

# GAETSS - Gamification and Enabling Technologies Strategic Solutions Newsletter

*Shaping the Future of Business and Society through Human Development and Motivation*

**November 2016**

**Digital Medicine and the Future of Digital Technologies in Medicine, Health & Well-Being**  
**Medilink SIG on VR and Simulations in Medicine**  
**Medilink Joint SIG on Digital Medicine**  
**Soft Launches of ISDM European Chapter**  
**Innovate 2016 and Digital Health Innovations**  
**Calls for Digital Medicine Papers & Articles**  
**50:50 Scenarios for the Next 50 Years**  
**Upcoming Events.**

Welcome to the GAETSS November 2016 E-Newsletter. This edition focuses on Digital Medicine and the use and impact of digital technologies on medicine, health and well-being where the combination of disruptive enabling technologies and gamification strategies could be one of the most influential factors in achieving the goal of a sustainable society.

Since the last newsletter in August 2016, I have been privileged to be appointed as the President of the European Chapter of the International Society of Digital Medicine (ISDM) and have been very focused on the development of plans to establish a UK Digital Medicine Research Centre in the East Midlands with a view to acting as a hub to a network of UK and European Digital Medicine Research Centres. I have reached an agreement with the ISDM in China to build this network and create opportunities for innovation in the use of digital technologies for medical, health and well-being applications

My aim is to have strategic partnership agreements in place to make this operational in early 2017, dependent on identifying a suitable UK base to operate from.

There are limited places available to attend the European Launch of this new venture in Barcelona on November 21<sup>st</sup> and these will be allocated on a "first-come, first-served" basis. If you are interested in attending the World of Health Summit in Barcelona (WOHIT 2016) to participate in this soft launch, please contact me asap at [president@isdmedu](mailto:president@isdmedu)

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## What is Digital Medicine?



*Logo of the International Society of Digital Medicine*

There is little doubt that digital technologies will be hugely influential in shaping the future health and well-being of citizens all over the globe. Digital Medicine is the marriage of one of the newest phenomena in mankind's history, digital technologies, to one of the oldest disciplines known to man, medicine.

The potential benefits to humanity of bringing precision and personalisation to medical practices are enormous but the challenges of introducing disruptive change into the traditions of a human, caring profession should not be under-estimated.

One of the first challenges to be faced is to create a common understanding of what Digital Medicine actually means. This challenge is not dissimilar to building the awareness and understanding of the concept of "Serious Games".

Working with the Chinese Founders of ISDM, I have drafted a definition of Digital Medicine as follows :-

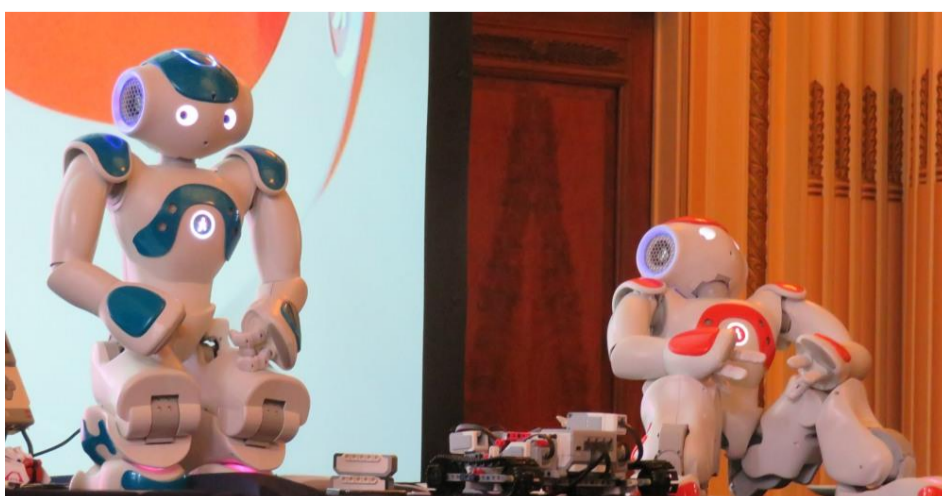
***Digital Medicine is the multidisciplinary science, practice and/or study of :-***

- ***Digital Technologies used for the diagnosis, prevention and/or treatment of medical conditions***
- ***Digital Technologies used in the science, practice and study of medicine***
- ***The impact of Digital Technologies on the science, practice and study of medicine***

***The ultimate aim of Digital Medicine is to facilitate the prevention of disease and the fostering of global good health and physical and mental well-being***

The 3 components shown above are meant to embrace the full spectrum of influences that digital technologies have today and will have tomorrow on medicine, health and well-being.

## The Future of Digital Technologies in Medicine, Health and Well-Being

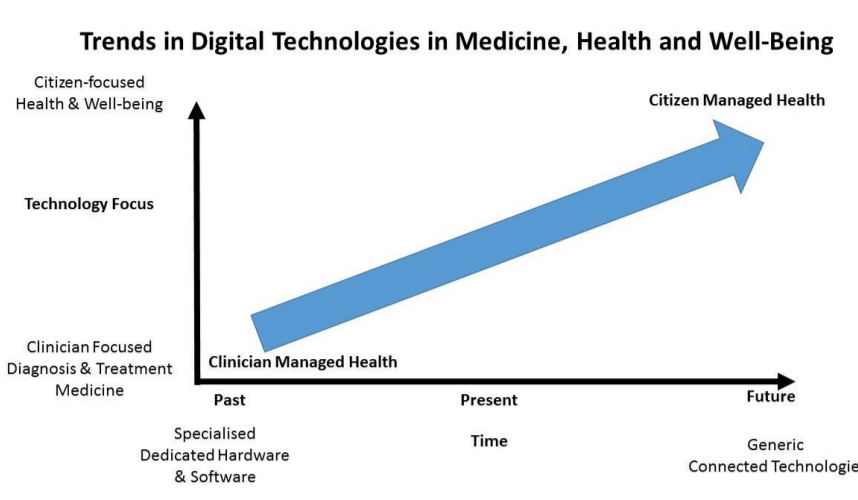


***Personal Robots on show at the Nottingham University iTag Conference***

There are an increasing number of conferences and events showing a full spectrum of digital technologies applied to medical and health applications. Some of the recent and forthcoming events are described in this newsletter and/or are included in the forthcoming events table shown at the bottom of this newsletter.

Disruptive technologies such as Artificial Intelligence, Robotics, Internet of Things, Cloud Computing etc. will have a major impact on the science, practice and study of medicine. It will be one of the aspirations of the International Society of Digital Medicine (Europe) to try to anticipate and shape the use of Digital Technologies for the benefit of medicine, health and well-being.

My personal expectation of the way digital technologies will be focused over time is shown on the graph below :-



I believe that we are rapidly moving into an era in which citizens will play an increasingly important role in taking responsibility for their own personal health management, supported by technologies such as wearable devices, implants, mobile devices and artificial intelligence. I also envisage that gamification or the use of games psychology and mechanics will play an important part in influencing lifestyle behaviours.

I see the role of the ISDM in Europe as building bridges between clinicians, technologists, academics and citizens to use digital medicine as a discrete multidisciplinary activity valued by medical, non-medical and technology professionals as a means to sustainable improvements in public health and well-being.

### Medilink East Midlands SIG on VR and Simulations in Medicine



Images from Medilink East Midlands Inaugural Special Interest Group on VR in Medicine

Medilink East Midlands launched a new Special Interest Group (SIG) at a seminar in Nottingham in October, collaborating with the International iTag conference being held at the same time. The focus of this event was the use of virtual reality and 3D technologies in medicine.

The event was moderated by Professor Phil Breedon of Nottingham Trent University who is leading this new Medilink Special Interest Group. Accompanying the series of presentations was a small exhibition showcasing developments in the use of VR and simulation technologies in medical practice.

### Medilink East Midlands Joint Special Interest Group Event on Digital Medicine

Medilink East Midlands Joint Special Interest Group Event on the theme of Digital Medicine

I am very pleased to be collaborating with Medilink East Midlands in seeking to establish the UK East Midlands as a hub for a European Digital Medicine network. On November 15<sup>th</sup> in Nottingham, Medilink are holding a joint SIG on Digital Health and 3D printing/additive manufacturing in healthcare. The agenda for the event is shown below :-

Time	Activity	Presenter
12:30	REGISTRATION AND LUNCH	
13:30	WELCOME AND INTRODUCTIONS	Medilink East Midlands
13:45	Design & development of bespoke healthcare products using digital technologies	Ben Irvine Bluefrog Design
14:15	UK Additive Manufacturing Strategy and Medical Applications plus the potential challenges for Additive Manufacturing in Healthcare	Phil Dickens & Professor Ian Ashcroft The University of Nottingham
14:45	REFRESHMENTS AND BREAK	
15:10	Digital Health Informatics and the 100k Genome Project at University Hospitals of Leicester NHS Trust	Dr Jonathan Tedds University of Leicester
15:40	Additive Manufacturing workflows in the commercial manufacture of patient specific human and veterinary implants	Ed Attenborough Attenborough Dental
16:10	Digital Medicine and Serious Games Applications for Physical and Cognitive Rehabilitation	David Wortley GAETSS
16:30	Launch of the China-UK Collaboration and establishment of East Midlands as the hub for the European Chapter of the International Society of Digital Medicine	David Wortley President of European Chapter of ISDM
16:45	CLOSE	

To register for this event, visit the Medilink East Midlands events page at <http://www.medilinkem.com/>

### Soft Launches of the European Chapter of the International Society of Digital Medicine



The introductory splash screen of the ISDM European Chapter Web Site – [www.isdm.eu](http://www.isdm.eu)

November 2016 sees the soft launches of the European Chapter of the International Society of Digital Medicine in Nottingham and Barcelona. The UK soft launch will take place at the Medilink Joint SIG in Nottingham and the European soft launch is scheduled for November 21<sup>st</sup> at the World of Health IT Summit being held in Barcelona (see below).

There are opportunities to participate in both soft launches – to find out more about ISDM (Europe) and to register an interest in joining the International Society of Digital Medicine, please contact me at [president@isdm.eu](mailto:president@isdm.eu) as soon as possible (places in Barcelona are very limited)

### Innovate 2016 and Digital Health Innovations



Images from Innovate 2016 held in Manchester

I attended the Innovate 2016 conference in Manchester early in November where digital medicine and health featured very strongly amongst the technological innovations being showcased. The following exhibitors caught my interest with interesting and innovative uses of technology :-

Organisation	Application	Web Site
Alzheimer's Research UK	VR apps to support dementia awareness	<a href="http://www.alzheimersresearchuk.org">www.alzheimersresearchuk.org</a>
VRgo	VR controlled by the wheelchair	<a href="http://www.vrgochair.com">www.vrgochair.com</a>
Immerse Learning	VR used for immersive learning in hospital apps	<a href="http://www.immerselearning.com">www.immerselearning.com</a>
CRIL	Smart COPD inhaler	<a href="http://www.criltd.co.uk">www.criltd.co.uk</a>
Scicasts	Smart Search Technologies for Medical Papers	<a href="https://scicasts.com">https://scicasts.com</a>
Simplyhealth	Personal health management solutions	<a href="http://www.simplyhealth.co.uk">www.simplyhealth.co.uk</a>
Catapult Transport Systems	Robot Cars and VR devices	<a href="http://www.ts.catapult.org.uk">www.ts.catapult.org.uk</a>
Blispa	Conference location tracking and treasure hunts	<a href="http://www.blispa.com">www.blispa.com</a>
Pacla Medical	Robotics in physiotherapy	<a href="http://www.paclamedical.com">www.paclamedical.com</a>
Morgan Innovation and Technology	Haptic glove and serious games for rehabilitation	<a href="http://www.morgan-iat.co.uk">www.morgan-iat.co.uk</a>
Iolight	Portable digital microscope	<a href="http://www.iolight.co.uk">www.iolight.co.uk</a>
Blue Maestro	Baby Temp tracking with soother	<a href="http://www.blumaestro.com">www.blumaestro.com</a>
Medisieve	Magnetic blood filtering	<a href="http://www.medisieve.com">www.medisieve.com</a>
Danny Manu	Ear Buds for real-time language translation	<a href="http://www.mymanu.com">www.mymanu.com</a>
Doppel	Emotion tracking and control wearable	<a href="http://www.doppel.london/">http://www.doppel.london/</a>

### Calls for Digital Medicine Papers and Articles



The Journal of Digital Medicine Edited by ISDM

The new relationship and close collaboration with the ISDM has created opportunities for publishing papers, editorial or commentary in the Digital Medicine Journal.

This is a great opportunity share expertise, views and reflections on the use of digital technologies for medicine, health and well-being. For a copy of the article submissions guidelines and access to an archived copy of the Digital Medicine Journal, please email me at [president@isdm.eu](mailto:president@isdm.eu)

### 50:50 Scenarios for the Next 50 Years – Technology and Society



A new book to celebrate the 50<sup>th</sup> Birthday of the World Future Society

Fast Future Publishing founded by Futurologist Rohit Talwar is compiling a series of chapters on possible future scenarios to be incorporated in a new book due to be published in March 2017. I am honoured to have a proposal for a chapter accepted for this book.

For details of FastFuture Publishing books and activities, visit their web site at <http://fastfuturepublishing.com/main/>

### World of Health IT Conference (WOHIT 2016), Barcelona, November 21/22



## The Upcoming World of Health IT Conference in Barcelona

The new HIMSS Europe World of Health IT (WoHIT) Conference & Exhibition will be taking place on 21–22 November 2016 in Barcelona, Spain. The event will gather top European healthcare stakeholders and will be the meeting point for the entire eHealth ecosystem.

A feature of the conference will be a special launch event of the European Chapter of the International Society of Digital Medicine. There will be a limited number of “invitation-only” places available at this prestigious launch event as we try to encourage high calibre and experienced professionals in the use of digital technologies for health and well-being applications to join the new Chapter and support its aspirations.

If you are interested in attending WOHT 2016 and an invitation to the soft launch of ISDM Europe, please email me at [president@isdmeu](mailto:president@isdmeu)

## Recent Articles, Presentations and Papers

A comprehensive list of archived articles, presentations and videos can be accessed at my website –

<http://www.davidwortley.com/conferences.html>

The most recent updates are shown below :-

Date	Article/Presentation Title	Comments
August 2016	Digital Medicine Journal Digital Medicine and the Aging Society Editorial View the article <a href="#">here</a>	This editorial focuses on the health challenges posed by the combination of technology and the Aging Society

## Upcoming Events Listing

Below is a list of forthcoming conferences – also accessible at <http://www.davidwortley.com/events.html>

Date	Event Name / Description	Location	Web URL
Nov 16	Medilink Joint SIG	Nottingham, UK	<a href="http://www.medilinkem.com/events/events-list/2016/11/16/default-calendar/jointsig161116">http://www.medilinkem.com/events/events-list/2016/11/16/default-calendar/jointsig161116</a>
Nov 16-18	GiantHealth Conference	London, UK	<a href="http://www.gianthealthevent.com/">http://www.gianthealthevent.com/</a>
Nov 21-23	World of Health IT Congress	Barcelona, Spain	<a href="http://www.worldofhealthit.org/ehome/index.php?eventid=141909&amp;">http://www.worldofhealthit.org/ehome/index.php?eventid=141909&amp;</a>
Nov 24	Medilink Networking Event	Burton on Trent, UK	<a href="http://www.medilinkem.com/events/events-calendar/2016/11/24/default-calendar/meetinthe Midlands241116">http://www.medilinkem.com/events/events-calendar/2016/11/24/default-calendar/meetinthe Midlands241116</a>
Nov 28 – Dec 1st	SEANES 2016 Ergonomics and Human Factors	Bandung, Indonesia	<a href="https://seanes2016.org/">https://seanes2016.org/</a>
Nov 30 – Dec 3rd	SEGAMED 2016	Nice, France	<a href="http://segamed.eu/WordPress/">http://segamed.eu/WordPress/</a>
Mar 8-10	ABSEL 2016 - Association for Business Simulation and Experiential Learning (ABSEL)	Myrtle Beach, USA	<a href="https://absel.org/">https://absel.org/</a>
May 26-28 2017	Technology, Knowledge and Society 2017	Toronto, Canada	<a href="http://techandsoc.com/2017-conference">http://techandsoc.com/2017-conference</a>

If you would like any presentations, videos or documents circulated to my network, I am happy to provide this service free of charge for any material relevant to readers of this newsletter. If you are interested, contact me at [david@davidwortley.com](mailto:david@davidwortley.com).

Best Wishes for a Better Future for all Mankind

David Wortley FRSA

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