

MODULE
06

Patent Information

MODULE 06. Patent Information

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INTRODUCTION

Even the latest gadgets get outdated in no time. Umpteen, new or improved models are constantly appearing on the market. Can something be really done to survive this fierce competition? In this module, we look at the role of patent information in protecting a business as well as in helping it to gain a competitive edge. In particular, we are going to deal with what is meant by patent information and why it is important and discuss how patent information may be used including searching patent information and strategically using the results of such a search.

LEARNING OBJECTIVES

1. You understand the concept of patent information.
2. You understand how to strategically use patent information.
3. You understand where to obtain and how to search patent information.

LEARNING POINT 1: Understanding patent information

1. Patent information & Patent documents

(1) Patent Information

It is the technical and legal information contained in patent documents that are published periodically by patent office. The phrase patent information refers to both granted patent and patent applications.

(2) Patent documents

a. Patent documents include not only the content of published patent documents but also bibliographic and other information concerning patents for inventions, inventors' certificates, utility certificates and utility models.

b. In most countries, a patent document is required to be in a standardized format.

- Front page (including abstract)

The front page of patent document contains date of filing, priority date, information on the title of the invention, bibliographic data, such as the name and address of the applicant and inventor, and an abstract.

The abstract summarizes the invention covered by the patent document. The abstract has no legal importance. It is a technical summary that is not relevant for and, therefore, cannot be used to interpret the scope of protection of the invention by the patent in question.

- Written description

The description of an invention should disclose the invention clearly and precisely to enable a person skilled in the art to understand the claimed invention and the technical information contained in it.

Preferably, it should be illustrated by examples to explain how to work or carry out the invention in practice so as to enable anyone

skilled in the relevant technical field or “art” to do so likewise, without undue experimentation.

- **Claims**

The claims define the scope of legal protection. In patent litigation, interpreting claims is the first step in determining whether the patent is valid and whether the patent has been infringed.

- **Drawings (if necessary)**

The drawings show technical details of the invention in an abstract and visual way. They help to explain some information, tool or result set out in the written description.

Drawings are not always a necessary part of the patent specification. If the invention is for a process or method of doing something, drawings usually are not required. If drawings are required, formal rules govern their acceptability.

2. Advantages of patent information

(1) Up to date information

In most countries, a patent application is published 18 months after it is filed. There is therefore always a time lag between the invention and the publication of the patent application. Generally, however, patents are granted well before a patented product is introduced in the market. As such, the publication of a patent application, despite the time lag, is invariably the earliest point in time at which the relevant information becomes available to the public.

(2) Uniform structure

Patent documents have a relatively standardized format including an abstract, bibliographic information, a description of and, in most cases, also drawings illustrating the invention and full details of the applicant.

Such uniform structure makes reading easier.

(3) Detailed description

As the invention has to be disclosed in a manner that is sufficiently clear and complete for it to be carried out by a person skilled in the relevant art, the background, description and drawings provide much more detailed information about a technology than any other type of scientific or technical publication.

(4) Unique source of information

It is estimated that some 70% of the information disclosed in patent documents have never been published anywhere else. It is also growing in size every day. To date, some 50 million patent documents have been published worldwide in every technical field with about two million more documents added each year.

(5) Well organized information

For easier search and retrieval of patent documents, they are classified in accordance with an internationally accepted classification system called the International Patent Classification (IPC)

More References 1-1: IPC (International Patent Classification)

1. Definition

The IPC is a hierarchical system of classifying technology by dividing them into a range of sections, classes, subclasses and groups.

2. Principle of classifying

The IPC employs the principle of classifying inventions according to their intrinsic nature (the “function-oriented” principle), rather than their possible “applications”. Still, the IPC contains both function-oriented places and application places and is a combined function/application classification system in which the function takes precedence.

An illustration of a complete classification symbol of IPC is shown below :

A	21	B	1	/	08
Section	Class	Subclass	Main group		Sub group

The classification scheme containing about 70,000 classification symbols is arranged in a hierarchical, tree-like structure.

- (1) Section: The lowest hierarchical levels are the eight sections of the IPC corresponding to very broad technical fields. (Section A=Human Necessities)
- (2) Class: Sections are subdivided into 120 classes in the eighth edition of the IPC. (Class A 21=Baking; Edible dough)
- (3) Subclass: Classes are further subdivided into more than 600 subclasses. (Subclass A 21 B=Bakers' ovens; Machines or equipment for baking)
- (4) Main group: Main group symbols always end with "/00". (Main group A 21 B 1/00 = Bakers' ovens)
- (5) Sub group: The hierarchy of the subgroups under main groups is designated by dots preceding the titles of the entries.

Main group A 21 B 1/00 ("Bakers' oven") is divided into 19 subgroups, the first four of which are the following:

A 21 B 1/02 . characterized by the heating arrangements
A 21 B 1/04 .. Ovens heated by fire before baking only
A 21 B 1/06 .. Ovens heated by radiators
A 21 B 1/08 ... by steam-heated radiators

As can be seen from the above example, not all the subgroups are on the same hierarchical level; the highest are preceded by one dot, the lower-according to their level-by two, three, four or more dots.

(6) Quick and easy access

Patent information may be stored in a variety of information carriers like paper, microfiches, CD-ROM and on-line databases. On-line searching has facilitated quicker, cheaper, and more convenient access to patent information than the conventional manual or CD-ROM based searching method.

(7) Wide fields of technology

While not all inventions are patented, for some inventions may be protected by trade secrets rather than by patents, inventions protected by patents cover virtually every field of technology from the simplest to the most complex.

As such, patents provide information on every sphere of scientific and technological activity.

(8) Citations Intelligence

Citations on the patent document are information of prior art cited by examiners or applicants. The examiner cites References which contain relevant prior art to judge the patentability during the patent prosecution.

US patents provide the citations on the front page of the publication and the EPO and PCT documents provide them as part of the Search Report.

An applicant may also give References to other patents and to journal articles in the description of an application. Citations are an important tool for analyzing the research and development activities and the technical trend of competitors.

More References 1-2: Patent Family

1. Definition

When an applicant seeks to patent an invention in multiple countries, then all such patent applications and the subsequent publications that relate to the same invention are collectively called a patent family.

There are at least three ways of defining a patent family:

- (1) All the patent documents which are directly or indirectly linked via a priority document belong to the same patent family.
- (2) All the patent documents having at least one priority in common belong to the same patent family.
- (3) All the patent documents having exactly the same priority or priorities in combination, belong to the same patent family.

To create a patent family, therefore a patent must be filed in several countries. A patentee takes on additional costs to extend protection to other countries only if it seems worthwhile to do so. Thus, patents that are members of families will generally be of higher value than those filed in a single country.

2. Importance

Patent families are particularly important:

- (1) to find an invention described in another language
- (2) to estimate the global importance of an invention (the more patent family members there are the more likely that the invention is an important one)
- (3) to identify competitors or potential business partners in global marketing strategies for a product or process

LEARNING POINT 2: Type of patent information search

1. State-of-the-art & Patentability search

(1) State-of-the-art search

- a. It provides a broad overview of a defined technological field as it covers all or broad range of patent and non patent literature relating to it.
- b. It reveals relevant published papers, studies, other non-patent literature, as well as patents expired and unexpired, as well as published patent applications worldwide.
- c. It is mainly used for establishing the starting point and direction of new research and development projects.

(2) Patentability search

It is narrower in scope than a state-of-the-art search. It is done with

Reference to a defined field of technology, such as that contained in an invention disclosure, for identifying relevant prior art for evaluating the novelty and/or non-obviousness of the disclosed invention.

The results of a patentability search are very useful for drafting stronger or better patent claims, and may also reveal potential conflicts with patents owned by others and/or the possibilities for getting around them.

A patentability search is done while preparing and before filing a patent application. It helps the applicant to decide whether or not (1) to file a patent application, or (2) to proceed with the patent application as drafted, or (3) to undertake further research and development to make further improvements to the invention for getting a stronger patent.

2. Infringement search

Also known as a “right to use” or “freedom to operate” or “clearance” search, it is done to determine if any unexpired (in-force) patents would be infringed by launching a product on the market or by otherwise practicing the invention in question.

By this search a party is “cleared” to make, use, sell or import a product incorporating the invention. It involves a study of all the claims of all the relevant patents which are still in force to determine their scope of protection so as to avoid doing anything which will be considered to be an infringement of an unexpired patent. For assessing potential infringement, it would be necessary to study the claims of all relevant published patent applications too.

Thus, periodically conducting a search at the stage of technical development, product development or before marketing a product will enable a company to identify related patents and to ascertain their legal status in time to prevent an infringement

3. Validity search

If the infringement search uncovers a patent that poses an infringement risk, then a validity search may be performed to help determine whether the patent so uncovered is valid. It is conducted after a patent is granted to assess whether the patent was properly granted. It looks for any publication (prior art) that can be used to prove that one or more claims of the patent are invalid.

Validity searches are done because of current or anticipated litigation, in the context of licensing negotiations, and as part of the due diligence process for assessing the value of a patent.

To challenge the validity of a patent, you have to search for patent or other documents that could challenge its novelty or inventive step and uncover issued patents or other published prior art that may render such a patent partially or completely invalid. Thus, a validity search can be useful as a defensive tool when a company is concerned about infringing a particular patent.

4. Index or name search

This is done to find out the names of inventors, researchers or companies in whose names patents are filed, issued or assigned.

This type of search is also employed to locate “patent families” or equivalent patents in various countries. A patent family search may help to locate an equivalent patent in a known language so as to avoid the cost of translation.

By analyzing the bibliographical data of numerous patent documents, it may be possible to identify the leading inventors, researchers or companies in a particular technology sector and to gain an insight into their research or patent strategies.

LEARNING POINT 3: Method of patent information search

Once you know your objective then you must select the source of patent information, such as the relevant databases that could be relevant for that objective, collect the patent documents, and analyze them in order to serve your objectives.

1. Types of patent information databases

Patent information may be stored in a variety of information carriers like paper, microfiches, CD-ROM and on-line databases.

(1) CD-ROM

CD-ROM databases are very convenient for documentary searches. Users need no outside connections, and can work with a CD-ROM driver plus a computer. However, they are soon out of date.

(2) Online databases

Anyone who has access to the internet is able to browse the full text of published patent documents via free of charge or commercial databases.

a. Free of charge databases

Many national patent offices have launched free-of-charge patent information databases, which are open to the public.

The free services work well for simple searches, but are not a suitable tool for executing more complex investigations and legally motivated searches.

Ex) The Full-Text and Full-Page Image Database of the USPTO, esp@cenet[®] provided by EPO

b. Commercial databases

Commercial service offers enhanced or value added patent information, based on the actual requirements of particular end users.

Commercial database hosts offer different types of clearing procedures or fees.

Ex) WIPS, Derwent, Dialog, STN, Questel Orbit, Micropatent

More References 3-1: Comparison of databases of USPTO, EPO and WIPO PCT			
	USPTO	Esp@cenet	PCT
Search Method			
Basic text search	O	O	O
Patent number search	O	O	O
Boolean text search	O	O	O
Advanced	O	O	O
Subject			
All classes of IPC	O	O	O
Patent collections searched			
US (application & granted)	O	O	O
European(application & granted)		O	
PAJ (English abstract)		O	
WIPO PCT		O	O
Document			
Browse abstract	O	O	O
Browse full text	O	O	O
Browse images	O	O	O
Print text/image	O	O	O
File data			
Date	1975	1987	1983
Updated	weekly	weekly	weekly

2. Selection of databases

Depending on the purpose in hand, the choice of databases may be governed by a number of criteria relating to the nature of the task.

For example, if you are interested in technologies developed within a particular country, you may confine your search to the databases covering the inventions

in that country. However, if you are more interested in a global overview, the international databases would be more relevant. If your interest is simply to retrieve prior art for a patent application, then the free on-line database will suffice. On the other hand, if your interest is in R&D or in M&A the commercial patent databases will be more useful.

In general, novice and occasional users of patent information tend to use only the free services, while professional users tend to use both free and commercial services.

3. Example of on-line databases search

The following will demonstrate a patent information search using “The Full-Text and Full-Image Database” at USPTO’s patent searching website (www.uspto.gov/patft).

(1) How to access Full-Text database

First, enter www.uspto.gov/patft in the address line.



Then, you can see the “Full-Text and Full-Page Image Database” of the USPTO. These databases allow you to search the patent information from issued patents and published applications.

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Tools to Help in Searching by Patent Classification
 Patent Application Information Retrieval (PAIR)
 Patent Assignment Database
 Downloadable Published Sequence Listings

KEY: #=online business system *fees =forms =help =laws/regulations =definition (glossary)

The Full-Text database is available for patent searching, which contains hyperlinks from the images button to the full-page images of each page of each patent in the database.

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United States Patent 7,126,467
 Albert, et al. October 24, 2006

Enhanced fire, safety, security, and health monitoring and alarm response method, system and device

Abstract

Method, system and device useful with conventional personal computers respond automatically to an identified alarm sound by sending a notification signal via the internet only, when a special sound monitoring program is active. Additionally, bedside detection of acoustic alarms is combined with enhanced waking devices to insure the waking of a child or hearing impaired person in response to an emergency. Home safety and security are provided using a bedside unit to monitor audible safety and security alarms and send notification signals to the appropriate communication site. A health monitoring method and system utilizes the bedside device to monitor breathing patterns and other health measuring signals and communicate these patterns and signals to a medical monitoring station.

Inventors: **Albert: David E.** (Oklahoma City, OK), **Albert: Kathryn Marie** (Oklahoma City, OK)
 Assignee: **Innovalarm Corporation** (Oklahoma City, OK)
 Appl. No.: **10/897,487**
 Filed: **July 23, 2004**

Publication Number: 07126467 Section: Front Page 1 of 27 pages

Full Text Help

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United States Patent
Albert et al.

Enhanced fire, Method, system, Internet only, when the waking of a security alarms at breathing pattern

Inventors:
Assignee:
Appl. No.:
Filed:

Sections:
● Front Page
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● Specifications
● Claims

United States Patent
Albert et al.

(11) Patent No.: US 7,126,467 B2
(17) Date of Patent: Oct. 24, 2006

(54) ENHANCED FIRE, SAFETY, SECURITY, AND HEALTH MONITORING AND ALARM RESPONSE METHOD, SYSTEM AND DEVICE

(71) Inventor: David E. Albert, Oklahoma City, OK
(US); Kathryn Marie Albert, Oklahoma City, OK (US)

(72) Assignee: Innovations Corporation, Oklahoma City, OK (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 139 days.

(11) Appl. No.: 10/097,407

(22) Filed: Jul. 25, 2004

(51) Int. Cl. G08B 29/00 (2006.01)
U.S. Cl. 340/511, 340/517, 340/573, 340/403, 340/576

(52) U.S. Cl. 340/511, 340/517, 340/573, 340/403, 340/576

(53) Field of Classification Search 340/511, 340/517, 340/573, 340/403, 340/576, 340/577, 340/578, 340/579, 340/580, 340/581, 340/582, 340/583, 340/584, 340/585, 340/586, 340/587, 340/588, 340/589, 340/590, 340/591, 340/592, 340/593, 340/594, 340/595, 340/596, 340/597, 340/598, 340/599, 340/600, 340/601, 340/602, 340/603, 340/604, 340/605, 340/606, 340/607, 340/608, 340/609, 340/610, 340/611, 340/612, 340/613, 340/614, 340/615, 340/616, 340/617, 340/618, 340/619, 340/620, 340/621, 340/622, 340/623, 340/624, 340/625, 340/626, 340/627, 340/628, 340/629, 340/630, 340/631, 340/632, 340/633, 340/634, 340/635, 340/636, 340/637, 340/638, 340/639, 340/640, 340/641, 340/642, 340/643, 340/644, 340/645, 340/646, 340/647, 340/648, 340/649, 340/650, 340/651, 340/652, 340/653, 340/654, 340/655, 340/656, 340/657, 340/658, 340/659, 340/660, 340/661, 340/662, 340/663, 340/664, 340/665, 340/666, 340/667, 340/668, 340/669, 340/670, 340/671, 340/672, 340/673, 340/674, 340/675, 340/676, 340/677, 340/678, 340/679, 340/680, 340/681, 340/682, 340/683, 340/684, 340/685, 340/686, 340/687, 340/688, 340/689, 340/690, 340/691, 340/692, 340/693, 340/694, 340/695, 340/696, 340/697, 340/698, 340/699, 340/700, 340/701, 340/702, 340/703, 340/704, 340/705, 340/706, 340/707, 340/708, 340/709, 340/710, 340/711, 340/712, 340/713, 340/714, 340/715, 340/716, 340/717, 340/718, 340/719, 340/720, 340/721, 340/722, 340/723, 340/724, 340/725, 340/726, 340/727, 340/728, 340/729, 340/730, 340/731, 340/732, 340/733, 340/734, 340/735, 340/736, 340/737, 340/738, 340/739, 340/740, 340/741, 340/742, 340/743, 340/744, 340/745, 340/746, 340/747, 340/748, 340/749, 340/750, 340/751, 340/752, 340/753, 340/754, 340/755, 340/756, 340/757, 340/758, 340/759, 340/760, 340/761, 340/762, 340/763, 340/764, 340/765, 340/766, 340/767, 340/768, 340/769, 340/770, 340/771, 340/772, 340/773, 340/774, 340/775, 340/776, 340/777, 340/778, 340/779, 340/780, 340/781, 340/782, 340/783, 340/784, 340/785, 340/786, 340/787, 340/788, 340/789, 340/790, 340/791, 340/792, 340/793, 340/794, 340/795, 340/796, 340/797, 340/798, 340/799, 340/800, 340/801, 340/802, 340/803, 340/804, 340/805, 340/806, 340/807, 340/808, 340/809, 340/810, 340/811, 340/812, 340/813, 340/814, 340/815, 340/816, 340/817, 340/818, 340/819, 340/820, 340/821, 340/822, 340/823, 340/824, 340/825, 340/826, 340/827, 340/828, 340/829, 340/830, 340/831, 340/832, 340/833, 340/834, 340/835, 340/836, 340/837, 340/838, 340/839, 340/840, 340/841, 340/842, 340/843, 340/844, 340/845, 340/846, 340/847, 340/848, 340/849, 340/850, 340/851, 340/852, 340/853, 340/854, 340/855, 340/856, 340/857, 340/858, 340/859, 340/860, 340/861, 340/862, 340/863, 340/864, 340/865, 340/866, 340/867, 340/868, 340/869, 340/870, 340/871, 340/872, 340/873, 340/874, 340/875, 340/876, 340/877, 340/878, 340/879, 340/880, 340/881, 340/882, 340/883, 340/884, 340/885, 340/886, 340/887, 340/888, 340/889, 340/890, 340/891, 340/892, 340/893, 340/894, 340/895, 340/896, 340/897, 340/898, 340/899, 340/900, 340/901, 340/902, 340/903, 340/904, 340/905, 340/906, 340/907, 340/908, 340/909, 340/910, 340/911, 340/912, 340/913, 340/914, 340/915, 340/916, 340/917, 340/918, 340/919, 340/920, 340/921, 340/922, 340/923, 340/924, 340/925, 340/926, 340/927, 340/928, 340/929, 340/930, 340/931, 340/932, 340/933, 340/934, 340/935, 340/936, 340/937, 340/938, 340/939, 340/940, 340/941, 340/942, 340/943, 340/944, 340/945, 340/946, 340/947, 340/948, 340/949, 340/950, 340/951, 340/952, 340/953, 340/954, 340/955, 340/956, 340/957, 340/958, 340/959, 340/960, 340/961, 340/962, 340/963, 340/964, 340/965, 340/966, 340/967, 340/968, 340/969, 340/970, 340/971, 340/972, 340/973, 340/974, 340/975, 340/976, 340/977, 340/978, 340/979, 340/980, 340/981, 340/982, 340/983, 340/984, 340/985, 340/986, 340/987, 340/988, 340/989, 340/990, 340/991, 340/992, 340/993, 340/994, 340/995, 340/996, 340/997, 340/998, 340/999, 340/1000

(57) ABSTRACT
Method, system and device useful with conventional personal computers respond automatically to an identified alarm sound by sending a notification signal via the Internet only when a special sound monitoring program is active. Additionally, bedside detectors of acoustic alarms is equipped with enhanced waking devices to assure the waking of a child or hearing impaired person in response to an emergency. These safety and security are provided using a bedside unit to monitor audible alarm and security alarms.

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7,126,467
October 24, 2006

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aces to insure
idible safety and
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(2) How to use a Quick Search page

Under the titles of Issued Patents and Published Applications, you may perform 'Quick Search', 'Advanced Search' and 'Patent or Publication Number Search'.

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[View Cart](#)

Data current through

Query [\[Help\]](#)

Term 1: in Field 1:

AND

Term 2: in Field 2:

Select years [\[Help\]](#)

Patents from 1790 through 1975 are searchable only by Issue Date, Patent Number, and Current I
 When searching for specific numbers in the Patent Number field, patent numbers must be seven characters in length.

The buttons at the top of the screen, Home, Quick etc, are used to quickly move from one location to another.

You may search the database using two-term Quick search queries, field, date range, phrase, and right truncation.

a. Two-term quick search queries

You can use the Quick search page to compose using two-term quick search queries presenting Boolean operator, AND, OR and AND NOT.

1 Two-term quick search queries Data current through C

Query [\[Help\]](#)

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Term 2:

Select years [\[Help\]](#)

AND
AND
OR
ANDNOT

Patents from 1790 through 1975 are searchable only by Issue
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- AND operator : Both terms must be present in the search result.
- OR operator : At least one term must be present.
- AND NOT operator : The first term must be present and the second not be present.

Let us use the terms of 'Fire' and 'Alarm'. Now select the 'AND' operator and check the result by pressing the 'Search' button.

1 Two-term quick search queries Data current through C

Query [\[Help\]](#)

Term 1: in Field 1:

Term 2:

Select years [\[Help\]](#)

AND
AND
OR
ANDNOT

click

Patents from 1790 through 1975 are searchable only by Issue
When searching for specific numbers in the Patent Number field, patent numbers r

1 Two-term quick search queries

Data current through C

Query [\[Help\]](#)

Term 1: in Field 1:

AND

Term 2:

Select years [\[Help\]](#)

Patents from 1790 through 1975 are searchable only by Issue Date.
When searching for specific numbers in the Patent Number field, patent numbers issued after 1975 are not searchable.

The result will show that the patent numbers start with the most recently issued.

1 Two-term quick search queries

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Searching US Patent Collection...

Results of Search in US Patent Collection db for:
fire AND alarm: 8444 patents.
Hits 1 through 50 out of 8444

PAT. NO.	Title
1 7,127,733	System for bi-directional voice and data communications over a video distribution network
2 7,127,270	Wireless communication and control system
3 7,127,230	Methods and computer program products for providing communications in emergency situations
4 7,126,951	System and method for identifying the floor number where a firefighter in need of help is located using propagation time

If you want to see the detail information of the patent, just click on the patent number or title.

1 Two-term quick search queries

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 Hits 1 through 50 out of 8444

Next 50 Hits

Jump To

Refine Search

PAT. NO.	Title
1 7,127,733	System for bi-directional voice and data communications over a video distribution network
2 7,127,270	Wireless communication and control system <small>click</small>
3 7,127,230	Methods and computer program products for providing communications in emergency situations
4 7,126,951	System and method for identifying the floor number where a firefighter in need of help is located using propagation time

You are looking at the full text of that patent. Furthermore, you can look at images of each page by simply clicking "Images" button at the top of the Full-Text page.

1 Two-term quick search queries

2 7,127,270 T Wireless communication and control system

USPTO PATENT FULL-TEXT AND IMAGE DATABASE

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Images click

(2 of 8444)

United States Patent 7,127,270
 Sinclair October 24, 2001

Wireless communication and control system

Abstract

A communication and control system for use by the disabled and their caretakers. The system has at least two communication modules, each module having a processing unit which has a unique identification code. Each communication module also has a unique hierarchical address corresponding to the identification code, the address defining the physical location of the module. The hierarchical address represents at least two physical domains. Each communication module further includes a processing unit having coupled to it one or both of a signal receiver and a signal transmitter, and at least one transducer for detecting a physical parameter and for broadcasting packets of data indicative of the status of a module or for controlling a remote module.

Inventors: Sinclair, John (Tarbert, GB)
 Assignee: SRS Technology Ltd. (GB)
 Appl. No.: 10/110,521

Publication Number: 07127270 Section: Front Page 1 of 20 pages Help

US007127270B2

United States Patent
Sinclair

(10) Patent No.: **US 7,127,270 B2**
(45) Date of Patent: **Oct. 24, 2006**

(54) **WIRELESS COMMUNICATION AND CONTROL SYSTEM**

(75) Inventor: **John Sinclair, Tarbert (GB)**

(73) Assignee: **SRS Technology Ltd. (GB)**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 528 days.

(21) Appl. No.: **10/110,521**

(22) PCT Filed: **Oct. 11, 2001**

(86) PCT No.: **PCT/GB00/03891**

§ 371 (c)(1), (2), (4) Date: **Aug. 12, 2002**

(87) PCT Pub. No.: **WO01/27893**

PCT Pub. Date: **Apr. 19, 2001**

(65) **Prior Publication Data**
US 2003/0073461 A1 Apr. 17, 2003

(30) **Foreign Application Priority Data**

(56) **References Cited**

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6,340,335 B1 *	2/2002	Shimizu et al.	719/38
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WO	WO 8008090	11/1986

* cited by examiner

Primary Examiner—Marcos Milford
(74) Attorney, Agent, or Firm—Gifford, Krass, Gosh, Sprinkle, Anderson & Citekowski, PC.

(57) **ABSTRACT**

A communication and control system for use by the disabled

Learn more: Full-page image

If you have a properly installed G4TIFF image viewer or plug-in, this will bring up the full-page image of the first page of the patent along with navigation buttons for retrieving the other pages of the document.

b. Field Searching in Quick Search Page

You can search individual fields within patents by choosing one of a list of all indexed fields from the FIELD drop-down menu.

2 Using field

Data current through October 24, 2006.

Query [\[Help\]](#)

Term 1: in Field 1: **All Fields**

AND

Term 2: in Field 2:

Select years [\[Help\]](#)

1976 to present [full-text]

Patents from 1790 through 1975 are searchable only by Issue Date, Patent Number, and Current US Classification. When searching for specific numbers in the Patent Number field, patent numbers must be seven characters in length.

reset

- Abstract
- Issue Date
- Patent Number
- Application Date
- Application Serial Number
- Application Type
- Assignee Name
- Assignee City
- Assignee State
- Assignee Country
- International Classification
- Current US Classification
- Primary Examiner
- Assistant Examiner
- Inventor Name
- Inventor City
- Inventor State
- Inventor Country
- Government Interest
- Attorney or Agent
- PCT Information
- Foreign Priority
- Reissue Data
- Related US App. Data
- Referenced By

For example, you want to look for something patented by an inventor named 'Lee' and something to do with 'Surfing'.

Enter 'Lee' in the 'Term 1' box, and select 'Inventor Name' from the 'Field 1' menu. Then, type 'Surfing' in the 'Term 2' box and select 'All Fields' from the 'Field 2' menu.

Select 'AND' from the 'Operator' menu, and hit the 'Search' button.

2 Using field

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Data current through October 24, 2006.

Query [\[Help\]](#)

Term 1: in Field 1: **Inventor Name**

AND

Term 2: in Field 2: **All Fields**

Select years [\[Help\]](#)

1976 to present [full-text]

click

Patents from 1790 through 1975 are searchable only by Issue Date, Patent Number, and Current US Classification. When searching for specific numbers in the Patent Number field, patent numbers must be seven characters in length.

Search results

Searching US Patent Collection...

Results of Search in US Patent Collection db for:
 IN/Lee AND surfing: 45 patents.
 Hits 1 through 45 out of 45

Jump To

Refine Search

PAT. NO.	Title
1 7,110,796	Portable terminal device having a display unit utilizing a holographic screen
2 7,074,168	System for human physical evaluation and accomplish improved physical performance
3 7,047,548	Recall of previous program channel
4 7,047,273	Load balancing in set top cable box environment
5 7,028,096	Method and apparatus for caching for streaming data
6 7,004,805	Directable exhaust for water sport tow boat
7 6,947,924	Group based search engine generating search results ranking based on at least one nomination previously made by member of the us nomination system is independent from visitation system
8 6,939,196	Omnidirectional toy manipulator
9 6,934,964	Electronic program guide viewing history generator method and system
10 6,918,347	Variable aquatic floating kit for leisure and sports
11 6,880,810	Gaming machines and systems offering simultaneous play of multiple games and methods of gaming
12 6,852,000	Beach wave playset
13 6,829,308	Satellite communication system utilizing low density parity check codes
14 6,804,704	System for collecting and storing email addresses with associated descriptors in a bookmark list in association with network addresses documents using a browser program
15 6,789,120	Real-time audio/video communication method for use on the internet and device therefor
16 6,754,241	Computer system for statistical multiplexing of bitstreams
17 6,745,367	Method and apparatus for generating a list of related documents

c. Date Range Searching

You can specify a range of dates rather than having to specify a certain day or month to narrow your search.

This feature is only available in date fields, such as Issue Date and Application Date.

4 Using date range:

USPTO PATENT FULL-TEXT AND IMAGE DATABASE

Home Quick Advanced Pat Num Help

View Cart

Data current through October 24, 2006.

Query [Help]

Term 1: in Field 1:

AND

Term 2: in Field 2:

Select years [Help]

1976 to present [full-text]

Patents from 1790
When searching for specific numbers in

Application Date

Reset

only by Issue Date, Patent Number, and Cu
patent numbers must be seven characters in le

For example, if you want to search patents issued any date on or after Nov. 1, 1997 and before or on May 12, 1998, enter "11/1/1997 ->5/12/1998" in the 'Term 1' box. And select Issue Date from Field 1 menu. Then hit the Search button.

4 Using date range

USPTO PATENT FULL-TEXT AND IMAGE DATABASE

[Home](#) [Quick](#) [Advanced](#) [Pat Num](#) [Help](#)
[View Cart](#)

Data current through October 24, 2006.

Query [\[Help\]](#)

Term 1: in Field 1:

Term 2: in Field 2:

Select years [\[Help\]](#)

click

Patents from 1790 through 1975 are searchable only by Issue Date, Patent Number, and Classification. When searching for specific numbers in the Patent Number field, patent numbers must be seven characters in length.

Search results

Results of Search in US Patent Collection db for:
 ISD/11/1/1997->5/12/1998: 77440 patents.
 Hits 1 through 50 out of 77440

Refine Search

PAT. NO.	Title
1 RE35,795	Method of making flowable alkaline thiosulfate/alkaline sulfite and the product thereof
2 RE35,794	System for reducing delay for execution subsequent to correctly predicted branch instruction using fetch information stored with each block of instructions in cache
3 RE35,793	Measuring and monitoring system
4 RE35,792	Disk storage drive
5 RE35,791	Printed sheet with integrally formed stamps
6 RE35,790	System for drilling deviated boreholes
7 RE35,789	Food processing machine
8 RE35,788	Method of and arrangement for rehabilitating a ballast bed of a track
9 PP10,400	Vriesea plant named Apollo
10 PP10,399	Geranium plant named 'RFP-1328 Red'
11 PP10,398	Geranium plant named 'RFP-424 White'
12 PP10,397	Geranium plant named 'RFP-1454 Light Salmon'
13 PP10,396	Geranium plant named 'Pink Passion'
14 PP10,395	Geranium plant named 'Purple Rose'
15 PP10,394	Phalaenopsis orchid plant named 'Sylvia'
16 PP10,393	Doritaenopsis orchid plant named 'Aposya'

d. Phrase Searching in Quick Search Page

A group of words enclosed in quotation marks(“ ”) can be treated as a single search term, which is called Phrase Searching.

If you were searching for the phrase Vacuum Cleaner than vacuum or cleaner, you would use “Vacuum Cleaner”.

5 Using phrase

USPTO PATENT FULL-TEXT AND IMAGE DATABASE

Home Quick Advanced Pat Num Help

View Cart

Data current through October 24, 2006.

Query [Help]

Term 1: "Vacuum Cleaner" in Field 1: All Fields

AND

Term 2: in Field 2: All Fields

Select years [Help]

1976 to present [full-text]

Search click Reset

Patents from 1790 through 1975 are searchable only by Issue Date, Patent Number, and Cu
When searching for specific numbers in the Patent Number field, patent numbers must be seven characters in le

Search results

Searching US Patent Collection...

Results of Search in US Patent Collection db for:
"Vacuum Cleaner": 6164 patents.
Hits 1 through 50 out of 6164

Next 50 Hits

Jump To

Refine Search "Vacuum Cleaner"

PAT. NO.	Title
1 D530,869	Vacuum cleaner
2 7,127,100	System and method for analyzing an image
3 7,125,842	Anti-fungal compounds and methods of use
4 7,124,467	Edge cleaning system for vacuum cleaner
5 D530,473	Vacuum cleaner handle portion
6 D530,472	Electric vacuum cleaner
7 D530,470	Body of electric vacuum cleaner
8 D530,469	Body of electric vacuum cleaner
9 D530,467	Vacuum cleaner
10 D530,466	Vacuum cleaner
11 D530,464	Handheld vacuum cleaner
12 7,122,089	Method of making a textile laminate having pile-like surface
13 7,121,024	Creaser steam iron
14 7,120,965	Battery-powered vacuum cleaner and method of cooling battery-powered vacuum cleaner
15 7,120,964	Bare floor shifter for vacuum cleaner
16 7,118,607	Filter stop for a vacuum cleaner

e. Right truncation

You can use a wildcard (\$) on the right side of a search term to retrieve words that begin with a certain string. Wildcards are different between the search systems.

If you are searching in a specific field the string must be at least 3 characters in length, and at least 4 characters in length in case of not searching in a specific field. You may want to truncate on a longer string to reduce the number of hits retrieved.

LEARNING POINT 4: Strategic use of patent information

1. In licensing

Analyzing patent information will provide the necessary technical and business information regarding the target technology and its value before entering into a licensing negotiation.

(1) 'Licensing in' technology

While preparing to 'license in' technology, analyzing patent information will be useful in answering the following questions:

- a. Is the technology in question in the public domain in the target market due to its non-protection, expiration, non-payment of maintenance fees or invalidation of the patent in a court proceeding?
- b. Is there a possibility of being sued for infringement?
- c. Is there technology overvalued or undervalued when compared with other related or alternate technologies?

(2) 'Licensing out' technology

While preparing to 'license out' technology, patent information could clarify:

- a. Who could be prospective licensees in the marketplace?
- b. How valuable is the technology?
- c. Is it a core technology in your business, which if licensed out might become an obstacle to continue to practice this technology?

(3) 'Cross-licensing'

While preparing to 'cross-license', patent analysis:

- a. Plays a role in comparing the patent portfolios of the two companies and in identifying key patents, so that it can help to decide who should pay whom and how much.
- b. Gives a picture of the life cycle of the target technology and key technologies, in the field, which will help in the decision making process.

Learn more: Time-series map

Through patent analysis, you can also build a time-series map. This map shows the flow of technology, which can help you identify the key technology. It may be drawn by collecting, layering and displaying pertinent patents in a time series.

For example, if you plan to enter into a new business manufacturing IC cards, then you need to identify the area(s) in which IC cards will be used in the industry and main manufacturers and core technologies in the field.

Fig. 6 Time-series map

2. In Mergers & Acquisitions

If a company wishes to acquire a specific technology along with other complimentary assets and has no idea where to obtain it, then it first needs to identify all the companies with relevant patents and related assets.

A patent search help to identify all of the patents related to the area of interest. Once one or more potential target technologies/companies are identified, then the company can undertake additional patent analysis to narrow down its choices to decide which of the companies is the best merger or acquisition target.

Once a company identifies a target company, patent analysis can also address additional issues such as:

- (1) Is the target's technology as good as it is claimed to be?
- (2) Is the company priced fairly?
- (3) Who are the key inventors and will they stay with the merged or acquired company?

Learn more: A real life example

As part of a broad strategic plan to fill gaps in a company's technology base, a large high-tech company acquired a small specialty business. Soon after completing the acquisition, the acquiring company discovered that R&D capabilities of the acquired company were quite limited, and certainly not consistent with the perception that it had strong technological capabilities. Its technological capability was dependent on one key researcher who was not to come along as a part of the deal. He was transferred to the parent company before the sale was completed. If patent analysis had been done before proceeding with the acquisition, the company would have been able to identify the key researcher and take timely appropriate measures to retain him.

3. In Research & Development

In order to enter into a new business or to develop a new product, a company should be able to size up the relevant technology field and accurately forecast the market needs.

Patent analysis makes it possible to find out the flow of technology from elementary technologies along with the expansion of those technologies, the trend of technological change, the life cycle of a technology (whether in the growth, development, maturity or decline phase), problems and solutions in the development of a particular technology, competitors' technologies and solutions to cope with possible problems.

Knowing the life cycle of a technology makes it possible to judge the timing of development policy and focus on certain development themes.

It can also prevent an infringement from occurring, which would save a huge amount in litigation expenses and compensation for damages.

4. In Human Resource Management

It has been repeatedly shown that a small number of highly prolific inventors drive technological development and a much larger number of researchers produce only one or two patents in any laboratory or company.

Patent analysis, such as a co-inventor brain map, can show the key inventors who are vitally important for the future of the company.

Such brain maps can identify not only star inventors within a company, but also key inventors in other companies, which is a useful analysis for headhunting and in developing an effective M&A strategy.

QUIZ

Q1. Identify the incorrect statement:

- 1) Patent information includes not only bibliographic data but technical and legal data extracted from patent documents.
- 2) Patent documents include not only the content of published patent documents but also bibliographic and other information concerning patents for inventions, inventors' certificates, utility certificates and utility models.
- 3) Patent documents published worldwide are classified by national classification systems according to the requirement of examiners and searchers concerned.
- 4) Patent family means patent documents published in different countries but relating to the same invention.

Answer : 3)

Most patent offices use the International Patent Classification (IPC) for search and easy retrieval of relevant patent documents. Some patent offices have their own regional or national classification systems to suit their own particular requirements. However, ever since the Strasbourg Agreement entered into force in 1975, most countries worldwide have adopted the IPC, while some of these countries are continuing to use in parallel their own national/regional classification systems.

Q 2. Identify the incorrect statement:

- 1) Patent information is generally the most up to date source of technical information available anywhere in the world.
- 2) Ideally, an appropriate patent search should be conducted at each of the key stages of the product development cycle.

- 3) A freedom-to-operate search should be undertaken before marketing a product so as to minimize the risk of a patent infringement suit.
- 4) A search made on free patent databases generally gives a complete answer to all the relevant questions.

Answer : 4)

It is generally wrong to assume that a search made on free patent databases is comprehensive and can give a complete answer to all the relevant questions. A do-it-yourself search is a good starting point but a comprehensive patent search is usually a job for an expert, who will know which sources to refer to and how best to manipulate them to retrieve the data needed.

Q 3. Identify the incorrect statement:

- 1) Patent information helps a company in preparing for patent licensing negotiations.
- 2) By using patent information it is possible to identify the key inventors in a particular technological area.
- 3) Patent information helps a company to avoid wasting its resources on R&D programs when everything has already been invented in that particular technological area.
- 4) A company could monitor activities of real and potential competitors.

Answer : 3)

By using patent information a company would become familiar with the technological developments in a particular field up to a particular date. This prevents them from wasting their limited resources on reinventing the wheel. At the same time, it enables the company to invest its resources on improving on the state of the art by developing a new or improved product or process.