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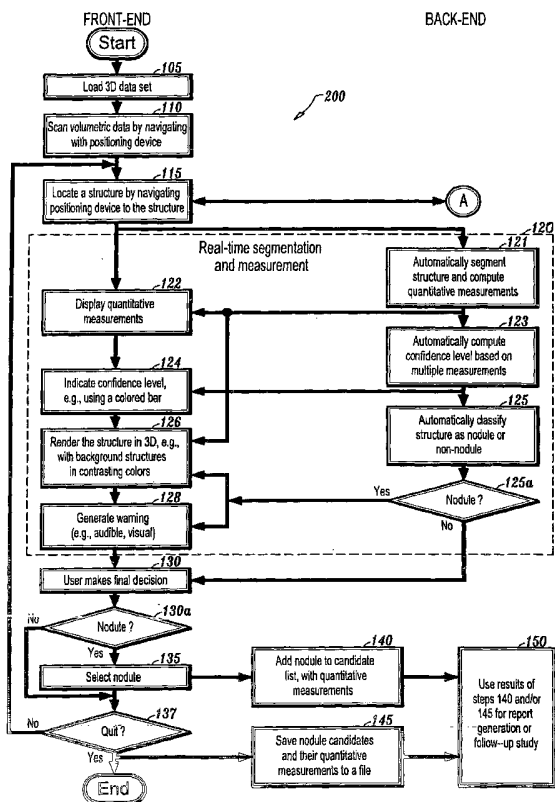
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND SYSTEM FOR AUTOMATICALLY DETECTING LUNG NODULES FROM MULTI-SLICE HIGH RESOLUTION COMPUTED TOMOGRAPHY (MSHR CT) IMAGES



(57) Abstract: A method for automatically detecting lung nodules from MSHR CT images includes defining a volume of interest (VOI) for a lung volume in an MSHR CT image (314). The lung volume is examined using the VOI (316), including, determining a local histogram of intensity (316a) and adaptive threshold values for segmenting the VOI to obtain seeds (316d). Each seed is examined to detect lung nodules therefrom (318), including segmenting anatomical structures represented by the seed by applying a segmentation method that adaptively adjusts a segmentation threshold value based on histogram analysis of the seed to extract the structures based on three-dimensional connectivity and histogram intensity information (318a), and classifying each structure as a lung nodule or a non-nodule based on a priori knowledge corresponding to lung nodules and related structures (320). The lung nodules are displayed (326). The lung nodules are analyzed (328), including automatically quantifying lung nodule features to provide an automatic detection decision (328a).

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06F19/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 873 824 A (DOI KUNIO ET AL) 23 February 1999 (1999-02-23) abstract; figure 17 ---	1, 20
Y	US 6 058 322 A (DOI KUNIO ET AL) 2 May 2000 (2000-05-02) column 9, line 23 - line 44 -----	1, 20

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

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- * & * document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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