

United States District Court,  
S.D. California.

**DR SYSTEMS, INC,**  
Plaintiff.

v.

**FUJIFILM MEDICAL SYSTEMS USA, INC., et al,**  
Defendants.

**and related counterclaim,**  
and related counterclaims.

Civ. No. 06-417-B (NLS)

**Oct. 2, 2007.**

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Doyle B. Johnson, Jonah D. Mitchell, Scott David Baker, Reed Smith, San Francisco, CA, John Patrick Bovich, Robins Kaplan Miller and Ciresi, Los Angeles, CA, Morgan W. Tovey, Quinn Emanuel Urquhart Oliver & Hedges, San Francisco, CA, for Defendants.

### **CLAIM CONSTRUCTION ORDER FOR UNITED STATES PATENT NUMBER 5,452,416**

**RUDI M. BREWSTER, Senior District Judge.**

Pursuant to *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996), the Court conducted hearings on February 27-28, June 12-13, and September 24-25, 2007 regarding the construction of the disputed claims in Plaintiff DR Systems, Inc.'s United States Patent Number 5,452,416 ('416).

At the *Markman* hearing, the Court, with the assistance of the parties, analyzed the claim terms in order to prepare jury instructions interpreting the pertinent claims at issue in the '416 patent. Additionally, the Court prepared a case glossary for terms found in the claims and specification for the '416 patent considered to be technical in nature which a jury of laypersons might not understand clearly without a specific definition.

After careful consideration of the parties' arguments and the applicable statutes and case law, the Court **HEREBY CONSTRUES** the claims in dispute for the '416 patent and **ISSUES** the relevant jury instructions as written in Exhibit A, attached hereto. Further, the Court **HEREBY DEFINES** all pertinent technical terms as written in Exhibit B, attached hereto.

At the hearing, Plaintiff stated that it would file a motion to correct Figure 8 in the patent, the Court will issue an Amended Claim Construction after that motion is resolved. *See* Exh. A at 8 (third box of Claim 5).

IT IS SO ORDERED.

*EXHIBIT A FN1*

FN1. All terms appearing in bold face type have been construed by the Court and appear with their definitions in the glossary in Exhibit B. The definition for each construed term appears in within brackets and in italics after its first use in the patent. Thereafter, a term that has previously been defined appears in bold type face and is also underlined.

*UNITED STATES PATENT NUMBER 5,452,416-CLAIM CHART*

***VERBATIM CLAIM  
LANGUAGE***

***COURT'S CONSTRUCTION***

***Claim 1***

A system for presenting images of anatomical structure for examination by a diagnosing physician, including:

A system for presenting images of anatomical structure for examination by a diagnosing physician, including:

means including one or more display monitors for displaying at least one display container including a display area subdivided into a plurality of presentation areas in a predetermined array;

**means** including one or more display monitors **for displaying at least one display container** [ *a bounded area or window in which images are presented* ] **including a display area** [ *a space within a display container in which the anatomical images may be viewed* ] **subdivided into a plurality** [ *two or more* ] **of presentation areas** [ *an area in which a single image is presented at a time* ] **in a predetermined array** [ *a two-dimensional layout of presentation areas (e.g. 2X2 or 4X5) determined beforehand* ] [ *This is a means-plus-function limitation. The function is displaying at least one display container including a display area subdivided into a plurality of presentation areas in a predetermined array. The corresponding structure is a display monitor.* ];

means for storing an image database including a plurality of images of anatomical structures, the images being separated into a plurality of image groups, in which:

**means for storing an image database** [ *a collection including stored image files, physician data tables, and indices that enables storage and retrieval of images* ] **including a plurality of images of anatomical structures, the images being separated into a plurality of image groups** [ *assigning images a file name that is specific to a particular image group [one or more image series obtained during an examination]* ] [ *This is a means-plus-function limitation. The function is storing an image database including a plurality of images of anatomical structures, the images being separated into a plurality of image groups. The corresponding structure is a storage device.* ], in which:

each image group is indexed by a unique group identification;  
and

**each image group is indexed** [ *one piece of information used to locate other information* ] by a **unique group identification** [ *identification of a particular image group for a specific patient to the exclusion of all other image groups* ]; and

each image group is partitioned

each **image group** is partitioned into one or more ordered image series,

into one or more ordered image series, each ordered image series including a succession of images which illustrate incrementally registered aspects of an anatomical target, each image series being ordered by assignment to each image in the image series of a numerical position in a respective monotonically changing sequence; and

physician data tables are stored with indexes to unique group identifications and to physician identifiers and including entries specifying output functions and displaying formats;

means for receiving a physician identifier;

means for receiving a group identification;

means connected to the means for receiving, to the means for storing an image database and to the means for displaying at least one display container and responsive to a physician identifier and to a group identification for retrieving at least one image series of an image group indexed by the group identification and for displaying the at least one image series in one or more presentation areas of the plurality of presentation areas in

each ordered image series including a succession of images which illustrate incrementally registered aspects of an anatomical target, **each image series being ordered by assignment to each image in the image series of a numerical position in a respective monotonically changing sequence** [ *each image in a collection of images in an image series is assigned a numerical value representing its order in the sequence* ]; and

**physician data tables** [ *data tables organized by referring and diagnosing physician that contain preferences for each respective physician* ] are stored with **indexes** [ *values in a database used to locate information at another location* ] to **unique group identifications** and to **physician identifiers** [ *information associated with a particular physician to the exclusion of all other physicians* ] and including **entries** [ *information input into a field* ] specifying **output functions** [ *an action to be carried out by a program to control presentation of images in an image group to a physician according to preprogrammed output preferences* ] and **displaying formats** [ *for each diagnosing physician, predetermined settings for the display on the monitor of all image series including, for example, mode, layout, size, and coupling of images* ];

**means for receiving a physician identifier** [ *This is a means-plus-function limitation. The function is to receive the physician identifier. The corresponding structure is a trackball mechanism, keyboard, user interface 14a, screen driver 14b.*];

**means for receiving a group identification** [ *This is a means-plus-function limitation. The function is to receive the group identification. The corresponding structure is a trackball mechanism, keyboard, user interface 14a, screen driver 14b.*];

**means connected to the means for receiving, to the means for storing an image database and to the means for displaying at least one display container and responsive to a physician identifier and to a group identification for retrieving at least one image series of an image group indexed by the group identification and for displaying the at least one image series in one or more presentation areas of the plurality of presentation areas in a display format contained in the physician data tables** [ *This is a means-plus-function limitation. The function is to retrieve at least one image series of an image group indexed by the group identification and to display the at least one image series in one or more presentation areas of the plurality of presentation areas in a display format contained in the physician data tables. The corresponding structure is the algorithm described at Figure 7 (except 83); col. 9, line 44 through col. 10, line 13 running on a computer with video card as described in col. 6, lines 3-5.*]; and

a display format contained in the physician data tables; and means for providing an output from the system according to an output function specified in the physician data tables.

**means for providing an output from the system according to an output function specified in the physician data tables** [ *This is a means-plus-function limitation. The function is to provide an output from the system according to an output function specified in the physician data tables. The corresponding structure is a computer, physical data tables as shown in Figure 6 (such as, for example, boxes 52 and 63), an algorithm associated with either the DONE, CHANGE SERIES, PRINT, NEXT, and/or PREVIOUS functions identified at col. 11, lines 7-47 and Figure 8 (box 92 and box below, box 96 and box below), Figure 10 (box 113 and box below, box 118 and box below).*].

## Claim 2

The system of claim 1, wherein: the physician data tables include at least one entry specifying a mode of image series presentation, in which a first mode is a monitor mode and a second mode is a series mode; and

The system of claim 1, wherein:

the **physician data tables** include at least one entry [ *information input into a field* ] specifying a mode of image series presentation, in which a first mode is a **monitor mode** [ *an image series is presented in the order of its respective sequence in a single respective display container such that each presentation area of the single respective display container includes no more than one image* ] and a second mode is a **series mode** [ *each image series is presented one image at a time in the order of its respective sequence in a single respective presentation area of the plurality of presentation areas* ]; and

the means for retrieving and displaying including means for ordering the display of the at least one image series in response to mode specification by:

the **means for retrieving and displaying** including **means for ordering the display** [ *Function and structure herebelow* ] of the at least one image series in response to mode specification by:

displaying each image series of the at least one image series in the order of its respective sequence in a single respective display container in the at least one display container such that each presentation area of the single respective display container includes no more than one image, in response to designation of the monitor mode; and

displaying each image series of the at least one image series in the order of its respective sequence in a single respective **display container** in the at least one **display container** such that each **presentation area** of the single respective **display container** includes no more than one image, in response to designation of the **monitor mode**; and [ *This is a means-plus-function limitation. The function is ordering the display of the at least one image series in response to mode specification. The corresponding structure is a computer performing the algorithm steps of boxes 81, 82 in Figure 7 and col. 6, line 61 through col. 7, line 5; & col. 7, lines 41-44.*]

displaying each image series of the at least one image series one image at the time in the order of its respective sequence in a single respective presentation

displaying each image series of the at least one image series one image at the time in the order of its respective sequence in a single respective **presentation area** of the **plurality of presentation areas**, in response to designation of the **series mode**.

area of the plurality of presentation areas, in response to designation of the series mode.

### **Claim 3**

The system of claim 2, further including means for synchronizing the presentation of each image series of two or more image series such that whenever the display of one image series of the two or more image series is changed to display a next image in the order of its respective sequence, each other image series of the two or more image series is correspondingly changed by the means for retrieving and displaying.

### **Claim 5**

The system of claim 1, further including:

means for displaying a palette display container on the one or more display monitors, the palette display container for presenting a plurality of presentation areas in an array;

means for selecting an image of an image series displayed in the at least one display container and reproducing the selected image in a presentation area of the palette display container.

### **Claim 6**

A method for presenting images of anatomical structure for examination by a diagnosing

The system of claim 2, further including **means for synchronizing the presentation of each image series** [ *This is a means-plus-function limitation. The function is synchronizing the presentation of each image series of two or more image series such that whenever the display of one image series of the two or more image series is changed to display a next image in the order of its respective sequence, each other image series of the two or more image series is correspondingly changed. The corresponding structure is computer program implementing the algorithms described at boxes 110, 111, 112 and box below of Figure 10 and Col. 13, line 57 through col. 14, line 8.*] of two or more image series such that whenever the display of one image series of the two or more image series is changed to display a next image in the order of its respective sequence, each other image series of the two or more image series is correspondingly changed by the means for retrieving and displaying.

The system of claim 1, further including:

and **means for displaying a palette display container** [ *the display container provided to receive and reproduce images which are selected from another display container.*] [ *This is a means-plus-function limitation. The function is displaying a palette display container on the one or more display monitors. The corresponding structure is computer program implementing Figure 7, block 83* ] on the one or more display monitors, the palette display container for presenting a plurality of presentation areas in an array; and

**means for selecting an image of an image series displayed in the at least one display container and reproducing the selected image in a presentation area of the palette display container.** [ *This is a means-plus-function limitation. The function is selecting an image of an image series displayed in the at least one display container and reproducing the selected image in a presentation area of the palette display container. The corresponding structure is trackball mechanism 16; keyboard 22; screen driver 14b; user interface 14a; image subsystem 14c; computer program implementing blocks 93-94a depicted in Figure 8\*; col. 12:31-58.*] \*Court to resolve whether or not there is a correctable error in the "no" branch from block 94.

**A method for presenting images of anatomical structure for examination by a diagnosing physician** [ *a method used by a diagnosing physician for examination of medical images* ], the method

physician, the method being executed on a computer display system having:

a display for displaying at least one display container subdivided into a plurality of presentation areas in a predetermined array;

a storage subsystem for storing an image database including a plurality of images of anatomical structures; and

means connected to the storage subsystem and to the at least one display container for retrieving images from the image database and displaying retrieved images in the at least one display container;

the method including the steps of:

storing a plurality of images in the image database; separating the plurality of images into image groups; indexing each image group by a unique group identification;

partitioning each image group into one or more ordered image series, each ordered image series including a succession of images which illustrate incrementally registered aspects of an anatomical target, each image series being ordered by assignment to each image in the image series of a numerical position in a respective monotonically changing sequence;

storing a first data table in the storage subsystem, the first data table listing a plurality of referring physician identifiers, each referring physician being

being executed on a computer display system having:

a display for displaying at least one **display container** subdivided into a **plurality of presentation areas** in a predetermined array;

a **storage subsystem** [ *storage device that stores information* ] for storing an **image database** including a **plurality** of images of anatomical structures; and

**means connected to the storage subsystem and to the at least one display container for retrieving images from the image database and displaying retrieved images in the at least one display container** [ *This is a means plus function claim. The function is retrieving images from the image database and displaying retrieved images in the at least one display container. The structure is the algorithm described at Figure 7 (except 83); col. 9, line 44 through col. 10, line 13 running on a computer with video card as described in col. 6, lines 3-5.*];

the method including the steps of:

storing a **plurality** of images in the **image database**; separating the **plurality** of images into **image groups**; indexing each **image group** by a **unique group identification**;

partitioning each **image group** into one or more ordered image series, each ordered image series including a succession of images which illustrate incrementally registered aspects of an anatomical target, each image series being ordered by assignment to each image in the image series of a numerical position in a respective monotonically changing sequence;

storing a first data table in the **storage subsystem**, the first data table listing a plurality of referring **physician identifiers**, each referring physician being **indexed** from at least one group identification, each referring physician **identifier** identifying a referring physician and including respective **fields** specifying **output preferences** [ *settings*

indexed from at least one group identification, each referring physician identifier identifying a referring physician and including respective fields specifying output preferences of the identified referring physician for outputting to the identified referring physician images from the display;

storing a second data table in the storage subsystem, the second data table listing a plurality of diagnosing physician identifiers, each diagnosing physician identifier identifying a diagnosing physician and including respective fields specifying format preferences and mode preferences of the identified diagnosing physician for displaying images on the display; and

providing a group identification; providing a diagnosing physician identifier;

in response to the group identification and the diagnosing physician identifier, retrieving at least one image series of an image group indexed by the group identification and displaying the at least one image series in one or more presentation areas of the plurality of presentation areas in accordance with a format preference specified in fields of the diagnosing physician identifier; and

outputting images from the at least one image series according to output preferences of a referring physician identified by a referring physician identifier indexed from the group

*specifying a physician's preferred choice* ] of the identified referring physician for outputting to the identified referring physician images from the display;

storing a second data table in the **storage subsystem**, the second data table listing a **plurality** of diagnosing **physician identifiers**, each diagnosing **physician identifier** identifying a diagnosing physician and including respective fields specifying **format preferences** [ *prespecified number and arrangement of presentation areas in which a diagnosing physician prefers all image series be viewed* ] and **mode preferences** [ *prespecified settings that determine whether a physician prefers all image series be displayed in monitor or series mode* ] of the identified diagnosing physician for displaying images on the display; and

providing a group identification; providing a diagnosing **physician identifier**;

in response to the group identification and the diagnosing **physician identifier**, retrieving at least one image series of an **image group indexed** by the group identification and displaying the at least one image series in one or more **presentation areas** of the **plurality** of **presentation areas** in accordance with a format preference specified in fields of the diagnosing **physician identifier**; and

**outputting images** [ *transferring images from a diagnosing physician to a referring physician* ] from the at least one image series according to **output preferences** of a referring physician identified by a referring **physician identifier indexed** from the group identification.

## EXHIBIT B

### *UNITED STATES PATENT NUMBER 5,452,416-GLOSSARY OF TERMS*

#### ***TERM***

**A method for presenting images of anatomical structure for examination by a diagnosing physician display area**

**display container**

**displaying format(s)**

**each image series being ordered by assignment to each image in the image series of a numerical position in a respective monotonically changing sequence**

**entry(ies)**

**field(s)**

**image database**

**image group(s)**

**indexed**

**indexes**

**means connected to the means for receiving, to the means for storing an image database and to the means for displaying at least one display container and responsive to a physician identifier and to a group identification for retrieving at least one image series of an image group indexed by the group identification and for displaying the at least one image series in one or more presentation areas of the plurality of presentation areas in a display format contained in the physician data tables means for displaying a palette display container**

#### ***DEFINITION***

a method used by a diagnosing physician for examination of medical images

a space within a display container in which the anatomical images may be viewed

a bounded area or window in which images are presented

for each diagnosing physician, predetermined settings for the display on the monitor of all image series including, for example, mode, layout, size, and coupling of images

each image in a collection of images in an image series is assigned a numerical value representing its order in the sequence

information input into a field

a location in a data table

a collection including stored image files, physician data tables, and indices that enables storage and retrieval of images

one or more image series obtained during an examination

one piece of information used to locate other information

values in a database used to locate information at another location

This is a means-plus-function limitation. The function is to retrieve at least one image series of an image group indexed by the group identification and to display the at least one image series in one or more presentation areas of the plurality of presentation areas in a display format contained in the physician data tables. The corresponding structure is the algorithm described at Figure 7 (except 83); col. 9, line 44 through col. 10, line 13 running on a computer with video card as described in col. 6, lines 3-5.

This is a means-plus-function limitation. The function is displaying a palette display container on the one or



**means ... for displaying at least one display container including a display area subdivided into a plurality of presentation areas in a predetermined array**

**means for providing an output from the system according to an output function specified in the physician data tables**

**means for receiving a group identification**

**means for receiving a physician identifier**

**means for selecting an image of an image series displayed in the at least one display container and reproducing the selected image in a presentation area of the palette display container**

**means for storing an image database including a plurality of images of anatomical structures, the images being separated into a plurality of image groups**

means for synchronizing the presentation of each image series

more display monitors. The corresponding structure is computer program implementing Figure 7, block 83.

This is a means-plus-function limitation. The function is displaying at least one display container including a display area subdivided into a plurality of presentation areas in a predetermined array. The corresponding structure is a display monitor.

This is a means-plus-function limitation. The function is to provide an output from the system according to an output function specified in the physician data tables. The corresponding structure is a computer, physical data tables as shown in Figure 6 (such as, for example, boxes 52 and 63), an algorithm associated with either the DONE, CHANGE SERIES, PRINT, NEXT, and/or PREVIOUS functions identified at col. 11:7-47 and Figure 8 (box 92 and box below, box 96 and box below), Figure 10 (box 113 and box below, box 118 and box below).

This is a means-plus-function limitation. The function is to receive the group identification. The corresponding structure is a trackball mechanism, keyboard, user interface 14a, screen driver 14b.

This is a means-plus-function limitation. The function is to receive the physician identifier. The corresponding structure is a trackball mechanism, keyboard, user interface 14a, screen driver 14b.

This is a means-plus-function limitation. The function is selecting an image of an image series displayed in the at least one display container and reproducing the selected image in a presentation area of the palette display container. The corresponding structure is trackball mechanism 16; keyboard 22; screen driver 14b; user interface 14a; image subsystem 14c; computer program implementing blocks 93-94a depicted in Figure 8\*; col 12:31-58. \*Court to resolve whether or not there is a correctable error in the "no" branch from block 94.

This is a means-plus-function limitation. The function is storing an image database including a plurality of images of anatomical structures, the images being separated into a plurality of image groups. The corresponding structure is a storage device.

This is a means-plus-function limitation. The function is synchronizing the presentation of each image series of two or more image series such that whenever the display of one image series of the two or more image

	series is changed to display a next image in the order of its respective sequence, each other image series of the two or more image series is correspondingly changed. The corresponding structure is computer program implementing the algorithms described at boxes 110, 111, 112 and box below of Figure 10 and Col. 13, line 57 through col. 14, line 8.
<b>monitor mode</b>	an image series is presented in the order of its respective sequence in a single respective display container such that each presentation area of the single respective display container includes no more than one image
<b>output function(s)</b>	an action to be carried out by a program to control presentation of images in an image group to a physician according to preprogrammed output preferences
<b>palette display container</b>	the display container provided to receive and reproduce images which are selected from another display container
<b>physician data table(s)</b>	data tables organized by referring and diagnosing physician that contain preferences for each respective physician
<b>physician identifier(s)</b>	information associated with a particular physician to the exclusion of all other physicians
<b>plurality</b>	two or more
<b>predetermined array</b>	a two-dimensional layout of presentation areas (e.g. 2X2 or 4X5) determined beforehand
<b>presentation area(s)</b>	an area in which a single image is presented at a time
<b>series mode</b>	each image series is presented one image at a time in the order of its respective sequence in a single respective presentation area of the plurality of presentation areas
<b>storage subsystem</b>	storage device that stores information
<b>the images being separated into a plurality of image groups</b>	assigning images a file name that is specific to a particular image group
<b>unique group identification</b>	identification of a particular image group for a specific patient to the exclusion of all other image groups

S.D.Cal.,2007.

DR Systems, Inc. v. Fujifilm Medical Systems USA, Inc.

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