

9 Aprile 2019

CNR – ICCOM  
Polo Scientifico Universitario  
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# FARE INNOVAZIONE

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# SERVIZIO INN.P.A.T.

Innovation search of new technologies  
through Patent Analyzer

Relatore:  
ING . ALFREDO FAGOTTI  
COSVIG - DTE2V

**9 Aprile 2019**

CNR ICCOM Polo Scientifico Universitario, via Madonna del Piano n° 10, Sesto Fiorentino (FI)

# Ricerca di conoscenza per le medie e piccole imprese

È stato spesso affermato che una delle maggiori fonti di conoscenza umana può essere ritrovata all'interno dell'intero database brevettuale mondiale. Un'affermazione sicuramente ambiziosa ma non priva di verità.

La conoscenza contenuta all'interno dei singoli brevetti rischia però di essere difficilmente rintracciabile, soprattutto per quei soggetti non abituati a esplorare questo vasto «corpus».

I testi brevettuali sono infatti spesso lunghi, ripetitivi e altamente tecnici, oltre ovviamente al non trascurabile problema dell'elevato numero di brevetti.

Per questo le grandi imprese sono dotate di un ufficio brevetti interno, il cui compito, tra le altre cose, è proprio quello di attingere alla conoscenza contenuta nel vasto corpus brevettuale. Ciò non è naturalmente attuabile per le piccole e medie imprese.

# Il servizio INN.P.A.T. - Obiettivi

- Il servizio INN:P.A.T. è stato pensato da Cosvig-DTE allo scopo di rendere disponibile alle MPMI del territorio uno strumento che nell'ambito di un percorso di innovazione, permette di migliorare un prodotto/servizio/processo utilizzando informazioni nell'ambito dei numerosi brevetti esistenti a livello mondiale.
- Il servizio viene erogato tramite personale esperto COSVIG utilizzando un sofisticato tool-software con un motore di Intelligenza artificiale (messo a punto da Università degli Studi di Firenze, Politecnico di Milano e Dr. Wolf s.r.l.)
- In particolare il servizio offre le seguenti funzionalità:
  - Ricerca brevettuale
  - Estrazione di informazioni tecniche
  - Identificazione di componenti e loro interazione

# Ricerca brevettuale personalizzata

Patent Analyzer Projects gala81@gmail.com

Test ⚙️ ⏴ 🔍 📄

Fields matching options: all terms  any terms  Patent offices included in search results: AT, AU, CA, CH, CN, DE, EP, FI, FR, GB, IT, JP, KR, MX, RU, SE, TW, US, WO.

Title	rod bar	⚙️
Description	cold	⚙️
Title	your search here..	⚙️

Remove results without description

Total results: 34

US2005369A	Method of coiling rods or bars	<span>i</span> <span>📄</span> <span>📄</span>	06/12/1934	+ Add to project
WO9428182A1	STEEL BARS AND RODS AND MANUFACTURING PROCESS	<span>i</span> <span>📄</span> <span>📄</span>	02/11/1993	+ Add to project
US3735625A	APPARATUS FOR PRODUCING HELICAL WIRES, RODS, BARS AND THE LIKE	<span>i</span> <span>📄</span> <span>📄</span>	05/12/1972	+ Add to project
US8491732B2	Hot-rolled steel bar or wire rod	<span>i</span> <span>📄</span> <span>📄</span>	07/12/2012	+ Add to project
US3990887A	Cold working steel bar and wire rod produced by continuous casting	<span>i</span> <span>📄</span> <span>📄</span>	01/11/1975	+ Add to project
US6866724B2	Steel bar or wire rod for cold forging and method of producing the same	<span>i</span> <span>📄</span> <span>📄</span>	03/12/2004	+ Add to project
EP0523275A2	Process for producing steel bar wire rod for cold working	<span>i</span> <span>📄</span> <span>📄</span>	01/12/1992	+ Add to project

# Selezione dei brevetti

Test

⚙️ ⏴ 🔍 📄

Patent Id	Title	Status	Date		
EP2270360A1	Improved reduction gearbox	Analyzed	06/12/2009	Analyze	Remove
EP0189556A1	Limited slip differential	Analyzed	02/11/1984	Analyze	Remove
US2015249409A1	CONTROL DEVICE FOR AC ROTATING MACHINE, AC ROTATING MACHINE DRIVE SYSTEM EQUIPPED WITH CONTROL DEVICE FOR AC ROTATING MACHINE AND ELECTRIC POWER STEERING SYSTEM	Analyzed	01/11/2011	Analyze	Remove
US2009128338A1	ID LABEL, ID TAG, AND ID CARD	Analyzed	02/11/2007	Analyze	Remove
EP2347680B1	Cover for freezers and freezer	Html	07/12/2016	Analyze	Remove
WO2009040576A2	PIPE FREEZING	Analyzed	09/12/2007	Analyze	Remove
EP1344997A1	FREEZER, AND REFRIGERATOR PROVIDED WITH FREEZER	Analyzed	03/12/2000	Analyze	Remove
US6110102A	Vision of love	Analyzed	05/02/1998	Analyze	Remove
US2010023348A1	REMOTELY TAKING REAL-TIME PROGRAMMATIC ACTIONS RESPONSIVE TO HEALTH METRICS RECEIVED FROM WORN HEALTH MONITORING DEVICES	Analyzed	07/12/2007	Analyze	Remove
US2014225692A1	ATTRACTION PLATE STRUCTURE OF ELECTROMAGNETIC DOORLOCK	Analyzed	01/02/2013	Analyze	Remove



# Testo brevettuale

US2010023348A1 

United States Patent 2010023348

United States Patent

2010023348

December 07, 2007

Kind Code

A1

## REMOTELY TAKING REAL-TIME PROGRAMMATIC ACTIONS RESPONSIVE TO HEALTH METRICS RECEIVED FROM WORN HEALTH MONITORING DEVICES

### Abstract

Health metrics can be received from at least one person wearing a health monitoring device in an unencumbered fashion that permits free motion. The health monitoring device can wirelessly convey the health metrics to a remotely located computing device. The received health metrics can be compared against at least one configurable, yet previously established threshold. A change in a situation proximate to the person can be inferred based upon comparison results. A programmatic event can be fired based upon the inferred change. At least one programmatic action can be automatically initiated responsive to the firing of the programmatic event, wherein the programmatic action initiates a response to the inferred change.

Inventors:

Assignee:

Appl. No.:

Filed: December 07, 2007

### Foreign Application Priority Data

Current U.S. Class:

Current International Class:

Field of Search:

### References Cited [\[Referenced By\]](#)

U.S. Patent Documents

Foreign Patent Documents

Primary Examiner:

Assistant Examiner:

# Collegamento diretto ai «drawing» del brevetto



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US2010023348 (A1)  
Bibliographic data  
Description  
Claims  
**Mosaics**  
Original document  
Cited documents  
Citing documents  
INPADOC legal status  
INPADOC patent family

### Mosaics: US2010023348 (A1) — 2010-01-28

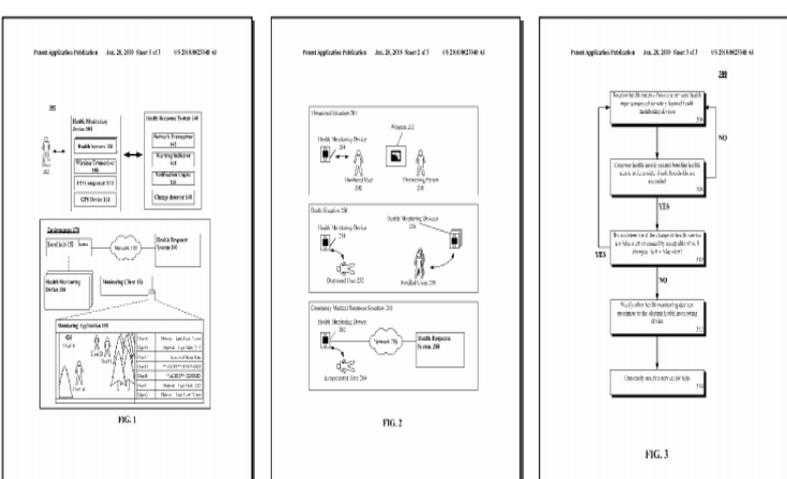
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#### REMOTELY TAKING REAL-TIME PROGRAMMATIC ACTIONS RESPONSIVE TO HEALTH METRICS RECEIVED FROM WORN HEALTH MONITORING DEVICES

14 Page 1/1 Drawings Download

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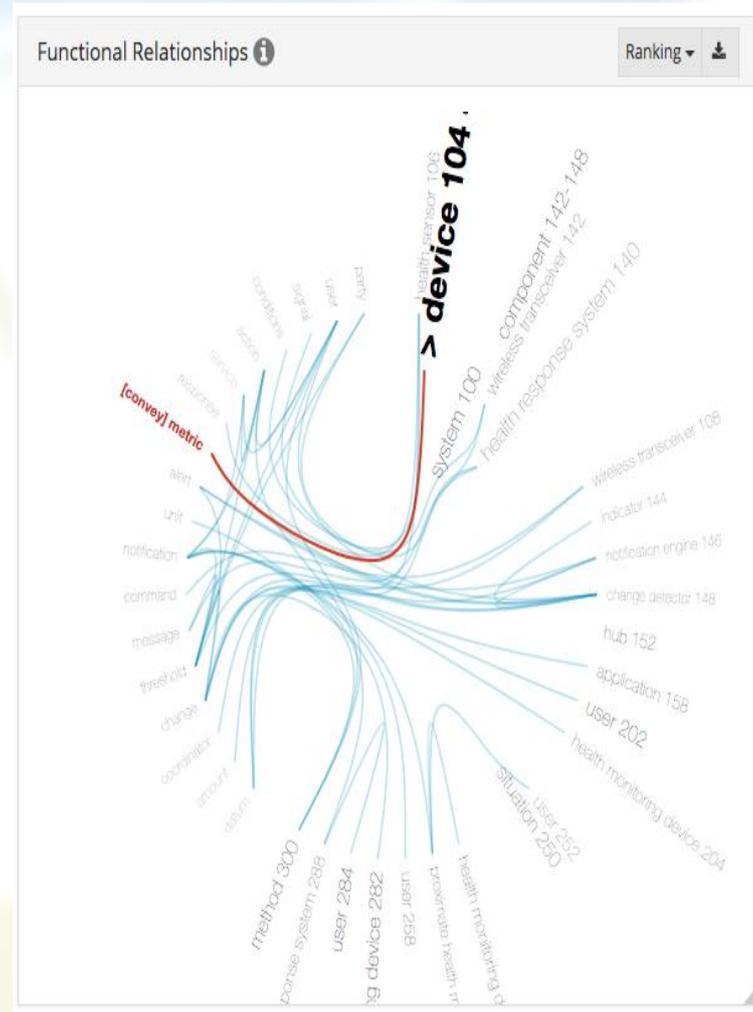
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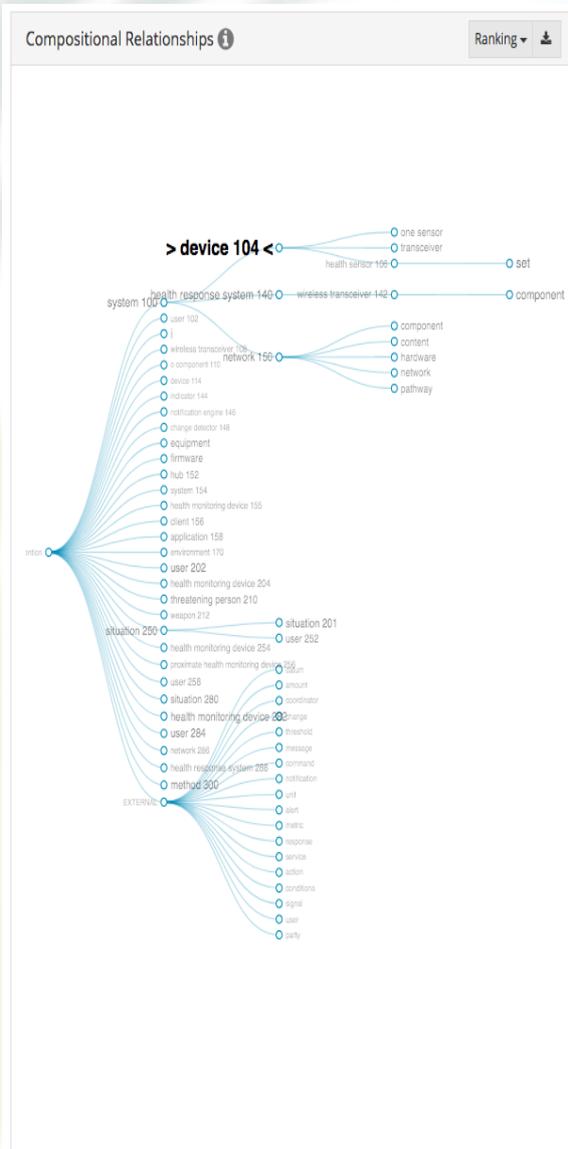
The drawings illustrate a system for remotely taking real-time programmatic actions responsive to health metrics. FIG. 1 shows a block diagram of the system architecture, including a Health Monitoring Device (100), a Health Metrics Server (110), a Health Metrics Database (120), a Health Metrics Processor (130), a Health Metrics Analyzer (140), and a Health Metrics Controller (150). FIG. 2 shows a block diagram of the system architecture, including a Health Monitoring Device (200), a Health Metrics Server (210), a Health Metrics Database (220), a Health Metrics Processor (230), a Health Metrics Analyzer (240), and a Health Metrics Controller (250). FIG. 3 is a flowchart showing the process of receiving health metrics, analyzing them, and taking programmatic actions based on the analysis.

Drawing pages of US2010023348 A1

# Grafo delle relazioni tra componenti



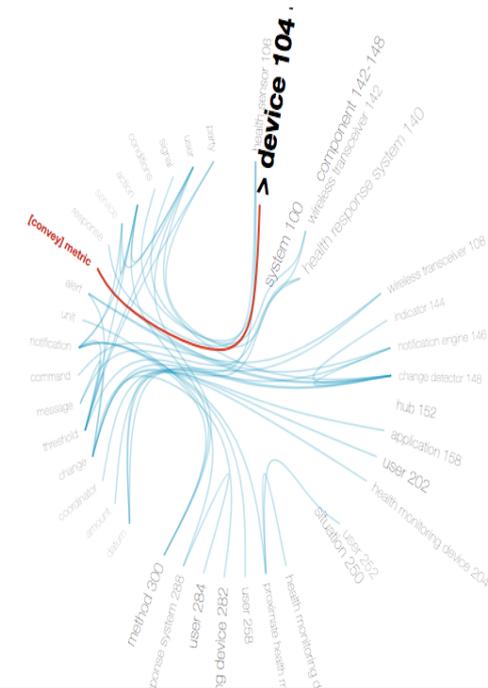
# Collegamento tra componente e sue posizioni nel testo



US2010023348A1 ⓘ

arrangements disclosed herein. In system 100, **health monitoring device 104** can be a device capable of monitoring bodily functions of user 102 and reporting the data to health response system 140. The **device 104** can be unobtrusively worn in standard environments with minimal encumbrance. For example, the **device 104** can be a wearable device, such as a wrist watch, as an ankle, and the like. Health response system 140 can be a remotely located system configured to receive health metrics from the **device 104**. These metrics can be received and processed in real-time, in near real-time, and/or after an arbitrary delay depending upon implementation specifics. The health response system 140 can be configured to perform a pre-programmed programmatic action whenever a health metric gathered by **device 104** exceeds a previously configured threshold. In one embodiment, the programmatic action can be a notification action that notifies an individual other than the user 102 of a potential situation that merits a response. In one embodiment, **multiple different health monitoring devices 104** can convey health metrics to the health response system 140. Programmatic actions and/or configured thresholds of the health response system 140 can be based upon input from **multiple different devices 104**. As shown, a **health monitoring device 104** can include one or more health sensors 106, a wireless transceiver 108, an input/output (I/O) component 110, a global positioning system (GPS) device 114, and/or other such components. The components shown for the **device 104** are not necessarily contained in a single discrete device, but can be contained within a set of different devices that are communicatively linked to each other. For example, a health sensor 106 can be embedded in a wrist watch, which communicates to a GPS 114 equipped mobile phone, which also includes the wireless transceiver, 108 and the I/O component 110. It is important that the **health monitoring device 104**, however configured, can be unobtrusively utilized in a deployed environment, where the user 102 can perform relatively unencumbered actions. The health response system 140 can include a network transceiver 142, a warning indicator 144, a notification engine 146, a change detector 148, and other such components. System 140 can be implemented within a centralized hardware device, can be implemented using a set of distributed devices interoperating in a distributed computing environment, and the like. Further, components 142-148 of system 140 can vary based upon implementation specifics. For example, an optional warning indicator 144 can present a warning proximate to the geographical area of the user 102 in one situation, and can provide a silent warning not discernable from the geographic environment proximate to user 102 in another situation. The change detector 148 can compare received health metrics against any set of defined thresholds and can trigger programmatic events that are driven by comparison results. Health sensors 106 can be responsible for monitoring the bodily functions of user 102. Health sensors 106 can include a set of sensors for doing tests on the human body to determine characteristics of bodily functions. For example, health sensors 106 can monitor galvanic skin response, heart rate, blood pressure, blood sugar levels, blood alcohol level, pupil dilation, and the like. In one embodiment, the health sensors 106 can also monitor conditions of an environment proximate to the user 102, such as ambient temperature, environmental gas composition, ambient sounds, and the like. These environmental conditions can be contextually useful when evaluating health metrics and to minimize false positive reactions. The wireless transceiver 108 142 can be any component able to convey digitally encoded information within carrier waves to an external component. In one embodiment, the transceiver 108 can be configured to only transmit health metrics and transceiver 142 can be configured to only receive them. In another embodiment, the transceiver 108 can receive commands and/or data from remotely located device, which enable it to perform responsive actions, such as presenting an alert and/or providing messages regarding health statuses of proximate health monitored users. Health sensors 106 can provide this data to wireless transceiver 108 for conveyance to health response system 140. Wireless transceivers 108 and 142 can be corresponding transceivers in which can communicate with each other. Wireless transceivers 108 and 142 can convert digital data into transmittable signals and can convert received signals into usable digital data. Wireless transceivers 108 and 142 can implement any form of wireless technology short or long distance. For example, wireless

Functional Relationships ⓘ Ranking ▾



Functional and Compositional relationships ⓘ

Active 1 Passive 0 Out 0 In 0

Source	Verb	Target
device 104	convey	metric

# Individuazione rapida delle relazioni tra componenti

US2010023348A1 ⓘ

embodiment, multiple different health monitoring devices 104 can convey health metrics to the health response system 140. Programmatic actions and/or configured thresholds of the health response system 140 can be based upon input from multiple different devices 104. As shown, a health monitoring device 104 can include one or more health sensors 106, a wireless transceiver 108, an input/output (I/O) component 110, a global positioning system (GPS) device 114, and/or other such components. The components shown for the device 104 are not necessarily contained in a single discrete device, but can be contained within a set of different devices that are communicatively linked to each other. For example, a health sensor 106 can be embedded in a wrist watch, which communicates to a GPS 114 equipped mobile phone, which also includes the wireless transceiver, 108 and the I/O component 110. It is important that the health monitoring device 104, however configured, can be unobtrusively utilized in a deployed environment, where the user 102 can perform relatively unencumbered actions. The health response system 140 can include a network transceiver 142, a warning indicator 144, a notification engine 146, a change detector 148, and other such components. System 140 can be implemented within a centralized hardware device, can be implemented using a set of distributed devices interoperating in a distributed computing environment, and the like. Further, components 142-148 of system 140 can vary based upon implementation specifics. For example, an optional warning indicator 144 can present a warning proximate to the geographical area of the user 102 in one situation, and can provide a silent warning not discernable from the geographic environment proximate to user 102 in another situation. The change detector 148 can compare received health metrics against any set of defined thresholds and can trigger programmatic events that are driven by comparison results. Health sensors 106 can be responsible for monitoring the bodily functions of user 102. Health sensors 106 can include a set of sensors for doing tests on the human body to determine characteristics of bodily functions. For example, health sensors 106 can monitor galvanic skin response, heart rate, blood pressure, blood sugar levels, blood alcohol level, pupil dilation, and the like. In one embodiment, the health sensors 106 can also monitor conditions of an environment proximate to the user 102, such as ambient temperature, environmental gas composition, ambient sounds, and the like. These environmental conditions can be contextually useful when evaluating health metrics and to minimize false positive reactions. The wireless transceiver 108 142 can be any component able to convey digitally encoded information within carrier waves to an external component. In one embodiment, the transceiver 108 can be configured to only transmit health metrics and transceiver 142 can be configured to only receive them. In another embodiment, the transceiver 108 can receive commands and/or data from remotely located device, which enable it to perform responsive actions, such as presenting an alert and/or providing messages regarding health statuses of proximate health monitored users. Health sensors 106 can provide this data to wireless transceiver 108 for conveyance to health response system 140. Wireless transceivers 108 and 142 can be corresponding transceivers in which can communicate with each other. Wireless transceivers 108 and 142 can convert digital data into transmittable signals and can convert received signals into usable digital data. Wireless transceivers 108 and 142 can implement any form of wireless technology short or long distance. For example, wireless transceivers 108 and 142 can implement BLUETOOTH, WIFI, or the like. Input/Output (I/O) component(s) 110 can be responsible for presenting output and receiving input to and from a user. I/O component 110 can present data to the user regarding their health. In some cases, another user can be wearing a health monitoring device in a proximate area. If the health monitoring device detects a health alert, it can notify the proximate health monitoring devices of the alert. When an alert is received, I/O component 110 can notify the user of the alert and provide associated data, such as the location, reason for the alert, and the like. I/O component 110 can include multiple components, which can provide the input/output functionality described herein. I/O component 110 can include a display and input mechanism. In one example, the display and input mechanism can be combined in the form of a touch sensitive display device. In other embodiments, the display can be a liquid crystal display (LCD) or organic light-emitting diode

Functional Relationships ⓘ Ranking ▾

Functional and Compositional relationships ⓘ

Active ⓘ Passive ⓘ Out ⓘ In ⓘ

Source	Verb	Target
device 104	convey	metric

# Esempi di utilizzo

## Possibili utilizzi del servizio INN.P.A.T.

- Consente l'estrazione di informazioni da testi brevettuali, agevolandone la lettura.
- Consente di effettuare un'analisi del settore di riferimento attraverso i brevetti relativi a quel contesto.
- Consente l'individuazione di soluzioni appartenenti anche ad ambiti esterni a quelli di competenza.
- Consente l'individuazione di variazioni tecnologiche nel corso del tempo confrontando i componenti e le relazioni di brevetti tra loro simili

# ***Il Servizio Proposto dal DTE2V***

Un approccio concreto

Una soluzione a portata di tutti

Una analisi ritagliata sulla propria Azienda

Possibilità di co-finanziamento da parte di  
RT

## **2 Livelli di intervento**

1- Scouting

2- Problem Solving Tecnologico

# Attività proposta di DTE2V

## 1 Livello: SCOUTING– a cura COSVIG

- Affiancamento al Cliente per la definizione dei parametri di ricerca
- Attività di ricerca e preanalisi
- Reporting dei Risultati
- Account a tempo (3 mesi) per permettere al Cliente di approfondire in autonomia

## 2 Livello: CONSULENZA di Problem Solving - Cosvig e Partner esterni – Finanziabili con il Catalogo dei Servizi Qualificati RT

- Valutazione del grado di maturità di una tecnologia target e suo posizionamento rispetto ad altre competitor
- Indicazioni preliminari per lo sviluppo tecnologico di una tecnologia/prodotto/processo e anticipazione di futuri scenari tecnologici
- Supporto alla presa di decisioni di carattere strategico in merito ad una tecnologia/prodotto/processo
- Consulenza esplorativa e supporto alla presa di decisioni per progetti d'innovazione



# MANIFESTAZIONE DI INTERESSE PER IMPRESE DEL TERRITORIO

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