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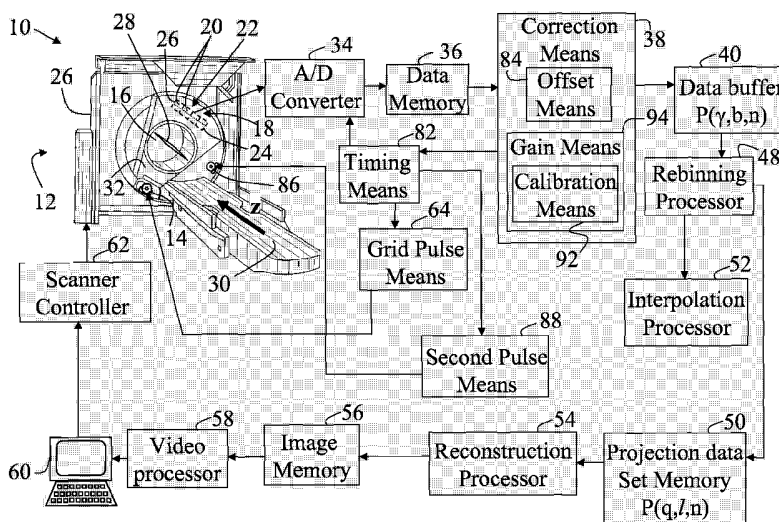
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**Declaration under Rule 4.17:**

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

[Continued on next page]

(54) Title: PULSED X-RAY FOR CONTINUOUS DETECTOR CORRECTION



(57) Abstract: A radiographic imaging apparatus (10) comprises a primary radiation source (14) which projects a beam of radiation into an examination region (16). A detector (18) converts detected radiation passing through the examination region (16) into electrical detector signals representative of the detected radiation. The detector (18) has at least one temporally changing characteristic such as an offset B(t) or gain A(t). A grid pulse means (64) turns the primary radiation source (14) ON and OFF at a rate between 1000 and 5000 pulses per second, such that at least the offset B(t) is re-measured between 1000 and 5000 times per second and corrected a plurality of times during generation of the detector signals. The gain A(t) is measured by pulsing a second pulsed source (86, 100, 138) of a constant intensity (XRef) with a second pulse means (88). The gain A(t) is re-measured and corrected a plurality of times per second during generation of the detector signals.

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**Published:**

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*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.*

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23 November 2006

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/IB2005/054069

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. G01T1/29

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)  
G01T

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, COMPENDEX

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 341 956 A (BAX ET AL) 27 July 1982 (1982-07-27) column 1, line 13 - line 18 column 4, line 28 - line 49 column 1, line 37 - line 42 column 2, line 51 - line 66 column 4, line 57 - column 5, line 6 -----	1,2,4, 15,16,25
A	DE 43 03 948 A1 (SIEMENS AG, 80333 MUENCHEN, DE) 11 August 1994 (1994-08-11) column 1, line 3 - line 11; figures column 2, line 25 - line 35 -----	2,4,16

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

4 July 2006

Date of mailing of the international search report

15. 09. 2006

Name and mailing address of the ISA/

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB2005/054069

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

see annex

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-4,15-17,25

A radiographic imaging apparatus and method wherein the primary radiation source is pulsed ON and OFF at a rate between 1000 and 5000 pulses per second  
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2. claims: 5-13,18-24

A radiographic imaging apparatus and method with a second pulsed source and a second pulse means  
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3. claim: 14

A radiographic imaging apparatus with correction means which are at least partially integrated with the A/D converter  
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2005/054069

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4341956	A	27-07-1982	NONE
DE 4303948	A1	11-08-1994	NONE