



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**23.10.2019 Bulletin 2019/43**

(51) Int Cl.:  
**A61B 8/08 (2006.01) A61B 8/00 (2006.01)**

(43) Date of publication A2:  
**16.10.2019 Bulletin 2019/42**

(21) Application number: **19173283.3**

(22) Date of filing: **30.07.2014**

(84) Designated Contracting States:  
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR**

(30) Priority: **31.07.2013 US 201361860900 P**  
**02.10.2013 US 201314044842**  
**19.11.2013 US 201314084589**  
**29.11.2013 US 201361910139 P**  
**27.05.2014 US 201462003448 P**

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:  
**14831624.3 / 3 027 116**

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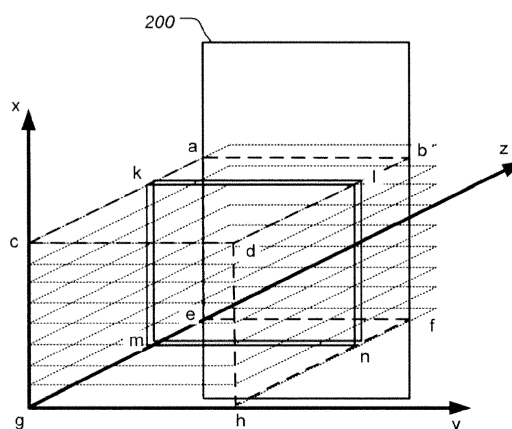
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(54) **REDUCED IMAGE READING TIME AND IMPROVED PATIENT FLOW IN AUTOMATED BREAST ULTRASOUND USING ENHANCED, WHOLE-BREAST NAVIGATOR OVERVIEW IMAGE**

(57) A method and system acquiring, processing and displaying breast ultrasound images in a way that makes breast ultrasound screening more practical and thus more widely used, and reduces missing cancers in screening and diagnosis, using automated scanning of chestwardly compressed breasts with ultrasound. Enhanced, whole-breast navigator overview images are generated from scanning breasts with ultrasound that emphasize abnormalities in the breast while excluding obscuring influences of non-breast structures, particularly those external to the breast such as ribs and chest wall, and differentiating between likely malignant and likely benign abnormalities and otherwise enhancing the navigator overview image and other images, to thereby reduce the time to read, screen, or diagnose to practical time limits and also reduce screening or diagnostic errors.



**Fig. 2**



## EUROPEAN SEARCH REPORT

Application Number  
EP 19 17 3283

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| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                       |                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Category                                                                                                                                                                                                                                               | Citation of document with indication, where appropriate, of relevant passages                                                                                                                                                                                                                                                                                                                                                                     | Relevant to claim                                                                                                                                                                                                                                                                     | CLASSIFICATION OF THE APPLICATION (IPC)                     |
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| The present search report has been drawn up for all claims                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                       |                                                             |
| Place of search<br><b>Munich</b>                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Date of completion of the search<br><b>16 September 2019</b>                                                                                                                                                                                                                          | Examiner<br><b>Daoukou, Eleni</b>                           |
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EPO FORM 1503 03.82 (P04C01)



## EUROPEAN SEARCH REPORT

 Application Number  
 EP 19 17 3283

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| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                      |                                                              |                                         |
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| Category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Citation of document with indication, where appropriate, of relevant passages                                                                                        | Relevant to claim                                            | CLASSIFICATION OF THE APPLICATION (IPC) |
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| The present search report has been drawn up for all claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                      |                                                              | TECHNICAL FIELDS SEARCHED (IPC)         |
| Place of search<br><b>Munich</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                      | Date of completion of the search<br><b>16 September 2019</b> | Examiner<br><b>Daoukou, Eleni</b>       |
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1 EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 19 17 3283

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|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------|
| 专利名称(译)        | 使用增强的全乳房导航仪概览图像，减少了图像读取时间并改善了自动乳房超声检查中的患者流量                                                                                                                            |         |            |
| 公开(公告)号        | <a href="#">EP3552551A3</a>                                                                                                                                            | 公开(公告)日 | 2019-10-23 |
| 申请号            | EP2019173283                                                                                                                                                           | 申请日     | 2014-07-30 |
| [标]申请(专利权)人(译) | QVIEW医疗<br>NEFF THOMAS                                                                                                                                                 |         |            |
| 申请(专利权)人(译)    | QVIEW MEDICAL , INC.<br>NEFF , THOMAS                                                                                                                                  |         |            |
| 当前申请(专利权)人(译)  | QVIEW MEDICAL , INC.<br>NEFF , THOMAS                                                                                                                                  |         |            |
| [标]发明人         | NEFF THOMAS<br>ZHANG WEI<br>SCHEIDER ALEXANDER<br>WANG SHIH PING<br>ROMSDAHL HARLAN                                                                                    |         |            |
| 发明人            | NEFF, THOMAS<br>ZHANG, WEI<br>SCHEIDER, ALEXANDER<br>WANG, SHIH-PING<br>ROMSDAHL, HARLAN                                                                               |         |            |
| IPC分类号         | A61B8/08 A61B8/00                                                                                                                                                      |         |            |
| CPC分类号         | A61B6/502 A61B8/0825 A61B8/463 A61B8/465 A61B8/469 A61B8/483 A61B8/5207 A61B8/5223<br>A61B8/523 A61B8/5261 G01S7/52073 G01S15/8993 G16H30/40 G16H40/63 G16H50/20       |         |            |
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#### 摘要(译)

一种方法，系统，其获取，处理和显示乳房超声图像的方法是，使用自动超声扫描向胸部压缩的乳房，从而使乳房超声筛查更加实用并因此得到更广泛的使用，并减少筛查和诊断中的遗漏癌症。增强的全乳房导航器概览图像是通过超声扫描乳房而生成的，该图像强调了乳房的异常，同时排除了非乳房结构（尤其是乳房外部的肋骨和胸壁）的模糊影响，并区分了可能的恶性和恶性。可能的良性异常，并以其他方式增强导航器概览图像和其他图像，从而将读取，筛选或诊断的时间减少到实际的时间限制，并且还减少筛选或诊断错误。

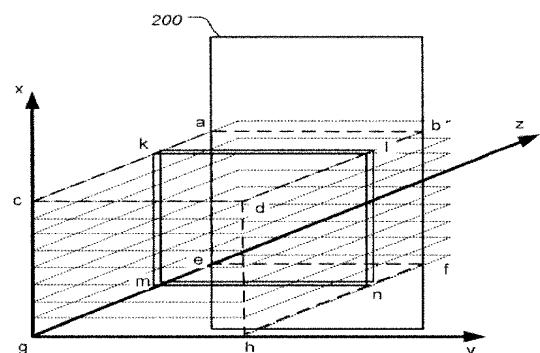


Fig. 2

