Some patenting trends in Medtech

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Dr Lawrence Cullen, Deputy Director (Biotech & Biopharma), Intellectual Property Office, UK
UK – role of the IPO

• UK is the 5th biggest economy in the world (World Bank, United Nations)
• The UK-IPO is responsible for IP delivery and IP policy.
• UK IPO employs ~1200, with ~400 patent examiners.
• Second largest national patent office in Europe
• UK patent applications ~21000 and ~6000 patent grants in 2018
• >99% of EP patents are validated in the UK (126,443 in 2018)
• Role of a national patent office is to support innovation
  • National, regional and worldwide patent systems available
  • Role of priority applications
  • Many applications, fewer grants
    • Publication of applications
    • Publication of granted patents
- Personalised Medicine
- Prosthetics
- Additive Manufacturing/3D Printing
- Telehealth
- Telemedicine
- Treatment Regime
- Detection/Diagnosis
Telehealth
Looking a little closer ....
Where the inventors are?

Where the markets are?
System for vital signs monitoring

Abstract

More precisely, the monitoring system (1) employing at least seven devices (5) (6) (7) (8) (9) (10) (11) of measurement signals (24) (25) (26) (27) (28) (29) (30) and at least one support device for the transmission of signals (13) and is wherein for capturing, transmission, processing, display and monitoring of at least seven vital signs of patients in homecare. These signals are picked up by sensors specific medical devices and transmitted with the aid of mobile devices such as smartphones and tablets, for a server in the cloud computing which can be accessed, controlled and displayed and processed by doctors or specialists. The present invention relates to a system for monitoring vital signs of patients in homecare that are made through the monitoring assisted by computerized apparatus in real time. Aided monitoring, it is understood the continuous measurement, capturing or measuring the physiological state of an individual as well as the display to interpretation of these measures, to detect changes in behavior or health status of an individual. For assisted remote monitoring means monitoring the predictive performed remotely. By computerized apparatus, also called computerized device, extends each and every device that has a microprocessor capable of performing data processing such as personal computers, laptops, tabém known as notebooks, ultrabooks or laptops, handhelds, also known as palmtop or handhelds, smart mobile phones, which are commonly referred to as smartphones and even tablets, which are computerized devices in clipboard format. Still, for mobile computerized apparatus extends laptops, smartphones or tablets.

Universidade Do Estado Do Rio De Janeiro
Who are the patent applicants/holders?

% Patents Per Company (Top 20)

- Koninklijke Philips NV
- General Electric Company
- State Grid Corporation Of China
- Robert Bosch GmbH
- Samsung Electronics Co., Ltd.
- Chinese Academy Of Sciences
- HARBIN GUANGKAI TECHNOLOGY DEVELOPMENT CO., LTD.
- RELIANT IMMUNE DIAGNOSTICS, INC.
- Medtronic plc
- Nanjing University Of Information Science & Technology
- Medcare Manufacturing
- Intouch Technologies, Inc.
- CHANG’AN University
- Nanjing University Of Posts And Telecommunications
Patents, Revenue, and Litigation per Company

- Koninklijke Philips NV
- General Electric Company
- State Grid Corporation Of China
- Samsung Electronics Co., Ltd.
- Chinese Academy Of Sciences
- Robert Bosch GmbH
- HARBIN GUANGKAI TECHNOLOGY DEVELOPMENT CO., LTD.
- RELIANT IMMUNE DIAGNOSTICS, INC.
- Medtronic plc
- Intouch Technologies, Inc.
- Nanjing University Of Information Science & Technology
- Medcare Manufacturing
- CHANG'AN University
- 3M Company
- Nanjing University Of Posts And Telecommunications
- Chengdu Chuangxinwei Technology Co., Ltd.
- C. RAFIN and CO. PTY. LTD.
- Southeast University
- Yonsei University
- Xian Xunteng Technology Co Ltd

Telehealth

Vision (% Patents + % Classifications + % Citations)

Resources (% Revenue + % Locations + % Litigation)
AI being applied in the telehealth field

- Intersection of Artificial Intelligence & telehealth
AI and tele-health
AI and tele-health
Telehealth

Patents, Revenue, and Litigation per Company

Koninklijke Philips NV
General Electric Company
State Grid Corporation Of China
Samsung Electronics Co., Ltd.
Chinese Academy Of Sciences
Robert Bosch GmbH

Telehealth & AI

IPO | Making life better through IP
Intellectual Property Office is an operating name of the Patent Office
WO2013132235A1
EP2823463A1

Granted
EP2823463B1 (22 May 2019)
Collaboration between UK hospitals and company with image analysis expertise to be able to compare 2D scans with 3D scans in order to better recognise features of interest from 2D scan – improve detection.
Future

• Role of AI with prosthetics?
• Role of AI with treatment regimes?

• Impact of changes to regulatory system for medical devices in Europe?
Resources

- The patent guide: A handbook for analysing and interpreting patent data

- Artificial intelligence: a worldwide overview of AI patents

Database of UK IPO Research Publications

- https://www.gov.uk/government/organisations/intellectual-property-office/about/research#research-publications