical disk recording media while maintaining said encoded information;

and wherein said record circuit **does not write any run-out blocks** while paused.

Claim 2 discloses:

A method of recording on an optical disc recording media, said method comprising the steps of:

transferring stored input information to an encoder; transferring encoded information to a record circuit;

causing an input buffer to contain less than a threshold amount of said input information;

when said input buffer contains less than the threshold amount of said input information, pausing said transferring of said encoded information, to stop said record circuit at a first point on said optical disk recording media while maintaining said encoded information;

causing said input buffer to contain at least a second threshold amount of information; and resuming said step of transferring said encoded information to said record circuit, to thereby restart said record circuit while **maintaining data succession** across said first point on said optical disc recording media;

wherein said record circuit **does not write any run-in blocks** during said resuming.

Claim 3 discloses:

3. The method of claim 2, wherein said record circuit **does not write any run-out blocks** during said pausing.

B. Background

An optical disc drive can sometimes write data to a disc faster than the data source can feed the data to the input memory, or buffer, of the drive. Without buffer under-run protection, when the buffer runs out of data to feed the writing circuit, erroneous or "nonsense" data is written to the disc.

C. The Accused Devices

Each of the accused devices includes a feature called buffer under-run protection, which is now “an industry requirement” for optical disc drives. Buffer under-run “events” are an ordinary and expected occurrence in an optical disc drive, particularly when a drive is attached to a host computer on which multiple applications are running simultaneously, thus placing high demands on the computer's central processing unit. The accused drives automatically use buffer under-run protection whenever the buffer in the optical disc drive gets low.

Plaintiff conducted tests on the accused products to determine whether they perform the claimed method. In testing the drives, plaintiff intentionally stopped sending data to the drives for one minute in order to activate the buffer under-run protection of the devices. Plaintiff detected no run-in or run-out blocks on the discs when reading the discs after the forced pause in transferring data. Run-in and run-out blocks are the blocks defined by the

Orange Book standard; they must remain on the disc so that they can be read later by any standard conforming drive. In testing the drives, plaintiff executed the "Synchronize cache" command before reading any blocks.

During the buffer under-run test, plaintiff observed that the user data delivered by the drive upon playback had maintained continuity of data within a tolerance of 2 clock bits compared with the user data sent to the drive for recording on the disc. From this, plaintiff inferred that the user data on the disc had therefore been written and synchronized within a tolerance of ±2 clock bits.

OPINION

A. Infringement: Run-out Blocks and Run-in Blocks (Claims 1-3 of '755 Patent)

Claims 1 and 3 of the '755 patent prohibit the writing of "run-out blocks" when recording is paused; claims 2 and 3 prohibit the writing of "run-in blocks" when recording is resumed. (Apart from plaintiff's proposed fact that "Run-in and run-out blocks are the blocks defined by the Orange Book standards," neither side proposes any facts defining these terms. However, because the parties' dispute surrounding the question of infringement does not hinge on the precise meaning of these terms, it is unnecessary to provide a construction in this opinion.)

Defendants' argument on this element is strained. It is undisputed that plaintiff has

shown in its testing of the accused products that it found no run-in blocks after the recording paused (with respect to claims 2 and 3) and no run-out blocks after recording resumed (with respect to claims 1 and 3). However, defendants say that this showing is not enough to survive summary judgment because plaintiff did not try to detect the blocks *immediately* after the pause or *immediately* after recording resumed. Instead, plaintiff first "executed the Synchronize cache command" before reading any blocks. Therefore, defendants say, it is possible that run-in and run-out blocks *were* written on to the disc, but then they were written over by something else and in a way that their presence could no longer be detected.

Defendants' argument sounds like a bad conspiracy theory. And, as with most conspiracy theories, defendants point to no evidence that supports it. In particular, defendants propose no facts explaining how the blocks could be overwritten, and, even if this were possible, whether it would be at all likely that the blocks *would* be overwritten in the time that it would take to "execut[e] the Synchronize cache command." Although defendants dispute plaintiff's proposed facts that run-in blocks and run-out blocks "must remain on the disc so that they can be subsequently read by any standard," the evidence they cite to support the dispute does not contradict plaintiff's proposed fact. At the very least, this question is genuinely disputed.

Defendants overstate plaintiff's burden on summary judgment. Plaintiff does not have to prove with 100% certainty that defendants' products infringe the '955 patent; it only

has to adduce enough evidence to permit a jury, drawing all reasonable inferences in plaintiff's favor, to find infringement. Plaintiff has satisfied that burden with respect to the absence of run-in blocks and run-out blocks in the accused devices.

Defendants' misunderstanding of summary judgment burdens is demonstrated again with respect to their alternative argument. They argue that because plaintiff induced a buffer under-run in its test by intentionally stopping the flow of data, it cannot prove infringement because an ordinary user would not intentionally induce a buffer under-run. In other words, defendants say that because plaintiff did not attempt to demonstrate infringement by running the accused products over and over again waiting for a buffer under-run to occur on its own, it is unreasonable to infer that a buffer under-run would *ever* occur in the accused products.

This argument is only slightly less ridiculous than defendants' conspiracy theory. The facts show that buffer under-run events are an "ordinary and expected occurrence." (Defendants did attempt to dispute this fact in their responses to plaintiff's proposed findings of fact, but they cited no evidence to contradict it and their assertion that plaintiff's cited evidence did not support the proposed fact was simply wrong.) Obviously, if defendants' drives never experienced a buffer under-run, there would be no point in having a feature designed to protect the recording process from such an event. Thus, it is at least reasonable to infer that buffer under-runs occur in defendants' products.

B. Maintaining data succession (Claims 2 and 3 of '755 Patent)

In construing the claims, I defined "maintaining data succession" as "maintaining continuity of data within a tolerance of 2 clock bits." Defendants have not come forward with any evidence of their own to show that the accused products do not meet this element. However, they say that plaintiff has failed to meet its burden to show that they do. In particular, defendants argue that plaintiff's evidence shows only that "the data could be read back from the disc," which is not enough to show a specific tolerance level of 2 clock bits.

Defendants' argument is contradicted by plaintiff's expert, who testified that during testing, continuity of data in the accused products *was* maintained within a tolerance of ±2 clock bits. Thus, plaintiff has adduced evidence that addresses the limitation as defined by the court. Although defendants dispute this testimony, they neither provide their own version of the facts nor provide any reason why the expert's own observations are insufficient to establish the tolerance level.

Because defendants offer no other reason why the accused products do not infringe (and they do not advance any arguments regarding invalidity of the '755 patent), I conclude that a genuine issue remains whether the accused devices infringe the '755 patent.

IV. U.S PATENT NO. 5,063,552

Invention: Combines positive attributes of two different kinds of optical disc recording and

reproduction methods to enhance the efficiency and economy of the process. In particular, the invention uses “annular zones” on the disk to determine the reproduction speed and the rotation speed of the disc.

Claims: 1 and 8

Accused Devices: SBW-081, SBW- 161, SBVJ241, SBW-242, SBW-242C, SBW-243, SBW-245, SDW-041, SDW-042, SDW-082, SDW-082K, SDW-085 and SDW-086

UNDISPUTED FACTS

A. The Claims

Claim 1 of the ‘552 patent discloses:

> A method for controlling an information recording and/or reproduction speed "f" and a rotation speed "n" of an optical disk used in an information recording and/or reproduction device, said optical disk having a plurality of tracks in the form of concentric circles or a spiral, said information recording and/or reproduction device being adapted to access said tracks by means of a light beam while rotating said optical disk, thereby to optically record information on or reproduce information from said tracks, said method comprising the steps of:
>
> dividing said tracks into a plurality of concentric annular blocks which are different in radius from each other;
>
> changing said information recording and/or reproduction speed "f" in accordance with the radius of a track to be accessed in such a manner that said recording and/or reproduction speed "f" is constant within a block but different as between said blocks depending on the block radii;
>
> and changing said rotation speed "n" of said optical disk in such a manner that f/(n-r)

is constant, where "r" is the radius of said track to be accessed.

Claim 8 discloses:

A method according to claim 1, wherein said tracks are substantially concentrically arranged on said disk in the form of a continuous spiral.

OPINION

Again, defendants have not pointed to any evidence showing that their products do not infringe plaintiff's patents. Instead, they have argued only that plaintiff has failed to meet its burden on summary judgment. Although defendants are entitled to put plaintiff to its proof, Celotex Corp. v. Catrett, 477 U.S. 317 (1986), they must first "infor[m] the district court of the basis for [their] motion, and identif[y] those portions of 'the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any,' which [they] believ[e] demonstrate the absence of a genuine issue of *material* fact." Id. at 323 (emphasis added).

With respect to the '552 patent, defendants have not met their initial burden because they have failed to identify any material facts that plaintiff failed to prove. In the brief supporting their motion, defendants do not point to any elements of claims 1 and 8 that their products do not meet. Instead, defendants say generally that their products can

operate in "other, different modes" besides "ZCLV."

Defendants' argument on the '552 patent is a non sequitur. Nowhere do the claims include a limitation for the "ZCLV mode." Defendants recognize this in the beginning of their reply brief, Dkt. #274, at 2 ("ZCLV" cannot "replace the actual claims of the paten[t]"), but they make the argument anyway. Because defendants failed to "poin[t] out" the absence of a genuine issue of any material fact, Celotex, 417 U.S. at 325, plaintiff had no obligation to come forward with evidence of its own. Sublett v. John Wiley & Sons, Inc., 463 F.3d 731, 736 (7th Cir. 2006). Accordingly, I conclude that defendants have failed to show the absence of a genuine dispute with respect to whether the accused devices infringe claims 1 and 8 of the '552 patent.

Although it is genuinely disputed whether the accused devices infringe the '755 patent and the '552 patent, the question remains whether plaintiff has shown that defendants have engaged in conduct that violates 35 U.S.C. § 271. I consider that question below

V. THEORIES OF INFRINGEMENT

UNDISPUTED FACTS

The accused optical drive model numbers SBW-081, SBW-161, SBW-241, SBW242, SBW-242C, SBW-243, SBW-245, SDW-041, SDW-042, SDW-082, SDW-082K, SDW-085 and SDW-086 are manufactured by defendant Quanta Storage. At least some

of the other defendants import these drives into the United States.

Quanta Storage and Quanta Computer do not sell optical drives to individual consumers, but only to corporate customers. More than one million of the accused devices have been sold.

Defendant NU Technology tests drives when "a new model come[s] in," which is an average of "10 drives" a year. Quanta's customers, such as NU Technology, Inc., Hewlett-Packard, Dell and Gateway, test at least some of the accused Quanta drives by, among other things, using them to write data to rewritable optical discs in the United States. More specifically, Dell tests drives to confirm that "the write strategy works." Hewlett Packard uses "ZCLV" in the course of its tests if the drive supports that feature.

Defendant Quanta Storage provides specification sheets for its drives to its corporate customers. These sheets include the words "buffer under-run protection." In addition, the specifications identify the writing speeds at which "ZCLV" is used.

A set of software, usually called firmware, resides on the computer chips in Quanta Storage's disc drives. It is is created by the company that makes the computer chips for the drives. For drives that include a buffer under-run feature, it "makes sense" to have "some block of code that is dedicated to that buffer under-run functionality" and "has no other purpose." For drives that include the "ZCLV" feature, the drive would "have at least some firmware dedicated to that functionality . . . that has no other purpose." Defendant Quanta

Storage performs "firmware fine-tuning" to insure that “ZCLV” works with the drive.

Among the presentation materials given to Dell is a page including a flowchart of an algorithm for buffer under-run protection. At the top of the page, both “Philips” and “Quanta Storage” are listed.

Defendant Quanta Storage allows its website visitors to download drivers for some of its optical disc drives. On a page called “Before You Download” are suggestions for those who have "problem[s] for reading/writing data,” including installing the latest burning software and using "qualified CD-R/CD-R/W discs.” In addition, the website contains a product description of the SDW-086 that includes writing speeds up to 24X.

In a letter dated October 14, 2005, plaintiff sought to “resume settlement discussions” with defendant Quanta Storage regarding the ‘755 patent and “patents previously discussed or otherwise notified to your company.”

All optical drives made by defendant Quanta Storage are capable of reading optical discs. Reading of the disc and writing to the disc cannot be performed simultaneously.

OPINION

The remaining questions are which theories of infringement plaintiff has adequately proven against which defendants with respect to which accused products. Unfortunately for plaintiff, the answer to all of these questions is “none.”

A. Infringement under § 271(a)

Under 35 U.S.C. § 271(a), infringement occurs whenever a party "makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention." The conduct described in § 271(a) is often called "direct infringement."

It is undisputed that defendant Nu Technology "uses" drives in the context of testing them in the United States. However, the problem for plaintiff is that the evidence it cites shows only that defendant Nu tests *some* of its products, not all of them. Plaintiff has failed to adduce any specific evidence that Nu tested any of the products accused of infringing the '755 and '552 patents or that it tested them in a way that would constitute infringement. Because plaintiff has the burden to prove this, the absence of evidence on this point requires that I grant defendants' motion for summary judgment with respect to defendant Nu on a theory of infringement under § 271(a).

Plaintiff includes arguments in the "direct infringement" section of its brief regarding defendants' sales and offers to sell the accused devices. Because the claims asserted in the '552 patent and the '755 patent disclose *methods* for writing and recording rather an actual device, to prove direct infringement, it is not enough for plaintiff to show a sale or offer to sell of an accused device. NTP, Inc. v. Research In Motion, Ltd., 418 F.3d 1282, 1321 (Fed. Cir. 2005). In Joy Technologies, Inc. v. Flakt, Inc., 6 F.3d 770, 775 (Fed. Cir. 1993),

the court held, "A method claim is directly infringed only by one practicing the patented method," suggesting that "use" was the only way a method patent could be infringed under § 271(a). Although in NTP, 418 F.3d 1282, the court stated that it was unnecessary to decide that "method claims may not be infringed under the 'sells' and 'offers to sell' prongs of section 271(a)," id. at 1319, it acknowledged that "Congress has consistently expressed the view that it understands infringement of method claims under section 271(a) to be limited to use," id. at 1321. Because plaintiff does not cite any authority or offer any argument why anything other than defendants' use of the accused devices incorporating the method should constitute infringement under § 271(a), I will grant defendants' motion for summary judgment with respect to plaintiff's claims for infringement under that provision.

B. Infringement under § 271(c)

A defendant may be liable for indirect, or "contributory," infringement under 35 U.S.C. § 271(c) if it "offers to sell or sells within the United States or imports into the United States . . . a component of a[n] . . . apparatus for use in practicing a patented process." There is an important limitation on this theory of infringement that plaintiff does not acknowledge: no infringement occurs if the accused device is "suitable for substantial noninfringing use." 35 U.S.C. § 271(c). Thus, "[t]he mere sale of a product capable of substantial non-infringing uses does not constitute indirect infringement of a

patent." Dynacore Holdings Corp. v. U.S. Philips Corp., 363 F.3d 1263, 1275 (Fed. Cir. 2004).

Plaintiff says that this limitation applies only to products that are not "especially made or especially adapted" for an infringing use, but plaintiff's reading of the statute is plainly wrong. Section 271(c) is not violated unless the accused device is "especially made" for infringement *and* "not . . suitable for substantial noninfringing use."

All of the accused devices are capable of reading discs as well as recording to them. Plaintiff does not deny that reading the discs is a noninfringing use or that the use of drives to read discs is substantial. In any event, common sense requires a conclusion that reading (that is, playing the disc) is a substantial use.

Alternatively, plaintiff relies on the commonly cited maxim that "an accused product that sometimes, but not always, embodies a claimed method nonetheless infringes." Bell Communications Research, Inc. v. Vitalink Communications Corp., 55 F.3d 615, 623 (Fed. Cir. 1995). Although at first look Bell might seem to conflict with the rule in Dynacore, the inconsistency is more apparent than real. The two cases address completely different issues. Bell addresses the question whether an accused *product* infringes. Dynacore addresses whether a particular *defendant* may be held liable under a particular theory of infringement. Thus, Bell has no application in this context.

Defendants' motion for summary judgment must be granted with respect to plaintiff's

claims under §271(c).

C. Infringement under §271(b)

Plaintiff puts most of its eggs in the § 271(b) basket, which prohibits anyone from "actively induc[ing] infringement of a patent." A plaintiff seeking to recover under this provision must prove two things: (1) direct infringement by a third party; and (2) "a certain level of intent on the part of the alleged inducer that the patent be infringed." Insituform Technologies, Inc. v. Cat Contracting, Inc., 385 F.3d 1360, 1377-78 (Fed. Cir. 2004). Plaintiff asserts its claims under this theory against defendant Quanta Storage only.

With respect to acts of direct infringement, plaintiff points to use of the accused devices by Hewlett-Packard, Dell and Gateway, who test the drives before selling them, and to the at least 1 million accused drives that have been sold to consumers. Defendants say that plaintiff's evidence is overly speculative because it does not point to specific acts of infringement. Plaintiff says there is sufficient circumstantial evidence from which to infer those acts of infringement. On this point, I think defendants are again requiring the plaintiff to prove too much, but I need not resolve this debate. Plaintiff has failed to meet its burden regarding intent.

As one can see from the quotation from Insituform, the standard for intent leaves something to be desired in terms of clarity: "a certain level of intent" is not exactly self-

defining. The central question appears to be whether the plaintiff must prove only that the defendant knew of the *acts* that cause infringement or whether the plaintiff must also prove that the defendant knew or should have come to the legal conclusion that its acts would cause infringement. Insituform, 385 F.3d at 1377-78. The parties do not discuss this lack of clarity in the law and I need not resolve it in this case because plaintiff has failed to meet either standard.

The Court of Appeals for the Federal Circuit has held that intent to induce infringement may be inferred only when the defendant knowingly took "active steps" to bring about the infringing acts. Tegal Corp. v. Tokyo Electron Co., 248 F.3d 1376, 1379 (Fed. Cir. 2001) ("'Actively inducing,' like 'facilitating,' requires an affirmative act of some kind."). Plaintiff points to a number of actions by defendant Quanta Storage that plaintiff believes constitutes "active inducement." I will consider each in turn.

Plaintiff proposes as a fact that defendant Quanta Storage provides "instructions" to its customers on performing the methods of the asserted claims in plaintiff's '755 and '552 patents. Plaintiff is correct that the court of appeals has held on a number of occasions that instructing customers how to perform a patented method may qualify as active inducement under § 271(b). Metabolite Laboratories, Inc. v. Laboratory Corp. of America Holdings, 370 F.3d 1354, 1365 (Fed. Cir. 2004); Moleculon Research Corp. v. CBS, Inc., 793 F.2d 1261, 1272 (Fed. Cir. 1986). See also Golden Blount, Inc. v. Robert H. Peterson Co., 438

F.3d 1354 (Fed Cir. 2006); Minnesota Mining & Manufacturing Co. v. Chemque, Inc., 303 F.3d 1294 (Fed. Cir. 2002). But plaintiff has grossly mischaracterized the evidence it cites: the alleged instructions are actually specification sheets that do not instruct the customer to perform a particular method or explain how to do anything. They simply identify the writing speeds at which "ZCLV" may be used and include the words "buffer under-run protection." To say that this information "induced" customers to perform the patented methods would rob the term of any meaning. Plaintiff cites no authority that supports its expansive interpretation.

Further, as I explained in the context of discussing infringement of the '552 patent, the claims of the asserted patents are not synonymous with "ZCLV." That term does not appear in the claims at all and plaintiff has not adduced any evidence to suggest its patents cover *all* recording that uses "ZCLV."

The other acts to which plaintiff points have their own deficiencies. The "firmware" in the accused drives is not designed by defendants. Although defendant Quanta "fine tunes" the firmware with respect to "ZCLV," plaintiff adduces no evidence that customers are informed of this, so it is not clear how this could encourage the customer to do anything.

With respect to the presentation materials given to Dell, which include an algorithm for buffer under-run protection, plaintiff has not even established whether any of the defendants was responsible for it. Even if they were, the presentation is touting an *algorithm*,

which the asserted claims do not cover.

The website instructions are even less specific. They do not even mention generally one of the patented methods.

Finally, plaintiff places great emphasis on the simple fact that defendant Quanta Storage "designs and sells" the accused devices. But this is simply a repackaging of its argument under §271(a) and (c) and one that has been flatly rejected by the court of appeals: "[S]ale of a lawful product by lawful means, with the knowledge that an unaffiliated, third party may infringe, cannot, in and of itself, constitute inducement of infringement." Dynacore, 363 F.3d at 1276 n.6. Defendant Quanta Storage may have known that its customers would perform the patented methods, but plaintiff adduces no evidence that Quanta encouraged infringement by its customers. Accordingly, I must grant defendants' motion for summary judgment with respect to plaintiff's claims under § 271(b).

ORDER

IT IS ORDERED that

1. The motion for summary judgment filed by defendants Quanta Computer, Inc., Quanta Storage, Inc., Quanta Computer USA, Inc. and NU Technology, Inc. is GRANTED with respect to plaintiff's claims that

a. defendants infringe claims 1 and 4 of U.S. Patent No. 6,631,109, on the ground

that those claims are obvious and therefore invalid;

b. defendants infringe claims 8-12 of U.S. Patent No. 6,172,955, on the ground that the accused devices do not include the limitation "starting a formatting process . . . as a background process."

c. defendants infringe claims 1-3 of U.S. Patent No. 6,661,755, on the ground that none of the defendants has engaged in acts that violate 35 U.S.C. § 271;

d. defendants infringe claims 1 and 8 of U.S. Patent No. 5,063,552, on the ground that none of the defendants has engaged in acts that violate 35 U.S.C. § 271.

2. On the court's own motion, defendants' claims against third-party defendants Philips Taiwan, Ltd., Business Line Data and Philips Optical Storage are DISMISSED as moot.

3. The clerk of court is directed to enter judgment in favor of defendants and third party defendants and close this case.

Entered this 21st day of August, 2007.

BY THE COURT:

/s/

BARBARA B. CRABB
District Judge