













## **Health & Fitness Tracking – Introduction**

The latest lifestyle has resulted in considerable appreciation of health and fitness.

Consequently, everyone is investing a lot of effort in losing weight, increasing physical activity, with a view to enhance

health and become fit.

At technology front, enormous surge has been observed across health and fitness tracking gadgets and smartphone applications, which generally overall measure

movement of one's body along with patterns covering exercise, sleep, diet, and assist the users in setting targets combined with motivations to achieve them.











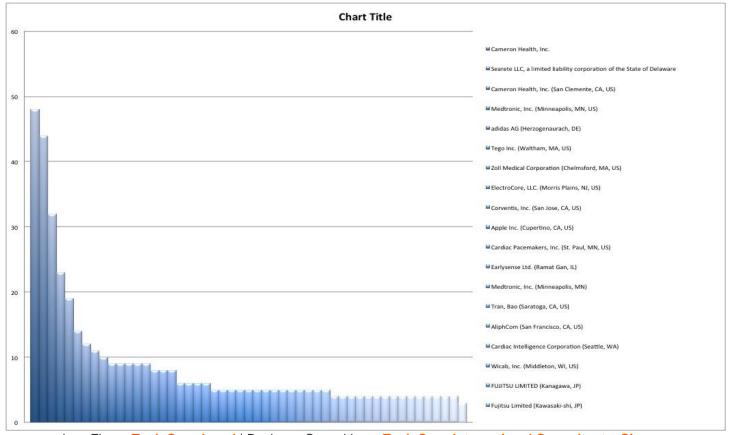


# Strategy

Relevant keywords were used to search patent trends in US, which helped in analyzing companies that have filed most number of patents, time trends on patent filings and most relevant patent

**Patent Assignees with Most Number of Patents** 

As may be seen in the following chart, major players include Apple, Nike, Adidas, Fujitso, and the like.









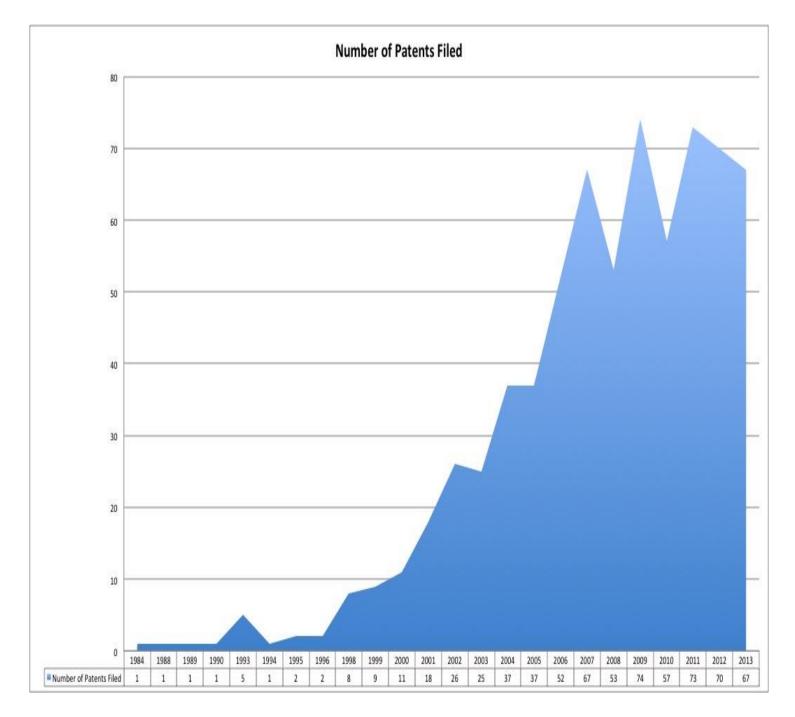




## **Patent Filing Trends**

With an advent increase in the usage of devices (like smartphones), no. of patents filed has increased in past 4-5 years.

A recent drop may be seen due to recently filed patents, which have not been published yet.













#### **Patent Trends - Most Relevant Patent Classifications**

The analysis revealed that some of the most active patent classes (US Class or USC) are:

600/300 - Diagnostic Testing

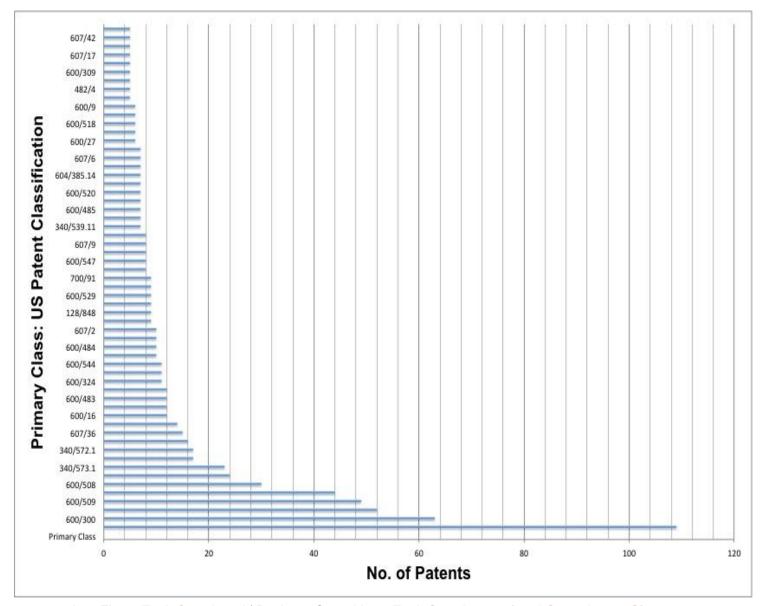
600/509 - Detecting Heartbeat Electric Signals

600/508 – Evaluating Heart Condition

340/572.1 – Communication – Detectable device on protected article (e.g., "tag")

607/36 – Electrical Application – Feature of stimulator housing or encapsulation

Remaining class details may be seen at US Patent office website (USPTO - http://www.uspto.gov/)





Multiple health and fitness tracking devices are expected to be launched soon while various such gadgets are already available in the market.

Here's a brief review of two latest devices, along with corresponding patents.

#### **Basis Health Tracker**

Health tracking device by Basis Science is aimed at targeting the measurement of movement user's body makes throughout the day and subsequently tracks the habits of such movement.

As a differentiator, Basis's health tracker accounts for actual heart rate, skin temperature and perspiration into its data.

By using the body's actual chemistry, the device is able to provide an accurate and comprehensive fitness trackers for recording calories burned, intensity of movement and useful patterns in the user's habits.











The device can be easily perceived as a wristwatch with an elegant black square face, black or white plastic straps and a trans-reflective LCD display. The user is required to wear the health and fitness tracker and it does all the work and the device is smart enough to determine a transition from one activity to another, and it syncs this information to the smartphone wirelessly through the Bluetooth.

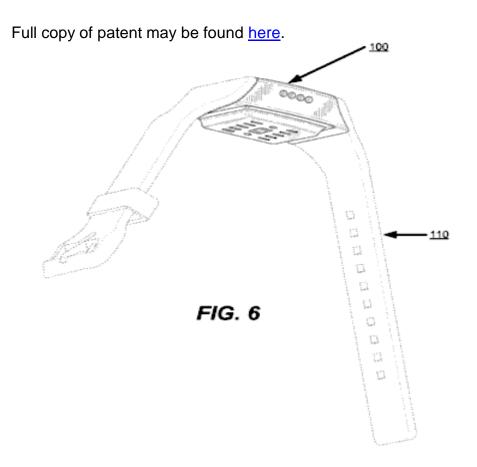
In addition, the biometric device may include other sensors, such as a galvanic skin response sensor, an ambient temperature sensor, skin temperature, motion sensor, etc., to enable the biometric device to measure arousal or conductivity changing events, ambient temperature, user temperature and motion associated with the user.

Additionally, information from each sensor may be used to further filter noise in one or more signals received by the sensors to provide biometric data to the user.

Basis Science Inc has filed a patent titled "Integrated Biometric Sensing and Display Device" with the USPTO, which has been published by US Patent Office as <u>United States Patent</u>

Application 20120271121 on 10/25/2012.

The '121 patent discloses a biometric device configured to be attached to a portion of a body of a user measures biometric data of the user, and the device includes an optical emitter, a wavelength filter, an optical sensor and a processor, for sending a light to the body of a user, receiving light received from the user, filtering and processing it to measure biometric data of the user, including for example, heart rate and blood flow rate.













Fitbit Inc has filed a patent titled "Methods, Systems and Devices for Generating Real-Time Activity Data Updates to Display Devices" that has been published by USPTO as <u>United States Patent Application Number 20140035761</u> on 02/06/2014.

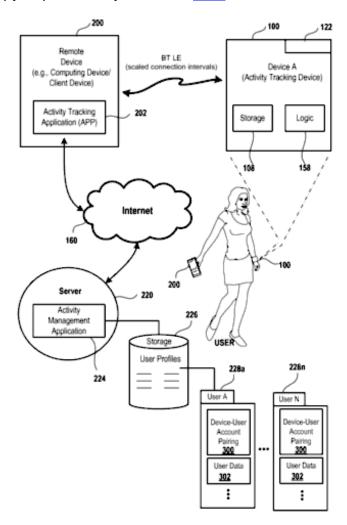
The '761 patent discloses methods, systems and devices for displaying monitored activity data in substantial real-time on a screen of a computing device. One example method includes capturing motion data associated with activity of a user via an activity tracking device. The motion data is quantified into a plurality of metrics associated with the activity of the user. The method storing the motion data in storage of the activity tracking device.

As disclosed therein, the method connects the activity tracking device with a computing device over a wireless data connection, and sending motion data to the computing device for display of a metric, of the plurality of metrics, on a graphical user interface of an activity application of the computing device. The sending of motion data to the computing device is configured to continue while additional motion data is captured and sent to the computing device. The metric displayed on the graphical user interface is shown to change in an increasing numerical or graphical form in substantial real-time.

#### **Fitbit Flex**

Fitbit Flex is a fitness band to be worn on wrist that tracks user's steps, distance, active minutes, calories burned and quality of sleep. As compared to other fitness trackers, Fitbit Flex does not have a display for present stats or time. In contrast, it simply has five tiny lights on the band that indicate how close the user is to reaching their daily goals. The Fitbit Flex is simple and smooth to use and the accompanying app is simple and intuitive.

Full copy of patent may be found here.

















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