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Patent searching for Dummies:

why patent searching should
be part of the literature review

Sunette Steynberg

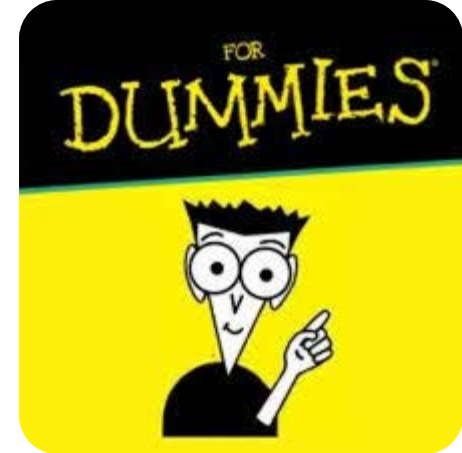
Sunette.steynberg@up.ac.za

September 2017

FOR
DUMMIES

A Reference for the Rest of Us! 

Contents



- Why search patents?
- Overview of patents in general
- Derwent Innovations Index
- Contact at the Innovation Office

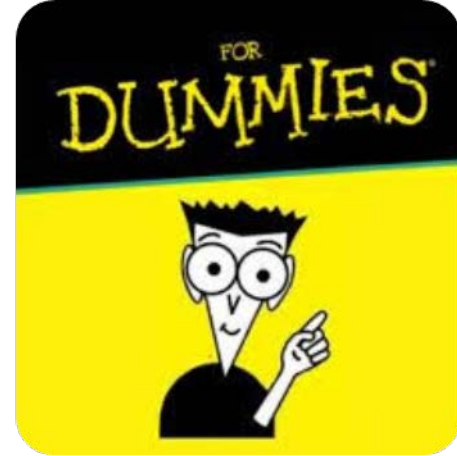
Why do we need to search patents?

- Often patents are the only documents for the R&D activities of a company
- If you are going to work in industry, your job may depend on your knowing about patents!

SciFinder Pubs.	Pfizer			3M		
	Patents	All	%	Patents	All	%
2008	143	778	18	714	780	92
2009	81	851	10	777	832	93
2010	74	1000	7	661	726	91



Why Researchers should care about patents



- Most up-to date source of information on applied technology
- Up to 80% of current knowledge is only in patents
- Avoid duplication of Research and spending
- Find solutions to technical problems

http://ec.europa.eu/invest-in-research/pdf/download_en/patents_for_researchers.pdf



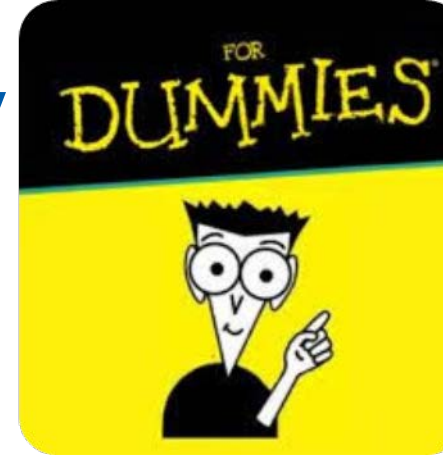
Protection of intellectual property take one of four forms:

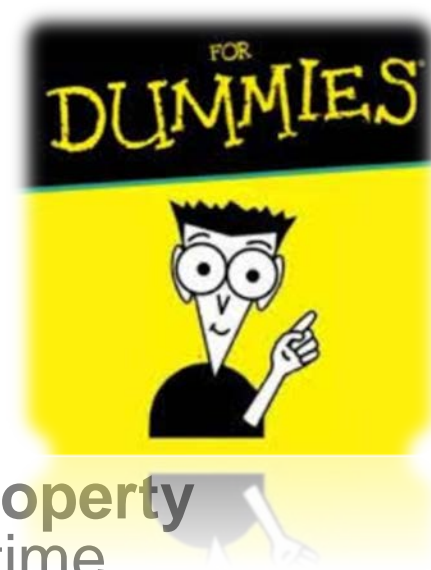
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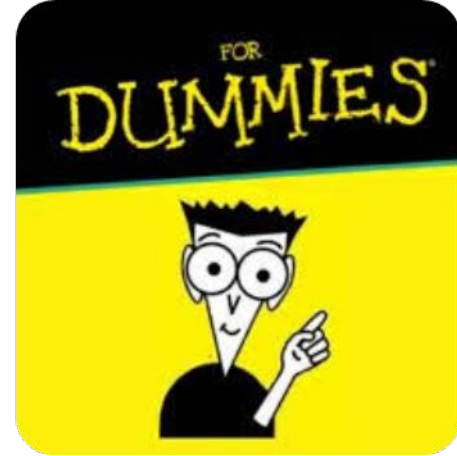




What is a patent?

- A patent for an invention is the grant of a **property right** to the inventor for a limited period of time (usually 20 years from date of application)
- Grants to the owner the right to **exclude others** from making, using, offering for sale, selling, or importing the invention into the country where the patent is obtained
- In return for this protection, the owner must describe the discovery in full (public disclosure)

Requirements to patent



Novel: The invention in its entirety must not have been known or used before

Useful: The invention must be fit for some desirable practical purpose.

Non-obvious in light of the prior art; not apparent to someone with “ordinary skill in the art”



Three Types of Patents

- **Utility** patents. For new and useful processes, machines, articles of manufacture, compositions of matter, or any useful improvements thereof. (20 yrs)
- **Design** patents. For new, original, and ornamental design for an article of manufacture. Protects only the appearance, not structure or utilitarian features. (Dxxxxxx) (14 yrs) (*Examples: iPod case; Koosh ball design*)
- **Plant** patents. For invention, discovery or asexual reproduction of distinct and new varieties of plants. (PPxxxxx) (20 yrs)



Example of a Utility Patent

US Patent 6,934,812

Title: Media player with instant play capability



US06934812B1

(12) **United States Patent**
Robbin et al.

(10) **Patent No.:** US 6,934,812 B1
(45) **Date of Patent:** Aug. 23, 2005

(54) **MEDIA PLAYER WITH INSTANT PLAY CAPABILITY** 6,377,530 B1 * 4/2002 Burrows 369/59,21
6,801,964 B1 * 10/2004 Mahdavi 710/35
2002/0045961 A1 4/2002 Gibbs et al. 700/94

(75) **Inventors:** Jeffrey L. Robbin, Los Altos, CA (US);
Ned K. Holbrook, Sunnyvale, CA
(US); Steven Bollinger, San Jose, CA
(US)

FOREIGN PATENT DOCUMENTS
DE 43 34 773 A1 4/1994
DE 44 45 023 A1 6/1996
EP 1 028 425 A2 8/2000

(73) **Assignee:** Apple Computer, Inc., Cupertino, CA
(US)

OTHER PUBLICATIONS

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 269 days.

Kennedy, "Digital Data Storage Using Video Disc," IBM Technical Disclosure Bulletin, vol. 24, No. 2, Jul. 1981.
Nonhoff-Arps, et al., "Strafenmusik Portable MP3-Spieler mit USB-Anschluss," CT Magazin fuer Computer Technik, Verlag Heinz Heise GMBH, Hannover DE, No. 25, Dec. 4, 2000.

(21) **Appl. No.:** 10/118,217

(22) **Filed:** Apr. 5, 2002

* cited by examiner

Related U.S. Application Data

(60) Provisional application No. 60/346,236, filed on Oct. 22, 2001.

Primary Examiner—T Nguyen
(74) **Attorney, Agent, or Firm**—Beyer Weaver & Thomas, LLP

(51) **Int. Cl.**⁷ G06F 13/10
(52) **U.S. Cl.** 711/138; 711/111; 711/112;
711/113; 711/139; 711/150
(58) **Field of Search** 711/115, 118, 150,
711/168, 148, 149, 111–113, 704/500; 369/33,
710/52, 56

(57) **ABSTRACT**

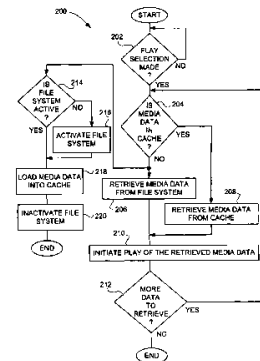
A media player and a method for operating a media player are disclosed. A media program is able to substantially immediately begin playing after a media play selection has been made. Through intelligent operation, the media program is able to start playing even before the media program has been substantially or completely loaded from disk storage into semiconductor memory (i.e., cache memory). Additionally, the media program can be loaded into semiconductor memory through use of a background process without disturbing the playing of the media program. Further, if desired, the disk storage is able to be aggressively "powered off" when not being accessed, thereby enhancing battery life when being battery-powered.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,608,698 A * 3/1997 Yamanoi et al. 369/53,35
5,647,386 A * 4/1997 Choi 369/126
5,712,949 A 1/1998 Kato et al. 386/96
5,740,143 A * 4/1998 Suetomi 369/47,33
5,822,288 A 10/1998 Shinoda 369/47,33
5,870,710 A * 2/1999 Ozawa et al. 704/500
6,332,175 B1 * 12/2001 Birrell et al. 711/112

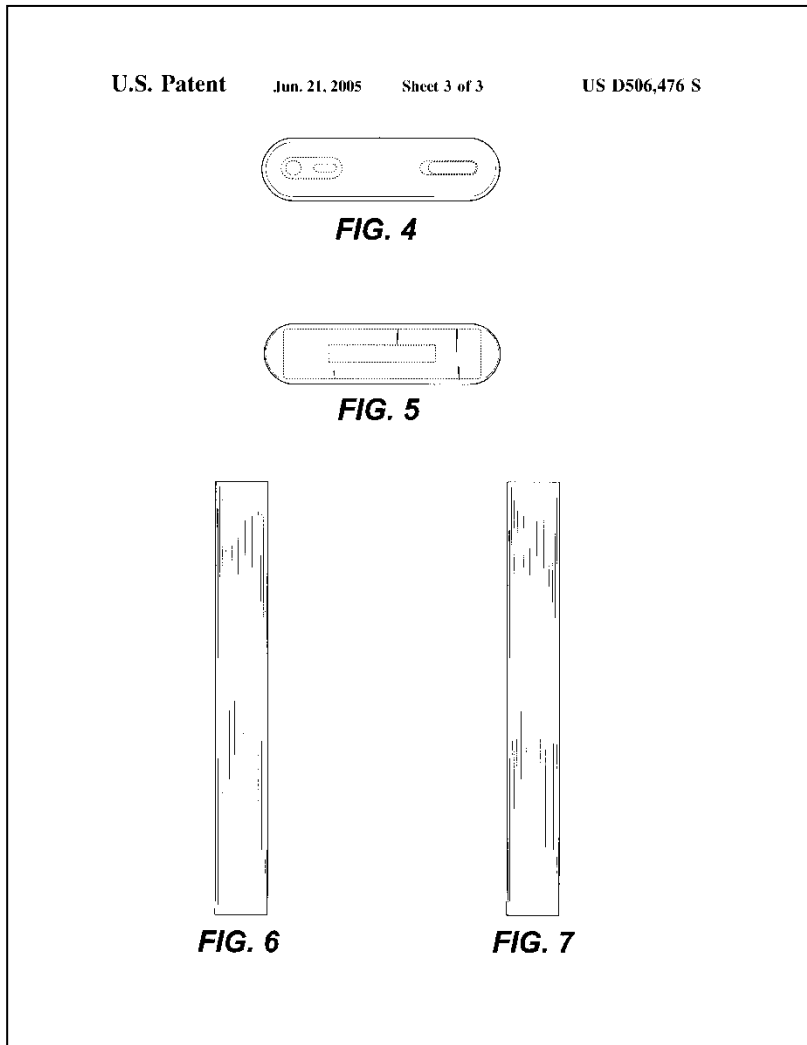
49 Claims, 6 Drawing Sheets



Example of a Design Patent

US Patent D506,476

Title: Media Device



(12) **United States Design Patent** (10) **Patent No.:** **US D506,476 S**
 Andre et al. (45) **Date of Patent:** **** Jun. 21, 2005**

(54) MEDIA DEVICE	5,661,632 A * 8/1997 Register	361,683
	D412,940 S 8/1999 Kato et al.	
	5,964,661 A 10/1999 Dodge	
(75) Inventors: Bartley K. Andre, Menlo Park, CA	D430,169 S 8/2000 Scibora	
(US); Daniel J. Coster, San Francisco, CA (US); Daniele De Iullis, San Francisco, CA (US); Richard P. Howarth, San Francisco, CA (US); Jonathan P. Iwe, San Francisco, CA (US); Steve Jobs, Palo Alto, CA (US); Duncan Robert Kerr, San Francisco, CA (US); Shin Nishihori, San Francisco, CA (US); Matthew Dean Rohrbach, San Francisco, CA (US); Douglas B. Satzger, Menlo Park, CA (US); Calvin Q. Seid, Palo Alto, CA (US); Christopher J. Stringer, Pacifica, CA (US); Eugene Anthony Whang, San Francisco, CA (US)	6,122,526 A * 9/2000 Paruski et al.	455/556.1
	D437,860 S 2/2001 Suzuki et al.	
	6,227,966 B1 * 5/2001 Yokoi	463.1
	6,254,477 B1 7/2001 Sasaki et al.	
	6,262,785 B1 * 7/2001 Kim	349/58
	D448,810 S 10/2001 Goto	
	D450,713 S 11/2001 Masamitsu et al.	
	6,314,483 B1 * 11/2001 Goto et al.	710/107
	D452,250 S 12/2001 Chan	
	D455,793 S * 4/2002 Lin	D21/329
	D468,365 S * 1/2003 Bransky et al.	D21/329
	D469,109 S * 1/2003 Andre et al.	D14/496
	D472,245 S * 3/2003 Andre et al.	D14/496
	D483,809 S 12/2003 Lin	
	D489,731 S * 5/2004 Huang	D14/496

OTHER PUBLICATIONS

(73) Assignee: **Apple Computer, Inc.**, Cupertino, CA (US)
 Andre et al., untitled "Media Device," U.S. Appl. No. 29/180,558, filed Apr. 25, 2003.
 (* *) Term: **14 Years**
 * cited by examiner

(21) Appl. No.: **29/212,343**
 (74) Attorney, Agent, or Firm—Beyer Weaver & Thomas, L.L.P.

(22) Filed: **Aug. 31, 2004**
 (57) **CLAIM**

Related U.S. Application Data

(63) Continuation of application No. 29/196,832, filed on Jan. 5, 2004.
 We claim the ornamental design for a media device, substantially as shown and described.

DESCRIPTION

(51) **LOC (8) CL.** **14-03**
 (52) **U.S. CL.** **D14/496**
 (58) **Field of Search** D14/400, 401, D14/435, 474, 496, 483, 217; D21/332, 333; 273/148 B; 463-43-47; 206/308 J, 307, 308.3; 369/2, 24, 25; 370/342-344

(56) **References Cited**
U.S. PATENT DOCUMENTS
 D264,969 S 6/1982 McCourtly
 4,976,435 A 12/1990 Shatford et al.
 5,192,082 A * 3/1993 Inoue et al. 463/44

FIG. 1 is a perspective view of a media device in accordance with the present design. The media device can, for example, be a media player or a media storage device.
 FIG. 2 is a front view for the media device.
 FIG. 3 is a rear view for the media device.
 FIG. 4 is a top view for the media device.
 FIG. 5 is a bottom view for the media device.
 FIG. 6 is a right side view for the media device; and
 FIG. 7 is a left side view for the media device.
 The broken lines are for illustrative purposes only and form no part of the claimed design.

1 Claim, 3 Drawing Sheets





Plant Patent

A distinct new variety
of plant

US Patent PP21,535 P2
Title: Sweet orange tree

(12) **United States Plant Patent**
Grosser et al.

(10) **Patent No.:** US PP21,535 P2
(45) **Date of Patent:** Nov. 30, 2010

- (54) **SWEET ORANGE TREE NAMED 'SF14W-62'**
- (50) Latin Name: *Citrus sinensis* L. Osbeck
Varietal Denomination: SF14W-62
- (75) Inventors: **Jude W. Grosser**, Winter Haven, FL (US); **Frederick G. Gmitter, Jr.**, Lakeland, FL (US); **William S. Castle**, Lake Alfred, FL (US)
- (73) Assignee: **Florida Foundation Seed Producers, Inc.**, Greenwood, FL (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
- (21) Appl. No.: **12/454,449**
- (22) Filed: **May 18, 2009**
- (51) **Int. Cl.**
A01H 5/00 (2006.01)
- (52) **U.S. Cl.** **Plt./202**
- (58) **Field of Classification Search** **Plt./202**
See application file for complete search history.

- (56) **References Cited**
OTHER PUBLICATIONS
Grosser, et al. (2007) Somaclonal Variation in Sweet Orange: Practical Applications for Variety Improvement and Possible Causes In: *Citrus Genetics, Breeding and Biotechnology* (ed. I.A. Khan), CAB International, pp. 219-233.
Larkin, et al. (1981) Somaclonal Variation—a Novel Source of Variability from Cell Cultures for Plant Improvement. *Theor. Appl. Genet.* 60, pp. 197-214.
Primary Examiner—June Hwu
(74) *Attorney, Agent, or Firm*—Jondle & Associates, P.C.
- (57) **ABSTRACT**
A new 'Valencia'-derived sweet orange tree particularly distinguished by producing trees that bear fruit that ripens 4 to 8 weeks earlier than standard 'Valencia' trees, trees that have an upright and moderately vigorous growth habit, trees that have a tendency for terminal fruit bearing and fruit having excellent juice quality, is disclosed.
- 2 Drawing Sheets**

1

Genus and species: *Citrus sinensis* L. Osbeck.
Variety denomination: 'SF14W-62'.

BACKGROUND OF THE NEW PLANT

The invention relates to a new and distinct variety of sweet orange tree, *Citrus sinensis* L. Osbeck, named 'SF14W-62'. SF14W-62 is a moderately vigorous tree that produces standard 'Valencia' type sweet orange fruit but with a significantly earlier fruit maturation date (4 to 8 weeks) than standard 'Valencia' trees. In Florida, fruit can generally be harvested from mid-January through February, depending on environmental conditions. Juice quality from fruit of 'SF14W-62' is equivalent to that of 'Valencia', the highest quality juice from oranges currently available. 'SF14W-62' provides the processing industry with earlier blending opportunities with 'Hamlin' or 'Midsweet' sweet oranges to improve the flavor and color of NFC (Not From Concentrate) orange juice. In the event of January or February freeze-mandated harvests in Florida, this blending opportunity would allow for grade A juice recovery and would significantly lessen economic losses as would normally be encountered with standard 'Valencia' oranges that have not reached full maturity at this time.

'SF14W-62' originated as a somaclonal tree regenerated from protoplasts isolated from an embryogenic suspension of tissue culture of standard 'Valencia' (*Citrus sinensis* L. Osbeck) in 1989. For the methodology, see Grosser, J.W. and F.G.J. Gmitter (1990). Protoplast fusion and citrus improvement. pp. 339-374. In: Janick, J. (Ed.), *Plant Breeding Reviews*. Timber Press, Inc, Portland, Oreg., USA. The original 'SF14W-62' tree was grafted to 'Carrizo' (unpatented) citrange rootstock and planted at a collaborative research block in Venus, Fla. in 1991. 'SF14W-62' is a true 'Valencia' sweet orange with an altered maturity date that allows for harvest 4 to 8 weeks earlier than traditional 'Valencia' clones. 'SF14W-62' has been subsequently asexually reproduced by

2

inverted "T" bud-grafting onto widely-used commercial citrus rootstocks 'Carrizo' citrange and 'Swingle' citrumelo. The present invention has been found to retain its distinctive characteristics through successive asexual propagations via an inverted "T" graft.

Plant Breeder's Rights for this cultivar have not been applied for. 'SF14W-62' has not been made publicly available or sold more than one year prior to the filing of this application.

SUMMARY OF THE INVENTION

'SF14W-62' is a new and distinct variety of sweet orange tree which bears fruit that ripens from mid-January through February in central Florida. The trees usually bloom between early to late March in central Florida, depending on seasonal weather. 'SF14W-62' trees are upright and of moderate vigor, with a tendency for alternate bearing. Second and third generation trees are more thorny than traditional 'Valencia' selections, especially on internal scaffold branches; however, thorniness diminishes over time and is less obvious with each generation of propagation. Thorns can be long, but are quite variable. Trees tend to bear more terminal fruit, which can cause long scaffold branches to bend over from the weight of the fruit, but also minimizes the impact of the thorns on harvesting.

'SF14W-62' trees bear fruit that is typical of 'Valencia' trees but 'SF14W-62' fruit ripens 4 to 8 weeks earlier than standard 'Valencia' clones based on the brix/acid ratio (see Table 1). Juice quality of 'SF14W-62' is typical of 'Valencia' in sugar and acid content, color and flavor. The fruit of 'SF14W-62' are juicy and difficult to peel. The fruit of 'SF14W-62' is slightly less seedy than standard 'Valencia' but not seedless. Replicated trials (both 2nd generation and top-worked 3rd generation trees) to determine yield were destroyed by the Florida state-run canker eradication program. The original tree in Venus, Fla. yielded more than 10

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Example: recharg lithium batter**



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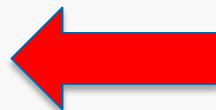
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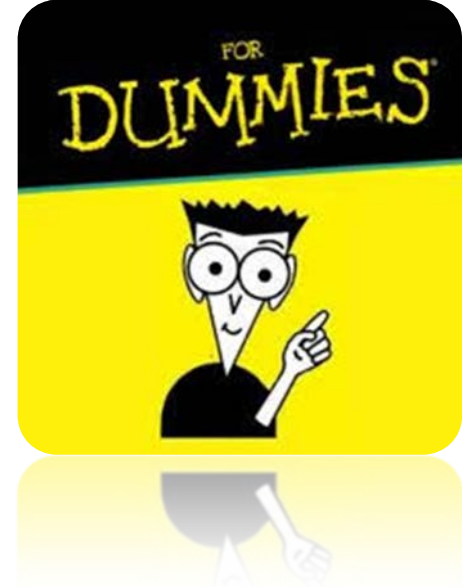
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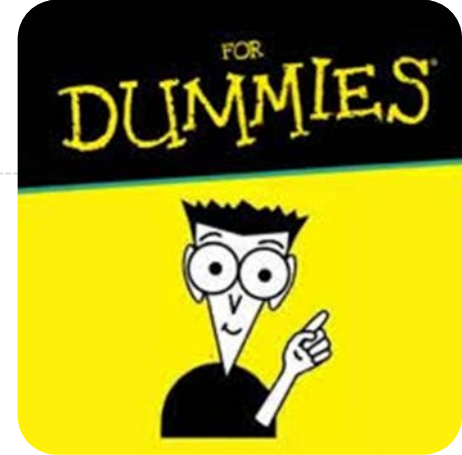
From 1963-1. to 2017





Searchable parts of a patent

- **Topic:** searches title and abstract
- **Title:** searches only the title
- **Inventor:** Searches the inventor's name, e.g. Smith, A J
- **Patent number:** enter complete or partial patent number, e.g. US5723470-A
- **Assignee:** Company name, e.g. University of Pretoria



Collaboration between Prof. De Wet Swanepoel (Communication Pathology) and Dr Herman Myburg (EEC Engineering)



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mobile test*

Topic

AND

hearing OR audio

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1. US2017230776-A1

Citing Patents: 0

Method for detecting and configuring speaker arrays, involves determining location of speaker array in first set of speaker arrays in listening area based on emitted test sounds and determined locations of second set of speaker arrays

Assignee: APPLE INC

Inventor(s): FAMILY A, JOHNSON M E, PAQUIER B P

Derwent Primary Accession Number: 2017-550656

2. US9729059-B1; US2017229965-A1

Citing Patents: 0

Direct current-direct current (DC-DC) power converter for providing power to micro point of load devices, in which footprint of inductor overlaps partially with footprint of embedded integrated circuit

Assignee: FARADAY SEMI LLC

Inventor(s): PARTO P

Derwent Primary Accession Number: 2017-54008U

Results similar to invention

- 3. CN106846211-A Citing Patents: 0
Internet-of-things based children hearing screening system, has statistics management module for receiving result statistic, and foreground part provided with account login module, hearing test module, query module and calibration module

Assignee: UNIV SHANGHAI NINTH PEOPLES HOSPITAL AFF
Inventor(s): WU H, HUANG Z, WANG X, et al.
Derwent Primary Accession Number: 2017-42327E

- 4. CN106851511-A Citing Patents: 0
Intelligent mobile phone based rapid patient pure tone audiometry method, involves performing left ear and right ear testing process, testing output results on intelligent mobile phone, and displaying hearing loss degree of listener

Assignee: UNIV TIANJIN
Inventor(s): CHEN F, WANG S
Derwent Primary Accession Number: 2017-42792X

Internet-of-things based children **hearing** screening system, has statistics management module for receiving result statistic, and foreground part provided with account login module, **hearing test** module, query module and calibration module

Patent Number(s): CN106846211-A

Inventor(s): WU H, HUANG Z, WANG X, LI Y, WANG Z

Patent Assignee Name(s) and Code(s): UNIV SHANGHAI NINTH PEOPLES HOSPITAL AFF(USJT-C)

Derwent Primary Accession Number: 2017-42327E [55]

Abstract: NOVELTY - The system has a management configuration module for performing school account allocation and hospital **hearing** task allocation, where the management configuration module performs device volume debugging process and system version management process. A school management module adds and updates student information. A statistics management module receives result statistic and examines **hearing** result details through a computer and a **mobile** phone. A foreground part is provided with an account login module, a **hearing test** module, a report query module and a calibration module.

USE - Internet-of-things based children **hearing** screening system.

ADVANTAGE - The system automatically analyzes centralized management and screening data and provides a better platform.

DESCRIPTION OF DRAWING(S) - The drawing shows a block diagram of an internet-of-things based children **hearing** screening system. '(Drawing includes non-English language text)'

International Patent Classification: G06Q-050/22; H04L-029/08

Derwent Class Code(s): T01 (Digital Computers); W01 (Telephone and Data Transmission Systems)

Derwent Manual Code(s): T01-F05F; T01-J03; T01-J05A1; T01-J06A; T01-J30A; T01-M06A1; T01-N01A2; W01-A07G1

Patent Details:

Patent Number	Publ. Date	Main IPC	Week	Page Count	Language
CN106846211-A	13 Jun 2017	G06Q-050/22	201755	Pages: 10	Chinese



Drawing:

100

Includes a drawing

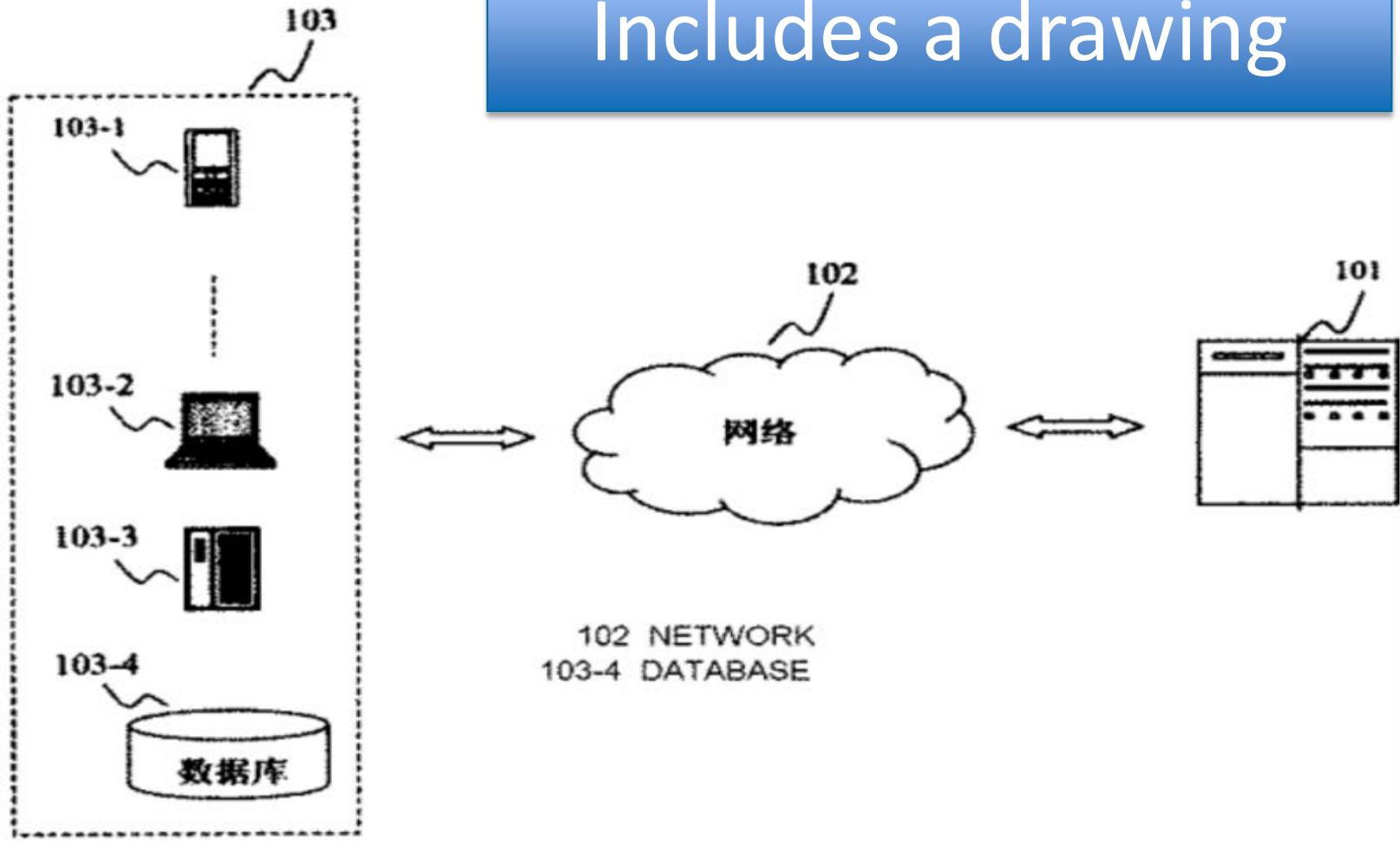


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- 1. WO2017098426-A1 Citing Patents: 0
Making plant extract having elastase inhibitory activity used in composition to treat skin aging, comprises drying e.g. leaves of *Myrsine africana*, grinding, mixing with organic solvent to get solution, filtering and removing the solvent

Assignee: UNIV PRETORIA
Inventor(s): LALL N
Derwent Primary Accession Number: 2017-39777P
- 2. WO2015049643-A1; IN201647014043-A Citing Patents: 0
Use of crude or purified extract from shoots of plant *Euclea natalensis* as immunomodulator and/or for hepatoprotection in subject which is human or animal, and for treating bacterial infections including *Mycobacterium tuberculosis* infection

Assignee: UNIV PRETORIA
Inventor(s): OOSTHUIZEN C B, LALL N
Derwent Primary Accession Number: 2015-24709D
- 3. WO2015049666-A1 Citing Patents: 0
Use of crude or purified extract of *Helichrysum odoratissimum* in prevention or treatment of skin conditions in subject and for exhibiting cytotoxic activity towards cells exhibiting conditions associated with skin cancer

Assignee: UNIV PRETORIA
Inventor(s): TWILLEY D, LALL N
Derwent Primary Accession Number: 2015-247091

Citing Patents: 1

4. WO2015028994-A1; ZA201601560-A

Determining interaction between three agents and probability of agents having inhibitory effect, involves representing outcomes of synergistic tests as set of binary matrices, feeding binary matrices, and generating prediction model

Assignee: UNIV PRETORIA

Inventor(s): HENLEY-SMITH C J, LALL N, BOTHA F S, et al.

Derwent Primary Accession Number: 2015-166797

Citing Patents: 1

5. WO2014033625-A2; WO2014033625-A3; US2015174059-A1; ...

Oral care composition used to inhibiting growth of potentially pathogenic oral microorganisms, treating periodontal diseases and evaluating attachment of microorganisms to enamel surface of tooth, comprises Heteropyxis natalensis extract

Assignee: UNIV PRETORIA

Inventor(s): HENLEY-SMITH C J, LALL N, BOTHA F S, et al.

Derwent Primary Accession Number: 2014-E13720

Citing Patents: 0

6. WO2014020575-A1; KR2015038469-A; EP2879647-A1; ...

Preparing plant extract for inhibiting Propionibacterium acnes, involves exposing plant material obtained from Leucosidea sericea plant to solvent to render extraction solution; and removing the plant material from the extraction solution

Assignee: UNIV PRETORIA

Inventor(s): SHARMA R, LALL N, HUSSEIN A, et al.

Derwent Primary Accession Number: 2014-C48959

Different from Web of Science searching

- Different search engine, different search rules
- No stopwords, e.g. Vitamin D will also retrieve Vitamin A, Vitamin B, Vitamin C
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What are some limits to patents?

- No experimental proof of prototypes or proof of chemicals actually tested or synthesized
- Many patents might be invalidated if challenged
- Titles can be very short and simple; not easily describing the invention
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Derwent Innovation

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refilwe.ngoato@up.ac.za,
012 420 4568



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