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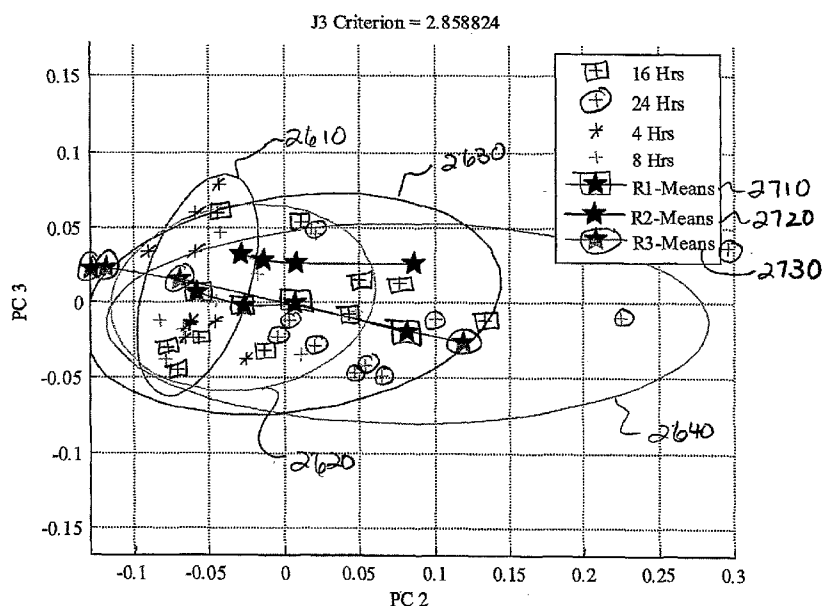
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Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a
patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: DIGITIZING BIOLOGY



(57) Abstract: A method and apparatus for determining the progress of a disease. A pre-determined vector space is determined where the vector space mathematically describes a reference set of wavelength resolved data at a plurality of time intervals. A sample containing at least one cell is irradiated with light. Target data is collected where the target data corresponds to at least one of light emitted from or scattered by the sample and includes a plurality of spatially accurate wavelength resolved measurements of light. The target data is transformed into the pre-determined vector space for each spatially accurate wavelength resolved measurement of light. A distribution of transformed points is analyzed in the plurality of pre-determined vector space. Based on the analysis, a transition of a disease condition of the sample is classified.



- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 08/26777

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8): A61B 5/00, G01J 3/00,5/02 (2007.01)

USPC: 600/310

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)
USPC: 600/310, 128/920, 250/339.01, 341.1 356/300

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Thomson Dialog, www.Answers.com, USPTO (Published Patent Applications, Published Patents) Search terms: vector, space, processor, database, spectral, method, image, select, plurality, light, cancer, breast, prostate, bone, bladder, grade, stage, immune

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

Thomson Dialog

Search terms: vector, space, processor, database, spectral, method, image, select, plurality, light, cancer, breast, prostate, bone, bladder, grade, stage, immune, irradiate, wavelength, morphology

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6,826,422 B1 (MODELL et al.) 30 November 2004 (30.11.2004) entire document, especially col. 8, ln. 28-35; col. 9, ln. 3-23 and ln. 47-50; col. 10, ln. 1-19 and ln. 30-60; col. 14, ln. 18-34 and 58-67; col. 19, ln. 16-57	1, 2 ----- 3, 5-17
Y	US 2004/0010197 A1 (FAUPEL et al.) 15 January 2004 (15.01.2004) para [0016], [0056], and [0085]	5-17
Y	US 2003/0018272 A1 (TREADO et al.) 23 January 2003 (23.01.2003) para [0051], and [0054]	3
Y	US 6,289,236 B2 (KOENIG et al.) 11 September 2001 (11.09.2001) col. 5, ln. 53-56	3, 8, 16
Y	US 6,201,989 B1 (WHITEHEAD et al.) 13 March 2001 (13.03.2001) col. 9, ln. 24-44 and col. 15, ln. 28-31	6-9, 12
Y	US 6,885,965 B2 (BUTLER et al.) 26 April 2005 (26.04.2005) col. 5, ln. 30-44 and col. 6, ln. 23-33	14-17

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