

European Patents Fulltext

FILE DESCRIPTION

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- Bibliographic, administrative, and legal status data from the *European Patent Bulletin* (1978 forward)
- Complete specification(s) and claims of published, unexamined applications ("A" documents) from 1986 forward (full text in the original language of publication)
- Complete specification(s) and claims of examined, granted patents ("B" documents), if available, from 1991 forward (full text in English, German, and French)

Titles are available in all three languages. English abstracts are added to German and French documents within several weeks of their addition to the database. Claims of "B" documents are searchable in all three official languages. The approximate breakdown of languages for the full patent specification (text) is 55-60% English, 30- 35% German, and 10-15% French.

The full text of European patents and applications is obtained from the EPO. Bibliographic, administrative, and legal status information corresponds to the *European Patent Bulletin*, and to its online equivalent, the European Patent Registry.

SUBJECT COVERAGE

European Patents Fulltext covers all technologies patentable under European patent law.

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DIALOG FILE DATA

Inclusive Dates: December 1978 to the present.

Update Frequency: Weekly

File Size: 900,000 records as of February 1998

CONTACT

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DIALOG(R)File 348:EUROPEAN PATENTS
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Power conservation for battery powered data processing systems.
Leistungseinsparung fur batteriebetriebene Datenverarbeitungssysteme.
Conversation d'energie pour systemes de traitement de donnees a piles.
PATENT ASSIGNEE:

/CO, CO=, PA=, AK=, AS= ACER INCORPORATED, (1037593), 347 Chung Feng Road, Lungtan, Taoyuan
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PC=, PN=,PN, PD= PATENT (CC, No, Kind, Date): EP 473249 A2 920304 (Basic)
EP 473249 A3 920805

AC=, AN=, /AN, AD= APPLICATION (CC, No, Date): EP 91301949 910308;

AC=, AN=, /AN, AD= PRIORITY (CC, No, Date): US 573628 900827

DS= DESIGNATED STATES: DE; FR; GB; IT

IC= INTERNATIONAL PATENT CLASS: G06F-001/32;

CT= CITED PATENTS (EP A): DE 3040326 A; GB 2064835 A

RF= CITED REFERENCES (EP A):

PATENT ABSTRACTS OF JAPAN vol. 7, no. 35 (P-175)(1180) 10 February 1983

ABSTRACT EP 473249 A2

/AB A battery powered data processing device having an oscillator (209) and a microprocessor (202) connected to the oscillator, the microprocessor having a programmable standby mode and a circuit responsive to the standby mode for disabling the oscillator. The device uses a sensor circuit (219-221) to generate from the standby mode when a key is depressed. A signal generator (210) is responsive to signals from the oscillator to disable the reset signal. (see image in original document)

ABSTRACT WORD COUNT: 78

LEGAL STATUS (Type, Pub Date, Kind, Text):

/LS Application: 920304 A2 Published application (Alwith Search Report;A2without Search Report)

Search Report: 920805 A3 Separate publication of the European or International search report

LD= Examination: 930324 A2 Date of filing of request for examination: 930127

AF= Examination: 970409 A2 Date of despatch of first examination report: 970221

LA= LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
AV= CLAIMS A	(English)	EPABF1	370
DT= SPEC A	(English)	EPABF1	1130
WA= Total word count - document A			1500
WB= Total word count - document B			0
WD= Total word count - documents A + B			1500

SPECIFICATION EP 473249 A3

/SP, /TX The present invention relates to a processing device, for example forthe conservation of power in battery powered processing systems.

The usefulness of a battery-powered device such as a portable personal computer will typically increase if the time duration of its battery sustained operation can be prolonged. Given the fixed amount of electricity which a battery can store, the time duration of a battery-powered device must in turn be prolonged by conservation of its power consumption.

Power consumption is conserved in the prior art by switching a device's circuits to a low-power, standby mode at times when operation of the circuits is not needed. Such conservation is commonly applied to keyboard devices where the "think" time of its operators is usually comparable, if not longer, that the "keying -in" time.

One prior art method of power conservation is disclosed in

SAMPLE RECORD (cont'd)

US-A-4,649,373. Another prior art power conservation method is disclosed in Application Notes AP-252 of the "Microcontroller Handbook" published by Intel Corporation, page 9-54. In these prior art methods, one or more output ports of the microprocessor is used to set the device into a low power, standby mode.

In accordance with the present invention, a processing device comprises:

- (a) an oscillator;
- (b) a microprocessor connected to the oscillator, the microprocessor having a programmable standby mode and a circuit responsive to the standby mode for disabling the oscillator;
- (c) a sensor circuit generating a reset signal in response to a predefined activity in the processing system to reset the microprocessor from the standby mode; and
- (d) a signal generator responsive to signals from the oscillator for disabling the reset signal.

With the present invention, power conservation can be achieved without the use of any input/output port of the microprocessor.

An example of a data processing system incorporating a processing device according to the invention will now be described with reference to the accompanying drawings in which:-

Figure 1 shows a battery-powered computer system; and

Figure 2 shows the circuit of the keyboard device within the computer system of Figure 1.

Figure 1 is a diagram of a battery powered computer system 100 wherein the present invention is embodied. The computer system 100 comprises a battery 101 powering a central processing unit 102, a video display device 103 and a keyboard device 104.

A schematic circuit of the keyboard device 104 is shown in Figure 2. The keyboard device 104 has a matrix keyboard 201 controlled by a microprocessor 202 executing instructions stored in a memory (not shown). This microprocessor may be an 80C51BH micro-controller chip made by Intel Corporation.

The control of the matrix keyboard 201 by the microprocessor 202 is achieved using techniques known in the art. Basically, the

(...)

Because of the power conservation, by way of switching between normal operating mode and the standby mode, is achieved without requiring the use of any input/output pin of the microprocessor 202, the circuit of the present invention can this provide conservation of power without restricting the flexibility of the microprocessor.

CLAIMS EP 473249 A3

/CM, /TX

1. A processing device comprising:
 - (a) an oscillator (209);
 - (b) a microprocessor (202) connected to the oscillator (209), the microprocessor having a programmable standby mode and a circuit responsive to the standby mode for disabling the oscillator;
 - (c) a sensor circuit (219, 220, 221) generating a reset signal in response to a predefined activity in the processing system to reset the microprocessor from the standby mode; and
 - (d) a signal generator (210) responsive to signals from the oscillator (209) for disabling the reset signal.
2. A device according to claim 1, wherein the signal generator comprises a rectifier circuit (210)
3. A device according to claim 2, wherein the signal generator further comprises a transistor (216) having a control terminal coupled to an output of the rectifier circuit (210).
4. A device according to any of the preceding claims wherein the sensor circuit comprises a transistor (220) having a control terminal which is driven by the predefined activity.
5. A device according to claim 4, wherein the sensor circuit further comprises a capacitor (223) connected in series with the transistor (220).
6. A device according to any of the preceding claims where the predefined activity is a key stroke of a keyboard.

(,,)

SEARCH OPTIONS

BASIC INDEX

SEARCH SUFFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
—	—	All Basic Index Fields ^{1,2}	Segment & Word	S DI(W)CHLORO S NORMAL(W)OPERATING(W)MODE
/AB	AB	Abstract ^{1,2}	Segment & Word	S CHLORO(W)PHENYL/AB S DATA(W)PROCESS?/AB
/AN	AN	Application Number ³	Word	S 91301949/AN
/AU	AU	Author/Inventor ³	Word	S KAO/AU
—	CA	Claims A		
—	CB	Claims B		
—	CE	All Claims in English		
—	CF	All Claims in French		
—	CG	All Claims in German		
/CM	CM	All Claims ^{1,2,4}	Segment & Word	S CHLORO(W)PHENYL/CM S CONSERV?(2N)POWER/CM
/CO	CO	Company (Assignee) ^{3,13}	Word	S ACER/CO
/LS	LS	Legal Status Text ⁵	Word	S SEARCH(W)REPORT/LS
/PA	PA	Patent Assignee ³	Word	S ACER/PA
/PN	PN	Patent Number ³	Word	S 473249/PN
—	SA	Specification A		
—	SB	Specification B		
—	SE	Specification in English		
—	SF	Specification in French		
—	SG	Specification in German		
/SP	SP	All Specifications ^{1,2,4}	Segment & Word	S CHLORO(W)PHENYL/SP S POWER(W)CONSERV?/SP
—	TE	Title in English		
—	TF	Title in French		
—	TG	Title in German		
/TI	TI	All Titles ^{1,2}	Segment & Word	S CHLORO/TI S CONVERSATION(1W)ENERGIE/TI
/TX	TX	All Text ^{1,2}	Segment & Word	S DI(W)CHLORO/TX S DRAIN(W)ELECTRODE)/TX

¹ All chemical names are indexed as complete individual words and chemically significant word segments. Words such as CHLOROBENZENE can be retrieved by either segment, e.g., S CHLORO or S BENZENE. Any term in the Basic Index can be restricted to a full word using the /FW suffix, e.g., S BENZENE/FW. Locants, such as 2,3, indicate the position of a chemical group within the structure and are searched as words, e.g., S 2(W)3.

² Text fields (/AB, /CM, /SP, /TI, /TX) are searchable in English. German and/or French, when available. Only the title is provided in all three languages.

³ Searchable in the Basic Index and in the Additional Indexes.

⁴ Complete text of specification and claims is available for published applications (A documents) from 1986 forward and for examined, granted patents (B documents) from 1991 forward.

⁵ Searchable in English only.

⁶ Includes Description of Drawings, Background of Invention, Summary of Invention, etc.

⁷ Note that when the suffix /TX is used, hits are retrieved only from the specification and claims fields.

⁸ The language field applies primarily to the title and abstract. Use AV= to search the exact language of the claims and specifications. The EPO languages include English, French and German, but only the title and the claims in the B document are provided in all three languages.

⁹ Use Limit /PB to restrict to the Basic Patent, i.e., the first patent published

¹⁰ UB= retrieval changes over time. When equivalent patents are added, the change is reflected in UE= and subtracted from UB=. Use PD= or PY= and limit to Basic Patent using /PB for precise retrieval, e.g., PY=1995/PB or PD=200102/PB.

¹¹ With the introduction of the Reformed International Patent Classification (IPCR/8) on January 1, 2006, the format of the IPC group has increased in length from 3 to 4 digits. For comprehensive retrieval, both forms of the classification should be searched, e.g., S IC=H04R-025/00 OR IC=H04R-0025/00 . Advanced level classification codes can be searched directly in the ICA= index. IPCR/8 Classification codes can be linked to their attributes using the S operator.

¹² Each IPCR/8 classification code is also assigned a series of attributes. These include classification level (A - Advanced, C - Core, S - Subclass), value (I - Inventive, N - Non-inventive), position (F - First, L - Later), status (B - basic, R - Reclassified, V - Various, D - Deleted), version date, action date, source (H - Human, M - Machine, G - Generated), and assigning office. The classification attributes can be searched with the IA= prefix and can be linked to an IPCR/8 classification code (assigned after January 1, 2006) using the S operator and quotes around the classification code, e.g., S IA=F(S)IC="A61K-0031/198" .

¹³ The CO= field includes patent assignee and opponent names.

ADDITIONAL INDEXES

SEARCH PREFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
AC=	AC	Application Country	Phrase	S AC=EP S AC=WO
AC=	AC, PR	Priority Application Country	Phrase	S AC=US/PR
AD=	AD	Application Date and PCT Application Date	Phrase	S AD=910308 S AD=9103
AD=	AD, PR	Priority Application Date	Phrase	S AD=19900827/PR S AD=199008/PR
AF=	AF	Legal Status Availability ⁵	Phrase	S AF=EXAMINATION
AK=	AK	Assignee Code	Phrase	S AK=1037593
AN=	AN	Application Number ³	Phrase	S AN=EP 91301949 S AN=EP 200101030
AN=	AN	PCT Application Number ³	Phrase	S AN=WO 91DE234 S AN=WO 2001EP6521
AN=	AN, PR	Priority Application Number ³	Phrase	S AN=US 573628/PR S AN=EP 2000870261/PR
AU=	AU, IV	Author/Inventor ³	Word & Phrase	S AU=KAO KENT AU=KAO(W)AU=KENT
AV=	AV	Fulltext Availability ^{4,8}	Phrase	S AV=CLAIMS A (ENGLISH)
AY=	AY	Application Year	Phrase	S AY=1991
AY=	AY,PR	Priority Application Year	Phrase	S AY=1990/PR
—	AZ	DIALOG Accession Number		
CN=	CN	Assignee Country	Phrase	S CN=TW/PA
CN=	CN	Author/Inventor Country	Phrase	S CN=TW/AU
CO=	CO	Company (Assignee) ^{3,13}	Word & Phrase	S CO=ACER INC? S CO=(ACER(W)INC?)
CS=	CS	Assignee Location	Word & Phrase	S CS=LUNGTAN S CS=LUNGTAN, TAOYUAN?
CT=	CT, SR	Cited Patent	Phrase	S CT=DE 3040326
DS=	DS	Designated States	Phrase	S DS=DE
DT=	DT	Document Type ⁴	Phrase	S DT=A
IA=	IC	International Patent Class (IPCR/8) Attributes ¹²	Phrase	S IA=I S IA=F(S)IC="A61K-0031/198"
IC=	IC	International Patent Class ^{11,12}	Phrase	S IC=H04R-0029/00 OR IC=H04R-029/00 S IC=H04R-0029 OR IC=H04R-029 S IC=H04R
ICA=	IC	Advanced International Patent Class ^{11,12}	Phrase	S ICA="H01L-0021/8234" S ICA=H01L-0021 S ICA=H01L
IL=	IL	Inventor Location	Word & Phrase	S IL=TAIPEI S IL=HSING-CHUANG CITY?
LA=	LA	Language of Publication ⁸	Phrase	S LA=ENGLISH S LA=FRENCH S LA=GERMAN
LD=	LD	Legal Status Date	Phrase	S LD=930107 S LD=9301 S LD=93
LR=	LR	Legal Representative	Word & Phrase	S LR=(SKONE(1N)JAMES) S LR=GILL JENNINGS?
—	LS	Legal Status Information		
OP=	OP	Opponent	Word & Phrase	S OP=(GENERAL(W)ELECTRIC) S OP=GENERAL ELECTRIC?
PA=	PA	Assignee Code	Phrase	S PA=1037593
PA=	PA	Patent Assignee ³	Word & Phrase	S PA=(ACER (W)INC?) S PA=ACER INC?
—	PB	Patent Basic		
PC=	PC, PB	Patent Country ⁹	Phrase	S PC=EP S PC=WO S PC=EP/PB
PC=	PC, PB	Patent Country and Kind	Phrase	S PC=EP A2 S PC=EP B1/PB
PD=	PD, PB	Publication Date and PCT Publication Date ⁹	Phrase	S PD=19920701 S PD=199207 S PD=200101/PB
—	PI	Patent Information		
PL=	PL	Assignee Location	Word & Phrase	S PL=LUNGTAN S PL=LUNGTAN, TAOYUAN?
PN=	PN, PB	Patent Number ^{3,9}	Phrase	S PN=EP 493113 S PN=EP 1205629 S PN=EP 670169/PB S PN=WO 9114620
—	PR	Priority Data		

ADDITIONAL INDEXES (cont'd)

SEARCH PREFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
PY=	PY, PB	Publication Year ⁹	Phrase	S PY=1992 S PY=2000/PB
RF= RL=	RF, SR RL	Cited References (Non-Patent) Representative Location	Word Word & Phrase	S RF=(PATENT(1W)ABSTRACTS(2W)JAPAN) S RL=LONDON S RL=NEWCASTLE UPON TYNE?
—	SR	Cited Patents and References		
UA=	UA	Update - Published Application A- Fulltext	Phrase	S UA=9609
UB=	UB	Update - Basic Patent ¹⁰	Phrase	S UB=9112
UD=	—	Update - All Records	Phrase	S UD=9999
UE=	UE	Update - Equivalent Patents ¹⁰	Phrase	S UE=9999
UG=	UG	Update - Granted Patent B- Fulltext	Phrase	S UG=9999
UL=	—	Update - Legal Status	Phrase	S UL=9212
UR=	—	Update - Translated Abstract in English	Phrase	S UR=9609
UT=	UA, UG	Update - All Full Text	Phrase	S UT=9609
WA=	WD	Word Count for Published Application A	Numeric	S WA=370
WB=	WD	Word Count for Granted Patent B	Numeric	S WB=1130
WD=	WD	Total Word Count	Numeric	S WD=1500

SPECIAL FEATURES

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LIMIT	/YYYY -- Publication Year	
SORT	AU, IC, PA, PD, PN, TI	SORT S6/ALL/TI
RANK	All phrase- and numeric-indexed fields in the Additional Indexes can be ranked. Other RANK codes include: ANPR, ANPRYY, ANYY, AU, IA, IC	RANK IC
MAP	AN, ANPR, ANYY (creates AN= entry with attached year for US applications), CO, CT, IC, PA, PN	MAP PN TEMP2
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PREDEFINED FORMAT OPTIONS

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1	--	DIALOG Accession Number
2	--	Bibliographic Citation, International Patent Classification, Cited References, Legal Status, and Fulltext Availability
3	Medium	Bibliographic Citation
4	--	Full Record with Tagged Fields
5	Long	Bibliographic Citation, International Patent Classification, Cited References, Legal Status, All Abstracts, and Fulltext Availability
6	--	Title, Fulltext Availability, Word Count, and Language of Publication
7	--	Bibliographic Citation, Abstract, Claims A and B, Legal Status, and Fulltext Availability
8	Short	Title, Word Count, Language of Publication, and International Patent Classification Codes
9	Full	Full Record, with Specifications A and B and Claims A and B , if available
24	--	All Front Page Information
27	--	Bibliographic Citation, Abstract, Claims A, Legal Status, and Fulltext Availability
29	--	Bibliographic Citation, Abstract, Specifications A, Claims A, Legal Status, and Fulltext Availability
37	--	Bibliographic Citation, Abstract, Claims B, Legal Status, and Fulltext Availability
39	--	Bibliographic Citation, Abstract, Specifications B, Claims B, Legal Status, and Fulltext Availability
K	--	KWIC (Key Word In Context) displays a window of text; may be used alone or with other formats

OTHER OUTPUT OPTIONS

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USER DEFINED FORMATS	User-defined formats can be specified using the display codes indicated in the Search Options tables.	TYPE S3/TI,PA/1-5
TAG	Output can be displayed with tags identifying each display field.	TYPE S3/5/1-10 TAG
DIRECT RECORD ACCESS	DIALOG Accession Number	TYPE 00100005/5 DISPLAY 0074483/TI,PN PRINT 00301964/9

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