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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

KARL STORZ ENDOSCOPY-AMERICA, INC.,

No. C 09-00355 WHA

Plaintiff,

CLAIM CONSTRUCTION ORDER

v.

STRYKER CORPORATION and STRYKER
COMMUNICATIONS, INC.,

Defendants.

_____ /

AND RELATED COUNTERCLAIMS

_____ /

INTRODUCTION

In this patent infringement action involving surgical equipment management, the parties seek construction of six phrases found in the two asserted patents. On May 3, 2011, a tentative claim construction order was issued, and the parties were invited to file five-page critiques of the constructions therein. After consideration of the supplemental briefing from both sides, final constructions of all six phrases are set forth below.

STATEMENT

The traditional approach to surgery required large incisions. A surgeon would cut an opening in the patient’s body large enough to access the site of the procedure. The surgeon then performed the operation and viewed the operation site directly through the opening.

1 Less invasive surgical techniques developed as alternatives to traditional “open” surgery.
2 In particular, advances in endoscopy made “minimally invasive” surgery possible. An endoscope
3 was (and remains) a small instrument with a camera and a light source that could be inserted into
4 the body through a small incision or hole, enabling surgeons to view the inside of a patient’s body
5 without opening the body in the traditional manner. Minimally invasive surgery became
6 common, and many surgical instruments were developed for use along with an endoscope in such
7 operations. The technology at issue in this action relates to coordinating the use and control of
8 such instruments.

9 Three patents were asserted in the operative complaint, but the parties recently stipulated
10 to dismiss one of them (Dkt. Nos. 105, 257). Twenty claims from United States patent
11 No. 5,788,688 and twenty-seven claims from United States patent No. 6,397,286 remain at issue.
12 The parties seek construction of six phrases appearing in these patents. Overviews of the patents,
13 the disputed phrases, and the associated claims are covered in detail in the analysis below.

14 ANALYSIS

15 Courts must determine the meaning of disputed claim terms from the perspective of one of
16 ordinary skill in the pertinent art at the time the patent was filed. *Chamberlain Group, Inc. v.*
17 *Lear Corp.*, 516 F.3d 1331, 1335 (Fed. Cir. 2008). While claim terms “are generally given their
18 ordinary and customary meaning,” the “claims themselves provide substantial guidance as to the
19 meaning of particular claim terms.” As such, other claims of the patent can be “valuable sources
20 of enlightenment as to the meaning of a claim term.” Critically, a patent’s specification “is
21 always highly relevant to the claim construction analysis” as well. *Phillips v. AWH Corp.*,
22 415 F.3d 1303, 1312–15 (Fed. Cir. 2005) (en banc) (internal quotations omitted). Indeed, claims
23 “must be read in view of the specification, of which they are a part.” *Markman v. Westview*
24 *Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996).
25 Finally, courts also should consider the patent’s prosecution history, which “can often inform the
26 meaning of the claim language by demonstrating how the inventor understood the invention and
27 whether the inventor limited the invention in the course of prosecution, making the claim scope
28 narrower than it would otherwise be.” These components of the intrinsic record are the primary

1 resources in properly construing claim terms. Although courts have discretion to consider
2 extrinsic evidence, including dictionaries, scientific treatises, and testimony from experts and
3 inventors, such evidence is “less significant than the intrinsic record in determining the legally
4 operative meaning of claim language.” *Phillips*, 415 F.3d at 1317–18 (internal
5 quotations omitted).

6 Karl Storz Endoscopy-America, Inc. has asserted the same patents that are at issue in this
7 action against a different defendant in the Western District of Tennessee. Five of the six phrases
8 construed by this order were construed recently in the Tennessee action as well (Dkt. No. 222-1).
9 Stryker Corp. and Stryker Communications, Inc. find the Tennessee court’s constructions to be
10 favorable and lean heavily upon them as “confirm[ing] the correctness of Stryker’s constructions”
11 (Stryker Br. 1). While the reasoning of the Tennessee court may be instructive, it is not binding
12 in this action. This order is required to — and does — undertake a full, independent analysis of
13 each disputed phrase. *See Aircraft Technical Publishers v. Avantext, Inc.*, No. C 07-4154 (SBA),
14 2009 WL 3817944, at *3 (N.D. Cal. Nov. 10, 2009) (Armstrong, J.) (explaining that each district
15 court “has an independent obligation to construe the claims in dispute, and to render its own
16 independent claim construction”). Moreover, the parties reported at the April 27 hearing that the
17 claim construction rulings from the Tennessee court are only tentative, and that because the
18 Tennessee action is stayed it is unknown when that court will finalize its constructions.

19 While this order acknowledges that the parties have a right to the construction of all
20 disputed claim terms by the time the jury instructions are settled, the Court will reserve the
21 authority, on its own motion, to modify the constructions in this order if further evidence —
22 intrinsic or extrinsic — warrants such a modification. Given that claim construction is not a
23 purely legal matter, but is (as the Supreme Court describes it) a “mongrel practice” with
24 “evidentiary underpinnings,” it is entirely appropriate for the Court to adjust its construction of
25 claims prior to trial if the evidence compels an alternative construction. *Markman*, 517 U.S.
26 at 378, 390. The parties should be aware, however, that they are *not* invited to ask for
27 reconsideration of the constructions herein. Motions for reconsideration may be made only in
28 strict accordance with the rules of procedure, if at all.

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1. THE '688 PATENT

The '688 patent, entitled "Surgeon's Command and Control," was issued on August 4, 1998. Bauer Laboratories, Inc. was the assignee of the '688 patent at the time of issue. KSEA claims to now own the entire right, title, and interest in this patent (Sec. Amd. Compl. ¶ 13). Twenty claims from the '688 patent are asserted in this litigation: independent claims 1 and 10, and dependent claims 2–9 and 11–20. Four of the phrases construed by this order are found in the '688 patent. They are italicized in the claims below.

Claim 1 covers the following apparatus (cols. 19:39–20:10):

1. In an endoscopic operating environment defining *a surgeon's operating station at which a surgical procedure is performed* with a plurality of self-contained independently and simultaneously operable pieces of surgical equipment, each including a surgical control head located at a non-sterile area remote from the surgeon's operating station and associated devices developing an output in response to commands manually entered directly at the surgical control head for driving an associated surgical instrument located at the surgeons [*sic*] operating station, a surgeon's command and control system comprising:

a surgeon's control panel operatively positioned at the surgeon's operating station, the surgeon's control panel including display means for displaying data relating to status of each of the plurality of self-contained pieces of surgical equipment and input means for receiving commands entered manually;

a plurality of communication interface circuits, one for each of said plurality of self-contained pieces of surgical equipment, each for transmitting data representing status of the associated surgical control head and for receiving remote commands for driving the associated self-contained surgical instrument; and

a central controller operatively connected to each said communication interface circuit and said surgeon's control panel, said central controller transmitting to said plurality of self-contained pieces of surgical equipment commands entered manually on the surgeon's control panel and transmitting to said surgeon's control panel status of the surgical control heads for display on said display means to provide a surgeon direct command and control of the plurality of self-contained pieces of surgical equipment located in the non-sterile area remote from the surgeon's operating station,

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whereby each of the plurality of self-contained pieces of surgical equipment can be simultaneously operated with the operation thereof controlled and monitored from the surgeon's operating station.

Claims 10 covers a similar apparatus (cols. 20:47–21:19):

10. A surgical control system, comprising:

a surgeon's operating station at which a surgical procedure is performed;

first and second self-contained and simultaneously operable pieces of surgical equipment each for performing a surgical procedure and including a surgical control head located at an area remote from the surgeon's operating station and associated devices developing a variable output for driving an associated surgical instrument located at the surgeons [*sic*] operating station, each self-contained piece of surgical equipment including means for producing a signal indicative of the output to each surgical instrument and means for receiving a variable control signal, the output varying in response to variations of the control signal;

first and second communication interface circuits for transmitting data representing status of the surgical control heads and for receiving remote commands for driving each of the self-contained surgical instruments;

a surgeon's control panel operatively positioned at the surgeon's operating station, the control panel including a display means for displaying data relating to the output to each of the surgical instruments and input means for receiving commands entered manually;

a central controller operatively connected to said communication interface circuits and said surgeon's control panel, said central controller developing and transmitting to each said self-contained piece of surgical equipment the variable control signal from commands entered manually on the surgeon's control panel and transmitting to said surgeon's control panel data relating to the output of each of the surgical instruments for display on said display means to provide a surgeon direct command and control of the self-contained pieces of surgical equipment located in the non-sterile area remote from the surgeon's operating station,

whereby each of the plurality of self-contained pieces of surgical equipment can be simultaneously operated with the operation thereof controlled and monitored from the surgeon's operating station.

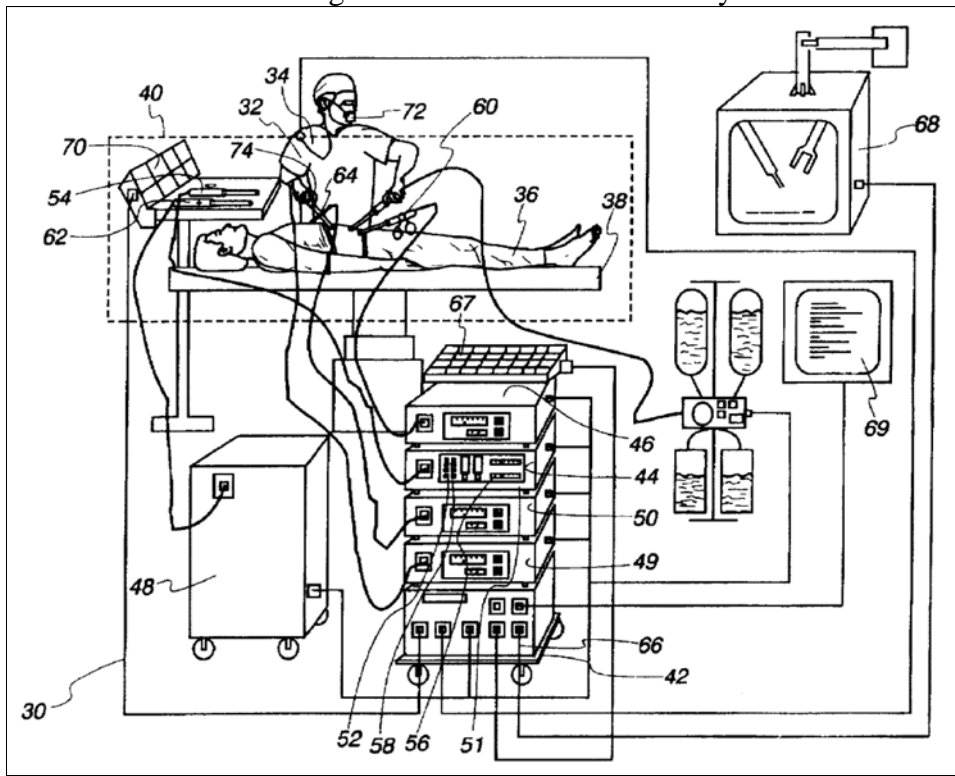
1 The growing number of advanced instruments required to perform minimally invasive
2 surgery “result[ed] in a tangle of cords and a conglomeration of equipment to be both monitored
3 and controlled during the course of an operation.” The patent further explained: “What should be
4 a serene environment to promote concentration by the surgeon and the support staff bec[ame] a
5 crowded, disorganized theater with a multitude of buzzers, beeps and flashing lights enveloping
6 the surgical team and patient.” (col. 2:1–14).

7 Each instrument used by the surgeon was connected to a “control head,” which “typically
8 include[d] a visual display panel for displaying output parameters of the equipment as well as
9 monitored inputs, and a series of buttons and switches for varying the output which drives the
10 surgical instrument” (col. 1:60–64). As more and more instruments were relied on in surgical
11 procedures, operating rooms became more and more cluttered with equipment, and the control
12 heads had to be placed further away from the patient and surgeon (col. 2:1–6). This scattering of
13 equipment required division of the surgeon’s attention, and it also limited the surgeon’s control
14 over the equipment; verbal instructions were relayed to support staff who managed the control
15 heads for the surgical instruments. The surgeon’s inability to directly monitor and control the
16 surgical equipment posed safety risks (col. 2:32–47).

17 The invention disclosed in the ’688 patent assuaged these safety risks by consolidating the
18 functions of the various instruments’ control heads into one device. At the technology tutorial,
19 KSEA explained that one of the inventors of the ’688 patent, James Bauer, was both a surgeon
20 and a jet pilot. Bauer observed that the cockpit of an airplane displays status information and
21 provides input controls relating to many different aviation instruments and plane features at once,
22 allowing the pilot to monitor and control many different instruments from the pilot seat. The
23 invention of the ’688 patent provided a similar solution for surgeons. Figure 1 from the patent
24 depicts a surgeon performing a surgical procedure using a surgical command and control system
25 according to the invention (col. 5:47–79):
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Figure 1 from the '688 Patent:
Use of a Surgical Command and Control System



In Figure 1, the surgeon wields several instruments, each of which is connected to a control head. All the control heads are connected to a central equipment control unit (66), which in turn is connected to a surgeon's command and control system (40), with a surgeon's control panel (70) located "proximate the surgeon's operating station" (cols. 6:26-7:37). Figure 4 depicts the surgeon's control panel in greater detail (col. 5:56-57):

Figure 4 from the '688 Patent:
A Surgeon's Control Panel

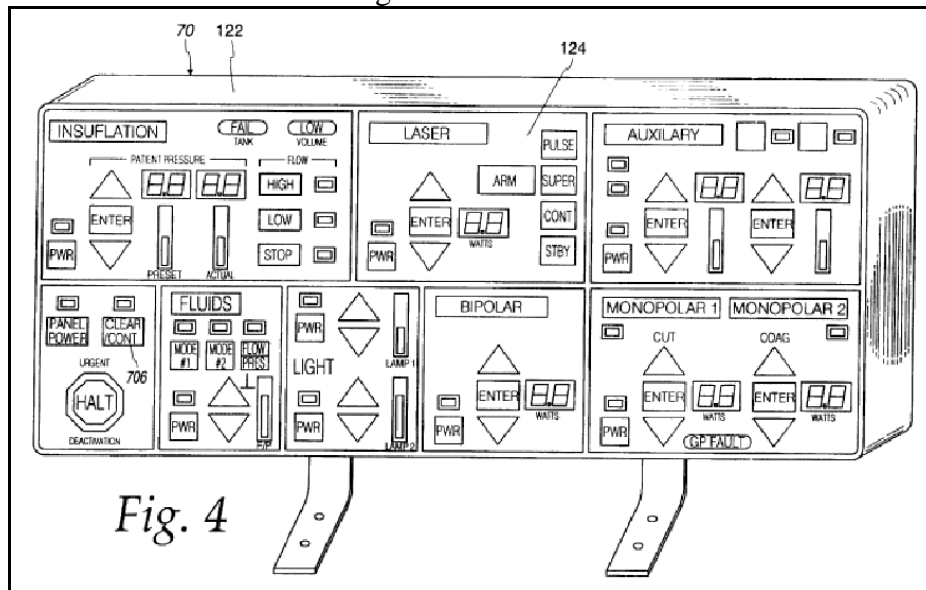


Fig. 4

The surgeon's control panel includes a switch matrix and data display relating to each piece of surgical equipment connected through the command and control system (col. 8:49-52).

A. "a surgeon's operating station at which a surgical procedure is performed"

The parties dispute the phrase "a surgeon's operating station at which a surgical procedure is performed." The parties interpret the phrase differently, but only Stryker seeks a construction.

The parties' proposed constructions are shown below.

KSEA'S PROPOSED CONSTRUCTION

STRYKER'S PROPOSED CONSTRUCTION

"one or more locations within an operating environment at which a member of the surgeon's team controls surgical equipment"

"the place within the sterile field of an operating room where the surgeon and more than one surgical instrument are located for conducting a surgical procedure"

The construction of this term is relevant to the parties' infringement arguments. The proposed constructions are vastly different. The parties disagree on each of the following points:

- (1) whether the phrase should be limited to one location as opposed to multiple locations;
- (2) whether the location(s) referenced depend on the surgeon only as opposed to the surgical team;
- (3) whether the location(s) are within the sterile field;
- (4) whether the location(s) include

1 equipment or instruments; and (5) how many items of equipment or instruments are included.
2 The intrinsic evidence answers all of these questions, but the construction of the disputed phrase
3 need not do so. The phrase “a surgeon’s operating station at which a surgical procedure is
4 performed” is relatively straightforward and could be understood by a juror without much of the
5 additional detail the parties propose to add.

6 The plain language of the disputed phrase itself indicates that it refers to a single
7 location — “a surgeon’s operating station.” The noun “station” is singular, not plural. Thus, “a
8 surgeon’s operating station” is a single location. It is the location “at which a surgical procedure
9 is performed.” The surrounding claim language confirms this interpretation. Various items are
10 described as being “positioned at the surgeon’s operating station,” “located at the surgeons [*sic*]
11 operating station,” or “located at a non-sterile area remote from the surgeon’s operating station”
12 in the asserted claims (*e.g.*, col. 19:44–52). These descriptions treat the surgeon’s operating
13 station as a single location relative to which other locations may be defined. The specification
14 follows suit, for example describing an area “proximate to a surgeon’s operating station” as well
15 as using the locational references already quoted from the claims (col. 1:66). The disputed phrase
16 refers to a single location.

17 KSEA’s argument to the contrary is unpersuasive. KSEA focuses on claim language
18 stating that the “surgical procedure” performed at the surgeon’s operating station “is performed
19 with a plurality of . . . pieces of surgical equipment” (col. 19:39–42). Because the equipment
20 includes control heads and other components scattered about the operating room, KSEA would
21 broaden the definition of “a surgeon’s operating station” to include any location at which any
22 component of surgical equipment could be controlled (KSEA Br. 5). This argument fails for
23 several reasons, two of which deserve mention. *First*, KSEA admits that each piece of surgical
24 equipment includes an instrument to be used in or on the patient (*id.* 4–5). Because the
25 instrument is part of the piece of equipment, a surgeon could use “a plurality of . . . pieces of
26 surgical equipment” simply by using a plurality of instruments on the patient — without touching
27 any other equipment component located elsewhere. *Second*, a construction of “surgeon’s
28 operating station” that included every location at which a component of surgical equipment is

1 located would contradict the claim language. The claim states that the control heads for the
2 pieces of surgical equipment are “located at a non-sterile area *remote from the surgeon’s*
3 *operating station*” (19:44–45) (emphasis added). Thus, at least the control-head portion of the
4 equipment is located in an area explicitly defined *not* to be part of the surgeon’s operating station.

5 Having determined that the disputed phrase refers to a single location, this order further
6 finds that the location is defined relative to the surgeon. Again, the plain claim language compels
7 this conclusion, and the specification provides ample support. The claims specify “*a surgeon’s*
8 *operating station*” (emphasis added), not “a surgical team’s operating station.” The specification
9 explains that the invention “unifies the various pieces of equipment currently found in an
10 endoscopic surgical suite into a *surgeon-centered* system (col. 19:32–34) (emphasis added).
11 Indeed, the invention is called “*surgeon’s* command and control,” and its goal is “provid[ing] *a*
12 *surgeon* direct command and control of various surgical equipment devices in an operating room,
13 offering to *the surgeon* heightened situational awareness and command of the surgical procedure”
14 (col. 2:53–57) (emphasis added). These statements focus on a single surgeon, explaining that the
15 invention consolidates equipment control functions to the location of that surgeon. The
16 specification contrasts this arrangement with the prior art practice under which “a surgeon cannot
17 efficiently monitor the output settings of the various control units” and “when a surgeon deems an
18 adjustment of the output settings is required, the instructions must be relayed to support staff
19 outside of the sterile field to actually adjust the equipment” (col. 2:32–39). The point of the
20 invention is bringing all the equipment input and output interfaces to the surgeon who is
21 performing the surgical procedure.

22 KSEA argues that the term “surgeon’s operating station” simply reflects that a surgeon “is
23 in charge” and “does not mean that *only* a surgeon works there” (KSEA Br. 5). For example, the
24 summary of the invention mentions “allowing the surgeon and assistant to make equipment
25 adjustments,” references “[a] team member making device adjustments,” and explains that “[t]he
26 surgeon and entire staff is informed of equipment setting changes” (col. 4:42–43, 52, 56–57).
27 This order recognizes the possibility that other members of the surgical team periodically may
28 perform tasks at the surgeon’s operating station. That observation, however, does not justify a

1 finding that the surgeon’s operating station encompasses every location ever occupied by a
2 member of the surgeon’s team. On the contrary, the surgeon’s operating station is limited to one
3 location, and that location is defined relative to the surgeon. KSEA cites additional references to
4 teamwork in the detailed description of the invention. In one possible embodiment, “mounting
5 options provide ready access to the surgical team,” and the system generally “provid[es] direct
6 command and control of operating procedures by the surgical team” (cols. 7:35–37). This
7 language does not address the location of the surgeon’s operating station, and the fact that one
8 embodiment may be team-oriented does not limit the scope of the claims.

9 In its critique of the tentative claim construction order, KSEA recasts its argument in
10 slightly different terms. KSEA reviews favorable evidence from the specification and infers that
11 the applicant used the term “surgeon’s” to describe “something used by members of the surgeon’s
12 team” (Dkt. No. 292 at 3). The question at hand is *location*, not use. Moreover, none of the cited
13 evidence concerning the word “surgeon’s” refers to a surgeon’s operating station — the phrase
14 being construed. KSEA’s indirect evidence that others may *use* the surgeon’s operating station
15 does not contradict the plain claim language defining its location.

16 Turning to the question of whether the surgeon’s operating station is located within the
17 sterile field, this order declines to read such a requirement into the disputed phrase at this time,
18 but leaves open the possibility of doing so in the future and the possibility that this will simply be
19 a fact issue for the jury. After the intrinsic evidence is supplemented with expert testimony at
20 trial, it may become clear that a person of ordinary skill in the art would have understood a
21 surgeon’s operating station as something that must be located within a sterile field. On the
22 present record, however, the undersigned judge is not yet convinced that the disputed phrase
23 should be construed to include a sterility limitation.

24 The phrase itself does not contain any words referring to sterility or non-sterility. The
25 only information the claims provide about the surgeon’s operating station is that it is the location
26 “at which a surgical procedure is performed with a plurality of self-contained independently and
27 simultaneously operable pieces of surgical equipment” (col. 19:40–42). The only information the
28 claims provide about sterility is that each piece of surgical equipment “includ[es] a surgical

1 control head located at a non-sterile area remote from the surgeon's operating station"
2 (col. 19:43–44). Contrary to Stryker's arguments, the fact that an area remote from the surgeon's
3 operating station is non-sterile does not imply that the surgeon's operating station is sterile. The
4 claim language therefore does not support limiting the surgeon's operating station to being
5 contained within a sterile field.

6 The specification also contains no clear indication that the applicants intended to claim
7 such a limitation. The background section references "the sterile field in which the actual
8 surgical procedure is conducted" and states that "[t]he surgical instruments are positioned within
9 the sterile field proximate to a surgeon's operating station from which the procedure is
10 performed" (col. 1:41–42, 65–67). The most that can be inferred from these statements is that,
11 under the prior art, the instruments were in the sterile field, and the procedure was performed in
12 the sterile field. Because the instruments were *proximate to* the surgeon's operating station, and
13 the procedure was performed *from* the surgeon's operating station, the operating station itself was
14 not necessarily included in the sterile field. Stated in practical terms, the surgeon may have stood
15 in a non-sterile area constituting the surgeon's operating station but reached into the sterile field
16 in order to wield the instruments and perform the procedure. With two exceptions, all of the
17 specification language Stryker cites follows the language quoted above in that it identifies
18 something other than the surgeon's operating station, but not the surgeon's operating station
19 itself, as being located inside the sterile field (Stryker Br. 11). Stryker's resort to the prosecution
20 history has the same problem. Stryker cites a request for reconsideration describing the invention
21 to include "a sterile control panel located *at* the surgeon's operating station" (Bateman Exh. G
22 at 1–2) (emphasis added). A green car could be parked *at* the library. That would not mean that
23 the car is *in* the library nor that the library is green.

24 As noted, however, Stryker presents two items of evidence that escape this logical fallacy.
25 This evidence deserves pause. It does not compel the conclusion that the claimed "surgeon's
26 operating station" must be sterile, but it nonetheless is instructive. In light of this evidence,
27 this order declines to hold at this time that the surgeon's operating station may include
28 non-sterile portions.

1 Stryker’s first instructive item of evidence comes from the detailed description of the
2 invention. There, the specification explains that Figure 1 depicts an embodiment in which “[t]he
3 surgeon’s operating station 32 is located within a sterile field, shown surrounded in dashed line in
4 FIG. 1” (col. 6:31–33). This description of a single embodiment, by itself, is not sufficient to
5 justify reading a sterility limitation into the claims. *Liebel-Flarsheim Co. v. Medrad Inc.*,
6 358 F.3d 898, 906 (Fed. Cir. 2004) (“Even when the specification describes only a single
7 embodiment, the claims of the patent will not be read restrictively unless the patentee has
8 demonstrated a clear intention to limit the claim scope using words or expressions of manifest
9 exclusion or restriction.”). It does, however, make some progress in that direction. That the
10 preferred embodiment locates the surgeon’s operating station within the sterile field suggests that
11 a person of ordinary skill in the art might recognize the surgeon’s operating station as a smaller
12 zone within a larger sterile field.

13 The second specification statement that weighs in Stryker’s favor comes from the
14 background section: “The surgical team, including surgeons, assistants and supporting nursing
15 staff, must stand within this sterile field and comply with strict ‘sterile procedures’ to insure that
16 the patient does not become infected as a result of the surgery” (col. 1:42–46). This statement
17 describes the prior art, and there is no clear indication that it was intended to limit the claimed
18 invention. On the other hand, however, it describes generally the field within which the invention
19 was made. A person of ordinary skill in the art therefore might understand the invention as
20 something to be practiced in a context requiring that the surgeon’s operating station be located
21 within a sterile field.

22 The present record is inconclusive on the question of sterility. This order will not now
23 read a sterility limitation into the disputed phrase, but it also will not decree that a surgeon’s
24 operating station may include non-sterile areas. For the time being, the question will be left open.
25 This aspect of the construction may be revisited before the jury instructions are finalized.

26 Stryker, in its critique of the tentative claim construction order, nonetheless urges
27 adoption of a sterility limitation now. Stryker’s insistence does not change the foregoing
28 analysis. *First*, Stryker’s challenges to KSEA’s extrinsic evidence regarding remote-control

1 surgery are irrelevant, because none of the sterility discussion in this order is based on that
2 evidence. *Second*, Stryker’s disagreement with the hypothetical description of a small sterile field
3 that extends only a short distance beyond the surgical site is not supported by any evidence.
4 *Third*, Stryker’s citation to an online medical dictionary not part of the claim-construction record
5 does not obviate the benefit of awaiting expert testimony. *Fourth*, Stryker’s repetition of
6 favorable specification language does not raise new considerations, even though claim terms “are
7 normally used consistently throughout the patent” (Dkt. No. 291 at 1–3). The Court’s reasoning
8 as to a possible sterility limitation remains unchanged.

9 The parties’ last disagreement regarding this first disputed phrase addresses the number
10 and location of surgical instruments or pieces of equipment with respect to the surgeon’s
11 operating station. On these points the claim language is relatively straightforward and could be
12 understood by a jury without further elaboration. Specifically, the claim language explains that a
13 surgical procedure is performed *at* a surgeon’s operating station, that the procedure is performed
14 *with* pieces of surgical equipment, and that each piece of equipment includes a surgical
15 instrument located *at* the surgeon’s operating station, as well as other components located
16 elsewhere (col. 19:39–49). The specification language is consistent with these descriptions and
17 further indicates that the instruments are used to deliver physical effects to the patient (*e.g.*,
18 col. 1:37–38). The parties’ attempts to define the location of the surgeon’s operating station
19 relative to the surgical equipment or instruments strain beyond the scope of the disputed phrase
20 and contradict the claim language. They are accordingly rejected.

21 In light of the foregoing, the phrase “a surgeon’s operating station at which a surgical
22 procedure is performed” shall be construed to mean “the location a surgeon occupies while using
23 surgical instruments to perform a surgical procedure on a patient,” at least for th time being.¹

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26 ¹The Tennessee court construed “surgeon’s operating station” as the “place within the sterile area of
27 the operating environment where the surgeon and the surgical instruments are located during a surgical
28 procedure” (Dkt. No. 222-1 at 11). Unlike the Tennessee construction, this order does not require the surgeon’s
operating station to be located within the sterile field and does not incorporate the presence of surgical
instruments into the construction. Although this order declines to read a sterility limitation into the disputed
phrase at this time, it does not foreclose the possibility of doing so in the future and it does not hold that a
surgeon’s operating station may include non-sterile areas.

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B. “a surgeon’s control panel operatively positioned at the surgeon’s operating station”

The parties dispute the phrase “a surgeon’s control panel operatively positioned at the surgeon’s operating station.” Again, they interpret the phrase differently, but only Stryker seeks a construction. The parties’ proposed constructions are shown below.

KSEA’S PROPOSED CONSTRUCTION	STRYKER’S PROPOSED CONSTRUCTION
“ a control panel operable from the surgeon’s operating station”	“a panel for the surgeon that is positioned within the sterile field such that the surgeon can directly operate the panel from the surgeon’s operating station by manually entering commands on the panel and by directly viewing data displays on the panel”

The parties’ main dispute regarding this phrase is whether the control panel must be within the sterile field, *i.e.*, sterile. They also dispute whether “operatively positioned at the surgeon’s operating station” refers to certain uses by the surgeon. The construction of this phrase is relevant to the parties’ infringement arguments.

This order finds that “a surgeon’s control panel” need not be sterile, sterilized, or within the sterile field. The plain language of independent claims 1 and 10 simply does not include any such requirement. Dependent claims 9 and 18, on the other hand, *add* the limitation “wherein said control panel comprises a control panel that is sterilized to avoid transfer of microorganisms from the control panel to a user” (cols. 20:44–46, 22:10–13). The doctrine of claim differentiation thus requires the inference that the “surgeon’s control panel” disclosed in claims 1 and 10 is *not* sterilized. *Phillips*, 415 F.3d at 1315 (“[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.”).

Stryker nonetheless attempts to split hairs, arguing that the term “sterilized” in the dependent claims refers only to a particular process for making an object sterile. According to Stryker, the control panel of claim 1 could be “sterile” and “within the sterile field” without having been “sterilized” because “claim 1 allows the panel to be protected in other ways, such as

1 covering it with a surgical drape” (Stryker Resp. Br. 12). Stryker’s attempt to distinguish
2 between “sterile” and “sterilized” runs afoul of the prosecution history. In response to the
3 rejection of claim 9 as indefinite, the applicants stated that claim 9 “depends from claim 1 and . . .
4 further adds the limitation that the panel is a *sterile* control panel” (Bateman Exh. G at 2)
5 (emphasis added). Thus, the applicants used the terms “sterile” and “sterilized” interchangeably,
6 and characterized the control panel in dependent claim 9 as differing from the control panel in
7 independent claim 1 in that the former must be “sterile.”

8 Accordingly, the “surgeon’s control panel” of the independent claims need not be sterile
9 and need not be within the sterile field as Stryker suggests. The drawings and specification
10 describe a preferred embodiment of the invention in which the control panel is a “sterile control
11 panel” (*e.g.*, col. 8:49–50). The observation that the panel *may* be sterile, however, does not
12 mean that the panel *must* be sterile in order to practice the claimed invention. In light of the
13 foregoing discussion of the claims themselves, a sterility limitation will not be read from the
14 specification into the disputed phrase.

15 Turning to the second part of the disputed phrase, the parties disagree whether
16 “operatively positioned at the surgeon’s operating station” requires that the surgeon be able to use
17 the control panel in certain ways. As discussed with respect to the “surgeon’s operating station”
18 phrase construed above, the goal of the invention is to provide a surgeon direct command and
19 control of the surgical equipment from his or her operating station. The claim language itself
20 repeats that the purpose of the input and output means on the surgeon’s control panel is “to
21 *provide a surgeon direct command and control* of the plurality of self-contained pieces of surgical
22 equipment located in the non-sterile area remote from the surgeon’s operating station”
23 (col. 20:3–6) (emphasis added). *CVI/Beta Ventures, Inc. v. Tura LP*, 112 F.3d 1146, 1160
24 (Fed. Cir. 1997) (“In construing claims, the problem the inventor was attempting to solve, as
25 discerned from the specification and the prosecution history, is a relevant consideration.”).

26 The phrase “operatively positioned at the surgeon’s operating station” serves this goal by
27 locating the control panel close enough to the surgeon that the surgeon can use it without leaving
28 his or her operating station. *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*,

1 424 F.3d 1293, 1306 (Fed. Cir. 2005) (noting that the term “operatively” is used to describe the
2 functional relationship between claimed components). KSEA argues that other members of the
3 surgical team besides the surgeon may operate the surgeon’s command and control panel, citing
4 specification language that references a broader goal of “providing direct command and control of
5 operating procedures by the surgical team” (col. 6:43–44). That may be so, but it does not change
6 the foregoing analysis. The crucial requirement is that the surgeon’s control panel must be
7 positioned such that the surgeon *can* use it directly from his or her operating station. The
8 observation that other members of the surgical team also may use the control panel is irrelevant.
9 KSEA’s critique of the tentative construction, which was discussed above with reference to the
10 location of the surgeon’s operating station, seems to have missed this point.

11 The claim language describes the surgeon’s control panel has having two types of
12 functionality: (1) a “display means for displaying data relating to status of each of the plurality of
13 self-contained pieces of surgical equipment,” and (2) an “input means for receiving commands
14 entered manually” (col. 19:51–56). The specification matches this description. Thus, the direct
15 use or operation of the surgeon’s control panel would require (1) viewing the data displayed on
16 the display means, and (2) manually entering commands through the input means. A control
17 panel “operatively positioned at the surgeon’s operating station” such that the surgeon is able to
18 make full use of the control panel would have to be close enough to the surgeon to enable the
19 surgeon to perform both of those functions without leaving his or her operating station.

20 Based on the foregoing considerations, the phrase “a surgeon’s control panel operatively
21 positioned at the surgeon’s operating station.” shall be construed to mean “a panel that a surgeon
22 can use directly both to view data and to enter commands manually without leaving the surgeon’s
23 operating station.”²

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27 ²The Tennessee court construed “operatively positioned at the surgeon’s operating station” as
28 “positioned at the surgeon’s operating station within reach and view of the surgeon to allow control and
monitoring of the pieces of surgical equipment” (Dkt. No. 222-1 at 14). The construction adopted by this order
is not meaningfully different.

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C. “input means for receiving commands entered manually”

The parties dispute the means-plus-function limitation “input means for receiving commands entered manually.” The parties’ proposed constructions are shown below.

KSEA’S PROPOSED CONSTRUCTION	STRYKER’S PROPOSED CONSTRUCTION
“a switch matrix, and equivalents thereof, for receiving commands entered manually”	“a membrane switch with a switch matrix, the switch matrix being associated with a number of raised switches, buttons or keys that can be depressed by the surgeon”

The construction of this phrase is relevant to the parties’ infringement arguments; Stryker seeks to lard up the construction with requirements that would exclude its accused products. For example, Stryker’s proposed construction requires “raised switches, buttons or keys that can be depressed,” whereas their accused products employ smooth touch-screen panels without any such raised switches, buttons, or keys. Stryker, however, fails to provide adequate support for reading any of the detailed requirements it proposes into the patent claims.

Means-plus-function claim limitations are “construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof” for performing the recited function. 35 U.S.C. 112 ¶ 6. To construe such a limitation, a court first must identify the claimed function and then must identify the recited structure in the specification that is capable of performing the recited function. A means-plus-function claim limitation does not include elements that are not necessary for performing the recited function. *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

Here, the parties agree that the claimed function is “receiving commands entered manually.” With respect to identifying the structure that corresponds to this function, however, the parties’ views diverge. KSEA points to “a switch matrix,” whereas Stryker identifies “a membrane switch with a switch matrix” and additionally would require the switch matrix to be “associated with a number of raised switches, buttons or keys that can be depressed by the surgeon.” KSEA has the better arguments.

1 The claims themselves do not specify a structure for “receiving commands entered
2 manually.” The specification must be consulted. The detailed description of the invention
3 describes two features of the surgeon’s control panel: “a switch matrix” and “panel displays”
4 (col. 8:51–52). As explained in construing the “surgeon’s control panel” phrase above, the
5 surgeon’s control panel has two types of functionality. The two panel features map onto the two
6 panel functions: the switch matrix performs the function of “receiving commands entered
7 manually,” and the panel displays perform the function of “displaying data.” No other structure
8 besides the switch matrix is disclosed for performing the function of receiving commands
9 entered manually.

10 Stryker’s attempts to deviate from this analysis are misguided. *First*, Stryker identifies “a
11 membrane switch with a switch matrix” rather than simply “a switch matrix” as the structure
12 corresponding to the function of receiving commands. The specification describes membrane
13 technology as a way to produce a sealed unit that can undergo sterilization (cols. 8:67–9:3). This
14 function has nothing to do with “receiving commands.” Membrane technology does not belong
15 in the construction of the disputed term. Further, the construction “a switch with a switch matrix”
16 is nonsensical in the context of the ’688 patent. Stryker cites a portion of the specification stating
17 that “[a] membrane switch and display panel 124 includes the switch matrix 112 and
18 displays 114” (col. 8:65–67). Thus, a membrane switch-and-display *panel* includes both (1) a
19 switch matrix, and (2) displays. It is the panel, not a “membrane switch,” that includes the switch
20 matrix. Stryker’s construction contradicts the grammar of this sentence and describes a switch
21 that itself includes a matrix of other switches — something that the claims and specification of the
22 ’688 patent neither disclose nor require.

23 *Second*, Stryker attempts to add the requirement of “a number of raised switches, buttons
24 or keys that can be depressed by the surgeon.” Stryker emphasizes that the specification only
25 discloses embodiments of the invention that use such raised devices to receive manually-entered
26 commands (Stryker Br. 16). There is, however, no indication that such raised devices are the *only*
27 way a switch matrix could be operated. Indeed, the Federal Circuit has cautioned district courts
28 against inferring unstated claim requirements from the fact that only one type of embodiment is

1 disclosed in the specification. *Liebel-Flarsheim*, 358 F.3d at 906. The '688 patent teaches that
2 the only structure needed for receiving commands is “a switch matrix,” which *may* be embodied
3 with raised buttons. Stryker’s transparent attempt to escape infringement by reading a raised-
4 button requirement into the claims is not supported by the specification.

5 KSEA’s proposed construction will be adopted, because it accurately applies the
6 governing law to the intrinsic evidence. Accordingly, the phrase “input means for receiving
7 commands entered manually” shall be construed to mean “a switch matrix, and equivalents
8 thereof, for receiving commands entered manually.”³

9 **D. “whereby each of the plurality of self-contained pieces of surgical
10 equipment can be simultaneously operated with the operation thereof
controlled and monitored from the surgeon’s operating station”**

11 The parties dispute the phrase “whereby each of the plurality of self-contained pieces of
12 surgical equipment can be simultaneously operated with the operation thereof controlled and
13 monitored from the surgeon’s operating station.” The parties interpret the phrase differently, but
14 only Stryker seeks a construction. The parties’ proposed constructions are shown below.

15 KSEA’S PROPOSED 16 CONSTRUCTION	STRYKER’S PROPOSED CONSTRUCTION
17 “(1) each of the two or more self- 18 contained pieces of surgical equipment 19 can be operated at the same time, and 20 (2) the operation of a self-contained piece of surgical equipment can be controlled and monitored from the surgeon’s operation station”	“each piece of self-contained surgical equipment can be controlled and monitored at the same time from the surgeon’s operating station through the surgeon’s control panel”

21 The construction of this phrase is relevant both to the parties’ infringement arguments and to their
22 invalidity arguments. The parties’ main dispute concerns whether the phrase requires the
23 capacity to control and monitor multiple pieces of equipment at once. The touch-screen panels on
24 Stryker’s accused products display data and controls for only one piece of equipment at a time, so
25 an affirmative answer to this question would help Stryker escape a finding of infringement

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27 ³The Tennessee court construed “input means” as disclosing a “switch matrix associated with a number
28 of physically manipulable switches, keys or buttons for receiving manually entered commands, which performs
the function of receiving commands entered manually” (Dkt. No. 222-1 at 23). This order agrees that the
relevant function is receiving commands entered manually and that the corresponding structure is a switch
matrix, but the construction adopted here does not require physically manipulable switches, keys, or buttons.

1 (Stryker Br. 10). Additionally, the parties dispute whether the control and monitoring must be
2 done through the surgeon's control panel.

3 Turning first to the question whether the control and monitoring must be done through the
4 surgeon's control panel, this order declines to add Stryker's proposed limitation. Claim 1 was
5 drafted to disclose "a surgeon's command and control system comprising: a surgeon's control
6 panel . . . ; a plurality of communication interface circuits . . . ; and a central controller . . . ,
7 whereby each of the plurality of self-contained pieces of surgical equipment can be
8 simultaneously operated with the operation thereof controlled and monitored . . ."
9 (cols. 19:49–20:9). Claim 10 has a similar structure. Thus, the "whereby" clause refers to "a
10 surgeon's command and control system," which is made up of a control panel, communication
11 interface circuits, and a central controller. The entire *command and control system* is what makes
12 the monitoring and control in the "whereby" clause possible. Limiting that monitoring and
13 control to the surgeon's control panel, which is only one of three components of the command
14 and control system, would be improper.

15 Stryker emphasizes the claim language "controlled and monitored from the surgeon's
16 operating station" and argues that the "surgeon's control panel operatively positioned at the
17 surgeon's operating station" is the only recited element that a surgeon could use to control and
18 monitor the equipment "*from* the surgeon's operating station" (Stryker Br. 7). This order partially
19 agrees. The control panel is the only element that the surgeon would use *directly*, but the surgeon
20 would be relying on the entire command and control system (including the communication
21 interface circuits and central controller as well as the control panel) in order to control and
22 monitor the surgical equipment from the surgeon's operating station. The fact that the control
23 panel is the only element the surgeon would use *directly* is irrelevant to the disputed phrase and
24 would add confusion rather than clarity to its construction.

25 Turning next to the question of simultaneous control and monitoring, Stryker's position
26 fares somewhat better. The words "with the operation thereof" are at the heart of the parties'
27 dispute about this aspect of the phrase. Each of these words merits close attention. *First*, the
28 word "with" is significant. KSEA reads the disputed phrase to set forth two "independent"

1 requirements. Not so. The word “with” connects the first and section portions of the phrase by
2 grouping them together into a joint requirement rather than two independent ones. This order,
3 however, does not go so far as to agree with Stryker that “with” translates to “at the same time.”
4 *Second*, the words “the operation” refer to the simultaneous operation described in the first part of
5 the phrase. The adverb “simultaneously” modifies the verb “operated,” and there is no other
6 antecedent operation. *Third*, the word “thereof” refers to “each of the plurality of self-contained
7 pieces of surgical equipment.” The simultaneous operation is *of* “each of the . . . pieces of
8 surgical equipment.” Thus, the disputed phrase refers to the monitoring and control of the
9 simultaneous operation of multiple pieces of surgical equipment.

10 Stryker cites the prosecution history of the ’688 patent to support its argument that the
11 *simultaneous control and monitoring* of multiple items of equipment (as opposed to the control
12 and monitoring of *simultaneous operation* of the equipment) is required (Stryker Br. 8–9).
13 Stryker first relies on the applicants’ statement that “a good portion of the application is directed
14 to the ability of a surgeon to simultaneously control and monitor multiple self-contained pieces of
15 surgical equipment from a central location” (Bateman Exh. E at 7). This statement is too general
16 to override the foregoing analysis of the specific claim language. In its critique of the tentative
17 claim construction, Stryker offers its “opinion” that this statement should not be dismissed so
18 easily (Dkt. No. 291 at 3). “The purpose of consulting the prosecution history in construing a
19 claim is to exclude any interpretation that was disclaimed during prosecution.” *Chimie v. PPG*
20 *Indus., Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005). The statement in question is not such a clear
21 disclaimer. The claim language is unambiguous, and the applicant’s intent concerning “a good
22 portion of the application” is too vague to displace the specific claim language being construed.

23 Stryker also notes that the disputed phrase was added by amendment after claim 1 was
24 rejected as anticipated by a prior art reference (*see* Bateman Exh. C–E; Aldrich Exh. H). Stryker,
25 however, cites no evidence that *simultaneous control and monitoring* of equipment (as opposed to
26 control and monitoring of *simultaneous operation* of the equipment) was understood by the
27 examiner or the applicants as a distinguishing feature of the invention. As explained, the
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1 language of the disputed phrase itself does not support such an inference absent an explicit
2 statement to that effect in the prosecution history. No such evidence exists.

3 KSEA explains that “for the embodiments disclosed in the ’688 patent, it is impossible to
4 control the operation of two or more pieces of surgical equipment at the exact same time from the
5 surgeon’s control panel because the control panel can only receive one command at a time, and
6 because the serial communication link between the control panel and the central controller can
7 only transmit one command at a time” (KSEA Br. 16). Stryker does not contest this statement.
8 Instead, Stryker construes its own proposed construction to mean that the data and controls for all
9 of the pieces of surgical equipment are “present and available to the surgeon at the same time on
10 the surgeon’s control panel” even if they cannot all be operated at exactly the same time
11 (Stryker Br. 9). To the extent these arguments apply to the reasoning adopted herein, this order
12 recognizes that the disclosed invention can process only one command at a time. This
13 recognition, however, was not a basis for rejecting Stryker’s proposed construction as Stryker
14 speculated in its critique (Dkt. No. 291 at 3–4). Rather, it was noted to clarify that the use of the
15 phrase “simultaneous operation” in the construction is informed by this practical reality.

16 The phrase “whereby each of the plurality of self-contained pieces of surgical equipment
17 can be simultaneously operated with the operation thereof controlled and monitored from the
18 surgeon’s operating station” shall be construed to mean “whereby the simultaneous operation of
19 multiple pieces of surgical equipment can be monitored and controlled from the surgeon’s
20 operating station.”⁴

21 **2. THE ’286 PATENT**

22 The ’286 patent, entitled “Arrangement for the Central Monitoring and/or Control of At
23 Least One Apparatus,” was issued on May 28, 2002. Storz Endoskop GmbH was the assignee of
24 the ’286 patent at the time of issue. KSEA claims to now own the entire right, title, and interest
25 in this patent (Sec. Amd. Compl. ¶ 17). Twenty-seven claims from the ’286 patent are asserted in

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27 ⁴The Tennessee court construed “can be simultaneously operated” as meaning that “all of the surgical
28 equipment can be controlled and monitored at the same time from the surgeon’s control panel” (Dkt. No. 222-1
at 18). This order explicitly does not equate operation with control and monitoring, and the construction
adopted here does not incorporate reference to the surgeon’s control panel.

1 this litigation: independent claim 1, and dependent claims 3–4, 7–11, 13, 19–20, 22, 24–28,
2 30–33, and 35–40. Two of the terms construed by this order are found in the '286 patent. They
3 are italicized in the claim below.

4 Claim 1 covers (col. 7:8–20):

5 1. System for centrally controlling a plurality of instruments
6 for endoscopy characterized by:

7 a *self-configuring bus* and a bus master and a plurality of
8 interfaces interconnecting the instruments to the *self-*
9 *configuring bus*;

10 the instruments being operatively connected via interfaces
11 on the *self-configuring bus* to said bus master,

12 the bus master monitoring communication on the bus for
13 correct execution;

14 the bus master configuring the bus automatically *whenever*
15 *a said instrument is either newly connected or is*
16 *disconnected from said bus without interruption of the*
17 *operation of the system.*

18 The '286 patent provides a computer science solution relevant to implementing a system
19 like the one disclosed in the '688 patent. The invention “is based on the problem of improving a
20 system for centrally monitoring and/or controlling at least one unit for endoscopy, and
21 specifically for minimally invasive surgery” (cols. 1:66–2:2). The invention does so “in such a
22 way that a large number of (different or identical) units can be centrally controlled at a
23 comparatively low expenditure” and “with the replacement of failed units or the connection of
24 new units being possible during the ongoing operation without any problems and particularly
25 without interference with the other units” (col. 2:3–9).
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A. “self-configuring bus”

The parties dispute the term “self-configuring bus.” The parties’ proposed constructions are shown below.

KSEA’S PROPOSED CONSTRUCTION	STRYKER’S PROPOSED CONSTRUCTION
“a communication network in which at least two connected devices automatically communicate with each other”	“a communication medium that can be shared by more than two devices and that automatically selects which device on the bus will serve as the bus master”

The parties dispute whether a bus is a “communication network” or a “communication medium,” but KSEA abandons this dispute in its responsive brief, conceding that “[t]he term ‘bus’ . . . can be understood to mean a medium . . .” (KSEA Resp. Br. 12). The remaining disputes concern how many devices must be connected to the bus and what constitutes self-configuration.

Regarding the number of devices, the claim language refers to “a plurality of interfaces interconnecting the instruments to the self-configuring bus” (col. 7:10–12). The instruments, in turn, are “a plurality of instruments for endoscopy” (col. 7:8–9). Thus, the bus claimed by the patent interconnects “a plurality” of devices. That means more than one.

Stryker argues that, instead, the bus must be capable of being shared by *more than two* devices. Stryker’s arguments are unpersuasive. *First*, Stryker argues that the claim requires a bus master *and* a plurality of instruments, which would add up to at least three devices (Stryker Br. 22). This argument fails because the bus master could be one of the plurality of instruments. The claim does not enumerate the bus master and the plurality of instruments as separate, mutually-exclusive elements, and the specification explains that any of a variety of devices may serve as bus master in addition to performing its own function (cols. 3:15–32, 6:9–22). A dedicated bus master is not required.

In its critique of the tentative construction, Stryker responds that the question whether the bus master can be an instrument “is independent of” the question whether the bus master can be one of the plurality of instruments *recited* in claim 1. Stryker cites the limitation “the instruments being operatively connected via interfaces on the self-configuring bus to said bus master”

1 (col. 7:13–14) to argue that the instruments and the bus master are separate elements in claim 1
2 (Dkt. No. 291 at 5). Adopting this interpretation of the claim language, however, still would not
3 justify adopting Stryker’s ultimate construction. The parties framed their dispute as concerning
4 the minimum number of devices that must share or communicate with each other through the bus.
5 If the bus master of claim 1 is construed as something different from the instruments
6 interconnected to the bus, then claim 1 only would require the bus master to *configure* the bus and
7 to *monitor* communication on the bus — not to use the bus for communicating with other devices
8 (col. 7:8–20). Thus, the bus master would not count as an additional device sharing or
9 communicating through the bus with other devices.

10 *Second*, Stryker cites the specification for support, arguing that “[b]y disparaging systems
11 with a number of point-to-point serial or parallel ‘computer interfaces,’ the ’286 patent
12 distinguishes the claimed ‘bus’ from a collection of one or more point-to-point connections where
13 the various connections are not shared by more than two devices — i.e., where data sent over one
14 point-to-point link is not necessarily sent over any other point-to-point link” (Stryker Br. 21)
15 (citation omitted). This argument is too attenuated to overcome the use of the word “plurality” in
16 the claim itself. The specification language Stryker cites merely states that “[t]he use of serial or
17 parallel interfaces for controlling the devices presents the disadvantage that the number of the
18 total units which can be controlled by the master computer is restricted by the number of
19 computer interfaces” (col. 1:35–38). This observation about the prior art does not indicate that
20 the claims are limited to buses that can connect more than two devices.

21 *Third*, Stryker cites the prosecution history of the ’286 patent, arguing that in
22 distinguishing prior art, “the Applicant also disclaimed any interpretation of the claims that
23 allows the ‘bus’ to be either: (1) a single, point-to-point connection between two devices; or
24 (2) multiple point-to-point connections between various devices where those multiple connections
25 are not shared by all of those devices” (Stryker Br. 21). This, too, is a stretch. The portion of the
26 prosecution history that Stryker cites for support enumerates several respects in which the
27 claimed invention differs from the prior art reference. The number of devices connected by the
28 bus is not one of them (Bateman Exh. L at 8). There was no clear disavowal of claim scope

1 limiting the claimed bus to being capable of connecting more than two devices. *See Teleflex, Inc.*
2 *v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1327 (Fed. Cir. 2002).

3 Turning to the question of self-configuration, neither the claim language nor the
4 specification provides much elaboration. The most that can be inferred from the phrase “self-
5 configuring bus” is that the bus configures itself if some way, such that external configuration
6 which otherwise would be necessary is not required. The parties agree that the self-configuration
7 happens “automatically.” The intrinsic record of the ’286 patent uses the term of art “configure”
8 without providing any clue as to its definition, so further construing that term of the disputed
9 phrase would require a resort to extrinsic evidence. *Vitronics Corp. v. Conceptronic, Inc.*,
10 90 F.3d 1576, 1583 (Fed. Cir. 1996). None, however, was provided. In its critique of the
11 tentative construction, Stryker states that “both parties agree the term [configuration] needs
12 construing” and that “it is for the Court to try to resolve, if it can, this dispute between the parties”
13 (Dkt. No. 291 at 4). KSEA’s critique of the tentative construction did not address this term, so it
14 is *not* clear that KSEA agrees that the term “configuration” needs further construing. Moreover,
15 the claim-construction record does not include extrinsic evidence showing how the term was
16 understood by those of ordinary skill in the art. Having foregone the opportunity to provide this
17 necessary foundation for construing the term, Stryker may not now demand a construction, at
18 least on this record.

19 Stryker argues that the claimed self-configuration is the process by which the bus selects
20 which device on the bus will serve as the bus master. Stryker reasons that this process is the only
21 process disclosed in the patent that would constitute self-configuration by the bus
22 (Stryker Br. 24–25). The problem with Stryker’s argument is that claim 1 does not disclose this
23 process as part of the invention. Selection of the bus master is disclosed in dependent claims, but
24 it is not required by the independent claim. The specification further explains that the bus-master
25 selection process becomes relevant only when “more than one unit suitable for use as BUS master
26 is connected to the bus,” and even then it is only “preferable” — not required — that provisions
27 “be made for arbitration or assignment of priorities so as to ensure that only one BUS master
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1 assumes the active BUS master function” (col. 3:28–32). This feature may not be read into the
2 independent claim simply because it is included in a preferred embodiment.

3 Because of the dearth of intrinsic evidence as to the meaning of “configure,” the phrase “a
4 self-configuring bus” shall be construed simply to mean “a communication medium for
5 connecting multiple devices that automatically configures itself.”⁵ This construction, which has
6 been refined since the May 3 tentative construction was issued, recognizes and allows for the fact
7 that the bus is configured automatically by the bus master whenever an instrument is either newly
8 connected or is disconnected from the bus, as required by the claim language.

9 **B. “whenever a said instrument is either newly connected or is**
10 **disconnected from said bus without interruption of the**
11 **operation of the system”**

12 The parties dispute the phrase “whenever a said instrument is either newly connected or is
13 disconnected from said bus without interruption of the operation of the system.” The parties
14 interpret the phrase differently, but only Stryker seeks a construction. The parties’ proposed
15 constructions are shown below:

16 **KSEA’S PROPOSED**
17 **CONSTRUCTION**

18 “whenever an instrument is either newly
19 connected or is disconnected from the
20 bus without interruption of the
21 operation of the system” (no
22 construction)

16 **STRYKER’S PROPOSED**
17 **CONSTRUCTION**

18 “whenever an instrument and the
19 interface that directly links it to the
20 bus are either newly connected to or
21 disconnected from the bus without
22 interruption of the operation of the
23 system, where the bus is a
24 communication medium that can be
25 shared by more than two devices”

26 The construction of this phrase is relevant to the parties’ infringement and invalidity arguments.
27 Stryker’s proposed construction of incorporates its proposed construction of “self-configuring
28 bus.” Because the phrase “self-configuring bus” already was construed, Stryker’s arguments on
that portion of this phrase need not be addressed again here. Thus, the only dispute to be settled

⁵The Tennessee court construed “self-configuring bus” as a “shared communication medium connecting multiple stations (*e.g.*, instruments) that has functionality for (i) automatically, based on arbitration provisions or assigned priorities, determining which one of the stations will serve as the bus master, and (ii) automatically detecting the connection or disconnection of stations to or from the bus” (Dkt. No. 222-1 at 31). This order agrees that a self-configuring bus is a communication medium for connecting multiple devices, but it does not attribute any such specific functionality to the bus.

1 is whether an instrument connected to the bus and the interface that directly links it to the bus
2 must be unplugged or plugged back in together, as a single unit.

3 The claim language describes instruments that are connected to the bus through interfaces.
4 Thus, the connection of an instrument to the bus could be disrupted by breaking the bus/interface
5 joint, or the interface/instrument joint, or both. This observation suggests that the phrase
6 “whenever a said instrument is either newly connected or is disconnected from said bus” would
7 encompass disconnection and re-connection at either of those joints.

8 Stryker construes the phrase to refer only to disconnection and re-connection at the
9 interface/bus joint. Stryker’s arguments are not persuasive. *First*, Stryker notes that “only the
10 ‘interface’ directly connects to the bus” and infers from that fact that “claim 1 must be referring to
11 connecting or disconnecting an instrument’s interface when it refers to the connection or
12 disconnection of an ‘instrument’ from the bus” (Stryker Br. 18). The foregoing analysis of the
13 claim language refutes this argument.

14 *Second*, Stryker argues that the specification supports its construction because “[e]very
15 embodiment shown in the ’286 patent shows the interface of the instrument as being directly
16 linked to the bus” and because “the specification disparages point-to-point ‘serial or parallel
17 interfaces’ when describing the prior art” (Stryker Br. 20). As explained, the mere presence or
18 use of an interface layer is not enough to support Stryker’s construction.

19 *Third*, Stryker also relies on the prosecution history of the ’286 patent, arguing that the
20 applicants distinguished prior art on the ground that it allowed adapters (which Stryker analogizes
21 to the claimed interfaces) to be connected or disconnected from a bus only when there was no bus
22 power. Based on this characterization of the applicants’ revisions and remarks, Stryker concludes
23 that the claims of the ’286 patent “only include systems that, in addition to meeting the other
24 claim limitations, allow the instrument and the interface that directly links the instrument to the
25 bus to be connected to or disconnected from the bus without interrupting operation of the system”
26 (Stryker Br. 19–21). Without commenting on the accuracy of Stryker’s interpretation of the
27 prosecution history, this order finds Stryker’s conclusion therefrom inadequate to support
28 Stryker’s proposed construction. The observation that the claimed invention *allows*

1 disconnection at the interface/bus joint does not imply a *requirement* that the invention
2 accommodates disconnection *only* at that joint.


3 The phrase “whenever a said instrument is either newly connected or is disconnected from
4 said bus without interruption of the operation of the system” shall be construed to mean
5 “whenever an instrument-interface unit is newly connected or disconnected from the bus, or an
6 instrument is newly connected or disconnected from an interface connected to the bus, without
7 interruption of the operation of the system.”⁶

8 **CONCLUSION**

9 For the reasons provided herein, the constructions set forth above will apply in this action.
10 The Court reserves the authority, on its own motion, to modify these constructions if further
11 evidence warrants such a modification. Counsel, however, may not ask for modification.

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13 **IT IS SO ORDERED.**

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15 Dated: May 12, 2011.

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18 WILLIAM ALSUP
19 UNITED STATES DISTRICT JUDGE
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⁶The Tennessee court did not construe any portion of this disputed phrase (Dkt. No. 222-1 at 26–35).