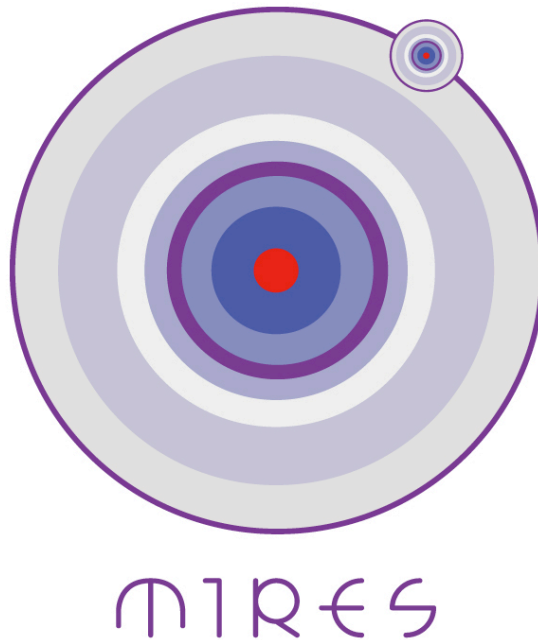


D6.1

PROPOSAL FOR THE ESTABLISHMENT OF A VIRTUAL RESEARCH-TO-INDUSTRY NETWORK



Project funded by ICT-7th Framework Program from the European Commission

Grant Agreement nr	287711
Project acronym	MIReS
Start date of project (dur.)	Oct 1st 2011 (18 months)
Document due Date :	31st December 2012
Actual date of delivery	31st December 2012
Leader	STRO
Reply to	michela@stromatolite.com
Document status	V3

Project ref. no.	287711
Project acronym	MIReS
Project full title	Roadmap for Music Information ReSearch
Document name	D6.1 Proposal document for the establishment of a virtual research-to-industry network
Security (distribution level)	
Contractual date of delivery	31st December 2012
Actual date of delivery	31st December 2012
Deliverable name	D6.1 Proposal document for the establishment of a virtual research-to-industry network
Type	Deliverable
Status & version	V3
Number of pages	40
WP / Task responsible	STRO
Other contributors	BMAT
Author(s)	Michela Magas
EC Project Officer	Reiner Typke
Abstract	
Keywords	MIReS, music, network, research, industry, SMEs, artists, performers, creatives, hackers, innovators, media
Sent to peer reviewer	Yes (BMAT)
Peer review completed	Yes
Circulated to partners	Yes
Read by partners	Yes
Mgt. Board approval	Yes

Table of Contents

BACKGROUND.....	4
INTRODUCTION.....	4
Main objectives and goals	4
Methodology	4
FRAMEWORK SPECIFICATION FOR THE ESTABLISHMENT OF A VIRTUAL RESEARCH-TO-INDUSTRY NETWORK	5
Information gathered from network building	5
<i>Stakeholder engagement.....</i>	<i>6</i>
<i>Information gathered and stakeholder feedback</i>	<i>8</i>
<i>Impact of network building</i>	<i>34</i>
Online framework specification	37
<i>The Music Tech Fest Online Video Channel initiative.....</i>	<i>37</i>
<i>Supporting framework of live events.....</i>	<i>37</i>
Principles for knowledge sharing	39

1 BACKGROUND

This document reports on the effort invested in Work Package 6 in building a research-to-industry network and presents a method for the establishment of a virtual network of MIR excellence connecting music researchers and theorists with industry representatives, strategists and policy makers, in order to ensure efficient communication and transfer of innovation to industry in the long-term, and inform policies beyond the lifetime of the proposal thus ensuring future academic excellence and EU competitiveness in the world music market.

2 INTRODUCTION

This document reflects on the knowledge gained in Task 6.1: “Network building”; lists existing stakeholders gathered through network building efforts; describes an early test ground for a framework for a research-to-industry network; demonstrates potential for expansion and ongoing activity beyond the lifetime of the proposal; and suggests further models for the setting of principles and incentives for knowledge sharing between industry and the academic MIReS community.

2.1 Main objectives and goals

This proposed method for the establishment of a virtual research-to-industry network, is presented in response to the following MIReS objectives:

- to lay the foundations for solid communication between RTD MIR centres and music industry representatives, strategists and policy makers
- to ensure a long-term transfer of MIR RTD innovation to industry
- to continue to inform policy makers beyond the lifetime of the proposal

2.2 Methodology

The consortium made preparatory steps for establishing a research-to-industry-network through specially-organized community co-creativity events and dissemination events, working actively towards expansion by forging links throughout the music technology stakeholders community, and successfully establishing the foundations for solid communication between music technology stakeholders.

Following large-scale stakeholder response, the organizing partners established an initial online community channel for the dissemination of video footage from the largest of the organised events, and have secured an ongoing involvement of the stakeholder

community to continue beyond the duration of the MIReS project, thus ensuring a long-term transfer of knowledge between the various stakeholders.

With the aim of strengthening the links between academic research and industry, the partners have given further consideration to examples of good practice from other academic fields and have made suggestions for the introduction of similar methods within the MIReS academic community.

3 FRAMEWORK SPECIFICATION FOR THE ESTABLISHMENT OF A VIRTUAL RESEARCH-TO-INDUSTRY NETWORK

The following section includes an overview of the network building effort, lists existing stakeholders thus gathered, proposes a specification for a virtual framework for knowledge sharing, cooperation and co-creation between EU academic research units, industry stakeholders and policy makers, and demonstrates potential for expansion and ongoing activity beyond the lifetime of the proposal.

3.1 Information gathered from network building

During the following series of specially-organized events the partners successfully engaged industry and media representatives, outside experts, future users, innovative SMEs, music tech startups, apps creators, developers, researchers, artists, performers, creatives and hackers:

- **Music Tech Fest:** research and industry trendspotting talks (London 17-19 May 2012)
- Music discovery and creativity **Synaesthesia Workshops** (London 17 May 2012)
- **3D Hack Camp** (London 18-19 May 2012)
- MIReS Panel **'Make, Play, Share: the Future of Music Tech'** at the Sonar Festival (Barcelona 14 June 2012)
- **Music Hack Day** at the Sonar Festival (Barcelona 14-15 June 2012)
- **Music Tech Talks** launch evening – London Cultural Olympiad (26 July 2012)
- **Music Tech Talks II** (15 November 2012)

Detailed reports from the above events are available in D5.3. Network building targeting industry stakeholders is documented in D4.2 dissemination events (MIDEM 2012, SONAR 2012, Music Matters 2012, Cloudbusting 2012, NEM 2012).

3.1.1 Stakeholder engagement

The response from stakeholders at the above events has exceeded partners' expectations. The MIReS community of industry and researchers has grown particularly thanks to the effort invested in the Music Tech Fest London and Music Hackday Barcelona, the associated industry talks, panels and workshops.

The Music Tech Fest and its associated events gathered:

- 55 contributors
- 77 workshop participants
- 30 hackers
- 1036 attendees
- over 10,000 users visited the website during May only
- the live streaming broadcast was seen by over 700 viewers from 40 countries
- the festival generated 830 minutes of video footage on each of the 3 cameras

The Music Hackday gathered:

- 30 representatives from 18 companies
- 90 hackers
- 10 artists
- 50 attendees

Contact details are available for dissemination to a total of:

- 78 contributors from industry, SMEs, musicians and artists
- 87 creatives
- 120 hackers
- 1086 attendees

Active MIReS stakeholders gathered through the Music Tech Fest include:

- a. researchers
- b. music industry representatives
- c. creative industries
- d. technology industries
- e. media representatives
- f. music rights legal representatives
- g. innovative SMEs and music technology startups
- h. performance artists
- i. installation artists
- j. hackers

A core of 55 contributing experts have made a valuable contribution to the MIReS knowledge dissemination efforts and continue to form part of the Music Tech Fest community:

1. Tom Cheshire (Associate Editor, Wired - media industry),
2. Jason Titus (CTO, Shazam - music industry),
3. Dave Haynes (VT, Soundcloud - SME and music industry),
4. Denzyl Fiegelson (Apple iTunes Music Synergist),
5. Robert Kaye (CEO. MusicBrainz - SME)
6. Matthew Hawn (VP Product, Last.fm - SME)
7. Andrew Shoben (Founder, Greyworld - artist)
8. Tim Exile (performance artist, music technology innovator)
9. Michael Breidenbrücker (Founder, RjDj - SME),
10. Peter Kirn (Create Digital Music - research),
11. Martin Ware (Founder, Illustrious - SME and music industry),
12. Chris Maples (Spotify - music industry)
13. Adam Powers (BBH Labs - creative industries)
14. Chris Godbert, (BBC R&D - media)
15. Stuart Berwick (PIAS - music industry)
16. Calum Morton (Warp Records - music industry)
17. Kara Mukarjee (EMI Music - music industry)
18. Will Page (PRS - music rights specialists)
19. Frederic Rousseau (IRCAM, research - partner),
20. Christian Blom (installation artist),
21. Matthew Davies (INESC - research, partner),
22. Oscar Paytuvi (BMAT - SME, partner),
23. Avi Ashkenazi (installation artist, research partner),
24. Adam Place (Founder, Alphasphere - artist),
25. Bruno Zamborlin (Mogees - performance artist, IRCAM/Goldsmiths - research partner),
26. Carles Lòpez (Reactable - performance artist).
27. Matt Black (Ninjatune - music industry, and Coldcut - performance artist),
28. Nicole Yershon (Ogilvy Digital Labs - creative industry),
29. Estefania Caño (Fraunhofer / Songs2See - research),
30. Saoirse Finn (QMUL - research, partner),
31. Patrick Bergel (Founder, Animal Systems - SME, research),
32. Ben Lawrence (Mixcloud - SME),
33. Evan Stein (Decibel - SME),
34. Kim de Ruyter (Noise Inc - SME),
35. Matthew Sherett (Last.fm - SME),
36. Tim Hadley (rara.com / Omnifone - SME),
37. Philippe Perreaux (CEO, Right Clearing, SME),
38. Cliff Fluet (music rights specialist, Lewis Silkin - legal, music industry),
39. Ed Averdieck (CEO, Cue Songs - SME), Will Page (PRS - music industry),
40. Michela Magas (Stromatolite - SME and research, partner),
41. Daniel Lewington (MPme / Apsmart - SME),

42. DJ Ham (Ninjatune - music industry),
43. Martin Macmillan (Founder, Soniqplay - SME),
44. Paul D (video artist),
45. Olivier de Simone (CEO, Webdoc - SME),
46. Johann Waldherr (Spectral Mind - SME),
47. Stephen O'Reilly (CEO, Mobile Roadie - SME and music industry),
48. Ariel Elkin (London Music Hackspace - research),
49. Jake Williams (performance artist and Goldsmiths music research),
50. Daniel Jones (performance artist and Goldsmiths music research),
51. Cassiel (performance artist),
52. Jason Singh (performance artist / Victoria and Albert museum resident sound artist and music researcher)
53. Vincent Akkermans and Julie Freeman (installation artists, academic researchers)
54. Tore Honoré Bøe (installation artist)
55. Latif Horst (CISCO - technology industry)



3.1.1 Information gathered and stakeholder feedback

The following information reflects the extent and the potential of the growing MIReS community. Feedback from participating industry, media and SMEs was gathered as contribution to the MIReS roadmapping process.

3.1.1.1 *Nicole Yershon, Ogilvy Digital Labs*

Nicole Yershon began her career in advertising 25 years ago at Simons Palmer and GGT, two of London's most renowned creative agencies. In 2000, she joined Ogilvy London where she now works as the Director of Innovative Solutions. In her first four years at Ogilvy she overhauled the agency's broadcast and video capabilities, taking them from analogue to digital, with the creation of RedWorks Broadcast.

Consolidated in 2007 into the Ogilvy Digital Innovation Lab (part of a worldwide network), the agency's innovation activities have seen Nicole build partnerships between industries and across media channels to fuel unprecedented creative campaigns, and educate, both within the agency and beyond, speaking at global conferences and building clients Labs of their own.

FEEDBACK AND CHALLENGES

The sound and music space, like most other digital and technological areas, is moving forward at an enormous rate of change - its so difficult to keep up with these innovative communities, that don't play by the old rules and regulations of the traditional music labels/publishers and distributors - they have their new way - and it needs to be embraced, encouraged and introduced to our creative teams and brands - to help propel them forward in these new uncharted waters - which is super exciting for us - but super scary for existing creative, traditional tv only music deals and business models. We must be in this space, mentoring students, collaborating at the cutting edge of these ideas.

Nicole.Yershon@ogilvy.com

3.1.1.2 *Estefanía Cano, Songs2See, Fraunhofer*

Songs2See: Learn to Play by Playing. Songs2See is an application for music learning, practice and gaming developed by the Fraunhofer Institute for Digital Media Technology in Ilmenau-Germany. Songs2See allows the use of real musical instruments while offering real-time performance feedback, automatic fingering animations, a learning mode for beginners and a rating system. A scrolling score with pitch and timing information guides the users through the performance. Saxophone, guitar, trumpet, bass, piano, flute and voice are supported in Songs2See. Users can create their own content for the Game using the Songs2See Editor. This application collects a number of processing and analysis tools that allow users to create content starting from MP3, WAV, MIDI or MusicXml files of their favourite tracks.

Songs2See was released to the market in March 2012.

FEEDBACK AND CHALLENGES

* Bridging the gap between music technology and music education: the music education community remains very traditional in their teaching techniques and are often reluctant to try new educational approaches. Fostering collaboration between these communities might result in the development of more appropriate tools that could potentially find use in many educational scenarios.

* Multi-user applications: for music performance applications, handling multi-user data is a must.

www.songquito.com

cano@idmt.fraunhofer.de

3.1.1.3 Patrick Bergel, Animal Systems

Patrick Bergel is CEO and Founder of Animal Systems, a creative technology company with an interest in playful, mobile and ubiquitous computing, recently spun out from UCL. Patrick now leads a team working on a brand new ubicomp platform inspired by biological phenomena, due for release shortly. At Music Tech Fest he will describe and demonstrate elements of the system. Previously, Patrick has worked as a creative director for clients including Microsoft, Ray-ban and Nike, as an entrepreneur in mobile search, and as an academic designer of novel audio control surfaces. He is currently also an Honorary Research Associate at UCL. He lives in London and has no hobbies.

FEEDBACK AND CHALLENGES

Music Tech Fest was one of those incredible events we won't forget soon, a heavyweight gathering of the sound tribe.

We met with movers, makers, hackers and players, acute listeners to sound, culture and technology, from industry leaders to newborn startups. All of us there with essentially the same goal in mind: to make some sense of what's coming next.

So it was a great opportunity for us to preview Chirp (<http://chirp.io>) onstage and talk about our plans later on at the Hack Day. Chirp is a young system, but (we think) full of promise. We have big dreams: can we put data anywhere there is sound? Can we enable new kinds of audio communication between simple devices, not just smartphones? We're trying to build a platform: so how can other people use Chirp? Can we go further still, and create new classes of audible machine language? Can we teach the machines to sing?

These are some of the challenges we're looking forward to. Wish us luck!

<http://animalsystems.com> <http://twitter.com/animalsystems>
patrick@animalsystems.com

3.1.1.4 Ben Lawrence, Mixcloud

Mixcloud is the home of on-demand radio online. The popular, easy to use service hosts content for DJs, Podcasters, and radio stations and connects them to a passionate audience around the world.

Mixcloud provides a unique, free experience to listeners and fans – one place to access tens of thousands of presenters and DJs, with great features to help discover relevant content.

In little over two years Mixcloud has built an audience of over 3,000,000 listeners per month, a catalogue of over 1,000,000 DJ mixes, Podcasts and radio shows (we call them Cloudcasts), and over 200,000 contributors, ranging from world-renown artists like Moby and Carl Cox to household names like the Guardian, Kiss FM, Penguin Books, the Independent, and XFM. Though largely focused on music, the site also offers a range of quality talk content, including sports, news, technology, politics, and comedy radio shows.

FEEDBACK AND CHALLENGES

Our talk considered the ways in which consumers engage with content in a social, digital economy, exploring how brands harness both platforms and music to deliver better levels of

engagement and convert brand consumers into brand advocates. Mixcloud is frustrated by lack of pan-European music licensing for recorded music rights.

@mixcloud <http://www.mixcloud.com/>

benl@mixcloud.com

3.1.1.5 *Evan Stein, Decibel*

Decibel, a London-based company, operates a platform that supplies rich, semantic music metadata to businesses in the broadcast, media and digital sectors. These data-driven assets power the creation of Connected TV, mobile, tablet and web applications; and increase revenues, collaboration and communication through enhanced discovery and business intelligence for consumer electronics manufacturers, digital retailers, record labels and broadcasters.

'Music metadata done right' is our motto. That's because we provide a music metadata database that is deeper and richer than anything else you are likely to find. Through our semantically linked database we can provide you with not only who played what song, but where they played it, who wrote it and who played the stylophone solo on the session they did in Abbey Road three years later. Data like this gives endless possibilities for discovery, research, analysis and plain old geeky curiosity.

Our database consists of rich data like this for 12 million tracks, from 1.1 million albums by 300,000 artists. We provide this data via a cloud based API that comes in a few different flavours depending on how much data you can handle.

If you would like to find out more, come and cast an eye over our website at www.decibel.net.

FEEDBACK AND CHALLENGES

At the risk of over-simplifying, there are two growth areas in the music industry: digital music and live music. The growth in digital music is powered by discovery through data; whether it's consumer data, product data or semantic data. Most industry participants understand that there is an inherent value in data, but they are yet to understand exactly how data impact revenues. This leads to a few simple challenges:

- how much can good data lead to extra revenue for the record industry?
- how can good data reduce piracy and re-valorise the digital music product?
- how can good data improve industry processes and reduce inefficiencies?

We believe that data has a dollar value. Example: knowing that Jimi Hendrix played on Little Richard's album costs a fraction of a penny to find out, to collate, to inter-relate and make available to retailers, but can generate thousands in extra sales.

The challenge is making the the recording industry start to understand the actual value of a piece of data to their business, both in reducing costs, increasing efficiencies and generating extra revenues.

Evan@decibel.net

3.1.1.6 *Kim de Ruiter, Noise Inc*

Kim is an award-winning digital music and mobile marketer with a wealth of experience gained at both EMI and Universal Music. She was shortlisted in the top 50 leading women in the mobile industry by MEM, and was nominated as Woman of the Year by Nordoff Robbins. Kim

specializes in the creation, management and promotion of digital music services, and in the strategy and management of new branded partnerships and opportunities for labels and recording artists.

The presentation explores best practice for mobile development. It examines the various reasons for brands and bands to engage with their fans using mobile as a platform, what the possibilities are, and the common pitfalls. The question of whether to optimise a site for mobile, or create bespoke native applications, is also discussed. There are a variety of case studies in the presentation which illustrate some of the objectives and results of very different types of businesses.

FEEDBACK AND CHALLENGES

Specific challenges (or really pointers) with regards to mobile development would be;

- Understand your core objectives and don't deviate from these
- Do your research, know what consumers expect and what they are looking for from you
- Mobile, as a platform and a channel, should represent a considered investment. Don't skimp on key elements relevant to points one and two above, just to save on cost
- Promote your app when you have one!

lisa@namepr.co.uk

3.1.1.7 *Matthew Hawn, Last.fm*

Last.fm is a global music service best-known for online radio, personalised recommendations and its comprehensive catalogue of artist and track information. At the heart of Last.fm is a music personalisation service, which uses the music our listeners play to bring them new music they'll love. Our audioscrobber technology effortlessly sends updates about the music our listeners play to their free Last.fm profiles. We call those little pieces of data 'scrobbles'.

You can send scrobbles from more than 600 supported media players and devices, allowing you to unlock personalised recommendations for new artists, live events, and festivals as well as the latest releases from artists you love. You can use Last.fm across a variety of apps produced both by Last.fm and by third parties, including apps for iPhone, Android, Xbox and Spotify. Each implementation is tailored to its platform or environment, but all of them help our listeners discover new music.

matthew@last.fm

3.1.1.8 *Tim Hadley, rara.com, powered by Omnifone*

Omnifone is the leading independent provider of cloud music services for consumer electronics vendors, ISPs, consumer brands, automotive and mobile companies globally including Sony, RIM and rara.com. With services licensed in 22 markets and a global catalogue of over 15m licensed tracks, Omnifone has the widest global reach of any cloud music service provider able to develop, license and run white label cloud music services across virtually all connected device platforms including TVs, games consoles (in-home and portable), set-top boxes, home cinema systems, Blu-ray players, picture frames, cars, mobiles, PCs, tablets and web browsers.

FEEDBACK AND CHALLENGES

Music Tech Fest was a great showcase for music licensing and recommendations technologies. My presentation focused on licensing digital music services with music rights holders; labels, publishers and collections societies, and the options available for entrepreneurs and developers wanting to create legitimate music apps and services for use in domestic and international markets.

www.omnifone.com

thadley@rara.com

3.1.1.9 Philippe Perreaux, Right Clearing

rightclearing simplifies and democratizes music licensing. The entire process has been automated so searching for songs, paying and receiving a binding contract takes mere minutes. Independent artists and labels can now earn money with their usage rights. Individuals, advertisers or filmmakers can easily license songs for their projects.

rightclearing was developed by the artist-based music platform restorm.com and launched in February 2012 at the Digital Music Forum East in New York. rightclearing bridges the gap between traditional Copyright (©), Creative Commons (CC) and Public Domain (PD), by allowing the monetization of all usage rights.

rightclearing is supported by prominent entrepreneurs, advertisers and industry representatives. Joi Ito (LastFM/Flickr/Twitter investor, director of MIT Media Lab) is but one member of our advisory board. (<http://rightclearing.com/about>).

CEO Philippe Perreaux, an open-source enthusiast, also represents Creative Commons in Switzerland.

http://rightclearing.com/how_it_works

perreaux@gmail.com

3.1.1.10 Cliff Fluet, Lewis Silkin

Cliff joined Lewis Silkin LLP as a Partner in April 2006 after over a decade as in-house counsel in the music and broadcast industry. Heading the Media & Entertainment group within the firm's Media, Brands & Technology team, he now acts for some of the world's largest names in mobile, brands, recorded music, mobile, live music, radio, audio-visual production and online.

He also specialises in working with clients whom are embracing content-based entertainment for the first time such as FMCG and lifestyle brand owners, advertising agencies, digital agencies, investment funds and financial institutions. He has a passion for working on innovative new business models, advertiser-funded programming and in the monetisation of format rights.

The Media & Entertainment Group is ranked in the "Legal 500" and "Chambers" and Cliff is ranked as a 'leading individual' in both directories.

FEEDBACK AND CHALLENGES

Thank you again for the invitation to talk at the Music Tech Fest. As you know, my contribution was with regard to explaining copyright in the digital environment ... the core issue in relation to copyright, is in many ways not "fit for purpose" for the online world. To the extent that online has enabled the ability for people to connect, share and create in ways that have never

yet been seen before, many of the issues in relation to copyright, particularly in the world of music, make it extremely difficult for people to create, connect and share.

My view is that we need to prompt a debate to ensure that right holders always have the right to be remunerated, the right to be identified, and that their right to control their works online should be balanced in a proportionate way.

Cliff.Fluet@lewissilkin.com

3.1.1.11 Ed Averdieck , CueSongs

CueSongs is a one-stop music licensing hub offering pre-cleared recordings for clients wanting to find and license well-known tracks for commercial online and digital media usage.

Peter Gabriel, co-founder of CueSongs illustrates: "The old world of music licensing is still the exclusive province of the few. It is too expensive for most, rarely available online and can be painfully slow and complicated. By introducing low prices and easy online access, CueSongs is creating a new market for music, to satisfy a huge untapped demand that can begin to provide new income streams for artists." he continues. "Young and minority interest artists will be able to get their work in front of people all over the world looking to license something interesting and different. Successful artists will find that a lot of their catalogue that is now rarely touched can generate a lot of use, with easy access and the right price."

"... CueSongs offers inspiration and simplicity, making it swift and straightforward to find and use the best tracks for our clients." Matt Woods, Managing Director, UK, The Partners (WPP Group)

"we can now easily select and gain approval to use dynamic music tracks for all digital marketing needs Belinda Pote, Chief Marketing Officer, Europe The Marriott Hotel Group
ed@cuesongs.com

3.1.1.12 Will Page, PRS

Will Page is the Chief Economist at PRS for Music. His role is to provide analytical support to colleagues within the organisation and to provide economic insight to the music industry as a whole. An economist by profession, Will previously worked for the UK Government Economic Service where he spent time at the Scottish Executive working for the Office of the Chief Economic Adviser and Department of Finance.

His work is focussed around three main areas: economic modelling of the recorded music business, the application competition law in two-sided markets and the broken supply chain between copyright and ISPs. He is currently working with Andrew Bud, Andrew Bud, Executive Chairman of MBlox, on the profile, tension and profitability that exists within 'Long Tail' markets.

FEEDBACK AND CHALLENGES

PRS for Music was thrilled to be invited to the Music Tech Fest (MTF) on the 19th May. Not just thrilled, but determined to fill an educational gap in the UK tech-copyright space. This gap was highlighted to us by Richard Hooper, who is currently completing his consultation into the Digital Copyright Exchange. In the report, he recognises that digital licensing in the UK compares relatively well with other markets, and that we have more licensed services here than anywhere else. This is important for the students of Ravensbourne with start ups in mind – the UK is open for business and business is relatively good. Not only do we have a thriving tech scene here in

the UK, but we also have the strongest digital music market in Europe – and education will help us maintain (not gain) that competitive edge.

PRS for Music decided to deliver a presentation on the reality of copyright licensing in a digital age. The reality is (i) it is not easy and (ii) there is no text book on the shelf telling us all how this new landscape is going to pan out. The presentation focussed on these challenges, especially in helping the students understand the different definitions for the different forms of copyright exploitation. We also took the students through relevant case studies from the digital space to show how to decipher the hype and hysteria that comes with digital media – and focus instead on the facts. Finally, we offered guidance on the types of licensing that PRS for Music presents to online services from low end LOML deals to high end Pan European Licensing.

Myself and colleagues from the online licensing team made sure all questions were answered and we've already had the pleasure of welcoming some of the students to PRS for Music head offices to explain more about our role in the music industry. We were all very impressed by the Ravensbourne campus and the switched on and entrepreneurial mindset of the people there. We are grateful for the invitation and would like to build on this event.

Will.Page@prsformusic.com

3.1.1.13 Daniel Lewington, Apsmart,

Founded in 2010 by Rahul Powar, an early member of the Shazam team and creator of their iPhone application, Apsmart are a mobile innovation company.

Whilst continuing to collaborate with Shazam as well as working on a bunch of other music-related projects, they most recently launched MPme, a new curated-radio application that was the winner of the Music Discovery, Recommendation & Creation category at this year's midem. Listening to thousands and thousands of radio stations in real-time, it uses that data plus your music library, listening habits and those of your friends to recommend stations that will be great for you - then you can listen to them. And it's all packed into a unique and lovely user interface. In addition to developing their own products, Apsmart also work with early-stage startups and well-established brands to design and build their mobile strategy.

FEEDBACK AND CHALLENGES

Discovery and recommendation are the toughest challenges that we try to solve for people who love music. Vast music catalogues are available online accompanied by a variety of recommendation engines but none help with online broadcast radio. Listening to the radio has never been more popular but finding new stations from the thousands now on offer has never been more difficult. This is where MPme comes in. MPme listens to thousands of radio stations in real-time and uses that data plus the listener's music library, listening habits and those of their friends to recommend stations that will be great for them. And at the heart of this is beautiful user experience. Additionally, MPme also combines with Airplay so listeners can transmit from their iPads to speakers and televisions. Our next goal is to bring this to multiple platforms.

www.apsmart.mobi

www.mpme.com

daniel@apsmart.mobi

3.1.1.14 Michael Breidenbrücker, RjDj

Michael is a serial entrepreneur who co-founded Last.fm Ltd. and managed the company as ceo from 2002 until 2005. His approach in combining music discovery, online radio and social software was awarded in Europe and the USA and brought the company to the attention of millions of consumers, global media and global players. Michael's latest venture is Reality Jockey Ltd. which is the publisher of the RjDj mobile music applications and the online music portal www.rjdj.me. The company is producing some of the most innovative iPhone applications such as "Dimensions, adventures in the multiverse" and "Inception The App".

Michael is regularly booked as speaker in international events and you will find interviews in magazines from Wired to Business Week. He is enjoying life with his family in a little village, in the Austrian Alps where you can also find him skiing and snowboarding on the local mountains. michael@rjdj.me

3.1.1.15 Peter Kirn, Create Digital Media

PETER KIRN is a technologist and composer/media artist. He is an advocate of open source technology for music, as co-creator of the open MeeBlip hardware synth and part of the team behind the embeddable libpd library, and an experimenter in audiovisual creation and performance. As the creator of createdigitalmusic.com and createdigitalmotion.com, he runs one of the most influential sites writing about the convergence of music, live and interactive visuals, and tech. His writing has also appeared in Popular Science, Make, Macworld, Keyboard, Wax Poetics, Computer Music, DE:BUG, and others. His live performance work has been seen recently at Stereolux (FR), LEAP (DE), CommuniKey Festival (CO, USA), In/Out Festival (NY, USA), Saturn Never Sleeps (PA, USA), and Bootleg Theater (CA, USA), and he is founder of the now-international, community-run Handmade Music DIY performance/showcase series. He is a PhD Candidate at The City University of New York.

FEEDBACK AND CHALLENGES

Music Tech Fest was a chance to engage with an international community of artists and developers re-imagining how digital interfaces for musicians can work. I presented a workshop and talk - and brief performance - exploring how touch interfaces can be expressive mediums for music. From pen and paper to graphical and code-based programming, I worked with participants to create interface prototypes, and showed some of the work that's evolving - particularly in connecting drawing to musical composition and performance. More informally, I got to engage in discussions of new musical interfaces, particularly with UK-based developers, including Ninja Tune co-founder Matt Black, who is building an iPad app that will allow users to remix a range of legendary artists.

As an international online publisher, a resource for musicians and developers alike, and a designer and manufacturer of open-source music hardware sold here in the EU, we face a range of challenges as we grow in Europe:

- * Realizing new hardware ideas means finding more access to local production, so that more of our supply chain can be near us and our customers rather than in Europe. "Digital" now often means "physical," too.
- * We need local production knowhow that's both skilled and open to small-batch runs as we introduce new designs.

* As a publisher and small business, we have to learn to navigate the regulatory landscape in Europe.

* With such rich developer talent in places like Germany and the UK, and across Europe, we urgently need ways to help connect developers with each other. Rather than a concentrated startup scene like Silicon Valley, we feel it's the diversity throughout the EU that offers cultural, technical, and creative depth.

www.createdigitalmusic.com

www.createdigitalmotion.com

peter@createdigitalmedia.net

3.1.1.16 Martyn Ware, *Illustrious*

Born in 1956 in Sheffield. Formed the Human League in 1978. Formed multimillion selling act Heaven 17 in 1980, and is still touring around the world. As record producer and artist has featured on recordings totalling over 50 million sales worldwide during a 35 year career to date. Martyn founded Illustrious Co. Ltd. with Vince Clarke in 2000 to exploit the creative and commercial possibilities of their unique 3DAudioScape immersive sound technology in collaboration with fine artists, the performing arts and corporate clients around the world. He is also an expert in the 'convergent' multimedia art world, and has founded sound branding company SonicID, and lectures extensively internationally.

Martyn is a Visiting Professor at Queen Mary College, University of London, a member of BAFTA, and a Fellow of the Royal Society for the Arts.

FEEDBACK AND CHALLENGES

Immersive three-dimensional soundscaping will become a more ubiquitous experience in the future, particularly in crowded and difficult urban environments. I like the notion that composition is finally going to make it 'out onto the streets' which will provide a degree of shared experience, sometimes with visual accompaniment, and hopefully bring communities (and strangers) together. In our practice, we have noticed a subtle but powerful hunger for more communal experiences – not just performances or one-off events – and sensitively crafted immersive soundscaping can and will enhance our cities in the future.

Challenges...it's all about content...

- Making chaotically noisy public spaces 'make sense' using positive soundscaping
- Creating a sense of theatre/narrative in retail spaces using soundscaping – to lure customers into the physical retail experience instead of shopping online
- New forms of entertainment – immersive cinema/theatre/'happenstance' live and/or remote performance – transmission of live soundscapes across the world
- Imparting a new sense of meaning to living in urban environments using 'stealth edutainment'
- In addition, in a visually chaotic world, soundscaping can help us make sense of the world around us

All this can be achieved using technology we already possess – we just need to share the understanding of the possibilities (particularly with urban planners, architects and architectural colleges).

To sum up, curated intelligently and sensitively, in the future immersive soundscaping will improve everyone's quality of life in urban environments.'

martyn.ware@virgin.net

3.1.1.17 Jason Titus, CTO Shazam

Shazam connects more than 200 million people in over 200 countries to the music, TV shows and brands they love. Every week another 1.5 million curious people embrace Shazam. All this makes us the world's leading media discovery company. It's an amazing app, available now on all major app stores and platforms.

We're the best way to discover, explore, buy, and share music – and, now, we're also a terrific TV companion app that enhances the viewing experience on the "second screen" – the mobile device. Shazam-enabled shows and advertisements connect viewers to exclusive information and special offers on their favorite products. There's a reason we're one of the Top Ten most downloaded iPhone app of all time.

Shazam brings together people and entertainment with more than 6 million tags a day. Plus, through leading social network sites like Facebook, Google+ and Twitter, it's easy to share your Shazam discoveries.

<http://www.shazam.com/>

rica.squires@shazamteam.com

3.1.1.18 Dave Haynes, VT SoundCloud

SoundCloud is the leading audio platform that enables anyone to upload, record, promote and share their originally-created sounds across the internet, in a simple, accessible and feature-rich way. From sample to symphony and soundbite to soliloquy, SoundCloud allows sound creators anywhere to instantly record or upload audio and share across the web.

dave@soundcloud.com

3.1.1.19 Tom Cheshire, Associate Editor WIRED

WIRED is the world's leading magazine for those at the cutting edge of ideas, technology, culture and business. Its mission to explain the ideas and innovations that are changing our lives.

Tom Cheshire is associate editor of WIRED (UK edition). He writes features for the magazine and edits the Play section, which covers the edges and intersections of culture - everything from music to design, architecture, film and lolcats. Tom's writing has also been published in GQ, ST Style and the Evening Standard. He has spoken at the Apple Store, BAFTA and Chatham House, and is currently working on his first book, which will be published in Spring next year.

Tom.Cheshire@condenast.co.uk

FEEDBACK AND CHALLENGES

During the panel discussion the panelists unequivocally identified the main challenges and future directions in the areas of tangible and gesture-driven interfaces. Other topics elaborated on the importance of research for any successful applications in industry.

3.1.1.20 Christian Blom, installation artist

Christian Blom (1974) is a composer living and working in Norway. Approaching music as not necessarily exclusive to sound, rather as something organized in time, Blom's brand of musical composition is enriched to also involve light, shadowplay and movement. As a consequence he works with musical composition, kinetic sculpture and performance art, an expansion of musical composition to include compositional strategies for transmedial structures. His broad scope stems from collaborative work with such names as dancer and choreographer Alan Lucien Øyen, videoartist Ellen Røed and as a member of the artist collective Verdensteatret. In these constellations as well as in his own projects a goal has always been to allow for the media and techniques to blend, to affect each other's expressive and structural qualities to a point where they seem inseparable. Blom's work can be seen and heard internationally on a regular basis. For more information on Blom, the works and where you might hear and see them please visit www.christainblom.com. Christian presented the installation *al Khowarizmis Mekaniske Orkester*. In this mechanical apparatus he approaches music as not necessarily exclusive to sound, rather as something organized in time. Blom's brand of musical composition is enriched to also involve light, shadowplay and movement. As a consequence he works with musical composition, kinetic sculpture and performance art, an expansion of musical composition to include compositional strategies for transmedial structures. An artistic goal for these practices is to allow for the media and techniques to blend, to affect each other's expressive and structural qualities to a point where they seem inseparable.

FEEDBACK AND CHALLENGES

Funding for the arts must not be too specific! It is of immense importance that any kind of funding for the arts is rooted in trust and confidence that the artist is best equipped to decide what to create and that this process can be as free as possible. Not tied to a media and not tied to a very concrete project, only conceptualists can work like that. Other artists work in processes that need elbowroom and time to grow. Naturally there is always a budget and a rough plan, however I can not stress enough the importance of non-specified funds for artistic research and creation.

www.christainblom.com

22blom@gmail.com

3.1.1.21 Martin Macmillan, Soniqplay

Soniqplay is an audio technology company which helps brands and media owners engage their audience through interactive music and audio apps. We're based in London and San Francisco. Our unique platform enables interactive audio apps to be easily built to empower consumers to become content creators in a simple accessible way.

Our Fireplayer remix platform has been licensed by a number of major brands and radio partners in the UK and internationally (including Bauer Media, Absolute Radio and DMG Australia), where we create and operate white label remixers as turnkey solutions which are integrated into on-air radio programming, providing new ways to engage consumers and drive revenues.

We've got a range of other apps in the labs built on our platform that enable content owners to create new and complimentary digital revenue streams through providing new ways monetizing existing assets, primarily multi-track recordings (stems).

Soniqplay has developed an interactive music platform which enables easy creation of engaging music-based apps for brand and media owners which helps turn consumers into content creators. Specially prepared content is sold as in-app purchases at premium price points. Through providing white label apps through our partnerships with media owners, we are able to achieve scale quickly, and provide an “Evergreen” business model where content is constantly made available to ensure ongoing usage and assure an ongoing revenue stream.

FEEDBACK AND CHALLENGES

- * Brand and media owners are trying to engage their audiences through music and empower them to become content creators around their brands.
- * Consumers are showing a greater propensity to want to interact with music rather than just listen to it.
- * Rights holders need to find new revenue streams from their existing digital assets, especially where they are additive and non-cannibalizing to their other revenue channels.

www.soniqplay.com

martin@bouncemobile.net

3.1.1.22 Paul D, video artist for Thomas Dolby

Paul D is a multi award winning Director/Producer who makes music videos, documentaries and feature films. His recent 'Toadlickers' promo for multi Grammy Award nominated artist, Thomas Dolby, reached #18 in YouTube's 'Most Viewed' chart and was shown on The BBC. Described as "Entertaining" by Promo News, Toadlickers made headlines for its groundbreaking use of bleeding edge technology to fuse puppetry by Mike Quinn (The Muppets, Star Wars), with live action, freerunners and burlesque girls.

paulincyberspace@yahoo.co.uk

3.1.1.23 Olivier de Simone, Webdoc

Olivier de Simone joined the advisory board of Webdoc in 2010 before taking on a full time position in 2011, developing the company's musical activities.

He is best known for his work with digital distribution company, The Orchard. In 2004 he started as the MD of France, Switzerland and Belgium and in 2010 was promoted to VP European Operations. In late 2010 Olivier de Simone co-founded The Orchard Lab @ London Met with Orchard founder Scott Cohen. Partners involved in the first year of the program included Spotify, Topspin, Soundcloud, Music Metric.

Olivier started his career in 1996 as a member of the Hip-Hop Band Averse De Soleil, performing over 150 shows with the likes of Snoop Doggy Dog, Warren G, The Pharcyde and Ice-T. He co-founded artist management company Le Produit Music SA in 1998 and later, Internet licensing service Biz4Music in 2000. Also in 2000, he formed a partnership with André Bourgeois & Urban Jungle Records Brazil. In 2003 de Simone and Bourgeois entered a partnership managing the artist, Céu, with whom they made a deal with Starbucks in 2005, making her the first international artist promoted in Starbucks coffeehouses.

Webdoc is a social place offering the most engaging way to share and unite with others through the creation of rich media posts. As instant as a status update, more expressive than anything else.

Webdoc offers expression canvases that enable anyone to mix user-generated and discovered content from the web, including services such as Twitter, Facebook, YouTube, Instagram, Google, SoundCloud, Songkick and many more. Webdocs are sharable through social networks and embeddable on all popular blogging platforms. Top brands and bands today leverage Webdoc to engage their communities in totally new and expressive ways.

The company is headquartered in Lausanne, Switzerland and has subsidiary offices in London and San Francisco. For more info: <http://www.webdoc.com>
olivier.desimone@webdoc.com

3.1.1.24 Johann Waldherr, Spectral Mind

Spectralmind is an audio intelligence company that changes the way people search for and discover audio content. Traditional keyword search methods make retrieval results dependent on the quality and quantity of existing metadata. As a result, only a small fraction of music catalogs are actually utilized.

The Spectralmind platform understands and interprets music in the same way as humans. Powered by semantic audio analysis technology, it automates the analysis of music in large catalogs, detecting key acoustic properties like beat, rhythm and timbre. This solution is capable of taking any sample audio track and delivering accurate and relevant matches based on acoustic characteristics. In combination with an intuitive visual search interface, it enables faster and smarter search, discovery and recommendation.

Music professionals can now find, monetize and discover millions of tracks.

Spectralmind was co-founded by a team of four world-leading semantic audio technology experts and is based in Vienna, Austria.

FEEDBACK AND CHALLENGES

The presentation discussed new concepts of visualizing music catalogues. Smartphones and music service offerings have advanced dramatically during the last years. However, the way music is organized, presented and browsed on these devices has not. Several companies are working on ways making the million-sized catalogues more accessible for users. Sonarflow represents an app that visualizes playlists in colorful bubbles. These can be zoomed in a natural way. Sonarflow will be released with a Spotify integration this summer. Challenges:

- * financially funding ideas in the music domain
- * rights issues related with online music and online images

www.spectralmind.com

waldherr@spectralmind.com

3.1.1.25 Avi Ashkenazi, live demo of large scale audiovisual installation

Avi Ashkenazi is an experienced designer that has the unique ability to juggle between the realms of sound, visual and code – combining them into a one cohesive experience. In his projects he explores the relationship between human body, music, and the multiple ways that they interact with each other, both in the physical world and the virtual one. His latest project, "Beatple", involved creating a space in which an individual can influence the visual atmosphere in the room depending on the sound that the person produces. Thus, a musical artist can change the visual atmosphere in his shows depending on the crowd engagement (e.g.

applause) or on the musical tempo. "Beatple" was implemented in 51% shows – an Hip Hop group that Avi was a part of. Beatple gives people an enjoyable and memorable experience by creating music and influencing the space's content and feel. The people who interact with Beatple record new video+audio tracks into a 16 grid matrix that randomly plays their inputs. The experience, in terms of sound and visual content, is random, musical and intriguing. Nowadays Avi is an MA student at Goldsmiths University of London. Prior his relocation to London from Israel, Avi was a researcher at The Interaction Lab, Holon Institute of Technology (H.I.T.) and worked alongside some of the top notch designers and studios, including the renowned "Talents Design" studio.

In my presentation I discuss the 3D visualisation of sound in a digital world where sound is no longer preserved in a physical way. My object is based on visualization of sound and meant to serve as a present to an important friend. I discuss the relationships between identity, means of identification, and the human voice. The connections between them pave the way to a series of questions about the affect of share our personal voice can create. My project is to research what shape an object of sound could have in order to be clear for its purpose. An object that contains one's voice, and can be scanned by a 3D scanner in order to reproduce the voice again. Throughout the research I explored visualization of sound, and created several prototypes for this object using vocal samples.

FEEDBACK AND CHALLENGES

- * implementing new physical music tools in the digital age
- * making humanity more auditory than visual

[@Superavi1](#)

<http://superavi.com>

xoxoavi@gmail.com

3.1.1.26 Stephen O'Reilly, *Mobile Roadie*

Mobile Roadie have been at the forefront of audience and fan engagement since we launched in 2009. We now power over 5,000 mobile applications for including some of the worlds leading artists, publishers, conferences and brands including Madonna, Adele, The Beatles, Midem LeWeb, Fader Magazine and many more. Mobile is one of the fastest moving technologies ever and every day our team of developers and designers are constantly looking at how we can add the latest features, functionalities and integrations into our mobile platform to allow millions of consumers connect with artists and brands via their mobile and tablet devices.

FEEDBACK AND CHALLENGES

Having launched first on iPhone & Android we have also recently added iPad and a mobile web product to our platform to ensure that our clients can reach their audience regardless of their type of handset. We are also seeing many brands and artists taking a "mobile first" approach and we see this trend continuing into 2012 and beyond.

stephen@mobileroadie.com

3.1.1.27 *Matt Black, Ninja Jamm by Coldcut and Ninja Tune*

Ninja Tune is an independent record label based in London. Ninjatune will release their first music app Ninja Jamm in June 2012; Matt will introduce its first sight by the public, combined with a sweep across other leading music apps. Ninja Tune was created in 1990 by DJ/remix/sampling pioneers Coldcut, Matt Black & Jonathon More and pioneering beats and bass music, the label quickly achieved notoriety, due to its funky style and commitment to eclecticism. Key in the label's success was the diverse character within the growing roster.

With the mixing and multi-media innovation of Coldcut, the studio know-how, DJ and musical expertise of the artists, the strong graphics of Openmind, and a priority on business with integrity, Ninja prides itself on delivering quality music while serving its artists in a way that no major label could. Acts such as Amon Tobin, Cinematic Orchestra, Mr Scruff and Bonobo are some of the top names in today's electronic scene. In 2010 Ninja celebrated 20 years with a massive XX boxset and series of parties. In 2011 they signed the cutting edge Brainfeeder label and blew minds with the outrageous new Amon Tobin live show.

'We deliver next generation beatnological manipulation'

Ninja Jamm is on... the new audio app from Ninjatune and Seeper...

Ninja Jamm is a free, easy to use, touch-controlled, four channel sample mixer with a range of instant effects, featuring tunes from Ninja's catalogue past and present. Current Ninjas such as Toddla T, Bonobo, Mr Scruff and Coldcut are featured, and Brainfeeder act Martyn also joins the party. Combining aspects of DJing, remixing and producing, the app lets anyone experience the enjoyment of playing with electronic music. As each tune plays, the user can switch seamlessly between the original licks and specially generated remix clips, whilst glitching and effecting each channel and firing oneshot samples over the top. Unlike many other music apps, the Jamm experience is very hands-on - not a rigid sequencer, it emphasises immediacy- the user's human feel is their key to enjoying abundant remix possibilities. Jamm and record, create a killer version of a favourite Ninja Tune and share it with the world through Soundcloud, Facebook and Twitter.

FEEDBACK AND CHALLENGES

The barriers to physical software distribution were previously a major problem to small operators making successful products, but the app store system solves that. A lot of technical issues have been resolved, others come up of course, but broadly now is a great time to be doing stuff because the tools are better, audiences are getting more into interactivity, and the possibilities are still limitless. Another problem in the past for me personally was taking too much notice of nay-sayers and perhaps being too dependent on other people's good opinion. At one point I realised it wasn't useful to blame anyone or anything else for things stalling, I had to accept that my own commitment had been at fault, and resolved to go forward and not make the same mistakes. I'm happy with how that's working.

<http://ninjajamm.com/>

mattb@ninjatune.net

3.1.1.28 *Ariel Elkin London Music Hackspace*

The London Music Hackspace is an open community lab for sharing thoughts, knowledge, and technologies on music and audio. Our community is composed of artists, engineers,

programmers, and lawyers too! Members are involved in the use and development of both free and proprietary software and hardware for music composition, production, and performance.

We hold meetups where we collaborate on projects involving music technology and related electronic arts. Our meetups are opportunities to review trends in music technology, collaborate on a high-end audio hardware engineering project, make experimental music, and have pizza, not necessarily in that order.

We're proud members of the London Hackspace.

ariel@arivibes.com

3.1.1.29 *nu desine: Alphasphere*

AlphaSphere is a brand new musical instrument which has been designed for electronic music. The AlphaSphere allows you to be expressive with music through a series of tactile pressure sensitive pads. Load the Sphere with your own sounds, or connect to your existing digital audio workstation (DAW) with the intuitive software. Get hands on with electronic music and create your new sound. Change the way you play.

AlphaSphere is a product by award-winning company nu desine, a team of musicians, engineers, and developers based in Bristol, UK. Founded in 2010 and committed to being at the front line of the new music revolution.

FEEDBACK AND CHALLENGES

Originally I made the AlphaSphere for myself, because there wasn't anything that allowed me to play music in this way, since going through the process of creating it I have discovered a whole world of people who want to play the AlphaSphere too. Now, I am often torn between creating the AlphaSphere and playing the AlphaSphere, extracting myself from sourcing electronic components and supply-chain management can be excruciating, but it is always rewarding as it's such a different kind of challenge to learn play a new musical instrument. Without being a user myself, the whole task would have been impossible, and I wouldn't have known where to begin. However, as a user, all of the features and design have existed because of necessity. (Adam Place, Alphasphere)

adam@alphasphere.com

3.1.1.30 *Jake Williams: London Fields*

Over the last 10 years Jake Williams has written/produced and engineered critically acclaimed releases for Warp Records, Lo Recordings, !K7 and Process amongst others, toured extensively as part of live bands and as a DJ, written music and created sound design for award winning short films, TV (CSI, NCIS, BBC, Channel 4) , high profile advertising campaigns and written/produced library music for companies such as Sky, Altitude Music, De Wolfe and Boosey and Hawkes.

Jake has run workshops in Ableton Live at most of the major London music technology colleges and is to start teaching at Goldsmiths University this year. He is currently studying for a Mmus in Creative Practice at Goldsmiths, exploring multi-channel sound pieces about cultural and spritual ritual, performance using timecode vinyl as a controller and direct light to sound experience.

His presentation is an excerpt of a work-in-progress performance piece 'London Fields' - Field recordings of the London night are manipulated with Ms Pinky timecode control vinyl and a bespoke collection of Max4Live patches to create an intense, improvised drone soundscape.
<http://www.jakeone.co.uk>

3.1.1.31 Daniel Jones: Twitter Feed Sonifier

Daniel Jones is a doctoral researcher at Goldsmiths, University of London, exploring the relationships between complexity, creativity and social dynamics. This manifests itself in both scientific and artistic output: he has published work on music theory, creativity, systems biology and artificial life, and exhibits his digital work internationally, harnessing algorithmic processes to create self-generating artworks.

Recent works include The Listening Machine (with Peter Gregson, 2012), a 6-month-long sound work which translates social network dynamics into a piece of orchestral music, recorded with Britten Sinfonia and commissioned by the BBC/Arts Council's The Space; Variable 4 (with James Bulley, 2011), an outdoor sound installation which transforms live weather conditions into musical patterns; Maelstrom (with James Bulley, 2012), which uses audio material from media-publishing websites as a distributed, virtual orchestra; Horizontal Transmission (2011), a digital simulation of bacterial communication mechanisms; and AtomSwarm (2006—2009), a musical performance system based upon swarm dynamics.

Daniel co-ordinated the technical infrastructure for The Fragmented Orchestra, winner of the prestigious PRSF New Music Award 2008. His audio development work for Papa Sangre and The Nightjar was nominated for two BAFTAs, including "Audio Achievement".

The Listening Machine is a 6-month-long piece of generative music which translates the dynamics of 500 UK Twitter users into sound, with a huge array of recordings made with Britten Sinfonia. Sentiment, topic and

conversation rate affect different facets of the piece, which is ever-evolving.

This talk described the motivations and development of the piece, and the challenges of turning speech patterns into music.

FEEDBACK AND CHALLENGES

* the opportunity for young digital composers/artists to work with top-class orchestras and recording environments

<http://www.listn.org>

d.jones@gold.ac.uk

3.1.1.32 Cassiel: Monometamicromatic

Nick Rothwell [cassiel] has recently worked on choreographic visualisation tools for Wayne McGregor|Random Dance at Sadler's Wells, interactive sound and sensing systems for Eddie Ladd's Ras goffa Bobby Sands (The Bobby Sands Memorial Race), and music composition for Shobana Jeyasingh Dance Company. He is currently working with Simeon Nelson and Rob Godman on large-scale projection works in Europe (Poland, Estonia, Durham) and at the Wellcome Trust.

cassiel: monometamicromatic

A live, barely-controlled ongoing collision between algorithmic step sequencers, sliced percussion, misapplied programming languages, cascaded effects processing and monome control surfaces. The musical material constantly shifts between tribal beats, pulse-based ambient layers and crafted designer noise as performance passes between LED matrices, Python and Clojure code blocks, delay lines, beat fragments and - somewhere in the middle - a human performer.

FEEDBACK AND CHALLENGES

- * Getting promoters to take interest in a body of work based on algorithmic "software thinking" in its conception, rather than just its realisation

- * More generally: promoting creative process in technology-based works rather than the technology

www.cassiel.com @cassiel.com

nick@cassiel.com

3.1.1.33 Bruno Zamborlin: Mogeess

Bruno Zamborlin focuses on the design of new interfaces for musical expression. Researcher at the Goldsmiths College in London and the IRCAM music research centre in Paris, he applied gesture recognition technology for the creation of a system called Mogeess, which transforms any surface into an expressive music instrument just by placing a contact microphone upon it (<http://mogeess.net>). He performs using his system both in solo and in duo with Ed Handley from Plaid (<http://warp.net/records/plaid>)

Mogeess is a project that uses microphones to turn any surface into an interactive board, which associates different gestures with different sounds. This means that desktop drummers could transform their finger taps and hand slaps into the sound of a marimba or xylophone.

Users plug any contact microphone onto a surface — be it a tree, a cupboard, a piece of glass or even a balloon. They can then record several different types of touch using their hands or any objects that cause a sound — so one sound could be a hand slap, another could be a finger tap and another could be hitting the surface with a drumstick. Users can train the system to detect new types of touch recording them just once.

The different gestures can then be associated with different sounds. Then when the user wants to perform, the Mogeess software will recognise which of these types of touch is closest to the one that the user is doing and then enable the corresponding sound engine or synthesiser. The tone of the synthesised sound is influenced by the actual sound picked up on the microphone. So you could use the same gesture — for example a tap — in different places on the surface and it would create the sound in a different key.

Mogeess currently uses two audio synthesis techniques — the first is physical modelling, which consists of generating the sound by simulating the propagation of the sound wave through different physical materials such as strings, membranes, or tubes using a piece of software called Modalys. The second technique is mosaicing, where the user loads a sound folder and then the audio coming from the contact microphone is analysed and the software looks for the closest segment within the sound folder. So if a sound folder of voices is loaded, touching the surface gently would provoke a whispering while scratching it will cause a sound similar to screaming voices.

FEEDBACK AND CHALLENGES

- * the desire to turn ordinary objects into percussive instruments
- * allowing musicians and performers to take full advantage of electronic music without losing the feeling of touching a real surface

bruno.zamborlin@gmail.com

3.1.1.34 Jason Singh: Beatbox/Vocal Sculptor

Jason's work is rooted in inspiring people to engage in exciting creative experiences, through the voice, technology, performance and participation. Using his voice and a number of samplers and loop pedals, he can vocally recreate sound and music compositions mimicking a wide range of instruments, textures, wildlife, and abstract experimental sonic environments.

A prolific solo artist, he has also created collaborations with organisations such as the Southbank Centre, PRSF, Serious, National Portrait Gallery, BFI, Rajasthan International Folk Festival, Jaipur Literature Festival, Contact, Royal Albert Hall, Glastonbury Festival, The Sage Gateshead and the BBC. Jason is also currently the first sound artist in residence at the Victoria and Albert museum.

Jason composes music for film, theatre, dance and facilitates sound and music workshops to young people and adults. These include Beatboxing, DJ, Sound Art and Music Production. He is an Associate Lecturer at the Manchester Metropolitan University.

My work and performances explore blurring and pushing the boundaries between the voice and technology to create live improvised musical compositions and an array of vocal sound textures. I use my voice to mimic a wide range of instruments, textures, mechanical sound effects, nature and natural phenomena. Coupled with this, the use of samplers, looping and effects pedals enable me to vocally recreate a plethora of musical genres which include ambient electronica, hip hop, jazz, house, techno, dubstep, drum and bass, world and Indian raga inspired drones.

FEEDBACK AND CHALLENGES

For the Music Tech Fest I brought my recently developed hardware vocal processing and sampling system consisting of a Shure SM58 microphone, 4 Kaoss Pads and a BOSS BCB 60 effects rack containing various pedals. Over a period of 45 minutes the audience were taken on an improvised vocal journey across Indian vocal percussion, ambient textures, Hip Hop, House, Minimal Techno, Drum and Bass, Dubstep and range of vocal sound effects.

- * developing music technologies to aid vocalists

<http://thesinghthing.com/>

jasonsingh@me.com

3.1.1.35 Carlez Lòpez: Reactable

Carles is an extraordinarily talented musician who has performed in festivals and venues on more than twenty different countries. Some of his recent concerts were: Sonar Barcelona, New York & Washington, Electrosonic Burgos, Electrowave Firenze, Room 18 Club Taipei, Microwave Festival Hong Kong. He has composed music for Alejandro Gonzalez Iñárritu (Director of Babel, Amores Perros...) and Marcel.li Antúnez (Fura dels Baus).

reactable.com

[@DjCarlazz](#)

[@reactable](#)

carlos@reactable.com

3.1.1.36 Julie Freeman and Vincent Akkermans

Julie Freeman is an artist for whom technology plays an integral part of her practice. Her dynamic artworks are often shaped by external influences such as humans, animals or environmental factors. Freeman's work explores the relationship between science and the natural world, questioning the use of electronic technologies to 'translate nature'. Freeman often works collaboratively with scientists, experimenting to transform complex processes and data sets into sound compositions, kinetic objects and animations.

Her work is held in a number of private collections, and since 1998 has been shown across the UK in venues such as the Institute of Contemporary Art, the Victoria & Albert Museum, Kinetica, the Barbican Centre and the Science Museum, and internationally in Brazil, Croatia, Lithuania, Luxembourg, Russia and the USA. Freeman is a PhD candidate in Media & Arts Technologies at Queen Mary University of London. She is a board member of MzTEK.org and holds fellowships from TED and NESTA.

Julie Freeman and Vincent Akkermans are both PhD students at the Media and Arts Technology doctoral training centre at the Queen Mary University of London. Julie is an artist and her work explores the relationship between technology, science and nature. Vincent is a technologist with a background in music technology and often works as a mediator between artists and composers and interactive technologies. Both have a focus on collaboration and have participated in several hack days.

Vincent Akkermans is a technologist with an interest in all things meta and recursive. He has a background in composition and music technology and has worked on a diverse set of projects, including adaptive music for games, haptic feedback suits, a live-coding language for visuals, and web services for music information retrieval. He is currently a PhD student at the Media & Arts Technology programme at the Queen Mary University of London. His research focuses on describing and synchronizing creative processes.

Julie and Vincent exhibited two works at the Music Tech Fest especially made for the occasion. The venue and its unique architecture provided an opportunity to work with projection mapping techniques. Using a high lumens projector a sound reactive visualization was placed between the circular windows, exploring the link between music technology and architecture. The second work was a lo-fi performance installation and translated lines drawn on a piece of paper onto the projection surface, where after a short period they began to deform and move with the rhythm of the music in the space.

FEEDBACK AND CHALLENGES

The methods employed in the process of the creation of these two works were intentionally modeled after the methods employed at hack days, focusing on collaboration and the quick exploration of new ideas. During the hack day Julie and Vincent actively sought collaboration with other participating hackers which led to a couple of quick experiments. The value of these ad hoc collaborations lies not in the work that is produced, but in the process of the collaboration itself. By working together artists and technologists learn about each other's

methods, see the value of collaboration, and how this collaboration can be structured and employed as a design strategy. (Vincent Akkermans)

[@misslake](#)

translatingnature.org

[@vakkermans](#)

vincentakkermans.me

3.1.1.37 *Tore Honoré Bøe: iFOLK*

You are invited to play an "acoustic laptops" made by transmedia artist Boe. It is one of many wood boxes with various tiny objects attached inside; springs, stones, metal, rubber, string, needles, memorabilia - amplified by a contact mike (piezo).

The acoustic laptops are musical instruments with which you can explore a soundworld that usually pass unnoticed and thus connect with unfiltered reality in a pleasurable way. Whereas Boe uses them to produce the microsounds he desires in his electro-acoustic music, a growing number of other musicians have started using them as additional effect gizmos. Boe has performed lots of concerts with them, mostly on his own, but due to their versatility also in free improv collaborations with colleagues.

Boe also gives workshops where people are invited to create their own "personal pc's". These events are always entertaining, for young or old, for the previously informed or the absolute amateur. Thus the acoustic laptops as functional flux-boxes have starred in both informal social settings and the established world of art.

In these times of digital options and general gadget worship, the acoustic laptops demonstrate the complexity of simplicity, the reframing and recycling of objects, the contemporary urge to reconnect to hands-on creation and the ethos of the do-it-yourself culture.

The acoustic laptops are not an anti-digital statement, they are a neutral addition that form a great platform for altering the perception of possibilities. Best of all: No password is needed.

[More here](#)

3.1.1.38 *Denzyl Fiegelson, Apple iTunes*

Denzyl is a 35-year music & entertainment industry entrepreneur with a proven track record of building ideas and leading companies in both traditional and digital media. In the 80's and 90's he built a successful artist-management, production and music-licensing company - Next Step Inc. In 1997, (in addition to creating one of the first online flower companies - hanaflovers.com) Denzyl founded and launched the pioneering pure digital label - Artists Without A Label (awal.com) which was sold in 2011. With his 2 AWAL partners - Kevin Bacon and Jon Quarmby, Denzyl is also the co-founder of the fast-growing analytics company buzzdeck.com. In 2002, Denzyl signed on as a strategic advisor and music synergist to Apple and has been integral to the global success's of iTunes ever since its launch in early 2003. Since 2007, Denzyl has been working on the successful iTunes Festival (now in it's 6th year) and has overseen hundreds of global live events for iTunes. Hailing from South Africa, Denzyl was instrumental in the worldwide success of Paul Simon's groundbreaking album "Graceland" and produced the first grand-scale multi-racial "Concert in the Park" in South Africa in 1982.

denzyl@apple.com

3.1.1.39 Kara Mukarjee, EMI Music

EMI Music is one of the world's leading music companies, representing artists spanning all musical tastes and genres.

In November 2011 EMI launched its OpenEMI initiative in partnership with The Echo Nest. OpenEMI makes available thousands of tracks, videos and other digital content from EMI's catalogue as well as dedicated developer sandboxes to a global network of 10,000 developers to create new digital concepts for EMI artists.

OpenEMI improves and streamlines the music licensing process for developers in a way that is flexible and adaptive and incorporates a groundbreaking revenue sharing structure.

Kara.Mukerjee2@emimusic.com

3.1.1.40 Calum Morton, Warp Records

Since its birth as a shop and record label in Sheffield in 1989, Warp has become one of the World's most respected creative organisations. Quickly developing into a platform for innovative and boundary-breaking music talent, Warp became synonymous with such artists as LFO, Autechre, Aphex Twin, Boards of Canada and most recently Grizzly Bear, Battles and Maximo Park.

@warplot www.warp.net

calum@warprecords.com

3.1.1.41 Chris Godbert, BBC R&D

BBC Research & Development is the core of the BBC's effort to be at the cutting edge of media technology and drives the exploration of exciting new tools for the production, distribution and consumption of media. It is a department of engineers, scientists, developers and designers with 160 staff across three labs in London and Salford.

In existence since the 1920s, BBC R&D has developed a wide range of technologies for sound, radio and music. This included inventing a noise-cancelling microphone in the 1920s, Nicam Stereo in the 1980s and helping to develop and launch the BBC's internet and digital radio services. More recently it has been researching multi-channel sound and Ambisonics, developing new services for hybrid radios and chairing the W3C Audio Working Group for audio in the browser.

<http://www.bbc.co.uk/rd>

@bbcrd

3.1.1.42 Latif Horst, Cisco

Cisco TelePresence provides breakthrough technology for distributed participants to remotely collaborate and interact just as they do in person. In manufacturing environments, this level of collaboration has reduced new product and service time to market by up to 30 percent.

By using the power of the secure network with unified communications, Cisco TelePresence transforms how global manufacturing representatives work with each other without traveling.

3.1.1.43 Chris Maples, Spotify

Chris joined Spotify in 2011 and has a dual-role within the company – as the UK Managing Director he runs the Spotify office in London, and as European Sales Director he is responsible for the overall development of the sales teams, inventory and relationships with advertisers across Europe.

Prior to Spotify Chris was Commercial Director of Microsoft Advertising where he was responsible for all display, network, search ad serving and analytics business in the UK. Chris started his career starting out over the hanger lane gyratory system – working for the first ever ITV sales house T.S.M.S. After such an illustrious start, he went on to join Channel 4 as part of the launch team when the channel became commercially independent in 1993. He has also held sales roles in non-terrestrial TV (Flextech Television), radio (Emap Advertising) and outdoor advertising (Maiden outdoor).

3.1.1.44 Stuart Berwick, [PIAS] Media

We are in the translation business. We take the complex world of music talent and the unharnessed power of creative technologists and translate this into effective and compelling campaigns on behalf of brands.

[PIAS] Media is the independent agency division of [PIAS] Entertainment Group with offices in 6 European territories and the understanding and reach to deliver localised, global campaigns.

We are a passionate team made up of music experts, technologists, creative marketers and communications specialists and we love what we do. Working out of the agency offices in London and the innovations studio in Bristol, we take bands, brands and creative technology and produce something special.

3.1.1.45 Adam Powers, BBH Labs

Labs is BBH's global innovation unit. We're tasked with pioneering new outputs and approaches: exploring emerging platforms and behaviours on behalf of brands, and developing new agency models along the way. Our overall ambition is to save the world find ways in which marketing innovation can be a powerful force for good (more effective, more engaging, more sustainable, more exciting). We're particularly interested in:

- Innovative new forms of creativity
- Novel approaches that are rapid, iterative & curatorial
- The mashup of thinking from radically different sources & industries
- Sustainable marketing at scale
- Co-creation and mass collaboration
- Social ideas and how they propagate
- Marketing as product or service

3.1.1.46 DJ H.A.M, Ninjatune

I am a young DJ from South Africa and student here in the UK. I currently work with Matt Black at Ninja Tunes on special projects and have always had a keen passion for music in general. I consider myself a DJ, Musician and Producer. I generally combine a large mixture of genres in my sets including several of the top selections from South Africa so that my audience has a

truly unique experience when hearing my sets. I always try to keep my music fresh, so I spend lots of time in search of great underground songs as and remixes. I have been fortunate enough to have grown up in a very diverse background so my music similarly reflects this and privilege to have been mentored by a highly talented colleague and friend of mine from Washington DC, DJ Ace. My sets are new, loud, unique and sure to get you off your seats and having a good time.

3.1.1.47 Robert Kaye, MusicBrainz

Robert Kaye is founder and lead developer of MusicBrainz, and President and Executive Director of the MetaBrainz Foundation. MusicBrainz is the leading open source project for music metadata on the internet. It utilizes an approach similar to Wikipedia to curate high quality metadata and to assign unique identifiers for metadata entities. These identifiers allow for unambiguous communication about music through its global metadata delivery network that includes customers like Google, BBC, Last.fm, Grooveshark, Amazon and AOL.

3.1.1.48 Ongoing encouragement from stakeholders

The organising partners received spontaneous encouragement and support from the newly gathered Music Tech Fest community with a high demand for future events and gatherings. Some of the feedback received in writing has been gathered for the purpose of this report:

- "It's a privilege to see such amazing new experiments in sound. I'm grateful to you for inviting me!"
Jamillah Knowles, BBC Outriders
- "Music Tech Fest was one of those incredible events we won't forget soon, a heavyweight gathering of the sound tribe."
Patrick Bergel, Animal Systems
- "Just got home from the @MTFHackCamp at @MusicTechFest, and I can honestly say it was the best 2 days I have had in recent memory. I wish that event could carried on for ever so I could live there."
Adam Williams, hacker and Imperial College Sound Technology student
- "that was fab! well done."
Matt Black, Ninja Tune
- "Music Tech Fest was a great showcase for music licensing and recommendations technologies."
Tim Hadley, rara.com powered by Omnifone
- "I can still see and hear the Music Tech Fest's colours and sounds, and I'm sure the same goes for many other people. It's been a great event, and I'm happy and proud to have been part of it. The Hack Camp was extremely fun to organise and participate in. 15

beautiful hacks saw the day thanks to it, and I find that quite rewarding. Thanks to you, the 6th floor was as fertile as a hack camp can be: very-well equipped, cosy, and inspiring. The logistics required for that were crucial and intense, and you put in a lot of effort to get it right. All hackers, including myself, were touched by the kindness and respect you have treated us with, and I'd like to say thank you for this great event.”
Ariel Elkin, London Music Hackspace

- “MTF was a great event. It provided the perfect mix of industry representatives, startups and hackers. The perfect occasion to find out what is happening in the music tech scene right now on all levels! The new thing however was the involvement of academia and research. Where in the past i had the impression that progress in the music tech industry is driven by commercially operating companies it was the first time that I felt active involvement from the research sector.”
Michael Breidenbrücker, RjDj and founder Last.fm
- “I heard nothing but glowing reports”
Denzyl Fiegelson, Apple Music Synergist
- “Thanks so much for having us along to speak yesterday. Really enjoyed the event and thanks for all the work you put into it making it a great few days.”
Martin Macmillan, Soniqplay
- “Congratulations! excellent work! An event with a great future!!!!”
Patrick Tresset, Arts and Technology researcher, Goldsmiths, University of London
- “I just wanted to send you a mail to say thanks for having us at Music Tech Fest last Friday. It was a great opportunity to see what the industry is up to.”
Daniel Lewington, Apsmart
- “Thank you..fantastic hosts”
Stephen O'Reilly, Mobile Roadie
- “Thanks for creating MTF! I'm definitely interested in helping you develop the event further.”
Reavis Moore, Serve Music Ventures
- “I just wanted to thank you for all your hard work and commitment over the festival. When the tiredness eases I hope you feel a sense of joy and achievement.”
Bob Harris, Head of Commercial Relationships and Development, Ravensbourne
- “I just wanted to write a quick note to say how much I enjoyed the Music Tech Fest. It was really interesting to see what is going on in industry and, on a personal note, it was great to have the chance to catch up with old friends and meet new people. I thought your support team, particularly the AV guys, did an amazing job. It was a slick production!”
Matthew Davies, INESC Porto

- "Jason had fantastic things to say about the event when I saw him on Monday, so thank YOU for including us at the last minute! We would love to be included in one of the tech talks! Please let me know what I need to do"
Rica Squires, PR Manager, Shazam
- "I just wanted to thank you for having us at the event. It was very interesting and I very much enjoyed being there."
Estefania Cano, Fraunhofer
- "Thanks to all for making this happen. Such an amazing event ! It was great to meet you all in person. I would like a MTF every month ;)"
Cyril Laurier, PhD graduate, Music Technology Group, Universitat Pompeu Fabra
- "Thanks for putting on such an excellent event last month"
Gregory Kris, CEO Decibel
- "Thanks for all your warmth and hospitality. I have been to a few events of this type and yours was truly the best. I hope I can be of some help to you guys here in Barcelona."
Varun Jewalikar, MA student, Music Technology Group, Universitat Pompeu Fabra
- "We really wish a long life to the MUSIC TECH Festival and we will be with you every year to presents our new products."
Frederick Rousseau, IRCAM
- "First of all, congratulations! Awesome event and organization! Thanks for having us there!"
Oscar Paytuvi, BMAT
- "Thank you so much for all your hard work during the event - I had a great time, and it was good to have the chance to perform on the night."
Nick Rothwell, Cassiel
- "It was lovely to meet you and your team at MTF. Congratulations on an amazing event! I thought it was exciting, surprising, thought-provoking and informative. And great fun."
Terry Tydesley, Kitmonsters, media and technology blogger

3.1.2 Impact of network building

The success of the Music Tech Fest and the Music Hackday has been to ensure long-term impact through regular involvement of the community of industry, SMEs, artists and researchers and regular gatherings and exchange of ideas, thus forming a research-to-industry network. The stakeholders have agreed to continue recording Music Tech Talks on a regular basis for inclusion on the Music Tech Fest channel.

3.1.2.1 Impact on roadmap writing

The feedback gathered at the MIReS specially-organized events has provided valuable insights for the writing of the roadmap challenges. The music industry and SMEs feedback has been used as a starting point for the development of well-formulated research challenges.

3.1.2.2 Impact on the EU NEM community

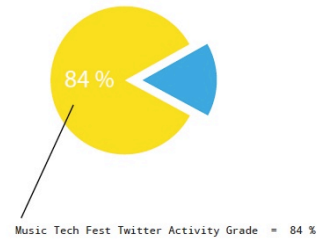
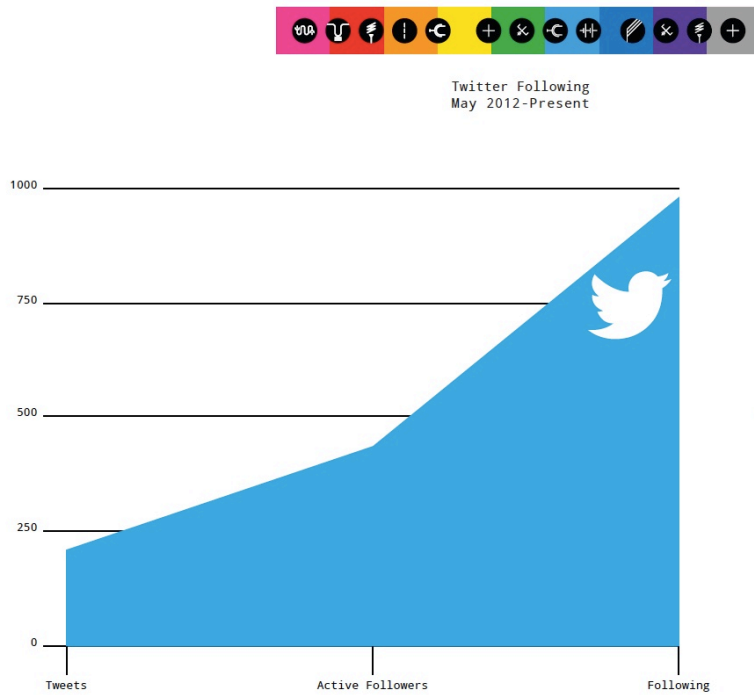
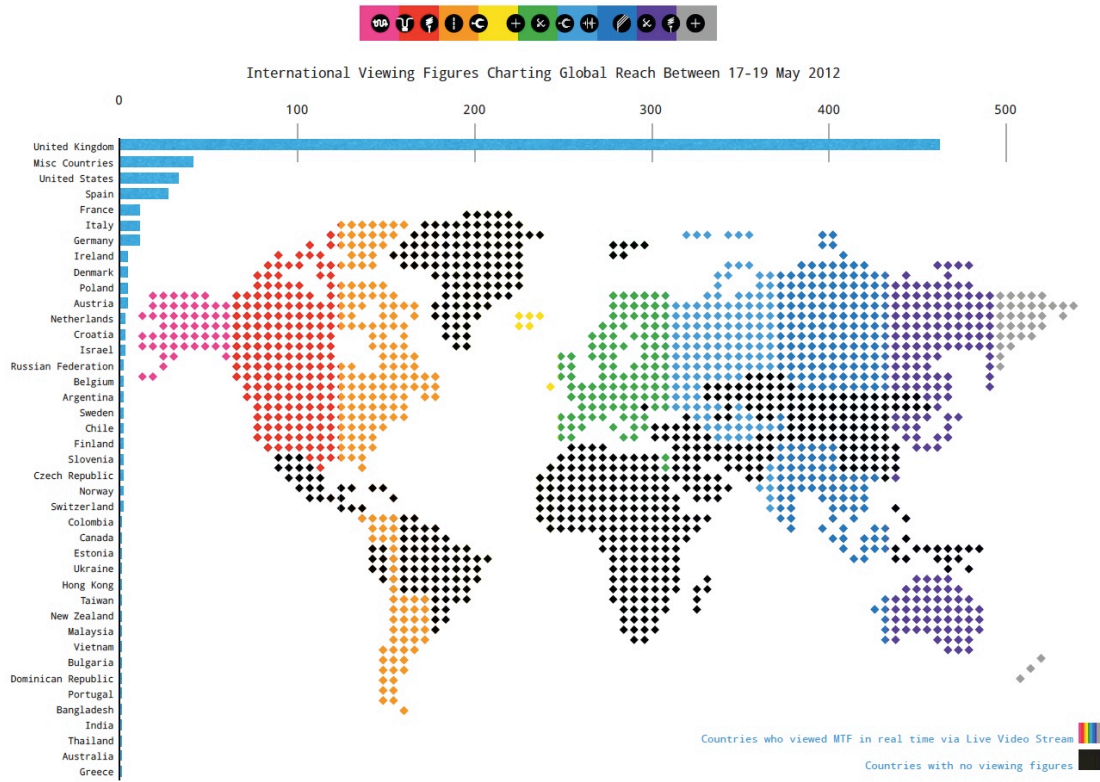
The Music Tech Fest was very well received at the EU NEM Summit in Istanbul (16-18 November 2012). The Synaesthesia App - the festival's supporting technology created especially to engage stakeholders in co-creation and cooperation, was presented in an accepted experimentation paper, and received particular praise, with the "NEM art" award for "art meets science" (youtube.com/watch?v=GcOqtvsuhxw). The app continues to be freely available from the iTunes App store and the Android Google Play.

3.1.2.3 Impact on media reporting

The Music Tech Fest generated several blogs and articles in the technology press (e.g. <http://tnw.co/Kz9ecB>; bit.ly/YjUrNq), and was reported as a series of interviews on the BBC radio and podcast in a special report on "the future of music" (<http://bbc.in/LxI7UF>).

3.1.2.4 Impact on global audiences

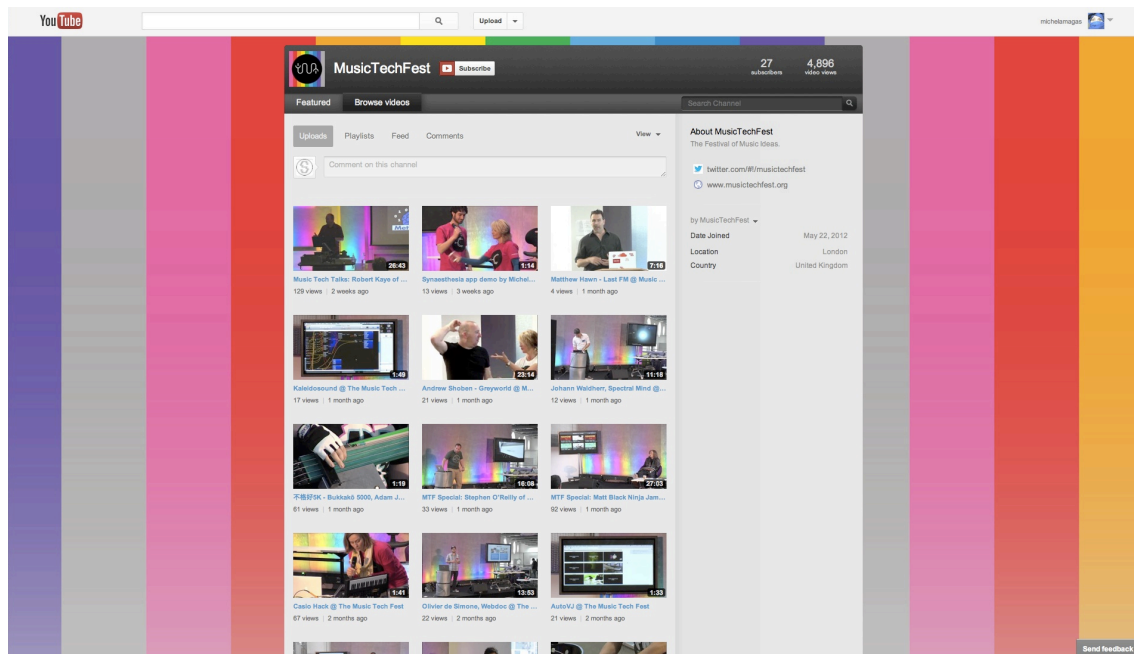
The Music Tech Fest video footage reached 656 different people over a period of two days, many of whom came back to view it again on several occasions, totaling 1435 views. Through live video streaming the Music Tech Fest reached 41 different countries, including Hong Kong, Greece, Russia, the US and Estonia. Since launching in London in May 2012, the Twitter channel @MusicTechFest has gained over 1,000 spontaneous followers, over 500 of whom are active followers. The YouTube video release programme has enabled the Music Tech Fest to continue building a global following and to reach new territories like Brazil, that had not originally tuned in to the live broadcast during the festival.



Information retrieved using

3.2 Online framework specification

Exceptional stakeholder engagement has enabled MIREs partners to take the early initiative of testing an online virtual framework for the continued engagement of the broader MIREs community. The Music Tech Fest Online Video Channel, supported by the ongoing Music Tech Fest and Music Tech Talks events, is secured to continue beyond the lifetime of the MIREs project (youtube.com/musictechfest/).



3.2.1 The Music Tech Fest Online Video Channel initiative

The considerable quantity of video footage from the Music Tech Fest has been used to test an online virtual framework similar to the "TED talks". This media content channel aims to gather all contributing music technology stakeholders in a virtual online environment and is being made accessible to the widest audiences.

At the time of writing this report, 53 videos have been edited and uploaded to the Music Tech Fest Online Video Channel, and have registered 4,952 views. Special requests by industry (e.g. Shazam) and innovative SMEs (e.g. MusicBrainz) have been received wishing to contribute with a Music Tech Talk to this channel.

3.2.2 Supporting framework of live events

After the Music Tech Fest in May 2012 the organizing partners had a request for an evening of Music Tech Talks on the 26th of July, as part of the London Cultural Olympiad. This event featured talks by Matthew Hawn, VP of Product at Last.fm, Andrew Shoben, founder of Greyworld and a special appearance by music technology innovator and performance artist Tim Exile. Upon request for participation by the USA-

based MusicBrainz, a Music Tech Talks II evening was run on November 15th featuring MusicBrainz founder Robert Kaye, and research presentations from MIREs partner QMUL. The event was linked to the Music Hackday London and to the seminar on creative rights issues presented to audiences of legal experts.

The partners have secured a continuation of the Music Tech Fest and Music Tech Talks into 2013, beyond the duration of the MIREs project. The next large-scale Music Tech Fest will be held in London on the 10-12 of May 2012, with new contributions populating the Music Tech Fest channel and further contributing to the MIREs knowledge base.

Satellite events have been requested by stakeholders from New York, Portland (Oregon), Ireland, Brazil and Croatia. The organisation of the Music Tech Fest satellite event in Croatia is planned for 19-21 July 2013, after the entry of Croatia into the EU on the 1st of July 2013. The organizing partners are actively pursuing funding opportunities to extent the MIREs stakeholder community within and beyond the EU.



3.3 Principles for knowledge sharing

Further recommendations have been made in view of ensuring that academic research translates the feedback from industry into well-formulated research challenges. Aside from discussing and building on the industry feedback gathered from specially-organized MIReS events, the partners have researched into methods in use by other academic research communities and have identified examples of good practice for involving industry and wider stakeholder networks with academic research.

The following Grand Challenges initiatives, involving wider networks and broader contexts, have been listed as examples of good practice which could be adopted by the MIReS community:

- a) The **ACM Multimedia Grand Challenge** invites industry to define and propose a number of problems and issues, and engage the research community to attempt to solve interesting and challenging questions relating to the industry's 3-5 year horizon (<http://www.acmmm12.org/call-for-multimedia-grand-challenge-solutions/>).

Solutions to the Grand Challenges proposed by industry representatives must:

- Significantly address one of the challenges posted by industry representatives
- Depict working, presentable systems or demos
- Describe why the system presents a novel and interesting solution

Finalists are selected by a committee including both academic and industry reviewers and requested to introduce their solutions briefly to the audience with a quick demo, followed by challenging questions from judges and audiences. Finalist submissions are published in the conference proceedings.

Since its launch in 2009, this method has established itself as a prestigious competition in multimedia community, attracting industry contributions from e.g. Google, HP and Technicolor.

- b) Organised by the US National Academy of Engineering in 2008, the **Grand Challenges for Engineering** initiative encouraged engineering solutions to broad realms of human concern: sustainability, health, vulnerability, and joy of living. (<http://www.engineeringchallenges.org/cms/8996/9221.aspx>).

The goal was to apply the rules of reason, the findings of science, the aesthetics of art, and the spark of creative imagination, to enable engineers to continue the tradition of forging a better future. The call resulted in a poll of 25,113 votes and a list of 14 major challenges, announced at a news conference in Boston on 15 February 2008.

- c) The UK Computing Research Committee (UKCRC) runs the **Grand Challenges in Computing Research** exercise to discuss possibilities and opportunities for the advancement of computing research, particularly in the UK. This is an ongoing effort which aims to identify ambitious, long-term research initiatives that might benefit from some degree of national and international coordination.

The community effort relies on a Moderator for each Grand Challenge, who sets up a Network with their collaborators and aim to reach broad agreement on how best to promote high-quality research in the topics of their Challenge, including background documentation, feasibility studies, and a Roadmap of strategic directions.

- d) During 2002 the US Computing Research Association (CRA) organised a conference series on **Grand Research Challenges in Information Systems** to explore priorities for information technology research, in an attempt to gain a larger perspective on research community efforts, suggest directions for the betterment of society, and underscore the long-term technological issues that must be resolved. The final report was created to set the information systems research agenda for the 21st century (<http://archive.cra.org/reports/gc.systems.pdf>).

The above methods present models for a “Grand Challenges for MIREs” initiative by the MIREs community. The following options are presented for consideration:

- Grand Challenges presented in the form of a peer-reviewed paper (e.g. see <http://www.sigir.org/forum/2008J/2008j-sigirforum-belkin.pdf>)
- The launch of a “Grand Challenges for MIREs” call for papers at a major MIR community conference (e.g. ISMIR), in response to industry challenges.
- A specially-organised conference or workshop focusing on the Grand Challenges for Music Information ReSearch, involving the broader range of industry and academic stakeholders.
- An ongoing, moderated effort to identify future Grand Challenges for the MIREs community, with contributions from both industry and academia.