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Paper No. 40
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ELEKTA, INC.,
Petitioner,

v.

VARIAN MEDICAL SYSTEMS, INC.,
Patent Owner.

Case IPR2016-00476
Patent 8,116,430 B1

Before BRIAN J. MCNAMARA, PATRICK M. BOUCHER, and GARTH D. BAER, *Administrative Patent Judges*.

BAER, *Administrative Patent Judge*.

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

Elekta Inc. ("Petitioner") filed a Corrected Petition (Paper 3, "Pet.") requesting *inter partes* review of claims 1–3, 6–10, and 12 of U.S. Patent No. 8,116,430 (Ex. 1001, "the '430 patent"). Pursuant to 35 U.S.C. § 314(a), we determined the Petition showed a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of claims 1–3, 6–10, and 12, and instituted an *inter partes* review of those claims. Paper 12 ("Inst. Dec."). Patent Owner filed a Patent Owner Response (Paper 18, "PO Resp.") and a Motion to Amend (Paper 20), requesting cancellation of claims 1–3, 7–10, and 12. Petitioner filed a Reply to Patent Owner's Response. Paper 26 ("Reply"). An oral hearing was held before the Board. Paper 39.

We issue this Final Written Decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. In this Decision, we grant Patent Owner's Motion to Amend and order cancellation of claims 1–3, 7–10, and 12. Petitioner's challenge to claim 6 remains for our consideration. Having considered the record before us, we conclude Petitioner has shown by a preponderance of the evidence that claim 6 of the '430 patent is unpatentable. *See* 35 U.S.C. § 316(e).

I. BACKGROUND

A. RELATED PROCEEDING

The parties assert the '430 patent is the subject of a proceeding before the International Trade Commission. Pet. 1; Paper 8, 2.

B. THE '430 PATENT

The '430 patent is directed to using an imaging device for radiation therapy. Ex. 1001, 1:14–16. The Specification describes a need for

"identifying the precise location of the target volume immediately prior to a dose of therapeutic radiation," and, to that end, discloses a "cone beam computed tomography radiotherapy simulator and treatment machine." *Id.* at 1:24–26, 52–53.

Figure 3 is reproduced, in part, below:

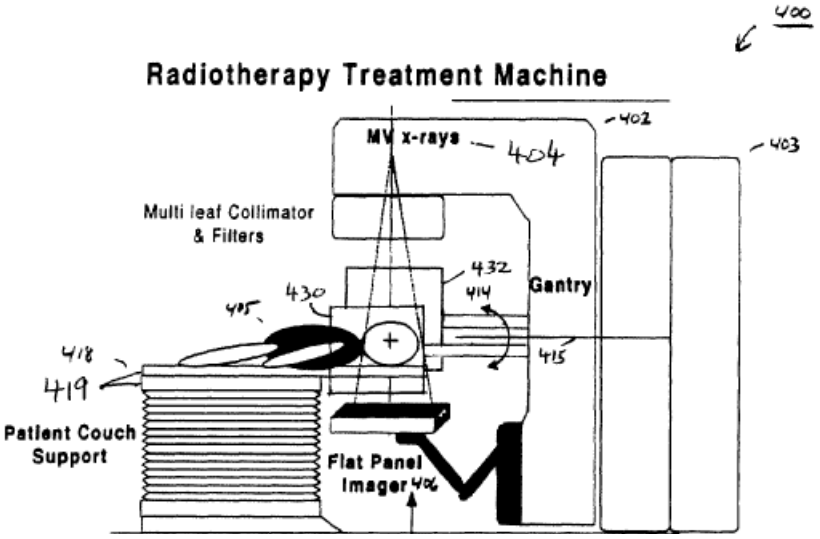

Figure 3 depicts the '430 patent's clinical treatment machine. *Id.* at 5:16–17. The Specification describes the machine as follows:

> The clinical treatment machine 400 includes a rotatable gantry 402 pivotably attached to a drive stand 403. A cone-beam CT radiation source 404 and a flat panel imager 406 oppose each other and are coupled to the rotatable gantry 402. . . .
>
> A treatment couch 418 is positioned adjacent to the gantry 402 to place the patient and the target volume within the range of operation for the radiation source 404 and the imager 406.

Id. at 5:25–35. The Specification describes that "[the] gantry rotates around the patient while the radiation from the cone-beam CT radiation source impinges the flat-panel imager." *Id.* at 2:60–63 (reference numerals omitted). "The gantry rotates and collects image data until a computer can

calculate a representation of the patient and the target volume." *Id.* at 2:62–64 (reference numerals omitted). Then, "a treatment plan may be generated from the collected image data . . . to apply a radiation dose to a target volume" while minimizing unwanted radiation to healthy tissue and critical structures. *Id.* at 2:67–3:6.

C. CLAIMS

Claims 1 and 6 recite as follows:

> 1. An apparatus, comprising:
>
> logic configured to modify a treatment plan for a target volume, the logic comprising at least one of hardwired logic and a programmable computer component;
>
> a rotatable gantry;
>
> a cone-beam radiation source coupled to the rotatable gantry; and
>
> a flat-panel imager coupled to the rotatable gantry, wherein the flat-panel imager is operable to capture image projection data to generate cone-beam computed tomography (CT) volumetric image data capable of being used by the logic to modify a treatment plan for a target volume.
>
> 6. The apparatus of claim 1, further comprising a translatable treatment couch coupled to the rotatable gantry via a communications network, wherein the translatable treatment couch is capable of movement in three planes plus angulation.

Ex. 1001, 8:63–9:8, 9:27–30.

D. Instituted Grounds of Unpatentability

We instituted *inter partes* review on the following grounds of unpatentability.

Reference(s)	Basis	Challenged Claims
Jaffray MICCAI 2001[1]	§§ 102(a), (b)	1, 6–10, 12
Jaffray MICCAI 2001	§ 103(a)	1, 6–10, 12
Jaffray MICCAI 2001 and Jaffray June 2000[2]	§ 103(a)	2, 3
Jaffray MICCAI 2001 and Jaffray JRO 1999[3]	§ 103(a)	7, 8
Jaffray Publication[4]	§§ 102(b), 103(a)	1–3, 6–10, 12

Inst. Dec. 21–22.

II. MOTION TO AMEND

Patent Owner filed a Motion to Amend, requesting cancellation of claims 1–3, 7–10, and 12, without proposing any substitute claims. Paper 18, 1. Petitioner did not file an opposition to the Motion. We grant the unopposed Motion, and, accordingly, do not address further claims 1–3, 7–

[1] Jaffray et al., *Image Guided Radiotherapy of the Prostate*, MICCAI 2001, LNCS 2208 1075–80 (2001) (Ex. 1021, "Jaffray MICCAI 2001").
[2] Jaffray et al., *Cone-Beam Computer Tomography with a Flat-Panel Imager: Initial Performance Characterization*, 27 Medical Physics 1311–23 (2000) (Ex. 1009, "Jaffray June 2000").
[3] Jaffray et al., *A Radiographic and Tomographic Imaging System Integrated into a Medical Linear Accelerator for Localization of Bone and Soft-Tissue Targets*, 45 Int. J. Radiation Oncology Biol. Phys. 773–789 (1999) (Ex. 1007, "Jaffray JRO 1999").
[4] International Publication No. WO 01/60236 A2 (Pub. Aug. 23, 2001) (Ex. 1025, "Jaffray Publication").

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