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Paper 36
Entered: January 28, 2015

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SILICON MOTION TECHNOLOGY CORP.,
Petitioner,

v.

PHISON ELECTRONICS CORP.,
Patent Owner.

Case IPR2013-00473
Patent 8,176,267 B2

Before KEVIN F. TURNER, JONI Y. CHANG, and MATTHEW R. CLEMENTS, *Administrative Patent Judges.*

TURNER, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
Inter Partes Review
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

Silicon Motion Technology Corp. ("Silicon Motion") filed a Petition ("Pet.," Paper 1) requesting *inter partes* review of claims 1–25 of U.S. Patent No. 8,176,267 B2 ("the '267 Patent"). Patent Owner Phison Electronics Corp. ("Phison") filed a Preliminary Response thereto (Paper 6). On January 28, 2014, we instituted an *inter partes* review of claims 1, 3–7, 9–11, 13–17, 21, 22, 24, and 25 on a single ground of unpatentability alleged in the Petition. Paper 7 ("Dec.").

After institution of trial, Phison filed a Patent Owner Response ("PO Resp.," Paper 13) and Silicon Motion filed a Reply thereto ("Reply," Paper 18). An oral argument was held on September 17, 2014. The transcript of the oral hearing has been entered into the record. Paper 35.

Silicon Motion filed a Motion to Exclude (Paper 25, "Pet. Mot. to Exclude") certain evidence submitted by Phison. Phison filed an Opposition (Paper 29) and Silicon Motion filed a Reply (Paper 33). Phison filed a Motion to Exclude (Paper 23, "PO Mot. to Exclude") the Declaration of Dr. Daniel Foty submitted by Silicon Motion. Silicon Motion filed an Opposition (Paper 31) and Phison filed a Reply (Paper 32). Phison also filed a Motion for Observation (Paper 22, "Obs.") on certain cross-examination testimony of Silicon Motion's Declarant, Dr. Foty, and Silicon Motion filed a Response (Paper 30, "Obs. Resp.").

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

Silicon Motion has shown by a preponderance of the evidence that all claims for which trial is instituted, claims 1, 3–7, 9–11, 13–17, 21, 22, 24, and 25 of the ’267 Patent, are unpatentable.

A. Related Matters

Silicon Motion indicates that a complaint alleging infringement of the ’267 Patent was filed November 15, 2012. Pet. 2. *See Phison Electronics Corp. v. PNY Technologies, Inc*., Civil Action No. 1:12-cv-01478-GMS (D. Del.). PNY Technologies, Inc. is acknowledged as a real party-in-interest in the instant proceeding. *Id*. Another patent, U.S. Patent No. 7,518,879 B2, also assigned to Phison, is also the subject of that litigation, and also the subject of an *inter partes* review, IPR2013-00472, with PNY Technologies, Inc. as its petitioner. *Id.* at 2-3.

B. The ’267 Patent (Ex. 1001)

The subject matter of the ’267 Patent relates to methods of accessing data in a flash memory storage device. Ex. 1001, Abs. The processes prevent a host from reading garbled codes when the system uses a data perturbation module. *Id*. at 1:20–24, 2:7–10. A data perturbation module encodes the data before they are transmitted to the flash memory and decodes the data after they are read from the flash memory to provide security of the data to be protected. *Id*. at 1:47–54.

When the blocks of memory within the flash memory device are initialized, it is not done through a write command, i.e., the data are not encoded by the data perturbation module, such that when data are read from the new blocks, through the data perturbation module, unrecognizable garbled code is produced. *Id*. at 1:55–67. The specification of the '267 Patent provides that when a block to be read is a new block, it replaces the values that would otherwise be read from the requested memory location with predetermined data. *Id*. at 11:59–67.

C. Illustrative Claim

The '267 Patent includes claims 1–25, of which a trial was instituted on claims 1, 3–7, 9–11, 13–17, 21, 22, 24, and 25. Of those, claims 1, 11, and 22 are independent claims. Independent claim 1 is reproduced below:

> 1. A data accessing method, suitable for a flash memory storage device having a data perturbation module, wherein a flash memory of the flash memory storage device has a plurality of physical blocks, and the physical blocks are grouped into at least a data area and a spare area, the data accessing method comprising:
>
> receiving a read command from a host, and obtaining a logical block to be read and a page to be read from the read command;
>
> determining whether a physical block in the data area corresponding to the logical block to be read is a new block;
>
> transmitting a predetermined data to the host when the physical block corresponding to the logical block to be read is the new block; and

> decoding data read from the physical block corresponding to the logical block to be read by the data perturbation and transmitting the decoded data to the host when the physical block corresponding to the logical block to be read is not the new block.

D. Prior Art Relied Upon

The following prior art references were relied upon in the instituted ground of unpatentability:

Bennett	US 2007/0113030	May 17, 2007	Ex. 1003
Sharon	US 2008/0151618	June 26, 2008	Ex. 1002

E. Ground of Unpatentability Instituted for Trial

The following table summarizes the challenge to patentability that was instituted for *inter partes* review:

References	**Basis**	**Claims challenged**
Sharon and Bennett	§ 103	1, 3–7, 9–11, 13–17, 21, 22, 24, and 25

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b). Claim terms also are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech, Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Predetermined Data

The claim term "predetermined data" is present in all three independent claims. We determined, in the Decision to Institute, that "predetermined data" is different than "decoded data," also used in the claims, and that "predetermined data" would have been understood as "replacement data." Dec. 6.

Claim 3, for example, recites "recording an indicator for each of the physical blocks to indicate that the physical block is the new block during a card activation process performed to the flash memory storage device," with dependent claims 13 and 24 reciting similar limitations. Given such explicit limitations provided in the dependent claims, we concluded that the broadest reasonable construction consistent with the Specification would include that the predetermined data necessarily are "stored before user operation." *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314–15 (Fed. Cir. 2005) ("[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim."). Therefore, we construed "predetermined data" to mean "replacement data," and applied that construction in determining the persuasiveness of the ground of unpatentability discussed below.

Phison accepted this construction for "predetermined data." PO Resp. 15. Silicon Motion requested reconsideration of this claim construction (Paper 10, 3), but we were not persuaded of error in the adopted claim construction. Paper 14, 3.

New Block

In addition, although not contested initially by the parties, we also construed the claim term "new block." Dec. 8. The Specification of the '267 Patent provides that "physical blocks (i.e., new blocks) . . . are just initialized (i.e., data stored therein is 0xFF)." Ex. 1001, 8:17–19. Thus, we construed "new blocks" as physical blocks that have been initialized with data as 0xFF. Dec. 8. We note that Phison disputes this construction, but we continue to adopt it for this proceeding, although we do not determine that the construction is dispositive to the conclusion reached herein. *See* PO Resp. 19, n.2.

B. Principles of Law

To prevail in its challenges to the patentability of the claims, Silicon Motion must prove unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). A claim is unpatentable under 35 U.S.C. § 103(a) 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. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). To establish obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *See CFMT, Inc. v. Yieldup Int'l Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003); *In re Royka*, 490 F.2d 981, 985 (CCPA 1974).

A patent claim composed of several elements, however, is not proved

obvious merely by demonstrating that each of its elements was known, independently, in the prior art. *KSR Int'l Co.*, 550 U.S. at 419. In that regard, for an obviousness analysis it is important to identify a reason that would have prompted one of skill in the art to combine prior art elements in the way the claimed invention does. *Id*. However, a precise teaching directed to the specific subject matter of a challenged claim is not necessary to establish obviousness. *Id*. Rather, obviousness must be gauged in view of common sense and the creativity of an ordinarily skilled artisan. *Id*. Moreover, obviousness can be established when the prior art itself would have suggested the claimed subject matter to a person of ordinary skill in the art. *In re Rinehart*, 531 F.2d 1048, 1051 (CCPA 1976).

We analyze the instituted grounds of unpatentability in accordance with the above-stated principles.

C. Claims 1, 3–7, 9–11, 13–17, 21, 22, 24, and 25 – Alleged Obviousness over Sharon and Bennett

Silicon Motion asserts that claims 1–7 and 9–25 of the '267 Patent are unpatentable over Sharon and Bennett under 35 U.S.C. § 103, of which trial was instituted against claims 1, 3–7, 9–11, 13–17, 21, 22, 24, and 25[1]. Dec. 18.

Sharon is directed to a technique for reducing high-block or page-error rates by transforming the user data bits into a pseudo-random bit

[1] We found Silicon Motion to be unpersuasive with respect to claims 2, 12, 18–20 and 23 being obvious over Sharon and Bennett. Dec. 14–15.

sequence that is programmed into the flash memory. Ex. 1002 ¶ 62. Sharon discloses a flash memory device, *id*. ¶ 4, having flash controller 44, which executes flash management software 48 that allows for randomization and derandomization. *Id*. ¶ 27. Sharon also incorporates by reference the disclosure of U.S. Patent No. 5,404,485 to Ban that discusses the use of addressable logical blocks that are written to, and erased in, a flash memory device. *Id*. ¶ 73. Also, in particular, Sharon provides:

> It should be noted that the above method of applying a transformation to the data bits assumes that the flash memory is being programmed. When a flash page is erased all of the cells of the page are set to the left-most state or voltage level (as illustrated in FIGS. 1A and 1B) and all the cells are assumed to contain the fixed all-1's data pattern. This might cause a confusion with a page that was actually programmed to the all-1's bit sequence, but that, according to the present invention, represents some other data bit sequence. However, this can be handled by the application using the flash memory device *being able to distinguish a page that was not written yet from a page that was written*. This is easy to do and is well known in the prior art of flash management systems, for example by allocating one or more flag cells, in the management portion of a page, that are always written as part of the page programming operation, and thus if found to be in the leftmost state, indicate an unwritten page. So a page found to be unwritten is interpreted according to the standard prior art logic, while a page found to be written is interpreted according to the methods of the present invention.

Ex. 1002 ¶ 78 (emphasis added).

Per our discussion in the Decision to Institute, we were not persuaded that Sharon discloses the appropriate logic to send predetermined data in

place of read data for new blocks. Dec. 10. In the context of this ground, Silicon Motion also cites to Bennett for this particular claim limitation. *See, e.g.*, Pet. 29–31.

Bennett is directed to methods of managing erase operations. Ex. 1003, Abs. Figures 3A and 3B of Bennett show the physical and logical grouping of memory cells. Bennett details that some systems utilize a flag on a read operation from an erased block. *Id*. ¶ 153. Such systems "return an 'Erased Status' (e.g., in the MS-PRO Status byte the 'ES' bit) and/or erased data in response to a read operation from an Erased block." *Id*. ¶ 155; *see also id*. ¶ 161. We are persuaded that this process is equivalent to transmitting predetermined data to the host, where the status indicator would be sent in place of data in the block.

Silicon Motion argues that Sharon and Bennett are both directed to methodologies in flash memory systems, Pet. 28, and argues that the standard prior art logic described in Sharon, Ex. 1002 ¶ 78, would have been understood to include Bennett's process of allocating one or more flag cells to indicate the erased states of sectors. Pet. 29–30. We are persuaded that one of ordinary skill in the art would have looked to Bennett in determining the logic applied in Sharon when a determination is made that a block is unwritten. We are persuaded further that the method step of "transmitting a predetermined data to the host when the physical block corresponding to the logical block to be read is the new block," per claim 1 and equivalent elements in claims 11 and 22, would have been obvious in view of the teachings of Sharon and Bennett.

With respect to claims 3–7, 9, 10, 13–17, 21, 24 and 25, Silicon Motion argues that Sharon distinguishes between pages that have been written to and pages that were not written to, and that Bennett discloses the use of an erased flag as an indicator. Pet. 35. Silicon Motion also points to Bennett's discussion of reformatting of memory to reformat as new. *Id.* We are persuaded that performing such a process upon activation of the device would have been obvious, as would providing the indicators in a spare or redundant area during such a process. In addition, Bennett describes the use of a Group Address Table (GAT) to keep track of the mapping between logical groups of sectors and their corresponding megablocks, Ex. 1003 ¶ 61, where a flag may be set therein as "logically" erased. *Id.* ¶ 161.

Phison presents several arguments as to why Sharon and Bennett fail to meet the requirements of the claims and how Silicon Motion has failed to provide an adequate reason to modify the references to reach the claimed invention. PO Resp. 15–34. Silicon Motion responds to these arguments. Reply 1–15. We address each argument in turn below.

Phison begins by arguing that the ES bit of Bennett is not "replacement data" as recited in claim 1. PO Resp. 15. According to Phison, the recited "replacement data" must replace the decoded data that would have been sent to the host, such that "the host thinks that it received the data that it requested." PO Resp. 16. Phison continues that "[r]eplacement data must be able to take the place of the requested data," with the host having an expectation that it will receive a page and/or sector of data. PO Resp. 17–18. Silicon Motion counters that the instant claims

are not so limited, and that the host need not specify an amount of data to read. Reply 3. Silicon Motion cites to Dr. Foty's testimony that the command to read multiple blocks in the SD Card Specification (Ex. 1004) does not require an amount of data to be specified. Reply 5; Ex. 1013 ¶¶ 29–30. Silicon Motion also argues that claim 1 does not require an entire page of data to be read, nor does the claim provide for "an amount of the requested data" as a limitation. Reply 5–6. We find Silicon Motion's arguments to be persuasive.

We continue to be persuaded that "predetermined data" would have been understood as "replacement data." Dec. 6. We find nothing in claim 1, or the other independent claims, that would require that the "replacement data" must be the same or similar to the decoded data such that the host thinks that it received the requested data. Although the "replacement data" must necessarily replace the decoded data, that does not necessarily mean that it would need to have the same size or structure, or both, of the decoded data. From a computer science perspective, there are multiple ways a host could be "satisfied" with returned data and not have that data be the same size. It is important to remember that "in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle," *KSR Int'l Co.*, 550 U.S. at 420, such that curing obvious problems would be within the realm of common sense. As such, we are not persuaded that the replacement data must be the same size or configuration, or both, as the decoded data.

Phison also argues that the ES bit of Bennett is an "indicator," which is separate from "replacement data" in the context of the '267 Patent. PO Resp. 18–19. Phison continues that "different claim terms are legally presumed to have different meanings unless the specification of prosecution history dictates otherwise." PO Resp. 19–20. Phison argues that the alignment of the ES bit with the new block indicator in the specification of the '267 Patent demonstrates that the ES bit cannot also qualify as the "predetermined data." PO Resp. 20–21. Silicon Motion counters that the ES bit can be replacement data because Bennett details that the flash memory can return the ES bit, the erased data, or both, such that the ES bit can act as replacement data. Reply 11–12. We agree with Silicon Motion.

Although Phison is correct that the ES bit of Bennett can be an indicator, it can also serve as replacement data. As detailed in Bennett: typical performance requirements include an "[a]bility to return an 'Erased Status' (e.g., in the MS-PRO Status byte the 'ES' bit) and/or erased data in response to a read operation from an Erased block." Ex. 1003 ¶¶ 154, 155. That the ES bit of Bennett might closely resemble the new block indicator in the '267 Patent does not mean that the ES bit cannot act as replacement data. Phison is correct that the ES bit cannot satisfy both of the separately recited claim terms, as discussed below, but given the disclosure of Bennett, it is clear that the ES bit can act as replacement data.

Phison disputes that Silicon Motion provided an adequate rationale to combine Sharon and Bennett for several reasons. PO Resp. 21–33. Phison argues that modifying Sharon to transmit the ES bit would create an

inoperable system. PO Resp. 21–25. Phison argues that, if the requested bytes of data are not returned in the system of Sharon, an error will be generated. PO Resp. 22–24. Phison further relies on the testimony of its Declarant , Dr. Andrew Wolfe, to argue that Sharon and Bennett would result in an inoperable system. Ex. 2005 ¶¶ 39–46, 55–58. Although we credit Dr. Wolfe's testimony, we do not find Phison's arguments to be persuasive.

Dr. Wolfe discusses the functioning of the Windows operating system in performing a read from storage, with his "understanding that other host operating systems have similar operating principles when operating as hosts for flash memory storage devices." Ex. 2005 ¶ 44. And althoughDr. Wolfe continues that "one of ordinary skill in the art would understand that a host computer requires the receipt of the amount of data that it requested from a storage device," (*id*. ¶ 45), we are persuaded that this finding is undercut by the disclosure of Bennett, discussed above, where the ES bit or erased data are returned in response to a read operation from an Erased block. Although Dr. Wolfe considered the modification of Sharon, the process of returning a single bit in Bennett must be considered in determining the obviousness of any modification. Dr. Wolfe clearly considered Bennett—which also is directed to flash memory—but does not appear to have considered the combined teachings of Sharon and Bennett" (*see id.* ¶¶ 59–63). As discussed by Silicon Motion, Dr. Wolfe has acknowledged that his analysis was limited to the Windows ReadFile function, that other specific specifications were not considered, and that no specific configuration of the

host system in Sharon is specified. Reply 7–8; Ex. 1012, 87:3–15, 128:5–129:19, 131:8–23. Therefore, although we may agree with Dr. Wolfe that Sharon operating according to the Windows ReadFile function may return an error when a single bit is received, claim 1 and Sharon are not so limited. As such, we are not persuaded that the modification of Sharon by the processes in Bennett would have rendered the system of Sharon to be inoperable.

Phison also argues that Sharon requires the transmission of the requested data and not a status bit, with Sharon teaching away from the proposed modification. PO Resp. 25–28. Phison argues that Sharon discourages ordinarily skilled artisans from compressing or reducing the amount of data returned to the host, and that the return of the precise data stored is disclosed by Sharon to be a fundamental feature thereof. PO Resp. 27–28. We do not agree.

The section of Sharon relied upon by Phison (Ex. 1002 ¶ 43) is concerned with the data compression and encryption, not with the application of replacement data, as provided for in the claims and in Bennett. We are not persuaded that any apparent proscription against compression would be understood as a prohibition against the use of replacement data by those of ordinary skill in the art. The convolution of replacement with compression is inappropriate, even though a reduction in the amount of data transmitted could be accomplished by both processes. As such, we do not find it availing that "there is no disclosure with the Sharon reference to indicate that the requirement to return the requested data is changed for

unwritten pages" (PO Resp. 28) because that motivation is found within Bennett, as discussed above.

Phison also argues that there would have been no reason to add the use of the ES bit to Sharon because Sharon already includes erase status bits. PO Resp. 29. That formulation, however, does not take into account the new *use* of the bits as motivated by Bennett. The flag cells set in Sharon (Ex. 2005 ¶ 78) would remain set, even under the modification in view of Bennett. Neither Sharon nor Bennett suggests that the flag cell set in Sharon to indicate an unwritten page would need to be extinguished in order to send the ES bit as replacement data. Phison also cites to *In re NTP*, 654 F.3d 1279, 1298 (Fed. Cir. 2011), for its discussion of the addition of elements from one reference into another, thereby making the first elements superfluous. PO Resp. 29. However, the citation is inapt because the combination of Sharon and Bennett would not render the flags cells of Sharon or the ES bit of Bennett superfluous.

Phison also notes that Sharon purposely does not return its erased block indicator, strongly indicating that such a modification would not have been motivated. PO Resp. 30–31. However, absence of evidence is not evidence of absence. The fact that Sharon does not transmit flags cells means that any potential finding of Sharon to be anticipatory over the claims would have been in error, but does not constitute a negative teaching or a teaching away from the functionalities of Bennett. Even if Sharon does not disclose the exact methods of the challenged claims, it does not impact whether the processes of Sharon can be modified according to Bennett.

Based on the above discussion, we are persuaded that Sharon and Bennett render the challenged claims obvious.

Phison also alleges that an insufficient rationale to modify Sharon in view of Bennett has been proffered by Silicon Motion, and accepted by the Board, and that such a combination is only motivated by improper hindsight reconstruction. PO Resp. 31–33. We determined previously that the processes in Bennett provide context to the standard prior art logic described in Sharon and provide illustrations of how the situation of new blocks in Sharon could have been handled. Dec. 12. We did not need to resort to improper hindsight reconstruction because Bennett discloses how the reading of new blocks can be handled, adding to the information in Sharon, that addresses the "confusion" problem by integrating a randomizer into the flash memory system. Pet. 29. By providing additional disclosure, Bennett suggests how certain reading processes from memory should be handled, without requiring the disclosure of the '267 Patent to serve as a roadmap.

In addition, Phison argues that the ES bit of Bennett cannot be used to teach or suggest both the claimed "replacement data," in claim 1, and "an indicator," in dependent claim 3, because they are separately claimed elements. PO Resp. 33–34. We agree with the principle outlined by Phison, but we are not convinced that the same feature was found to be equivalent to two distinct aspects of the claims.

We have discussed, and Silicon motion has cited (Pet. 36), both the flag cells used to distinguish between pages that have been written to or not, and the ES bit. We are not persuaded that the ES bit, sent as replacement

data, is the same as the flag cell, which is not transmitted back to the host. As discussed above, the disclosure of the setting of the flag cell does not preclude its alternative uses as disclosed in Bennett. In effect, once the bit is sent as replacement data, the flag in Sharon remains set to the selected value and still serves the same purpose disclosed. Claim 3 only requires "recording an indicator," which is then used in making a determination as to whether the logical block is a new block. In other words, we are persuaded that the transmitted ES bit and the non-transmitted flag cell are separate elements that can render obvious elements of claims 1 and 3.

We are persuaded that Silicon Motion has shown by a preponderance of the evidence that claims 1, 3–7, 9–11, 13–17, 21, 22, 24, and 25 of the '267 Patent are unpatentable over Sharon and Bennett under 35 U.S.C. § 103.

D. Motions to Exclude

The party moving to exclude evidence bears the burden of proof to establish that it is entitled to the relief requested—namely, that the material sought to be excluded is inadmissible under the Federal Rules of Evidence. *See* 37 C.F.R. §§ 42.20(c), 42.62(a).

Phison seeks to exclude Dr. Foty's Declaration (Ex. 1013) on the grounds that Dr. Foty lacks sufficient expertise in the subject matter of this proceeding to qualify as one of ordinary skill in the art or an expert. PO Mot. to Exclude 1. Alternatively, Phison seeks to exclude paragraphs 20–24 and 26 of the same Declaration because they are based on the wrong

standard for claim construction. *Id*. We are not persuaded that Dr. Foty's Declaration, or portions thereof, should be excluded.

Phison argues that Dr. Foty has little or no experience with flash memory systems, where the undisputed level of ordinary skill in the art is "a Bachelor's degree in Electrical Engineering and between 1–2 years of experience in the design and/or analysis of flash memory storage systems or an equivalent combination of education and experience." PO Mot. to Exclude 2 (citing Ex. 2005 ¶20, emphasis omitted). Based on Dr. Foty's experience, Phison argues that Dr. Foty "would not even qualify as a person of ordinary skill in the art of the '267 patent." PO Mot. to Exclude 3. We do not agree.

Phison's analysis focuses on the "design" of such systems but not the "analysis" of such systems. Although Dr. Foty may not have the *design* experience with flash memory storage systems, given his testimony, we cannot say that he has no experience with such systems. Phison has not explained sufficiently why flash memory systems is so specialized a field that Dr. Foty, having experience with multiple types of memory systems, would not be qualified to offer opinions in this proceeding. We are persuaded that Dr. Foty has sufficient experience to act as an expert in the instant proceeding, and do not find sufficient reason to exclude his testimony.

Phison also argues that "Dr. Foty ignored the Board's claim construction and based his opinion on a fundamentally flawed claim construction methodology," with respect to the claim term "predetermined

data," such that portions of his testimony, paragraphs 20–24 and 26 should be excluded. PO Mot. to Exclude 3. Although it may have been preferable for Dr. Foty to apply our construction of the term "predetermined data" instead of a dictionary definition, this goes to the weight given to his testimony but does not require that his testimony be excluded. Dr. Foty's view of the claim term, as one of ordinary skill in the art, is still relevant and illustrates that our construction is consistent that the ordinary use of that term. As such, we are not persuaded that paragraphs 20–24 and 26 of Dr. Foty's Declaration (Ex. 1013) should be excluded.

Silicon Motion moves to exclude specific documents as evidence (Paper 25), but subsequently withdrew motions to exclude with respect to most of the documents it sought to exclude. Paper 33. Silicon Motion argues that Exhibit 2005, Declaration of Dr. Wolfe, is deficient under the Federal Rules of Evidence. *Id*. at 3–5. Silicon Motion maintains that Dr. Wolfe's statement about his Declaration being made under penalty of perjury (Ex. 2005, 16) does not meet the requirements of 37 C.F.R. § 42.2. Paper 33, 4–5.

We need not reach the merits of Silicon Motion's Motion to Exclude because, as explained above, even if the disputed evidence is considered, we have concluded that Silicon Motion has demonstrated, by a preponderance of the evidence, that the challenged claims are unpatentable. Accordingly, Silicon Motion's Motion to Exclude is dismissed as moot.

F. Motion for Observation

Phison's observations are directed to the cross-examination testimony of Dr. Foty (Ex. 2009), who was deposed after Silicon Motion filed its Reply. We have considered Phison's observations and Silicon Motion's responses in rendering our decision, and have accorded the testimony the appropriate weight. *See* Obs. 1–3; Obs. Resp. 1–4. Although Phison's observations about the functionalities of Sharon and Bennett have been considered, they do not change our conclusions about the obviousness of the subject claims in view of Sharon and Bennett, as discussed above.

III. CONCLUSION

We conclude Silicon Motion has shown by a preponderance of the evidence that claims 1, 3–7, 9–11, 13–17, 21, 22, 24, and 25 of the '267 Patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Sharon and Bennett.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1, 3–7, 9–11, 13–17, 21, 22, 24, and 25 of the '267 Patent are held unpatentable;

FURTHER ORDERED that Phison's Motion to Exclude is *denied*;

FURTHER ORDERED that Silicon Motion's Motion to Exclude is *dismissed*; and

FURTHER ORDERED that because this is a Final Written Decision, parties to the proceeding seeking judicial review of the Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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