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11152463.3 28 January 2011 (28.01.2011) EP(71) Applicant (for all designated States except US):
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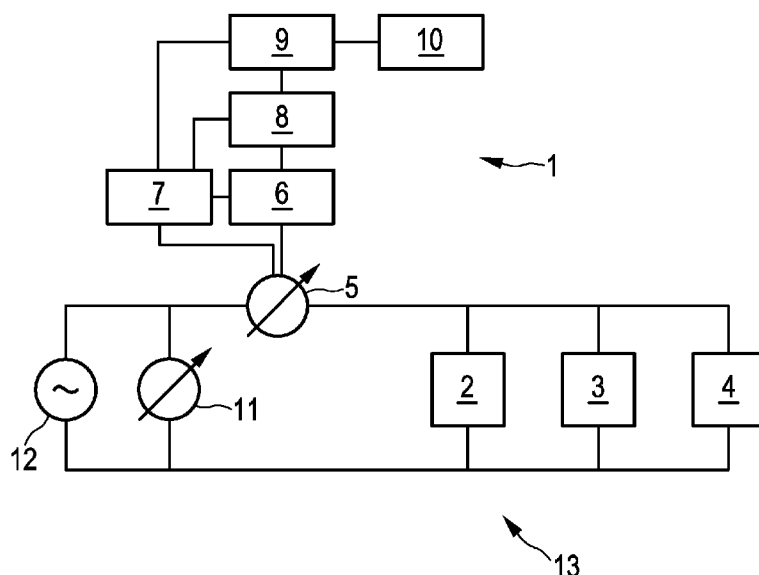
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Declarations under Rule 4.17:

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

[Continued on next page]

(54) Title: DISAGGREGATION APPARATUS

**FIG. 1**

(57) **Abstract:** The invention relates to a disaggregation apparatus for determining electrical statuses of electrical consumers (2, 3, 4) in an electrical network (13). An overall electrical parameter, which is measured at least two different times and which is represented by a first number of sampled electrical parameter values, is used for determining a compressed difference overall electrical parameter, which is represented by a second number of sampled electrical parameter values being smaller than the first number. Compressed electrical signatures of the electrical consumers are provided, and the statuses of the electrical consumers are determined depending on the compressed difference overall electrical parameter and the compressed electrical signatures. Since compressed parameters and signatures are used for the disaggregation, less data have to be processed and have to be stored, thereby reducing the computational and storing efforts needed for the disaggregation.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. H04L12/24
ADD.

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)
H04L

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 practicable, search terms used)

EP0-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 471 536 A (INTELLIGENT SUSTAINABLE ENERGY LTD [GB]) 5 January 2011 (2011-01-05) page 9, paragraph 1; claims 1,12; figures 1,2	1-13
X	----- WO 2010/007369 A2 (ISIS INNOVATION [GB]; DONALDSON JAMES [GB]; MCCULLOCH MALCOLM [GB]) 21 January 2010 (2010-01-21) page 12, paragraph 3; claims 1,13,25,31,33,39,41,60; figures 1,12,13 -----	1-13

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Further documents are listed in the continuation of Box C.

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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

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Date of the actual completion of the international search

24 July 2012

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2471536	A	05-01-2011	NONE	

WO 2010007369	A2	21-01-2010	AU 2009272473 A1	21-01-2010
			CA 2729960 A1	21-01-2010
			EP 2304449 A2	06-04-2011
			EP 2469287 A1	27-06-2012
			JP 2011528121 A	10-11-2011
			US 2011153246 A1	23-06-2011
			WO 2010007369 A2	21-01-2010
