

<p><b>Institution: De Montfort University</b></p>
<p><b>Unit of Assessment: 35 Creative and Performing Arts</b></p>
<p><b>Title of case study: The development of online resources for instrumental and electroacoustic musicians and students in a digital age</b></p>
<p><b>1. Summary of the impact</b></p> <p>This case study focuses on examples of web-based projects, across a range of the Music, Technology and Innovation Research Centre's (MTI) activities, which have had impact on a wide range of beneficiaries including: instrumental composers; performers; electroacoustic musicians; students; and amateurs of all ages. The case study highlights the use of technologies, concepts, and content structures with the following aims:</p> <ul style="list-style-type: none"> <li>• to make use of Internet content structures to facilitate impacts from research</li> <li>• to encourage public engagement with research outcomes as social and living entities rather than as abstract concepts</li> <li>• to make research available to a wider readership than traditional models of academic publishing would allow</li> </ul>
<p><b>2. Underpinning research</b></p> <p>All the underpinning research was carried out at DMU by the researchers named in the text.</p> <p><b>2.1 Hugill's</b> online initiatives began as a series of education and outreach projects, such as the <i>Symphony for Cornwall</i> (1999) (an internet collaboration with twenty schools across Cornwall and the Bournemouth Orchestra) and <i>MusiMOO</i> (2000-2010) (a virtual environment for teaching music which was nominated for a Times Higher Education Award in 2006). These outreach projects led to the research hypothesis that orchestration may be understood more effectively through remediation via the web and by treating the orchestra as a living/social entity (rather than an abstract/theoretical one). This hypothesis was further tested in two subsequent projects undertaken in collaboration with the Philharmonia Orchestra in 2002 and 2003 - 06 which led to the following research outputs:</p> <ul style="list-style-type: none"> <li>• <i>The Sound Exchange</i> (2004-5) web development <a href="http://www.philharmonia.co.uk">http://www.philharmonia.co.uk</a></li> <li>• <i>The Orchestra: A User's Manual</i> (2004-present) an online orchestration manual <a href="http://andrewhugill.com/manuals/">http://andrewhugill.com/manuals/</a> (both accessed 25/09/13)</li> </ul> <p>A series of articles were published from this research, most notably in <i>Contemporary Music Review</i> Vol. 24:6 (2005). In 2008 the first edition of Hugill's monograph <i>The Digital Musician</i> was published, and in 2012 it went into a second edition with many substantial updates. The research has included extensive interviews with around 100 musicians Case Studies.</p> <p><b>2.2 Batchelor</b> is a practicing artist who tests and applies his research in his own compositions. Various works (e.g. "Kaleidoscope: Fissure") have required the development of purpose-built compositional tools for multisampling ('Clatter'), granulation ('Plode') and multichannel sound deployment ('Orbit'/N-CHAN'), using the internationally significant software Max/MSP. Batchelor developed (and subsequently published) tools specific to his compositional research, in particular relating to multisampling, granulation and multichannel tool building. These discussions were published on YouTube, and the interest they generated led him to begin the process of providing tutorials, which he published on YouTube. The tools have been in continuous development since they were initially released between 2000-2004 (and are available for download) whilst the tutorials have been created since 2010 beginning with introductory lessons.</p> <p><b>2.3 Landy's</b> research was founded on the basis that the rapidly evolving field of electroacoustic music studies suffered from a vocabulary that was inconsistent; its field of studies had not been as well established as it might be; and finding resources when studying this music (beyond historical and how-to texts and recordings) was non-trivial. Working with <b>Atkinson</b> and a team of researchers at DMU, and with support from the AHRB and subsequently by UNESCO, the <i>The ElectroAcoustic Resource Site</i> (EARS) site was created to serve as a knowledge portal. Students, amateurs and specialists in the field of electroacoustic music all benefit from this resource. It consists of a glossary (ca. 550 terms now available in four languages with German virtually completed, and Greek and Mandarin Chinese in development), multi-lingual thesaurus, multi-lingual bibliography (over 3500 items) and a structured index, thus helping to delineate the field of</p>

electroacoustic music studies. It also has a publishing arm. EARS was created based on Landy's earlier research focussing on increasing access to experimental music in general (e.g. through the Intention/Reception project) alongside his wish that the musicology of electroacoustic music was to develop as rapidly as its musical corpus. From 2003 onwards, *The ElectroAcoustic Resource Site* (EARS) has been available at <http://www.ears.dmu.ac.uk>

### 3. References to the research

#### Publications:

- Atkinson, S. and L. Landy (2004) 'The ElectroAcoustic Resource Site (EARS): Philosophy, foundation and aspirations'. *Organised Sound* Vol 9, No. 1, pp. 79-85.
- Hugill, A. (2008, 2012) *The Digital Musician*. New York: Routledge.
- Hugill, A. (2005) 'From Online Symphonies to MusiMOO: some creative uses of the internet in music and education' in *Contemporary Music Review* Vol 24, No. 6, pp. 527-540.
- Landy, L. (2006) 'The Intention/Reception Project' in M. Simoni, ed. *Analytical Methods of Electroacoustic Music*. NY: Routledge. pp.29–53 + appendix on DVD.
- Landy, L. (2007) *Understanding the Art of Sound Organization*. Cambridge, Mass: MIT Press.
- Landy, L. (2009) 'Sound-based Music 4 All'. in R. Dean, ed. *The Oxford Handbook of Computer Music*. Oxford: OUP. pp.518-535.

*These publications have all been peer reviewed, see also the reviews of 'Digital Musician' in Journal of Music, Technology and Education 2013 Vol. 6 issue 2; DOI: 10.1386/jmte.6.2.221\_5; and Adkins, M. (2008) Organised Sound 14(1): 109–117 Cambridge University Press.*

#### Compositions (Batchelor):

- Kaleidoscope: Fissure on Batchelor P. 2007. Reflections [CD]. Canada, c3r records
- Kaleidoscope: Fissure on Batchelor P. 2013. Kaleidoscope [CD/DVD-R]. USA, Pogus Records.

Significant performances: Greek Orthodox Church, Old Fortress, Ionian University, Corfu, Greece—27.05.10; Sibelius Academy, Helsinki, Finland—00.04.09; ÉuCuE: serie XXVI series, Salle de concert Oscar Peterson, Concordia University, Montreal, Quebec—07.02.08; Sounds Electric '07 Electroacoustic Music Competition - Finalists Concert, Dundalk Institute of Technology, Ireland—22.11.07; SARC, Queens University, Belfast, UK—25.10.07; Instabilities, SEAMS (Society for Electroacoustic Music in Sweden), Fylkingen, Sweden—24.02.07; Ai-maako 2006, 6th Santiago International Festival of Electroacoustic Music, Chile—18.10.06

### 4. Details of the impact

The sections below describe the impact of these initiatives on musicians and creative practitioners in the educational sector and in the wider creative and cultural industries.

**4.1 Hugill:** Since its creation, *The Orchestra: A User's Manual* has consistently received between 8,000 and 16,000 unique visits per month. The demographic analysis demonstrates that there is significant traffic from 114 countries across the world, including many African and Asian countries. Evidence of the impact of the user's manual on the wider creative and cultural industries is illustrated in email testimonies from users [text removed for publication]

Typical comments include: "I wanted to say I have been using you(r) Orchestra Manual for about two years, first as an independent composer, and now in my [composition] studies in Brazil,. ... The Orchestra Manual is one of the best examples. I use it and recommend it to my colleagues all the time"; "As a young composer, I have read a lot of orchestration guides and manuals and many other books and articles. Nothing I have used has offered quite the same amount of depth, information and coherence than The Orchestra : A Users Manual developed by Andrew Hugill and the Philharmonia Orchestra"; and "I have to thank you for keeping such a 'tool' alive and for giving to all the musicians and composers community a very useful tools for everyday work and study." *The Orchestra: A User's Manual* is also a hyperlink on many other sites including Wikipedia's orchestration page.

*The Sound Exchange* was nominated for the BT Digital Music Awards in 2004 and is still very active today. Through the site, the Philharmonia became the first orchestra globally to webcast a live concert (2005) and from 2008 has established a video podcast series. This has led to *audience development, education projects* and an enhanced relationship with the creative community.

**4.2 Batchelor** has now published nearly 100 YouTube tutorials to introduce Max/MSP via

## Impact case study (REF3b)

exercises that give clearly musical outcomes, largely based on his own compositional tools. These tools are presented in their basic forms and catalyse the discussion of some of the fundamental issues surrounding the software. As part of Batchelor's on-going research, the tools have also been modified for use within the Zirkonium spatialisation software developed by Europe's leading new media arts centre, ZKM (Karlsruhe). Beneficiaries from the tools and tutorials that Batchelor published include university students and academics, with the tutorials now forming the curriculum at University of Maryland/Baltimore County and being cited as a useful resource at many others (including University of California, Irvine and the National University of Singapore).

The tools and the tutorials have also enabled many independent artists, musicians and software engineers outside academia — both professional and amateur — a route into the programme, including those working with the popular sequencing application Ableton Live (into which Max/MSP has recently been closely integrated). YouTube indicates in excess of 200,000 views over three years; and further statistics and user feedback can be found on the YouTube page itself. The tutorials are also strongly endorsed on several related user forums (e.g. "Beautifully written tutorials which progress logically and in a way that sticks") and Batchelor has received further positive feedback via email (e.g. "As a novice electronic musician I found them informative and comprehensible; as a longtime pedagogue I found them well organized and clear – bravo"; "Being an older learner, I found your vids extremely enjoyable and a huge aid"; "clear and uncondescending"). (See testimonial page noted in section 5 for further examples.).

**4.3 Landy/Atkinson:** The EARS site is primarily intended for students and specialists around the globe. Between 2005 and 2007, EARS was translated into French, Spanish and Italian and other translations continue to be made. In this way, the site's extended content (e.g. its multi-lingual bibliography) is accessible to more beneficiaries than an English-only site. For example, one can follow the translation of the site into Mandarin (CHEARS.info). CHEARS will become part of EARS once completed and offers the first resource of its kind in the Chinese-speaking world. Furthermore, contributors around the globe prepare bibliographic entries for the site knowing how important this is as EARS is the key global resource in the field of electroacoustic music studies. (Resources related to the technology of music are ubiquitous. EARS, on the other hand, focusses on the music and its associated musicology and therefore fills an important gap.)

Now in its second decade, EARS statistics range (since 2008 for the purposes of this report) between just under 100 to over 1600 visits in a day – averages are closer to 450, and monthly visits range from 5,000 to over 25,000 with peaks in traditional Northern hemisphere exam periods and less activity in holidays. Ironically, in recent years, the average monthly statistics have risen slightly, although 2010 was a peak year according to these usage statistics). The site often attracts favourable correspondence, for example "Hi there, Prof. Landy! A middle school boy I'm tutoring found your page <http://www.ears.dmu.ac.uk/spip.php?rubrique225> while working on his paper on noise pollution and I just had to tell you! (...)! Thank you for helping him come out of his shell".

Another indicator of the importance of the site is how effectively it has diffused into the wider on-line community; a sample list of Blogs and forums that cite the site is given in Section 5. As an extension of the site, Landy published his book "*Understanding the Art of Sound Organization*", which elicited the following review from Joel Chadabe, Founder and President, Electronic Music Foundation "Leigh Landy's book is more than a book. It's an illuminating exploration of a new world of sound..... His discussions of listeners' receptivity are provocative and fascinating. It's worth noting that the book is linked in its concerns and structure to the EARS (ElectroAcoustic Resource Site) website that Landy supervises, and that the website - [www.ears.dmu.ac.uk](http://www.ears.dmu.ac.uk) - provides an ongoing and invaluable knowledge resource for anyone interested in electronic music".

## 5. Sources to corroborate the impact

### 5.1 Hugill

- Data cited about the number of visits and visitor demographics for '*The Orchestra; A Users Manual*' is taken from analytics set up on the site. Copies can be provided upon request.
- >20 Testimonials for *The Orchestra: A User's Manual* have been bundled at: <http://andrewhugill.com/manuals/testimonials.html>
- Google Analytics shows 654 sites which refer to '*The Orchestra; A Users Manual*'. Copies of this information can be provided upon request. These include: Wikipedia <http://en.wikipedia.org/wiki/Orchestration> Sounds <http://www.northernsounds.com>

## Impact case study (REF3b)

Compose Create <http://www.composecreate.com> and Young

Composers <http://www.youngcomposers.com>

- For evidence of the Philharmonia's current activities with the Sound Exchange its archive see <http://faithinqueenspark.org.uk/fusion/Philharmonia%20Orchestra%20The%20Sound%20Exchange%20Live%20Projects%20Echoes%20And%20Dreams.htm>, and <http://www.philharmonia.co.uk/explore/films>

### 5.2 Batchelor

- The tutorials can be accessed on YouTube (e.g. see <http://www.youtube.com/watch?v=j0Z6SE530L4>) and the full list can be accessed through <http://www.peterbatchelor.com/maxTuts.html>.
- Testimonials for Peter Batchelor's YouTube tutorials have all been bundled at: [www.mti.dmu.ac.uk/~peterb/maxtutsTestimonials](http://www.mti.dmu.ac.uk/~peterb/maxtutsTestimonials). These testimonials are in addition to the feedback left on You Tube (for example, "Thanks for this A LOT of information from your videos. Goodness is a rare thing in this time. Cheers from Italy") and include both personal emails and comments left on forums.

### 5.3 Landy/Atkinson

- Ears, and its translations into French, German, Spanish and Italian, can be accessed at <http://www.ears.dmu.ac.uk> The working Mandarin translation can be accessed at <http://chears.info/>
- A copy of the email from the Writing/Science Tutor in Seattle Public Schools can be made available upon request. Further testimonials can also be provided that verify that the site is widely used internationally to teach the subject (e.g., "This online resource is used by all of our students (as well as students studying elsewhere in Argentina) in the area of electroacoustic music. It is particularly welcome that the translation into Spanish by Ricardo Dal Farra is there. Furthermore, the Spanish-language bibliography is a unique resource, including the most important titles from Latin America. I have also heard words of support from other Latin American countries, including Chile, Brazil, Colombia, Venezuela, and Mexico." Or "As a Canada Research Chair in Telematic Arts, I am fully cognizant of the value that an online, authoritative, peer reviewed resource site can hold for a professional community. As a teacher to Chinese EA music students at the Central Conservatory of Music (CCOM) in Beijing, I have found it a rock in the field of terminology and translation; I recommend it to all my students as a foundation for their studies." And "From the early days of its development, it has been at the top of my students' reading lists for all the sound-based courses I teach at the University of Aberdeen. It has become the main website to where I send students and colleagues when they need definitions of terms and techniques as well as further reading. The gathering of all this information in one place has had a tangible effect on the way students and scholars of electroacoustic music undertake their research and I cite it regularly in my own writings and research papers. Its impact is therefore huge, particularly in educational contexts, but also in non-academic environments as I know that many people outside the university context use it as an electroacoustic 'wikipedia'. It is pleasing to hear that it is being translated into more languages and that EARS 2 is already having an impact on the educational sector. The importance of this work cannot be underestimated".
- Ears is listed on the various forums and Blogs around the world – amongst others:
  - [http://www.arts-humanities.net/casestudy/electroacoustic\\_resource\\_site](http://www.arts-humanities.net/casestudy/electroacoustic_resource_site)
  - [http://cec.sonus.ca/econtact/8\\_4/bibliography.html](http://cec.sonus.ca/econtact/8_4/bibliography.html)
  - [http://www.pytheasmusic.org/electroacoustic\\_music.html](http://www.pytheasmusic.org/electroacoustic_music.html)
  - <http://www.parjohansson.se/biblio.html> <http://www.topsite.com/best/electroacoustic>
  - [http://www.lcc.arts.ac.uk/coursework/sound\\_arts/Links.htm](http://www.lcc.arts.ac.uk/coursework/sound_arts/Links.htm)
  - <http://www.chemistrydaily.com/chemistry/Electroacoustic>
  - <http://www.nationmaster.com/encyclopedia/Electroacoustic>

(all accessed 25/09/13)