

## HEaTED Regional Network Event – Event Report

**Region:** North East

**Date:** 20 March 2015

**Venue:** City Space, City Campus, Sunderland, SR2 7PT

### Agenda:

- 10.30 am Welcome and Introductions – Linda Robinson, North East Regional Co-ordinator
- 10.45 am HEaTED Update - James Nobes, HEaTED Membership & Networks Manager
- 11.30 am MOOCs Free Online Courses – The experience and opportunities of creating and delivering successful free online courses – Suzanne Hardy, Senior project Officer, Newcastle University
- 12.15 pm Lunch and networking
- 1.00 pm Professional Registration at Newcastle University: Progress to Date – Mel Leitch, Technical Manager, FIScT, Newcastle University
- 1.15 pm 3d Motion Capture Technology – Elizabeth Gandy MSc MBCS, Senior Lecturer, Department of Computing, Engineering & Technology and Stuart Dixon, Sciences Manager, University of Sunderland
- 2.00 pm Tour of City Space, University of Sunderland
- 3.00 pm Close

A copy of the presentation slides used at today's event can be found in the North East Region [Online Group](#) with the event report.

### Welcome and Introduction

Linda Robinson welcomed those attending event and explained agenda. A short icebreaker took place.

### HEaTED Update – James Nobes, HEaTED Membership & Networks Manager

James thanked participants for attending and provided an overview of HEaTED and his role. James introduced John Dwyer from IST and informed everyone if they had any questions/queries/concerns that John would be available for a chat over coffee.

James reminded staff that to receive communication from HEaTED they must register to be a member via the website [www.heated.ac.uk](http://www.heated.ac.uk). Members are sent newsletters approximately every 5 weeks.

#### Overview

- What is HEaTED
- How can HEaTED support your development
- Supporting Professional Registration

## What is HEaTED

HEaTED Membership is free to staff once their Institution has signed up. HEaTED have 75+ different Institutions and over 3,250 from these institutions have registered. Over 600 individuals have participated in training events. This equates to 250 training days.

James went through the HEaTED website and what is available to attendees.

## How can HEaTED Support your development – Network Grants

There are 2 arms to Network Grants.

Arm 1 – Training and Development. James went through the options e.g. on-line, tailored delivery etc. James stressed that the website has some useful Guides in the Library that are available to members. Becoming a course provider through HEaTED you will have access to all members on the website. The new Course Directory will be available next month as it is currently being printed. If there are courses you are interested in but are not in the directory, please let HEaTED know and they will source a facilitator. There is also the option of technicians running expert workshops and raising income for their Institutions.

Arm 2 – Regional Networks. There are a number of HEaTED Regional Groups throughout the UK. These groups allow members the opportunity to share, ask questions and network. Meetings are held around the UK and are free to attend. There are 3 North East network meetings per year. The next North East event will be the annual joint regional event with Yorkshire regional group to be held at the National Science Learning Centre at York on 24 June 2015, the theme for this event will be 'Mindfulness'. Details will be published soon on [www.heated.ac.uk](http://www.heated.ac.uk).

## HEaTED Competency Assessment Toolkit for Technical Staff (CATTS):

HEaTED has received many requests for help with organisational and individual performance assessment. In response to this and a wider UK need, a new resource exclusively for HEaTED members has been developed.

The CATTS resource has been designed to change the way professional technicians in HE (and FE) explore performance. It provides a benchmark for all professionals (regardless of specialism or discipline) of their current competencies, development areas, and future direction.

The toolkit recognises each discipline on a competency related basis. The Toolkit is evidence based and allows for skills mapping and skills gap identification across your Institution. The CATTS is a resource/toolkit for continual monitoring, assessment and development.

*There are 5 key competency areas as modules:*

1. Professional Practice
2. The Student Experience
3. Leadership & Management
4. Planning and Organising Resources
5. Governance and compliance (incl.H&S)

*There are 5 levels of competency for the reviewee to be matched against:*

1. Learner
2. Experimentalist
3. Practitioner
4. Specialist
5. Expert

An example of one of the modules (Student Experience) was showcased.

The resource is for sale at £250 for HEaTED member institutions and £450 for non-member. The payment is per Institution and NOT per individual. There will be a HEaTED [Online Community Group](#) to support this resource where members can share their experiences.

### Supporting Professional Registration

James recapped on the discussion of the previous meeting.

Anyone wishing to apply for professional registration must join the relevant licensing body then decide on the level e.g. Registered Science Technician (RSciTech), Registered Scientist (RSci), Eng Tech, ICT Tech, I Eng, C Eng.

There is only one form in the common application process. If there are sufficient numbers, assessors may come to your work place to help support individuals with the application process.

### Why Registration is good for you and why should you get involved

- Recognition
- Knowledge and competence
- Demonstrate professionalism
- Recognition beyond work place and employers (e.g. job application)
- Part of growing community
- Good for organisation
- Support for development
- A benchmark across department, sections and roles

There have been 1,000 applications in a short period of time.

### The role of HEaTED in Professional Registration


- Think of HEaTED as a vehicle
- All courses are linked with the competencies
- Regional Network events and contribution to on-line groups and community
- Sign-posting routes for registration

Evidence suggests that 21% using HEaTED as evidence and 26% requesting more information. HEaTED supports technicians on their journey to professional registration through Licensed Bodies.

### Who to register with?

There is a range of Awarding Bodies and you choose the one specific to your requirement. There is more information available on the Science & Engineering Council's website. There is no Arts Professional Registration yet but they are lobbying for an equivalent registration.

### What do HEaTED need from you?

- Register through HEaTED and/or update your profile
- Keep coming to events and encourage your colleagues to join
- Complete the on-line survey
- Post in the Regional On-line groups
- Help spread the word in your Institution
- Run your own courses through HEaTED
- Tell us what training you need
- Tweet 

John Dwyer explained that to register for Professional registration you need to complete the competency forms. IST has a team of people who are available to give you one-to-one help/support. Professional Registration is a way forward. You can go to the webpage and start the process.

## **MOOCs Free Online Courses – Suzanne Hardy, Senior Project Officer, Newcastle University**

Suzanne Hardy from Newcastle University gave an introduction to MOOCs (Massive, Open, On-Line Courses) that have been available since September 2012.

### Background – Why did Newcastle University partner with Future Learn?

The University recognised the need for MOOCs as an opportunity to offer programmes more flexibly. By partnering with Future Learn gave the University exposure to a bigger market as Future Learn have 1.1 million learners across 130 countries.

MOOCs are engaging and Newcastle have had 2 MOOCs:-

- 1) Hadrian's Wall
- 2) Ageing Well: Falls

Statistics discussed:-

#### Hadrian's Wall

This was launched in September 2014 and will be run again in June 2015.

6%% started the course

91% were active learners

48% were social learners

30% of people who started the course completed it. (18,000 people signed up for it)

Feedback – 89% said the course was about right. 82% said it was engaging and 88% said it was about right. It received excellent feedback from CEO and was the 14<sup>th</sup> biggest course of its time.

Newcastle University worked closely with their partners e.g. English Heritage and Segedunum. From September 2014 – November 2014 the Segedunum website had 2,067 hits, a significant increase.

#### Ageing Well: Falls

This ran from November 2014 – December 2014

59% started the course

92% were active learners

58% were social learners

57% of people who started the course completed it. (5,685 people signed up for it)

Feedback – there is some evidence to suggest that fear of falling has been reduced – 377 completed the survey. Most people who did the course were between the ages of 60-80.

#### So what are MOOCs good for?

36,000 people have signed up to Newcastle's MOOCs to date in 107 countries.

### Benefits of MOOCs

- Exposure to 1.1 million people
- 130 countries worldwide
- Funding council support
- Teaching/development opportunities

MOOCs will have an impact on REF. Those signed up to a MOOCs could potentially be a target audience for market research purposes for identifying future courses. The content of MOOCs can be revised and embedded into courses on our website.

### What is different about MOOCs?

“You have to have time to do it” (Lynne Rawles) – Ageing Well: Falls  
 “It’s making every second count” (Professor Ian Haynes) – Hadrian’s Wall

We are used to creating formal PGTs, we know what we are doing. We are asking them to do the same thing but in a different way. The advantage is that they don’t lose anything if they don’t finish it. MOOCs need to be encouraging so they want to see the course through to the end – The Learning Curve is massive!

### Lessons Learned – The Challenges:-

- Can we offer it to such a diverse cohort of students
- How can we work the ratios of staff to students
- With no fee, no credit, no exam – what motivates this. Is intrinsic motivation enough?

There is a lot of planning that goes into MOOCs so you have to get the story board down quickly. Each video is no longer than 4 minutes in duration in order to maintain interest and concentration.

### Committees of practice

- Academics
- Learning Technology
- Digital Media

### How do we mainstream the lessons learned?

We have created an Action Learning Group.

The Third MOOC is to be launched on 30 March 2015 and is called the Enterprise Shed. Estimated age dynamic is 18-35. Delegates watched a trailer.

## **Professional Registration at Newcastle University: Progress to date – Mel Leitch, Technical Manager, FIScT, Newcastle University**

Mel thanked Linda for helping to drive through Professional Registration at Newcastle University.

Mel talked through the Chartered Institute that was launched in 2012. The Framework shows you how to progress through the registration process.

Mel mentioned Krystena Callaghan’s from Newcastle University and Emily Brown from the Science Council provided two very inspiring presentations at the previous NE HEaTED regional meeting held on 6 November

2014. This led to a number of Newcastle University technicians becoming very enthused about professional registration.

On 2 December 2014 an event was arranged at Newcastle University to promote Professional Registration - 40 Newcastle University technical staff attended the event. Dr John Hogan, Newcastle University's Registrar was in attendance on the day to support this initiative.

The event included presentations from:-

Ali Orr, Science Council

Krystena Callaghan, Newcastle University (repeated her talk from the previous meeting on the application process)

Katherine Rogers, Newcastle University and Natalie Kenney, Sheffield University

On the day 6 candidates were assessed via video conferencing at the event. All 6 candidates achieved the registration.

4 more candidates were assessed by video conferencing on 21 January 2015 and 1 by the paper route.

2 technicians have attended Assessor training in Nottingham and are now qualified assessors.

On 11 March 2015 those who had achieved professional registration were invited to a celebrating Success Event hosted by Newcastle University's Vice Chancellor, Professor Chris Brink.

#### What is next?

On 1 May 2015 we have arranged for 5 slots to be available for face-to-face registration. 3 slots have already been taken.

#### Mentor Briefing sessions

Linda Robinson will be arranging some mentoring training in April for technical staff at Newcastle University who have volunteered to become 'professional registration mentors'. There are currently 10 volunteers.

#### Professional Registration Event

Due to its popularity a re-run of the December event is to take place on 15 May 2015. A number of Newcastle University senior key people have volunteered to present at this event.

### **3d Motion Capture Technology – Elizabeth Gandy MSc MBCS, and Stuart Dixon, University of Sunderland**

Stuart Dixon demonstrated to the audience 3d motion capture technology.

#### Explanation of suit

Look at how we can use technology system that has been around for 3 years. The software is by a Dutch Company. The suits is used in the movie and gaming industry as well as military apps. Each suit contains a 3d accelerometer, 3d gyroscope and a Magnatomica.

The suit was used in the movie 'Paul'.

The suit captures movement from the suit which can be exported and then animation added. You can physically see the movement on a computer as an avatar. It allows you to see the centre of gravity which is

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shown as a red dot. This allows you to use measurements and ergonomic benefits. You can put MENS in a ball and when it is kicked it allows you to see how it was kicked, the curve at which it was kicked and also the force. This is used a lot for sport. The suit and software allows you to look at certain points of the body to see if there are any problem areas e.g. when used in horse riding on the rider it allows you to look at their center of gravity and how the riders body is positioned when they jump. MENS can be found in phones.

The suits cost £50,000 and are wireless.

Elizabeth introduced herself and the research undertaken with the suit.

### Use of the Xsens 3d motion capture technology for horse rider

Allowed me to work with Stuart and to write the software to make it easier for statistics

### Background

The equipment was used to look at horse rider, saddle and horse in conjunction with Saddle Research Trust.

The research was aimed at investigating whether inertial sensing technology is a practical tool for identifying and measuring rider asymmetry. This impedes performance and increases injury risk to both horse and rider. An analytical posture can have a significant effect on tolerance and stability.

### Method

12 horse/rider combinations were fitted with the Xsens™ MVN motion capture suit. The data captured for straight runway and 15m circle, in rising trot on each run. The data was exported and converted to CSV using customized c# software. The data was analysed for 2 stride circles (straight line) and 10 stride cycles (circles). To analyse the statistical data we used R™ statistical package. Video was shown and can be viewed at <https://www.youtube.com/watch?v=T1RGsQnMk0&feature=youtu.be>

### Results

- The Asymmetry shown in external hip rotation of all riders
- Values from 1-27 degrees in a straight line and from 0-30 degrees in circle
- 83% showed greater external rotation of the right hip.
- Good intra-rate repeatability
- Wireless range reliable within 20x40m arena
- Suit enables quick changeover between riders

### Conclusion

- Study represents novel use of inertial sensing technology in its application to the measurement of rider motion patterns
- Benefits of Xsens™ Motion Capture Technology:
  - Non-invasive and capable of recording rider hip rotation asymmetry whilst performing a range of movements unhindered
  - Goes beyond conventional optical motion analysis by providing the means of assessing the rider with greater accuracy
  - Efficient and practical, with potential to further advance analysis of horse and rider interactions



### Publication

“A preliminary investigation of the use of inertial sensing technology for the measurement of hip rotation asymmetry in horse riders”

### Further studies

- Analysis of hip flexion and pelvic alignment of horse riders
- PhD “Visualising inertial motion sensor data : the design and evaluation of a horse rider assessment interface”
- Cycling analysis, comparison with the Retul™ bike fit technology
- Validation of Xsens™ Retul™ technology comparison with vicon™ optical and motion capture

Liz and Stuart thanked everyone for their time.

### **Tour of City Space, University of Sunderland**

Kevin Ludlow, manager of City Space provided participants with a tour of the facilities. Linda Robinson thanked Kevin for all his help with organizing venue, arranging refreshments and providing the tour.

**ACTION:** ALL – book to attend training courses or contact HEaTED if you wish to host an on-demand course.

**ACTION:** ALL - Ask your colleagues, team members and other network groups (Unions and Staff Developers) to register independently on the HEaTED website to ensure everyone receives information direct from HEaTED and can take full advantage of your Institution's Membership.

**ACTION:** ALL – if you would like to host a HEaTED course at your Institution contact [admin@heated.ac.uk](mailto:admin@heated.ac.uk)

**ACTION:** Use the [Online Community Group](#) to make comments and feedback on what you have heard today.

### **Next event**

North East & Yorkshire joint event – National Science Learning Centre, York, 24 June 2015.