

Media Innovation Studio
Interactive Review

Vol. 1



**MEDIA
INNOVATION
STUDIO**



Media Innovation Studio: Interactive Review

Edited by Prof Paul Egglestone, Dr Mark Lochrie and John Mills



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INTRODUCTION

The Media Innovation Studio's founding aim in 2012 was to work across disciplines to explore the potential of creative and digital technologies to bring about positive change.

Our 'action research' approach is lodged in a desire to create inclusively-designed prototypes as responses to real-world issues. Originally positioned within the University of Central Lancashire's (UCLan) School of Journalism and Media, and now part of the College of Culture and the Creative Industries, the Studio's remit is to inhabit 'liminal spaces' between disciplines. It hopes to explore, research and innovate within the digital ecosystem evolving around us.

The human race is more socially, economically, politically and technologically interdependent than at any time in its history. Yet, inequality, instability and unsustainability remain. Collectively, the Media Innovation Studio is trying to understand whether technology has a contribution to make to resolving this broader set of fundamental social issues. Perhaps more interestingly, we're asking whether there are an emerging series of ideas bound up in the creation and use of Information Computing Technology as it is repurposed by global communities to support activities that make our lives better.

We do not believe that technology enables everyone by magically bridging the 'digital divide'. Nor do we believe that its use by supporters of 'digital democracy' is any more democratic because of the use of ICT. Instead, we have discovered through a combination of talking to people, building relationships and making things together, possibilities for change are created.

Thankfully, there's plenty of evidence to demonstrate we're capable of this.

This review shows some of our projects, approaches and methodologies which combine disruptive design techniques, traditional social science and established practice-based methods from the arts. Focussing on the last 12 months of activity, the book also incorporates earlier projects that helped shape the thinking that brought us together to create the Media Innovation Studio. An emphasis on knowledge exchange and impact beyond the academy is a strong feature of our research. Previous projects like Meld (2007) encouraged journalists to work with interactive designers, programmers and games designers to develop new forms of non-linear digital narrative storytelling – or adapt existing software applications and technologies to create new methods of distributing content. Meld was an exciting and useful 'adventure' into an interesting space between 'geek' and 'hack' whilst industry engagement was critical throughout.

Similarly, the Media Lab Playground brought together a diverse range of players from Belgium, France and the UK in 2014 for a weekend ‘playground’ at the Media Innovation Studio. A multidisciplinary approach was at its core, and attendees included university students, mentors, media experts with technology, media, business, and coding backgrounds and entrepreneurs.

Our award-winning Interactive Newsprint project, operating between 2011 and 2013, celebrated two research firsts. It connected paper to the Internet and developed a digital system for recording interactions with printed matter. The project puts community at its centre drawing on the creativity of individuals in the process of technology design and content creation. The project grew to include several international media companies from Brazil and Europe, as well as national media organisations in the UK.

The current direction of research and innovation within the Studio is firmly rooted in its previous work.

Our inclusive research culture ensures that there is no artificial divide between research and teaching. Research staff are involved in teaching at all levels from foundation to undergraduate to Masters and research degree supervision, with research developments in areas as diverse as entrepreneurial media, sensor journalism to Unmanned Aerial Vehicles (UAVs) for search and rescue.

The examples that follow demonstrate a commitment to ensuring that people are central in all of our work. We understand that technology is rarely the answer and we are keen to avoid the promotion of technology as a solution looking for a problem. However, technology - and more accurately, human interactions with our technologies - form the basis of many of our studies as we seek to gain insights into how they influence or change behaviours, open or close possibilities.

The book you are holding is no exception. Embedded within some of its pages are opportunities for readers to access additional rich media content, whether it’s video footage, audio clips, photos or even PDFs. To activate this content you will need an iPhone or Android. For more details visit mediainnovationstudio.org/misreview_app on how to download. Once you have the app installed you will be all set to browse additional media content. Simply look out for the Media Innovation Studio icon on the page, which indicates this page is interactive.



Interactive



This review serves as the print book companion to the Media Innovation Studio. It identifies the emerging field of media innovation by bringing together projects from Studio practitioners, each from diverse disciplines, to shape theory, identify real world problems and current opportunities. The book includes 40 selected case studies spanning communication, education, STEAM subjects (science, technology, engineering, art and maths), journalism, media, business and policy. It attempts to develop a shared language and a common purpose to enable people to collaborate beyond disciplinary silos.

Enjoy the book.

Professor Paul Egglestone

PARTICIPATING ORGANISATIONS

Trinity Mirror plc



FOJO:
MEDIA INSTITUTE



Innovate UK
Technology Strategy Board



Stuff



Fieldcraft Studios

JOHNSTON PRESS PLC



Manchester
Evening News

NOKIA

Microsoft

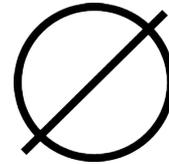
punchdrunk
theatrical experiences



J•lab



littleBits[®]



ACADEMIC PARTNERS



WHERE?



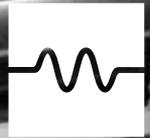
It's a cliché, but research and innovation is a journey not a destination. At the heart of our journey - alongside a commitment to the wider academic community - is a deep desire to collaborate with others, learn together and share in what it means to be human.

We travel so we can celebrate, commiserate, strategise, demonstrate, debate, build, support, wonder, laugh, enjoy and create with people who have shared values. We hope this enables us to make even the smallest contribution to creating a better world together.

We're all acutely aware of the environmental impact of our travel plans and consciously look to travel only when necessary in line with each of our projects and the expectations of our funders or those who invite us to collaborate. However, at a time when humans are increasingly divided on the grounds of their religion, race, social, educational or economic status we are committed to connecting with people where they are, sharing cultures and focusing on the things that bring us together.

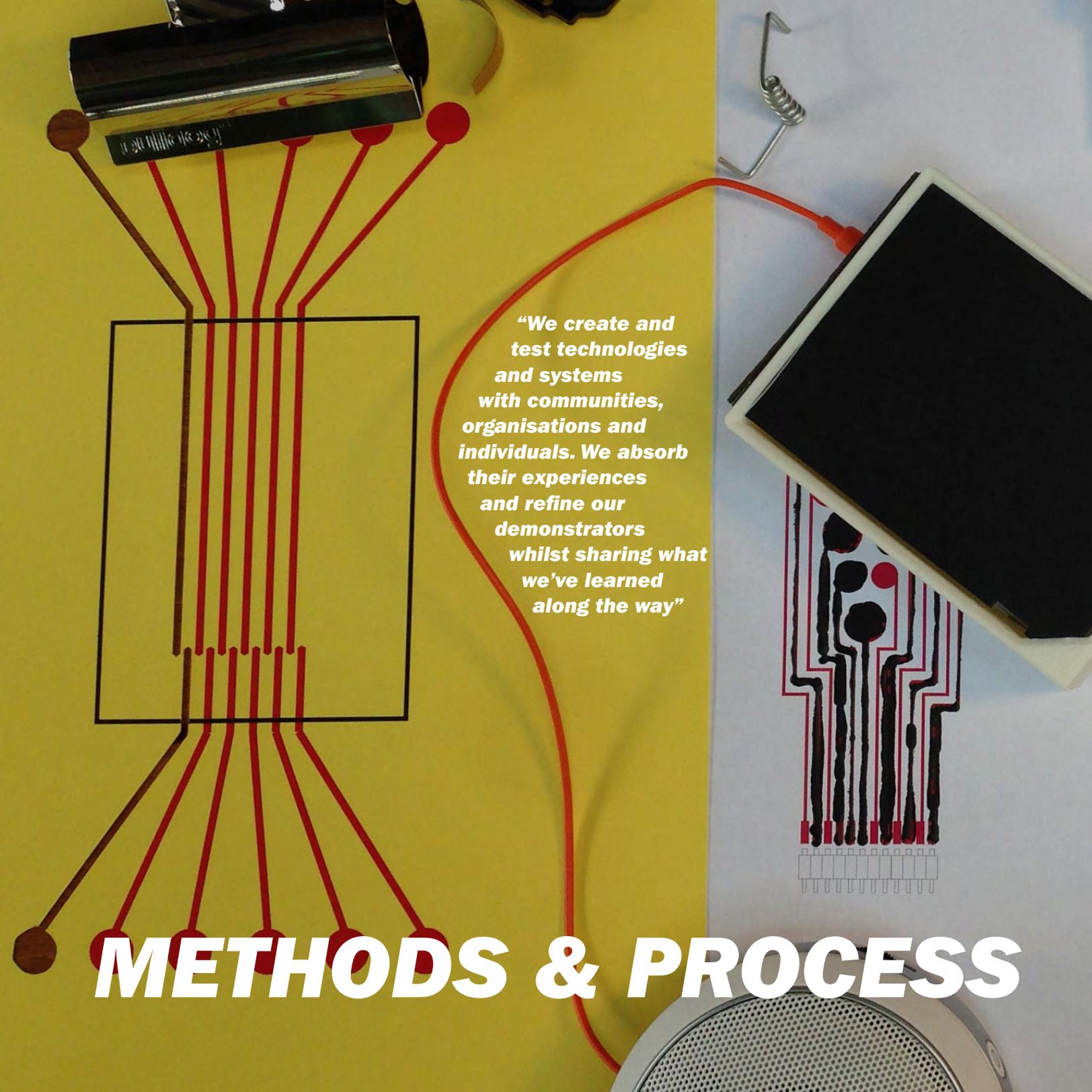
The map shows many of the places we've visited during the projects featured in this review. What it can't possibly illustrate are the many deep and ongoing friendships that have emerged through various research collaborations across the world.





Interactive





***“We create and
test technologies
and systems
with communities,
organisations and
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their experiences
and refine our
demonstrators
whilst sharing what
we’ve learned
along the way”***

METHODS & PROCESS

Prototyping

When Nicholas Negroponte, author of *Being Digital*, co-founded the MIT Media Lab he came up with a very simple - and yet in many academic circles - contentious phrase "demo or die". Negroponte had grown tired of traditional academic processes of peer-reviewed papers. He also recognised that creative people make work - they don't do scientific experiments.

For the Media Innovation Studio team those foundational thoughts are a genuine inspiration. We build things. We take physical demonstrators - often very crudely fabricated, almost Heath Robinson-like working objects out into the real world and ask people to interact with them. We create and test technologies and systems with communities, organisations and individuals. We absorb their experiences and refine our demonstrators whilst sharing what we've learned along the way. Whether it's software, hardware, methods or processes, we are 100 percent committed to getting them out of the lab and into the real world. Prototyping is present at the beginning of every project, from conceptualising the ideas on white boards to using digital services.

We create paper prototypes, mock-ups and demonstrators to discuss the project within the team, but also as a method of explaining the research to partners and collaborators. After this we tend to create a working version. This could be a data set or mobile application, a piece of film or a plan for a workshop. The prototype is then used in alpha and beta testing, to then be applied in an iterative model in producing the final output.



Interactive

Co-design

Co-design is an attempt to define a problem and create a collective response. It differs from 'participatory design' in a couple of important ways. Firstly, it's not driven by the political will to redress the imbalance between management and workers by shifting power from the latter to the former. Secondly, it's usually applied to the creation of a product or development of computer software.

The Media Innovation Studio team uses co-design and co-creation - the collective building of an object developed through co-design - for almost any project that involves the creation of a new product, whether it's hardware or software. Consequently, there are several examples of co-design throughout this publication. Projects including Bespoke, Interactive Newsprint, Digital Playscripts and DataMakers all feature elements of co-design.



Participatory design

Despite the apparent interchangeable use of the words 'participatory design' and 'co-design' and the increasingly shared methods used in each process they are distinguished from each other by their original intent.

Participatory design was a political process created to include workers in the design of and decisions about their environment and working practices. It's focus was on improving facilities and physical space and providing factory workers with the opportunity to contribute to developing policies that directly affected their employment.

The Media Innovation Studio team uses participatory design when working with communities, local authorities and non-governmental organisations who want to bring about change. The Speak Up Preston project delivered a series of participatory design workshops in three communities in Preston after the closure of a well established neighbourhood management scheme left local residents without a collective voice. The workshops formed part of Nesta's Neighbourhood Challenge series and were delivered in community spaces in the three Preston wards of St Matthew's, Ribbleton and Deepdale. Members from each community presented a series of issues during a workshop using open space as a method of facilitation (see Creative Facilitation). Midway through each workshop, participants worked with local councils, charities and representatives from the emergency services and local health provision to redesign and improve the way they interacted with or were served by them.

Creative Facilitation

Since its inception, the Media Innovation Studio has worked with a number of creative facilitators and regularly delivers its own facilitated workshops. We offer creative facilitation services to companies, communities and colleagues so that they can meet the aims of their workshop, and not worry about designing or delivering the processes that will get them there.

Creative facilitation is simple but it's not easy. It's simple inasmuch as it involves the planning, coordination and delivery of an interactive workshop. It's not easy because the workshops often have to achieve complex outcomes in relatively short periods of time.

Good creative facilitation will engage all those participating. It draws on a range of techniques to lead people through a process that's often quite playful, enabling them to contribute openly and honestly to the generation of new ideas or resolution of difficult issues together.

Great creative facilitation will do all this without people feeling they are being facilitated.

The Media Innovation Studio offers access to a unique technology, designed and built entirely in house, called Remerge (detailed elsewhere in this publication) which can be used alongside other creative facilitation tools like LEGO Serious Play, scenario building and simulations, world cafe conversations, hack-jams and role play sessions to fuel discussion and deliver successful workshops.

From early projects such as Meld and InFuze to current work like Media Lab Playground, Collaborative Revenue Capture and Trinity Mirror - creative facilitation is another aspect of our work and a very useful tool in the box!



WiFi name: MediaInnovationStudio
pass: openhebor

vic drone centre
LUNCH EVENT 19th February 2015

Night Foundation

British Antarctic Survey

NIWA

“Great creative facilitation will do all this without people feeling they are being facilitated”



Hacks and Making

Hackathons (hacks) are a great way to generate buzz and drive innovation, and we're passionate about hosting and participating in them. Hacks bring together a diverse range of people around a specific cause or problem, allowing us to experiment with ideas quickly and creatively. Hosting hacks enables us to reach out and work with specific communities to test research or analyse findings. It's not just the topic of the hack that's important, it's the fact that it's fun too. Short timescales create an intense and creative atmosphere where teams need a strong focus and ingenuity. Our hacks also throw mentors and masterclasses into the mix, and the added bonus of junk food (and sometimes beer). We're also conscious of the limitations of hacks, and are working on support models that can take the concepts from a hack to a short sprint, to a fully-functioning product, business, charity or process. Over the course of the last year, we have hosted two DroneHacks, which have spun out projects and skills that were transferable into the types of drone projects we have to date (for more information on this, please refer to the Drone section).



“Hacks bring together a diverse range of people around a specific cause or problem, allowing us to experiment with ideas quickly and creatively”

The image is a detailed architectural site plan of a residential development. It shows a grid of streets, numerous rectangular building footprints, and parking lots. A prominent feature is a large, irregularly shaped area in the lower-left quadrant, possibly a park or a large open space, with some internal paths and small circular symbols. The plan is rendered in black lines on a white background. A solid orange vertical bar runs along the right edge of the image. Overlaid on the lower-left portion of the plan is a quote in a bold, italicized, orange font.

“Insight Journalism offers a radical approach to design and service provision for communities”

Insight Journalism

Developed during the Research Council UK (RCUK) funded Bespoke project, Insight Journalism offers a radical approach to design and service provision for communities. It blends community-centred storytelling, journalism's critical and investigative approach with the skill sets of designers, makers and doers.

By fostering community action and innovation through storytelling and journalism, Insight Journalism moves beyond simply 'giving a community a voice'. Instead, it seeks to inspire action as a result of the journalistic stories that are told, whether they be through audio, video, image or text. A central aim is to connect communities to design and expertise, and produce innovative concepts and solutions specifically tailored to the storytelling communities.

But the method does not simply end here.

An integral part of the approach is that journalistic activity continues to focus on the designs or services after they are installed. As such, Insight Journalism provides a critical reflection, emanating from the community, on whatever design, service or innovation has been created as a result of their stories. This process constructs a re-envisioned Fourth Estate between communities and those with whom they partner. The result is an ecosystem where stories inform an iterative community-centred design approach that is relevant to participants.

Slack

Slack is a team collaboration tool that offers searchable messages and files via a chat-like interface.

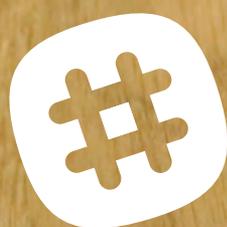
Over the last year, Slack established itself within the team collaboration platform market. The Media Innovation Studio is one of 1.7 million active daily users to communicate directly, publically or privately. Alongside its ability to allow users to chat and share files, it integrates with other third party applications and industry platforms like Skype and Dropbox. Over the last six months, we've adopted Slack for internal and external communication on a number of levels: we have posted 17,000 messages, shared 511 files and built three integrations. What makes Slack different is its ability to allow third party developers access to its platform via its Application Programming Interfaces (APIs).

With a growing interdisciplinary team, we found that a management technique through weekly debriefs in a "That Was, The Week, That Was!" email was born out of a need to communicate the practices, successes and to share in failures and lessons learned across a dynamic and motivated team of researchers. The aim of the weekly summary was in part to ensure everybody knew and understood what everyone else was doing, just so they could work out whether there were potential synergies and crossovers with their own work. We have now adopted this through Slack, each project has its own channel, and each channel has its own set of members. Messages are posted to keep everyone informed of the goings on within the project. If something should be included in the weekly TWTWTW round up, users must tag their content with a specific identifier [twtwtw].

Alongside this, we have utilised Slack's communication protocol in a number of (very important) ways; the first being for Halloween (trick or treat) where if someone mentioned Halloween in their posts, a bespoke piece of hardware connected to the gumball machine and the Internet (refer to littleBits) would decide if that user deserved a trick or a treat. In turn, the machine would flash a skull for a trick or turn the sweets out and reward the user. We have also used Slack as a way of automatically sending auto-generated private messages in the pairing up of members in the team for secret Santa, using SlackBot to notify that user who their recipient should be.

Over the next year, we plan to use Slack further, decreasing the number of emails we send and plan to build more applications that run on Slack's platform, followed up by further research in the area of online collaboration and blended learning.



 slack

“The Bespoke method of Insight Journalism democratised the design process by giving designers access to a range of local voices and perspectives”



PREVIOUS WORK

Bespoke

Thought of as a foundation project for the Media Innovation Studio, Bespoke ran between 2009 and 2011. It sought to understand how insights created during a community journalism initiative in two deprived areas of Preston could be used within a process of community innovation and design to improve people's lives. For the research team in Preston, it had an emphasis on the training and practice of the community-level media-makers we came to call Insight Journalists.

Bespoke had a diverse interdisciplinary research team that was assembled during an Engineering and Physical Sciences Research Council (EPSRC) Sandpit in 2008. Partnering universities included the University of Central Lancashire, University of Surrey, University of Dundee, Falmouth University and Newcastle University. As the project evolved it grew to include international industry partners from Microsoft, Nokia, Johnston Press, the BBC and T-Mobile, as well as national social housing organisations and local community groups.

Bespoke was located in the Callon and Fishwick areas of Preston for several reasons. Primarily, researcher Paul Egglestone had previously worked with community associations successfully in the area, building trust among a range of individuals and organisations. Equally, there was an interest in media representation pre-existing in the area – locals had been depicted quite poorly in the past (for example being featured in the Neighbours from Hell TV programme and being labelled “race hate capital of Britain”). Importantly, within the context of the original funding call, the project also had the potential to satisfy the aims of Research Council UK's Digital Economy programme. This funding strand seeks to “rapidly realise the transformational impact of digital technologies on community life, cultural experiences, future society, and the economy”. At the time, UK Home Office statistics suggested people living in Callon and Fishwick were among the ten percent most deprived in the UK. By creating a community-led innovation project, an opportunity was identified to explore how digital technologies could be designed to enable a greater uptake and access.

The Bespoke method of Insight Journalism democratised the design process by giving designers access to a range of local voices and perspectives. The community collectively determined their own needs, commissioning designers to respond to them before feeding back on the final designs through their journalism. Instead of top-down workshops where designers invited people to produce design requirements, the process of Insight Journalism offered a greater level of transparency and reflexivity, thinking less about narrowly defined user needs and more about sets of relationships and practices.

Interactive voting box Viewpoint was one of the most successful designs to evolve through Insight Journalism. Located in three areas of Callon and Fishwick, it presented a weekly question to the community, and garnered responses via a simple yes/no buttons. Questions were asked by a diverse range of individuals and organisations spanning local drama groups, city councillors and housing providers.

If an organisation asked a question using Viewpoint, they had to concretely respond to the result, either through a direct action or a commitment. It combined two basic elements of journalism: content and design. Content comprises information people need to make better informed decisions about issues that directly affect them – whether it's housing, vandalism, plans for a new community centre or where a litter bin should be placed on their street. Like all grassroots journalism, it strives to ensure that decisions are open and transparent. The design element creates a vehicle through which the journalism is delivered, and the community's voice represented. But it's a voice which is not only heard but loud enough to demand a suitable and considered response that shows a genuine understanding of what's needed.

Some were sceptical about Viewpoint's aim. Would it simply raise expectations and fail to deliver any tangible benefits?

Viewpoint works because everyone who's involved, from the families on the Callon and Fishwick estates, to the councillors, housing officers and researchers, understand the importance of commitment and communication. For example if someone asks a question about whether dog fouling is a priority issue for the area then the recipient knows it must be answered quickly and honestly. Their answer is not only communicated to everyone but is followed up to ensure promises to resolve the issue are kept. Viewpoint is the project's defining moment. It represents the difference between empty political rhetoric and grassroots reality. Rather than connecting the community to a formulaic, centralised and faceless bureaucratic process it links people to people, enabling everyone to change things for the better.

Speak Up Preston

Speak Up Preston began in 2011 as an innovative collaboration combining the strengths of community radio station Preston FM, the Bespoke Project, Community Service Volunteer's VolTV operation in Preston and hyper-local news site Blog Preston.

Together we recruited, trained and worked with citizen journalists in the electoral wards of Deepdale, Ribbleson and St Matthew's. According to the most recent government figures, the three areas combined have a population of over 20,000 people and the aim of Speak Up Preston was to provide a platform for those individuals' stories. The stories fed into a community action initiative, where small groups of residents came together to form projects related to some of the issues and topics raised in the journalism. Using innovative facilitation to further develop the ideas, these teams then pitched for micro-funding to support these small prototype projects.

Although Speak Up Preston only ran for a short period, our journalism teams were re-envisioned for the city's community radio station Preston FM, broadcasting three-times a week and covering local news, sports and cultural activities.



“...actors, audience members, students and theatre staff performed the role of insight journalists creating a nightly newspaper reflecting on the production and the collaboration...”



Punchdrunk

Working with immersive theatre company Punchdrunk in New York was a definite highlight and an early application of our Insight Journalism method since the Bespoke project.

Launched in 2013 the Arts and Humanities Research Council in collaboration with Nesta, the two-year Digital Research & Development fund aimed to create new links between professional arts companies, artists, performers, technologists and academics. Through a series of networking events potential collaborators were brought together to design a project and pitch for funding to deliver it.

Punchdrunk were one arts organisation who were successful in winning grant funding to work with MIT (Massachusetts Institute of Technology) on a project designed to see if technology could help them increase audiences for their performances.

Punchdrunk persuaded Professor Todd Machover from MIT to see if he could find new ways of taking their highly immersive and regularly sold out theatre production Sleep No More from a specially designed New York hotel set into the homes of people who either couldn't get tickets to the shows or weren't based in New York. Punchdrunk wanted to offer new audiences a virtual experience of the critically acclaimed production.

The technology team from MIT experimented with various sensor technologies activated by audience members as they moved through the hotel set. They became avatars for online viewers, activating additional content interacting silently with others in the audience and examining the objects placed within the set as part of the performance. This was transmitted via the web to an online viewer who could also communicate with their 'avatar' asking them to look more closely at some of the clues that were part of the performance.

Led by Dan Dixon of the University of the West of England and accompanied by Professor Jon Rogers from the Product Design Studio at the University of Dundee and Media Innovation Studio director Paul Egglestone, the team worked with Punchdrunk and MIT to test technology and evaluate the project and processes using Insight Journalism.

For this project, actors, audience members, students and theatre staff performed the role of insight journalists creating a nightly newspaper reflecting on the production and the collaboration, and exploring what worked well and what didn't. The entire project is documented in the final digital R&D report for Sleep No More, which is available online from the Media Innovation Studio website.

UnLimited Theatre: Digital Playscripts

A second Media Innovation Studio AHRC digital R&D project came in the form of a 2014 collaboration with Leeds-based Unlimited Theatre, London-based creative tech company Storythings and the University of Dundee's Product Design Studio. The Insight Journalism method developed during the Bespoke project was used to document and evaluate an exciting attempt to create a new digital platform for play scripts. Unlimited Theatre's Make Some Noise script was used by a community of audience members, who themselves became part of the new platform's design team.

A regular series of co-design workshops brought together computer technologists, product designers, playwrights, actors and the audience community. They experimented with new ways of presenting play scripts digitally on mobile, tablet and online platforms. The idea was to enhance the experience of reading a play script by creating atmosphere through sound effects or changing the brightness or colour of the screen to emotionally engage readers.

Key to the success of the project was the recognition that everybody involved contributed in some way to the final product. This meant thinking about how individuals and members of the audience community would be rewarded for their creative input - sharing their intellectual property. The decision to establish a community interest company to share revenues from the new platform was a genuine breakthrough - not only for the Make Some Noise project but for other projects, such as hyperlocal community journalism websites, which also rely on people's willingness to share ideas and content openly.

The team felt the process was so successful they produced the short How to Co-Design our Digital Future book describing the project and sharing the processes they had developed to encourage others to experiment with community co-design. It was launched in 2014 at the Arts and Humanities Research Council creative economy showcase in London. It is available along with the final project report via the Media Innovation Studio website.



“Key to the success of the project was the recognition that everybody involved contributed in some way to the final product”

Entrepreneurs



InFUZE

InFUZE combined the expertise and resources of the BBC with the skills and experience of leaders in convergence and multiplatform journalism training at UCLan. The aim of the programme was to take ten journalists from traditional news backgrounds in print and broadcast and to equip them with the digital skills required to secure jobs as cross platform content creators working across the traditional media disciplines and online platforms.

During March and May 2009, delegates were introduced to a series of techniques designed to help seed stories and grow audiences quickly - developing and managing online communities and networks in the process. These practical 'backpack journalism' workshops also included sessions on laptop editing using digital video cameras and mobile phones, and a range of relevant software (from incorporating Flickr, Dipity and Twitter to uploading and connecting geo-tagged images to Google maps). The InFUZE course also included an industry placement where participants had the opportunity to work alongside online and digital staff at the BBC and ITV as well as several radio stations and regional newspapers.

InFUZE culminated in a final practical workshop session before introducing delegates to senior online editors from industry (Reuters, the BBC, Johnston Press and Journalism.co.uk) where they presented personal websites demonstrating their work.

Media Lab

The Open Media Innovation Lab in 2014 brought together multidisciplinary participants to create media start-ups in 48 hours. Participants included university students, mentors, coders, media and business experts, and entrepreneurs.

Through a series of facilitated sessions, mentoring and workshops, the teams worked across a weekend, which culminated in a Dragons' Den style pitching event where business proposals and prototypes were presented to high-profile media representatives. The process was outputted live through multimedia and social media to make the lab ecosystem collaborative. This Research Council UK funded event was run in collaboration with 48-hour media start-up specialist Media Lab Session. The aim was to feed into larger discussions around media business models online, and open innovation processes, as a way to facilitate SME growth across a range of sectors.

readymag.com/u61590527/32443/

Meld

Meld was an innovative creative ideas project which brought together journalists from across the media spectrum. Held in 2007 and 2008, the project was a collaboration between UCLan's Department of Journalism and journalists from the BBC, Sky News, the Times, the Independent, Haymarket Media, Johnston Press and Trinity Mirror. Editors, designers, reporters and filmmakers turned their attention to what the media landscape might look like in a decade – and to what skills journalists will need to work in a constantly changing media environment.

Interactive Newsprint

Interactive Newsprint provided an opportunity to open up new and innovative paths of communication and dialogue between researchers, communities, publishers and technologists, re-constituting what it means to understand the roles and responses to information and communications technology. It also explored the lived experiences of access to digital media and social exclusion.

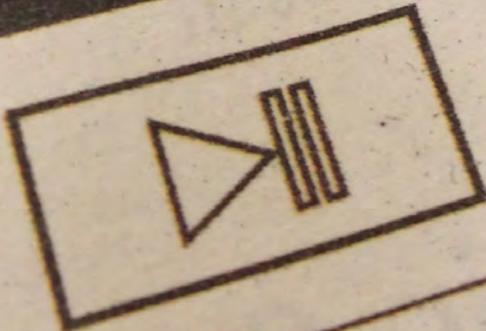
Bringing together researchers from the Media Innovation Studio, the Product Design Studio at the University of Dundee, the University of Surrey's Digital World Research Centre and technology partner Novalia, the project worked with a diverse range of communities from across Preston. Between 2011 and 2013, local, national and international publishers collaborated with Interactive Newsprint and produced a series of nine physical co-designed prototype paper products that turned paper into digital storytelling platforms. The demonstrators could respond to human touch, play audio, receive emails and collect votes, and also explored the advances in printed electronics and paper-based web connectivity. In many ways, this research explored fundamental elements of the Studio's research interests: the creation and use of information technologies to both empower individual citizens and promote democratic ideals through enabling people to create and share their own news and information on a new platform they co-designed. Existing local journalism and content, produced for the platform by the community, assisted in the development of new forms of digital storytelling and more effective ways of connecting communities to local news and information.

The co-design of a new platform was enabled by developments in printed electronics which allow digital devices and interfaces to be built into paper documents, including audio storage, speakers, microphones, buttons, sliders, colour changing fibres, LED text displays and mobile communication. The project team connected paper to the Internet. In tandem, they developed a system for recording people's interactions with print online - we now call this output Paper Data. Simple touches of specific areas on the paper; multiple presses on the same area of the paper; multiple presses on multiple areas of the paper were stored on a database and represented graphically to the community, publishers and journalists. This had never been done before.

For the media industry, the Interactive Newsprint project was a response to the systemic failure of newspapers to invest in their own future. The project was delivered in the context of the continuing decline of the newspaper industry in the developed world. It recognised the different communication paradigm created by physical-digital media and offered an alternative response to policy based initiatives to save print journalism.

By connecting the rapidly developing field of printed electronics to the newsprint industry, Interactive Newsprint offered newspapers a 'third-way' – that of innovation within the platform itself.

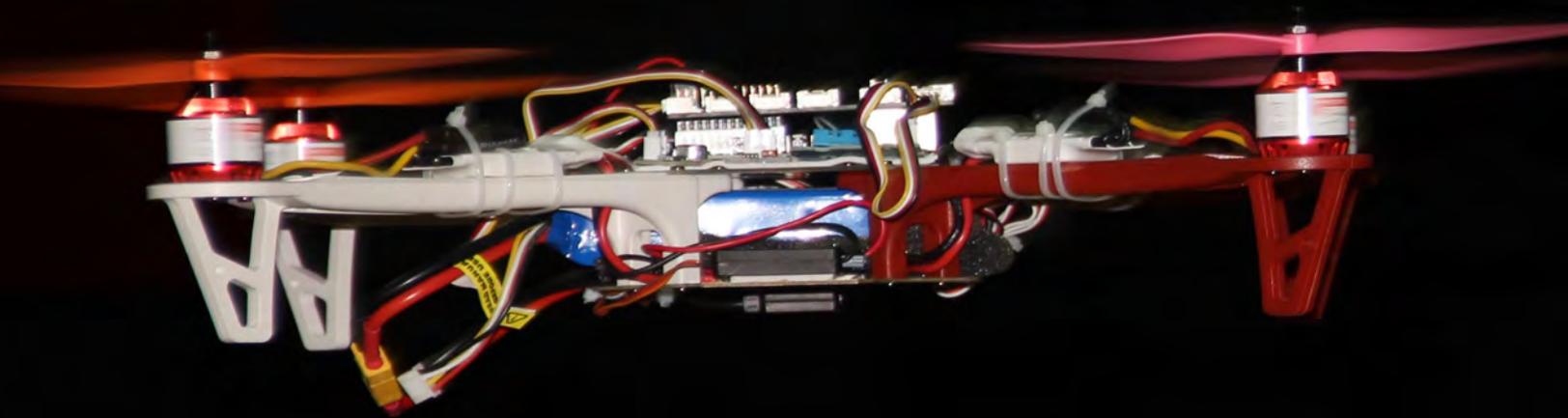
The Project has won two awards. Netexplo, a global initiative and network of journalists, scientists and academics, has listed Interactive Newsprint as one of the world's top 100 outstanding innovations. The RCUK Digital Economy also awarded its Telling Tales of Engagement award. Prototypes were also exhibited at the prestigious London Design Festival in September 2012. The Design Festival attracted an estimated 350,000 people and received extensive media coverage. In addition to articles in the national press, the Interactive Newsprint project also received a Best of the Festival commendation from the prestigious Blueprint magazine. Our work around conductive inks has expanded beyond Interactive Newsprint, and is most recently seen in the EKKO and Interface projects.



The full interview with D
he says he has been push

Jilted

“Civic Drone Centre has sought to examine and explore ethical, engineering, legal and digital opportunities around the burgeoning UAV market.”



DRONES

Civic Drone Centre

The Civic Drone Centre is a two-year project between the University of Central Lancashire's Media Innovation Studio and Engineering Innovation Centre designed to examine innovative drone uses and marketplaces across four streams: search and rescue, media, agriculture and humanitarian aid.

Over the last twelve months, the Civic Drone Centre has sought to examine and explore ethical, engineering, legal and digital opportunities around the burgeoning UAV market. It has also used innovative techniques - such as rapid prototyping, crowdsourcing and hackathons - to catalyse innovation within the drone community.

It seeks to work closely with established aerospace SMEs, multi-disciplinary academics and the north-west region's manufacturing sector to provide progressive hard- and software development for Unmanned Aerial Vehicles (UAVs) in non-military uses. Using standard development pathways alongside innovative facilitation techniques, such as community co-creation, hack-jams, multidisciplinary study sandpit sessions and creative prototyping techniques, the centre hopes to create rapid innovation within an already evolving sector.

The Civic Drone Centre seeks to develop these relationships and explore how this emergent field could impact on the UK and global digital economy, particularly through the potential of new industry partnerships, commercial applications and new revenue streams.



aeroSee

Search and rescue tool aeroSee utilises drone-shot images, tagged with location data, and disperses them across the web to a global community of 'virtual search and rescue agents'. These agents sift through a fraction of the total images tagging them if they see a person. This crowdsourced approach of search and rescue hopes to offer a safer and more efficient way to find missing persons.

An earlier version of aeroSee (2013) provided the foundation of collaboration between UCLan's Media Innovation Studio and Engineering Innovation Centre - this relationship resulted in the creation of the Civic Drone Centre.

As a previous nominee for the Design Museum's 2014 Design of the Year award, aeroSee's 2015 update saw the redesign of the interface – taking inspiration from Tinder, Facebook, and Twitter – with a simple Yes/No choice, new sorting algorithm and the development of a requirements brief for search and rescue organisations to adopt.

In December 2015, working with a UAV specialists IRIS Group and search and rescue professionals aeroSee was used in the search for missing 18-year-old Fredrik Johannessen Lie, who was known to be in the vicinity of Ekerhovd, on Sotra, Norway on January 1st 2015. We aim to continue to research, and develop and refine aeroSee for the global search and rescue community over the course of 2016.





THE HELPFUL DRONE
192.168.42.1

“The best idea goes home with the much coveted (plastic) golden drone trophy”

DroneHack

Over the course of 2015 we held two DroneHacks at the in the Media Innovation Studio with with one goal in mind – designing, building, and flying a drone. Each hack offers teams a core stock of essential parts and UAV platforms, injecting real world problems into the process. The hacks were centred on the theme of humanitarian use of drones. There are two more planned for 2016 on the themes of Media and Transportation. These events build on the model aircraft DIY and builder origins of drones, capturing their innovative nature to solving problems with what is available to them.

Teams are created with a balance between those with the technical knowhow, such as coding or electronics and those with expertise from working on-the ground. Once provided with all the parts and tools they need to build and fly a drone, they're supported by the Civic Drone Centre's 'Drone Doctors' to help troubleshoot problems.

The best idea goes home with the much coveted (plastic) golden drone trophy.

Gesture Control

When you take the pilot out of an aircraft you open up possibilities of controlling it in vastly different ways. The Civic Drone Centre and the Allied Health Professionals Research Unit are exploring the development of gesture control for drone serious games – used for purposes other than entertaining, such as education or rehabilitation.

Various non-invasive wearable sensors can be placed on a person through which they can control a drone using physiological or biomechanical signals, such as muscle activity or a simple gesture – replacing the traditional RC-controller or laptop.

This method of drone control can be coupled with various rehabilitation principles for different conditions, thus allowing effective therapeutic interventions through ‘playing’ with the drone. The same sensors which control the drone also capture accurate and useful data on movement when flying, which can be used to monitor progress and plan future rehabilitation activities.





“The Civic Drone Centre is also inspiring the next generation of pilots, engineers, programmers and technologists”

1919

The important thing in science is to obtain new facts as to do of thinking about them.
Lawrence Bragg, scientist, quoted in 1938

176

Drone Education

Many people are unaware that there are rules and regulations around drone use. To help educate people on drones, their civilian uses, and what the laws are, the Civic Drone Centre has started several activities.

With The Great Circle flight school, the Civic Drone Centre has become a National Qualified Entity (NQE) and set up the UACE – Unmanned Aviator Certificate of Expertise – a UK Civil Aviation Authority-approved commercial qualification.

In addition to the training, the Civic Drone Centre is also inspiring the next generation of pilots, engineers, programmers and technologists. The centre has run stands at both the Manchester and Lancashire Science Festivals to teach groups young and old about the technology, uses and the future of drones.

United Utilities

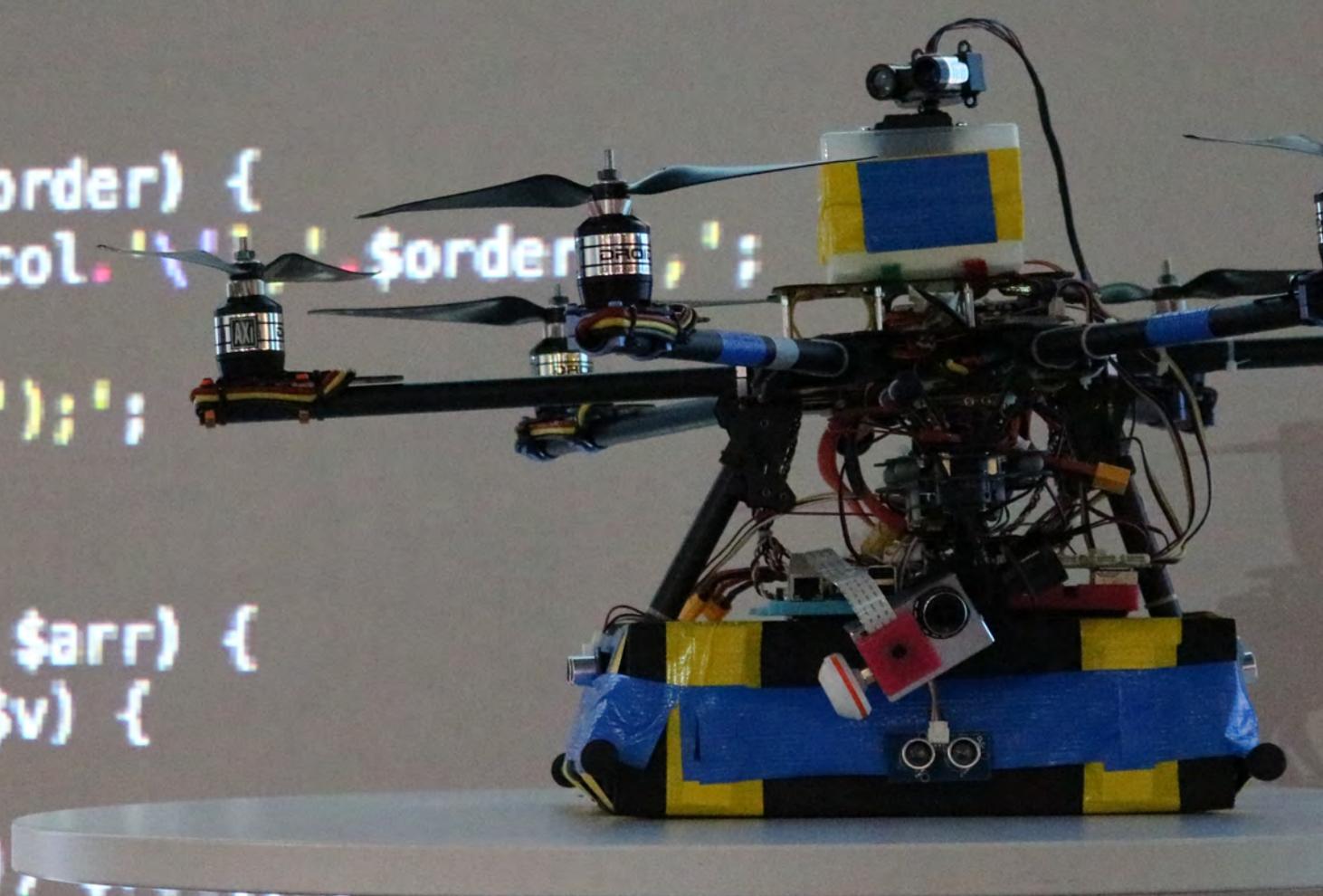
United Utilities is one of the Civic Drone Centre's prototype projects, and assesses the viability of using a UAV-mounted vision system to inspect the inside of fluid handling tanks.

Fluid handling tanks, otherwise known as digestion tanks, must be periodically inspected for any deterioration in the structure such as cracks and corrosion, and other damage that could lead to gas escaping. The normal approach to this is to drain the tank, erect scaffolding inside it and photograph and visually inspect the tank.

Our approach is to use a camera and a UAV to partially automate the process of inspection. We're developing systems for accurate and stabilised position control as well as photography or filming. The project is currently focussing on the challenges of reliability, integration and payload.

We are working with United Utilities as the main user of the service that our Confined Space Inspector Drone can provide. Our test environments include empty digestion tanks in a water treatment centre, enclosed spaces at UCLan sports facilities and airplane hangers in Blackpool Airport.

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JOINT VENTURES

PARTNERS?

Industry

MANUFACTURERS
- Foundations
SERVICE PROVIDERS
INFORMATION BROKERS

Host
Gov't + Donors + Academia

Civ/mil

WHO GETS IT THROUGH CUSTOMS?

TRUSTWORTHY?

Volunteers -

MAY BE LIMITED IN WHO THEY CAN PARTNER WITH

NGO/UN Hum.

Local UAV/CBO

Policy, Ethics & Law

The earthquake in Nepal in April this year brought both the pros and cons of drone usage in disaster zones into sharp focus. The scale of the quake and the subsequent aftershock seemed to suggest UAVs as the safest and possibly best tool to provide an overview of the scene for first responders.

However, the premise for this scenario assumes that the drones in question will be deployed, and therefore under the control of, humanitarian or search and rescue (SAR) professionals. It is also assumed that these professionals would have the knowledge, skills and experience to follow the operational protocols under which any international rescue mission operates.

The truth of the matter is that, for now at least, the most likely drone operators in a disaster scenario will not be on the staff of the local SAR team or a member of a legitimate NGO. They will, however, be driven by a passion to assist the people at the epicentre of the disaster. They will have technological and some aviation expertise. And they will have the sort of kit that is able to supply video and data that is of value to SAR teams, emergency responders and aid workers in the disaster zone.

In July 2015, the Civic Drone Centre participated in a policy forum supported by the Rockefeller Foundation in Bellagio, Italy.

The purpose of the forum, led by Dr Patrick Meier, was to draft guidelines for the safe, coordinated and effective use of UAVs in humanitarian settings.

A cross-section of experts that ranged from the UN Office for the Coordination of Humanitarian Affairs, the International Committee of the Red Cross, to UAV manufacturer DJI and other independent experts met to produce a series of guidelines focusing on five priority areas identified during a full-day Humanitarian UAV Experts Meeting co-organised at the UN Secretariat in New York in November 2014. These five policy areas spanned code of conduct, data ethics, community-engagement, principled partnerships and conflict sensitivity.

The guidelines will be officially launched at the World Humanitarian Summit in 2016.



Interactive



WEARABLES

“Finding new ways to tell stories is something we’re passionate about here at the Studio and our sensor journalism approach is a good example of that”

Ran’s Dash

With temperatures reaching more than 50 degrees Celsius, a total distance of 156 miles, Saharan sand dunes, limited water and nutrition, and 1,360 competitors, the Marathon des Sables (MdS) is one of the toughest events on the globe. 2015 saw the UK’s Sir Ranulph Fiennes compete in the MdS on behalf of the charity Marie Curie, the Media Innovation Studio collaborated with production company Fieldcraft Studios and Kingston University to chart his attempt at the Earth’s most challenging race.

Using a range of sensors and data sets spanning geolocation, heart rate, fluid consumption and calories burnt, media from Fieldcraft Studios and analysis from Kingston University sports scientists, the Media Innovation Studio team created a daily visualisation mapping tool, allowing users to experience Sir Ranulph’s Marathon des Sables. The work was completed under the DataMakers project, where ‘RansDash’ laid the foundations for other sensor-based data dashboard projects.

Finding new ways to tell stories is something we’re passionate about here at the Studio and our sensor journalism approach is a good example of that.

Designing and building Ran’s digital dashboard allows us to pull in performance data from wearable technology sensors, combine it with great images from the Fieldcraft team over in Africa and convey the physiological effects of one of the world’s most gruelling challenges on the human body.

Glass Journalism

Initiated in 2014, our ongoing Google Glass work aims to understand how a wearable content-capture device could perform in journalistic contexts. Working with Eduardo Pellanda and André Pase at Ubilab research centre at PURCS university, Porto Alegre, Brazil, our research has deployed Glass in a wide range of editorial scenarios in the UK, Latin America and north Africa.

Industry partners have included the Liverpool Echo, Journalism.co.uk, Zero Hora and Fieldcraft Studios, who took Glass to a multimedia production in the Sahara.

The study examines both the potential technological and editorial barriers to entry and storytelling opportunities for this wearable technology and accompanying platform, both of which are reportedly being iterated by Google.

Our focus includes how Glass can be used by journalists, influence the types of content that is gathered, and how its digital connectivity is used by editorial operations. It explores how newsrooms integrate Glass into their workflows and practices, informing innovation and adoption more generally as to how editorial teams respond to new technologies.

Future work hopes to expand to focus on wearables as content capture tools, and the process through which editorial teams integrate them (or not) within their operations.







Interactive



dashboard.leedsdatamill.org

dashboard.leedsdatamill.org/canvas/55f2b8cf18f0066c0d784e86



LEEDS DATA MILL

powered by

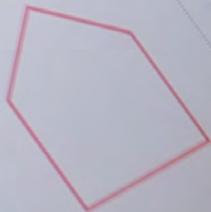
LEEDS DATA MILL

16 Licensing 331 Planning

View Stat Notices

Author: Nathan Smith

House prices in Leeds
Average house price in Leeds by month



Detached
£265,367
Monthly Change 0.03%

£260k
£262k
£264k
£266k
£268k



Parking Fines
Oct 2014-15
20,485
Fines Issued
£1.27bn if paid in full

18 hours
Until Sunrise
08:00 AM

FOI & EIR
Number of FOI & EIR Requests
Dec-14
FOI & EIR Requests received

DATA

Media Mill

Over the last ten years, local government has generated an ever-increasing mountain of data covering what it does, and how it works. It's also opened it up for people to explore and use. Thousands of data sets on everything from when the bins are emptied to monthly council spending is available making government more transparent and accountable. This raw data is seen as the fuel for exciting innovations like Smart Cities and key to unlocking the potential of 'big data'.

But how much of this data is actually useful? How much does it help the average citizen understand how their councils work? How much does it tell them about the city they live in?

Those are some of the questions we are exploring as part of the Media Mill Project. The 18-month project is funded by UK innovation charity Nesta (National Endowment for Science Technology and the Arts) and the UK government's innovation agency - InnovateUK.

Media Mill brings together Leeds-based media and technology company Hebeworks, Leeds City Council, York City Council and the Media Innovation Studio to look at ways of creating compelling content from open data to help people understand the city around them. The project has already released its first product, an open source data dashboard called MySolomon. As research partner for the project, we report on the project and sharing our findings on the role open data might have in creating and supporting a hyperlocal media economy.

mediamillproject.uk
mysolomon.co.uk



“...with the right skills, hyperlocals could be uniquely placed to exploit the mix of economic, civic and social innovation that open data promises”

HLDJ

As more and more of our daily life are governed by data, many see data journalism skills as key for the industry doing its job holding those in power to account. At the same time news coverage at a local level is being cut back and hyperlocals, small content providers focussed on a particular area, are seen as one way to fill the gap.

Inspired by our work on the Media Mill project, the Media Innovation Studio team wanted to dive deeper into the world of hyperlocal journalism and understand more about how data is being used. Our response was the HLDJ Conference. To get an idea of what was happening in the space, we brought innovators from the sector together for a two-day conference. Hyperlocal publishers like Urbs:London, The City Talking, On the Wight and The Bristol Cable told us about how they approach data journalism and the new opportunities it has created. We think that, with the right skills, hyperlocals could be uniquely placed to exploit the mix of economic, civic and social innovation that open data promises.

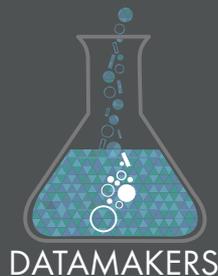
That mix of skill and opportunity is something we call Hyperlocal Data Journalism (HLDJ), and we'll be exploring that in more depth over the coming year.

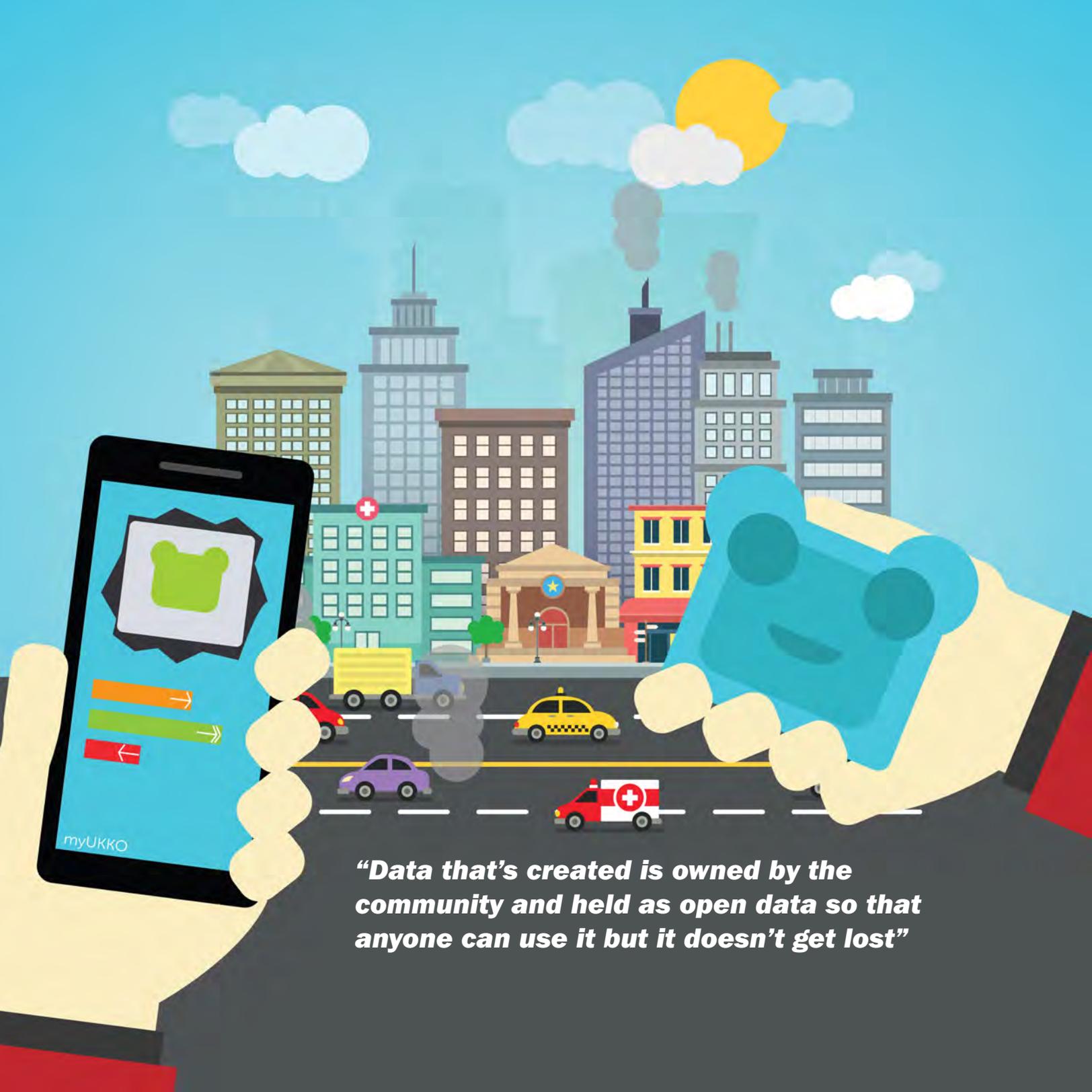
DataMakers

Our lives are defined by data. From the offers your supermarket send you based on your loyalty card spending to government decisions about funding social care. Experts talk about the sheer amount of data being produced as big data - too much data produced too fast to make any real sense of it. It sometimes feels that the data about us and the communities we live in can get lost in the cloud along with the ability to really use it to change things at a community level.

The DataMakers project explores ways of making the creation and use of data more accessible and most importantly real. We are experimenting with ways for individuals to be part of the process of collecting data to contribute to that decision making process. We have been working with the local community, experimenting with sensors and mobile phones, to create a game called UKKO to collect air quality data at a local level. That's data the local community can use to highlight bigger issues like traffic congestion or a healthier environment.

We're also committed to making that data open. Data that's created is owned by the community and held as open data so that anyone can use it but it doesn't get lost. That means building an understanding of what data is and how it can be used. So we are also experimenting with new technologies like littleBits (an easy to use way to build electronic circuits and devices) and collaborative design approaches to build the skills and understanding communities need to start making data work for them.





“Data that’s created is owned by the community and held as open data so that anyone can use it but it doesn’t get lost”

EKKO

Imagine paper that could detect human touch, activate sound, act as a games controller and send and receive data from the web. Exploring conductive inks, 'connected paper' and physical-digital analytics, EKKO is a 'clip' that augments paper by connecting a conductive ink matrix to the internet via a dedicated smartphone app. In doing so, it explores a relatively uncharted range of interaction opportunities around paper and the Internet of Things.

The Media Innovation Studio has worked on a number of projects over the last five years, such as Interactive Newsprint, that have examined how conductive inks, printed electronics and augmented print could impact on journalism and the media sector. EKKO is the most recent example: a collaboration between our research team, creative agency Uniform and the University of Dundee.

The team worked with a range of industry partners which spanned the Liverpool Echo, Stuff Magazine and book publishers. Our prototypes included a magazine that doubles as a paper games controller and a newspaper pull-out that, by simply touching the paper, allows readers to listen to audio commentaries of former Liverpool captain Steven Gerrard's greatest goals.

Although EKKO isn't yet available commercially, papers and posters presenting it in academic contexts won a number of national and international awards during 2015. These include the Interactive Tables and Surfaces conference's best poster presentation and the British HCI best workin progress and poster award.



Interactive

INTERNET OF THINGS

Rare Occurrence

Development of the Internet of Things (IoT) continued apace over 2015 - creating a buzz in the public domain and in academic contexts. IoT can be an ambiguous term, spanning a wide range of 'things' as diverse as connected cars, smart fridges, smart city sensors and monitoring and wearable computing devices.

These things, sometimes referred to as connected objects, can be always on, always present and always active. Rare Occurrence takes a different approach. It creates a range of IoT objects, but with a different emphasis: one where users activate digital content only seldomly.

In this way, the early-stage collaboration between the Media Innovation Studio and Bristol-based product studio Thomas Buchanan offers an alternative rendering of the Internet of Things. It asks whether simple and infrequent interactions with connected objects can create enhanced meaning and experience within the always-on, white noise-fuelled digital cacophony of the web.

Rare Occurrence strives to cut through the superfluous and create digital objects with personal resonance.

The project currently has three prototypes. Infrequency is an alternative take on always-on radio transmission. Users can access audio content based on when they tap and tilt the object. Snow Day (pictured) is a playful take on a Twitter-activated alert system that signals when schools are closed and Route B is an alternative directions object that responds to live traffic updates, and helps you find the quickest route to work, or back home.



Interactive



***“Rare Occurrence
strives to cut
through the
superfluous
and create
digital objects
with personal
resonance”***

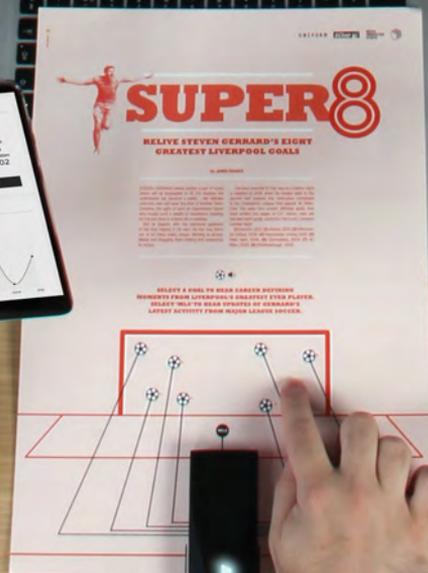
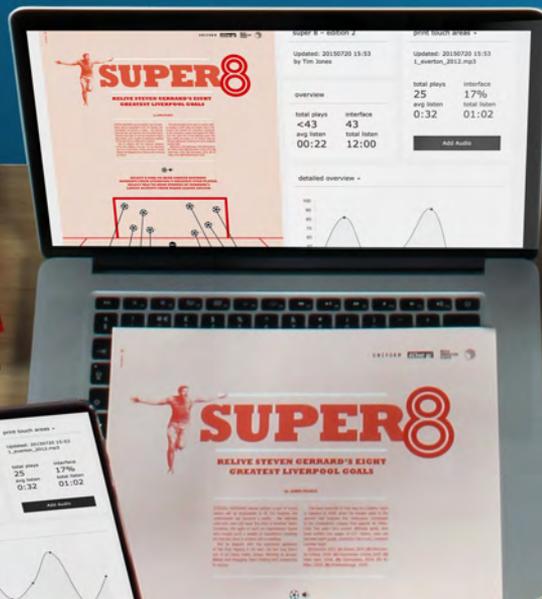
Interface of Things

This project runs in tandem with EKKO and Rare Occurrence, both of which explore how physical items can exist within the three-dimensional digital ecosystem of the Internet of Things (IoT).

Interface is the digital platform that connects IoT objects, acting both as a content management system and analytics suite for connected objects. Developed in collaboration with product development studio Thomas Buchanan and supported by Adrian Gradinar of TransparentBug, Interface enables physical devices and seeks to understand user interactions via a range of datasets and visualisations.

It allows users to update conductive ink media, such as audio files that activate via a user touching the relevant part of a printed design, or for newsrooms to update this subject remotely.

It also provides a tool for integrating future IoT work and research from within the Media Innovation Studio, and we're hoping to deploy Interface in new ways over the course of 2016 and beyond.



A person is shown from the side, focused on assembling a small electronic device using littleBits. The table in front of them is covered with various littleBits components, including sensors, actuators, and connectors. Some components are already assembled into small robots or prototypes. A white storage bin with multiple compartments is visible in the foreground, containing more littleBits parts. The background shows a white table with some papers and other electronic components scattered around.

littleBits

As we experiment with different technologies and platforms, we have noticed a gap in the market for a physical platform to enable children to combine and explore digital creativity, design and technology. That's why we love littleBits. With its block-based nature somewhat similar to LEGO, littleBits is a 'snap together' platform of electronic building blocks. It's the perfect platform to engage engineers, artists and designers. Alongside their extensive library of electronic blocks, littleBits provide recipes to introduce make culture and their open source approach means that creators can develop their own 'bits'.

The lightweight nature of the bits means it is easy to combine them with cardboard, plastic and paper to hack together prototypes. So kids can then start to understand about the objects around them from how a lamp works to how a house alarm system works.

Since getting our hands on the kits and becoming part of the littleBits chapter worldwide programme, we have hosted a number of workshops providing a hands-on experience to children and University students. We also practice what we preach - experimenting with littleBits in the Studio. Our first project was to monitor the number of coffees we drink, we use the littleBits platform to count this which pushes the data to the cloud and becomes part of the 'Studio Data' dashboard on the Media Innovation Studio's homepage. The other project combines collaboration platform Slack with littleBits in creating a trick or treat machine. When a message is sent over Slack, the littleBits cloud pushes an action to the project which turns a motor inside a gumball machine and turns the cog for sweets to be dispensed. Over the next year, we plan to run more workshops, research the findings and continue to develop with littleBits in playful and productive ways.



Interactive

“Since getting our hands on the kits and becoming part of the littleBits chapter worldwide programme, we have hosted a number of workshops providing a hands-on experience to children...”

***“The sessions
explore all
aspects of their
digital strategy
with a mix of
hands-on training
presentations and
conversation...”***

NEWS

IDEAS

SOCIAL
MEDIA.

MONEY
INVEST

INNOVATE

INNOVATION



Tr



Trinity Mirror

Trinity Mirror is the largest newspaper group in the UK with nearly 300 regional and national titles. They've invested heavily in digital innovation at all levels of the business including high profile experiments like social news site USVTH3M, data journalism site Ammp3d and a unique regional data journalism team. We've been lucky to work with them for nearly five years as they grow and develop their digital strategy providing nearly 100 days of workshops for approximately 500 members of staff.

The sessions explore all aspects of their digital strategy with a mix of hands-on training, presentations and conversation to explore what it means to be a digital influencer in a newsroom, the challenges of managing changing newsrooms and just what's possible with the amazing new digital tools appearing everyday.

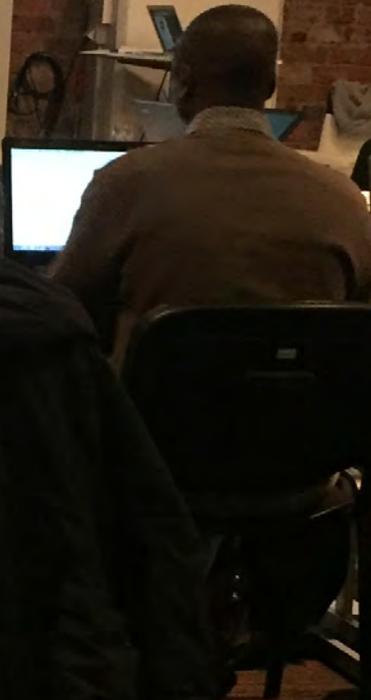
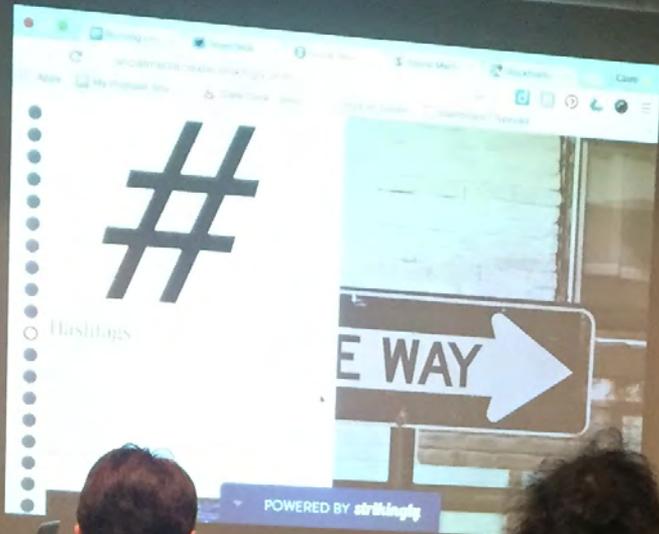
The workshops are a great way to get people out of newsrooms and sharing their experiences and think about the future. We've had a range of guest speakers from Twitter, the BBC, and national and international news companies. Some of the experiments in the workshop have made it into the real world including the David Moyes Excuse Generator, which generated millions of page views when launched. It's 'hearts and minds strategy' with a practical focus - working journalists would accept nothing less. We are really excited to have the opportunity to work with Trinity Mirror. Their open, collaborative approach means we've learned loads about the way organisations are changing to meet digital disruption head-on.

Fojo

Commissioned by Fojo Media Institute, a two-day workshop in Stockholm explored the unique challenges faced by media in exile or restrictive environments – and how social media strategies could be used to overcome them.

Both media in exile (out-of-country news outlets feeding independent information into the country of origin) and those in restrictive environments (in-country providing counter information) face particular challenges in their news operations.

Often away from their homes, they are small teams spread internationally. News exists online, occasionally in print, or shortwave radio near borders, satellites or phone-in radio. Outlets are often unable to return home due to danger or warrants for their arrest, and many have been abused, imprisoned or tortured. Social media is key to their online strategies and mission to promote free expression and alternative news. Two bespoke resources were designed for participants covering social media production tools and techniques, and providing new insights into distribution.





Interactive

EASY BUILD APPS
FOR MOBILE WITH
POOR INTERNET

MONETISED
RSS TO BYPASS
CYBER ATTACK

Collaborative Revenue Capture

As part of our ongoing projects exploring media in fragile states, the Media Innovation Studio has been working to understand ways to make media outlets more sustainable. Both media in exile and those in restrictive environments often rely on media development funding to survive. Yet they are increasingly expected to diversify revenues. As a result, many outlets are faced with a tension: the necessity to generate money in particularly challenging markets while continuing public service journalism.

More than a dozen media providers joined experts and consultants from donor organisations such as Open Society Foundation, Internews Europe and the Rory Peck Trust, with digital and creative leaders in a workshop. The event, funded by RCUK's New Economic Models in the Digital Economy (Nemode) strand, discussed alternative ways oppositional news outlets could generate revenues.

The work focussed on understanding how to articulate and define collaborative revenue capture as a model. Instead of approaching revenue generation at the individual firm level, it explored how digital technologies can facilitate new ways to generate income if news organisations worked together. It designed and evaluated these new modes to attract income and then assessed the extent to which collaborative revenue capture can be used for the benefit of the exiled media sector.

Overall it explored ways collaboration between media, rather than working in isolation to chase much-needed revenues, could be an option as a working solution for journalism business models.

This research theme will continue via networks exploring media innovation for such outlets, a pilot project using proximity broadcasting for media in restricted environments, and a study on the impact of social media.

readymag.com/54803/

GAMI

The Media Innovation Studio is one of the founding members of the World Association of Newspapers' (WAN-IFRA) Global Alliance for Media Innovation (GAMI).

Created in 2013, its aim is to connect the news industry with global research and development to promote an innovation ecosystem for the news media industry.

Not surprisingly, the aims of the GAMI map naturally with those of the Media Innovation Studio - as do many of the activities we have engaged in across the network already.

After its foundation in 2014, John Mills and Professor Paul Egglestone presented work from the Media Innovation Studio to media professionals attending the WAN-IFRA's World Publishing Expo in Amsterdam. Since then, team members have collaborated on a European research bid with colleagues from the alliance.

Paul has also presented on behalf of GAMI to the New European Network Assembly at the 2015 London Digital Catapult. He also met senior European officials in Brussels as part of a workshop designed to connect the media industry to opportunities provided by European Horizon 2020 research funding.

The GAMI network continues to grow. It offers a range of activities and opportunities to connect with thousands of members who own media companies internationally and recognise the need for innovation in their businesses.

WAN-IFRA
World Association of Newspapers and News Publishers

WAN-IFRA
World Association of Newspapers and News Publishers



Our Mission

WAN-IFRA is a determined and progressive press association that works to support the development of new business models and to increase the financial and social role of the press.

WAN-IFRA

Join WAN-IFRA!

WAN-IFRA

WAN-IFRA
World Association of Newspapers and News Publishers

WAN-IFRA

WAN-IFRA

Emerging media cultures in Africa's margins

The media landscape in Africa has radically changed following the (re)adoption of political pluralism in large parts of the continent in the early 1990s. The private broadcast media, in particular, has expanded exponentially, with numerous radio and TV stations now broadcasting across the continent. Yet the 1990s media liberalisation project still remains an incomplete one. The news media sector continues to face many challenges ranging from restrictive legal and policy regimes to instances of ethno-political patronage.

This work on community media attempts to examine how new media is shaping community journalism. More specifically, it is interested in exploring the ways in which new media is influencing institutional journalistic practices in community journalism - how it is adopted but also adapted locally. Does it, for instance, radically change the ethos and practices of (community) journalism? Is it enabling a centering or de-centering of the margins? How do we understand the very idea of 'community' within the context of new media?

Discursively, elite interests have continued to dominate media discourse as a wealthy politico-economic class continue to dominate media content. It is arguable that an epoch that had promised a much more inclusive media has yet to realise that promise. In very general terms therefore, the 'margins' in Africa, a term used loosely to refer to minority interests - those individuals or groups on the economic and political periphery - remain critically underrepresented in mainstream media. It is for this reason that there has been a revival of interest in community media, a sector, which, theoretically at least, is interested in the inclusion of those 'margins' in the media. Unlike the commercial private media, it is a sector that has traditionally, even if not exclusively, focused on encouraging the growth of community radio and the broader legal and policy infrastructure that can support its development.





EVENTS

Paper Evolutions

Printed batteries, posters capable of detecting touch, WiFi-blocking and noise-absorbing paper, these are just a selection of innovations brought together in September 2015 by the Paper Evolutions: Exploring Digital and Physical Paper Futures exhibition.

Hosted at VTT, the Technical Research Centre of Finland, in Espoo, near Helsinki, a selection of 16 exhibits invited people to consider a range of radical, digital and disruptive paper and print technologies.

Paper Evolutions was co-curated by VTT, the Media Innovation Studio and Amsterdam-based HVB Communications. It combined prototypes from across the COST Action FP1104 programme, part of a European network to promote transnational cooperation, and Paper Breakthroughs - a travelling exhibition showcasing innovative paper prototypes.

The Espoo event showcased some of the most interesting print, paper and fibre innovations taken from across Europe. It also explored a range of diverse applications these materials could have.

Exhibits included packaging that incorporates sensors and links with your mobile, posters that are capable of detecting human touch and printed batteries. But beyond the technology, the collection sought to show how fibres from a range of materials could offer socially conscious solutions such as fibres made from recycled cacao beans and smart packaging that informs allergy sufferers of potentially harmful ingredients.

Speaking in advance of the exhibition, Anu Seisto of VTT and chair of the COST action, said: "The aim of our COST network has been to bring together people with technology, business or game research backgrounds to discuss and innovate together different combinations of fibre based materials and digital services. This exhibition showcases some possibilities that have been taken forward by our member institutes. It's been intriguing to see how ideas evolve with combining and sharing expertise."

Jerusalem Press Club

In May 2015 the Media Innovation Studio's director Paul Egglestone accepted an invitation to speak at the International Press Freedom conference at the Jerusalem Press Club. The conference was convened by Uri Dromi, a former spokesman of the Rabin and Peres governments from 1992-96. Over 100 journalists from 50 different countries met at the Conference in Israel to discuss the erosion of media freedom across the world.

The issue of press freedom is core to the work of several members of the Media Innovation Studio team. As well as the Exiled Media project featured elsewhere in this review, the Studio has launched CAST, a new project to explore how emerging technologies might support journalists expelled from their own countries because of their desire to speak out against oppressive regimes.

Paul went to speak about the impact of digital technologies on the role of journalists focusing on how web and mobile technologies can assist reporters even in difficult circumstances. He talked about corroborating stories using some basic techniques to check on the authenticity of a story's source by accessing metadata from digital photographs, locating Internet protocol and server addresses used to distribute information and accessing GPS data to verify the location of eye witness accounts. He also talked a little about data journalism.

He was joined at the conference by journalists from Libya, Turkey, Russia and Mongolia who spoke openly about time they had spent in detention. They were joined by others from Africa, South America and China who talked of intimidation violence and even death for those publishing or broadcasting stories that governments, corporations or religious extremists would rather they didn't.

It's relatively easy to forget how difficult and dangerous journalism can be from the relative comfort and stability of the West. The Media Innovation Studio through its connections with organisations like the Jerusalem Press Club, the Frontline Club and the World Association of Newspapers, is keen to advocate for those where the freedom to speak up and speak out can carry grave consequences.





SXSW

The Media Innovation Studio and friends travelled to Austin in March this year to participate in one of the world's large tech, innovation, music and film events - the South by South-West festival.

Clare Cook chaired our Drones for Good panel, which featured Darren Ansell, UCLan's space and aerospace lead for the Engineering Innovation Centre, Dickens Olewe, founder of African Skycam and Ben Kreimer from Nebraska Lincoln University's Drone Journalism Lab.

The panel drew on its own expertise from Europe, Africa and north America to explore the potential of web-connected drones and how they offer new and engaging ways for citizens, storytellers, journalists and organisations to utilise UAV technologies. The panel tackled contentious issues of ethics, privacy and safety, asked what are the dangers of eyes in the sky, and can positive UAV uses re-energise a potentially sceptical public?



Cook

Kreimer

Ansell

**Diversity in Food Journalism
and Culinary School**

INTERACTIVE

INTERACTIVE

INTERACTIVE

Grand Challenges

The original UCLan Grand Challenge series was designed to bring together academics, students and support staff from across the University to develop new partnerships and innovative projects.

Led by UCLan's Research and Innovation Office and facilitated by Change the Conversation's Michael Meaney and Andy Chapman, the workshop series ranged across engineering, health, conflict resolution, innovation within the emergency services and social change.

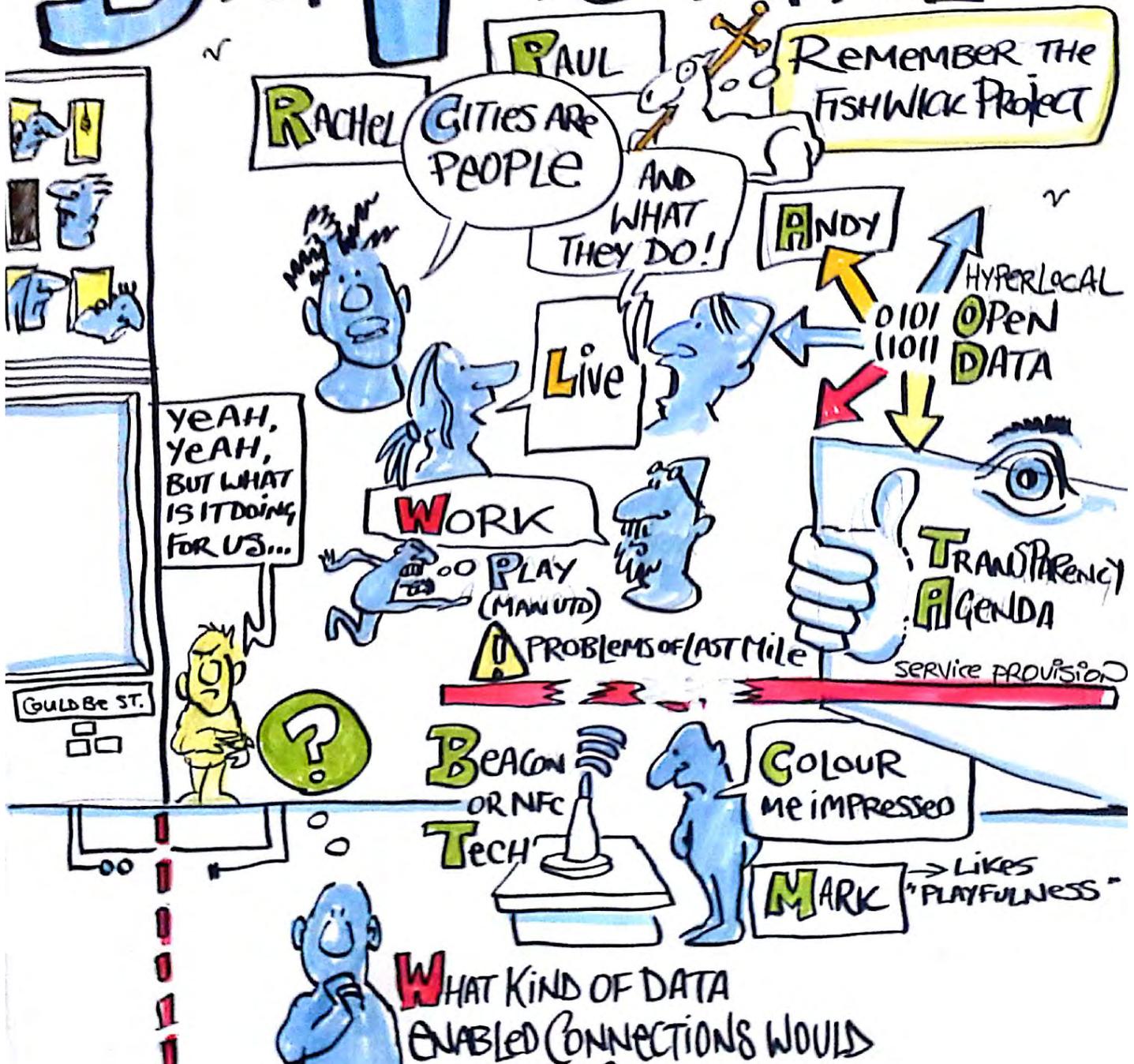
In 2015, the Media Innovation Studio led and participated in several challenges that placed community firmly at the centre of the workshops.

The first was Community Mill. The 'grand challenge' for this project was to demonstrate how communities could collect and use data to make better predictions and decisions. During a facilitated workshop with individuals, groups and organisations, we explored what data was of genuine interest and importance, and how it could help communities address problems, improve public services, support businesses, attract funding, build leadership and increase cooperation.

The second Grand Challenge explored opportunities and challenges in transforming Preston into a Smart City. Essentially, smart cities are where residents, public services and infrastructure are digitally connected to allow urban areas to operate more efficiently, effectively and democratically.

The day-long event opened with a series of video recordings shot by the Media Innovation Studio team on the streets of Preston that asked market stall holders, shopkeepers, pedestrians and school teachers what they thought a smart city was. This was followed by asking Prestonians how they thought a future city might be different to the cities they currently live, work and play in.

BIG PICTURE



Web2day

The Web2day festival is a mix of innovation-themed talks and workshops where academics, bloggers, entrepreneurs, politicians and investors gather in Nantes, France to discuss the future of digital.

Located in the creative quarter of the city, the festival takes place amid huge mechanical elephants and supersized robotic carousels of the Île de Nantes. The event attracts 2,600 participants over three days.

2015 saw the Media Innovation Studio take part in two sessions. The first focussed on the personalisation of media content and its impact on traditional media organisations. It examined the potential impact of digital personalisation on media business models.

The second revisited the drones for good panel held at SXSW in March. Our multidisciplinary panel explored how UAVs can be used across a range of humanitarian, media and search and rescue scenarios. The session reunited UCLan's Engineering Innovation Centre's Darren Ansell and drone journalist Ben Kreimer with researcher John Mills to talk in more detail about the future plans of the Civic Drone Centre. The panel built on and extended our SXSW talk in covering legal frameworks, opportunities for media capture and humanitarian uses, but also examined current research projects and placed the conversation in a future-scoping mode.





IN THE SPACE

The Media Innovation Studio is a 30sqm flexible space. Equipped with mobile whiteboards and movable furniture, the space can be reconfigured for a wide variety of uses. A high definition nine-metre projection system, open Wi-Fi network and large flat panel monitors are permanently available in the Studio.

We offer the space to colleagues from all over the university to support their projects and workshops. We also like to open the space to communities, local businesses and organisations for their events too. For our academic colleagues, the Studio is a space where people can move away from the traditional classroom experience and create new learning experiences for students. For communities, it's an opportunity to interact with the university in ways they may not expect and in a relaxed environment that's conducive to good conversations.

The following projects belong entirely to the people who designed and delivered them. The Media Innovation Studio team are pleased to play host to such a diverse range of great projects.

Raspberry Jam

On the first Monday of every month, the Preston Raspberry Jam community meets together in the Media Innovation Studio. UCLan has hosted these regular monthly Raspberry Jam events since 2012 when the Raspberry Pi computer first became available. Although the very first meetings were held at UCLan in Preston, the events have now spread to other locations worldwide and are now administered by the Raspberry Pi Foundation.

In the Studio each month, a group of between 30 and 80 participants ranging in age from eight to 75-years old meet to share and develop their understanding of computing and the Raspberry Pi computer. Participants sometimes travel considerable distances to the event - 14-year-old Cerys regularly travels from Staffordshire and has been inspired to host her own events.

Children attending the event have opportunities to see projects that they would not normally experience in a school setting, and are able to collaborate with adults working on advanced projects. Events comprise of hands-on development of hardware and software as well as mastery sessions and lightning talk presentations.

Following enquiries from teachers about the potential of the Raspberry Jam events, there is now a regular professional development meeting in collaboration with Computing At School, part of the British Computing Society, for teachers before each event.

| about your own business engagement activities, what are your biggest challenges?

getting business owners to do stuff for free
overcoming barriers to engagement
academic availability

experience
communication

structures
ent
a-university
ble companies
employers

university valuing this work
e systems and procedurs
engagement
systems and processes
ing what we offer externally
right academic clear

reaching the appropriate contacts in businesses
convoluted processes
internal co-operation
contracting

process, admin, the way we cost 'things', monitoring
and recording of the activity the list is long
funding streams for interaction
university systems and processes
trying to keep on top of the day job
delegating the right "stuff"

WORK
non as a place to do business



internal systems and procedures
making connections back into uclan with people who
can help
having the time away from the day job ... the time to
explore and develop relationships
nothing, I find employers really eager and willing to
collaborate with us
fitting around academic year
finding sufficient to engage
getting contracts through the university
internal delays in response
getting someone to re

response times
silo effect
IP
exploring possible opportunities
communication within the university
staff time to engage from schools
delivering optimum quality for all stakeholders
knowing who to direct enquiries to
How businesses find the right support/contacts etc
motivation incentives
getting people to reply to e

Remerge

The Media Innovation Studio is always buzzing with workshops, meetings and conferences run by expert facilitators. To further enhance these activities, the team has been developing an immersive digital solution over the last eight years: Remerge. Using applications specially developed for iPads, it enables participants to voice their opinions, ideas and suggestions, anonymously and in real-time. Questions, drawings and many other interactions can be created on the fly by the facilitator who responds to the dynamic nature of design-led, bottom-up thinking events. Images can be captured live from flipcharts, whiteboards, large graphic templates and Post-it's. This content is projected over the complete back wall off the studio (12m wide, 2m high) and can be zoomed into and explored at any time, giving everyone a complete picture of the event and wider context discussions.

Remerge is licensed to large multinationals and used worldwide in forward thinking workshops by the best facilitators.

remergeonline.com



Great Northern Creative Festival

Well over 350 undergraduate and postgraduate students were in the Media Innovation Studio at the end of April, rubbing shoulders with guests and alumni from UK and International film and television production companies, animation studios, news organisations and broadcasters. A cast of writers, producers, creative directors, news editors, reporters, graphic designers and 3D artists celebrated the week long Great Northern Creative Festival aimed at inspiring students from the School of Journalism and Media by showing and telling them about how their careers have developed since leaving UCLan.

Screenwriter Frank Boyce of 24 Hour Party People fame kicked off proceedings on Wednesday with a masterclass and screening. On Friday the focus switched to media careers as students were treated to quick fire talks from a raft of guests from the BBC, ITV, Nine Lives, Trinity Mirror, SkyNews and many more.

The schedule continued over the weekend with animation workshops wrapping up on Monday evening after a daylong masterclass with New York-based documentary maker Sikay Tang.

The Media Innovation Studio team showcased a couple of their current projects including their latest DataMakers project with Sir Ranulph Fiennes (and his biometric data), Fieldcraft Studios and Kingston University. The team also chaired a Drone Journalism panel featuring a range of national and international speakers.



Prof. Paul Egglestone

Paul is Director of Research and Innovation in the College of Culture and the Creative Industries, Director of the Media Innovation Studio and Professor of Creative and Digital Technologies. A former independent TV producer working for BBC, ITV and Sky on regional and network programming, he established UCLan's international research studio for media innovation in 2012. He is a founder member of the World Association of Newspapers and News Publishers (WAN-IFRA) Global Media Alliance. He is a co-founder of the Civic Drone Centre. Paul has worked with journalists, filmmakers, producers, photographers, games designers and artists from the BBC, Sky TV, The Independent, The Times, the Guardian, Haymarket Media, Johnston Press and Trinity Mirror to collaborate on a series of projects addressing the challenges posed by digital convergence. Paul is most interested in getting involved in a range of activities that genuinely make a difference to people's lives.



Debbie Dearnley

Debbie is the project co-ordinator for the Studio. Her work focuses on the management, planning, co-ordination and administration roles within the office and its related activities and various projects. She works closely with the team and takes a leading role in monitoring and providing support for the project budgets and all purchases. She has been working at the university for over a decade and has gained many skills as well as achieving her PGCert in Management and PRINCE 2 in project management. Previously, her role at the university was as PA to Heads of School. She enjoys the challenges that her role brings along with the increasing knowledge she is gaining.



Andy Dickinson

Andy is a senior lecturer in digital and online journalism and researcher. He's been an influential voice in the field for over 15 years and is regularly named in lists of journalism influencers online. In 2016 Journalism.co.uk named him one of the top 50 bloggers journalists should follow. He has provided training and consultancy for UK and International media organisations embracing digital and online skills. Before he found himself in academia he worked in TV as an editor and director, producing documentaries for a range of broadcasters. Andy is a self-confessed geek and loves to explore the places where tech, journalism and communities meet. His current research interests include innovation in media organisations especially around the civic and democratic impact of data journalism and open data.



Clare Cook

An award-winning journalist with ten years' experience in the print and magazine industries, Clare now provides training and consultancy on social media and its impact on journalism practice in the UK and internationally, and co-authored *Social Media for Journalists: Principles and Practice* (Sage). Her research focuses on the revenue models of journalism start-ups globally, hyperlocal media in Europe and oppositional news outlets in closed or repressive regimes. Working with partners such as Internews Europe, Fojo Media Institute, J-Lab Hogeschool Utrecht and UK innovation charity Nesta, she explores how best to promote economic resilience and sustainability in small medium enterprises. She is also researching the impact of media technology in restricted environments with a project deploying proximity broadcasting as a village connectivity system.



John Mills

John's research activity spans journalism, the Internet of Things and connected objects, augmented paper, mobile journalism, wearables, human-computer interaction, drone journalism and innovation theory. Since moving into academia from online journalism and content creation, his research activities have included the hyperlocal/digital design project Bespoke, which formulated the immersive community media methodology 'Insight Journalism', 'Interactive Newsprint', which developed a new platform for community news using printed electronics. He is currently exploring the Internet of Things, and how news organisations can utilise physical platforms and experiences. He has taught multimedia journalism techniques and theory at UCLan, and supported community and citizen journalists across a range of projects. Professionally, John has established business-to-business editorial operations in Manchester and Leeds, and managed large teams of online correspondents both in the UK and beyond.



Dr. Mark Lochrie

Coming from a computing background, Mark has demonstrated how technology can be used to encourage participation in communities. Through the use of mobile and web technologies he has designed and developed a range of applications to evaluate the impact citizens have whilst occupying spaces from Location Based Games to physical check-in mechanisms. More recently, Mark has sought to explore local economic activity through BARTER; a bespoke platform to encourage local spending through the use of web, mobile and NFC technologies. Furthermore, he has continued his work with communities through data-related projects, ranging from the Sir Ranulph Fiennes Data Dashboard (RansDash) to represent his Marathon des Sables experience to enabling school children in creating mobile games which generate data, educate and encourage participation around air quality issues. Designing for children has generated a new passion. This has been particularly seen with littleBits, enabling children to express their creativity through the creation and sharing of electronic projects.



Dr. Andrew Heaton

Andrew gained his BSc in Aerospace Technology with Management in 2009 from the University of Hertfordshire, during which he spent his second year at West Virginia University in the United States. He was a member of the University of Hertfordshire's UAS (Unmanned Aerial Systems) Team in his final year. He then went on to receive an MSc in Aerospace Engineering from Brunel University in 2010. He gained a PhD from Cranfield University in 2014, researching the Integrated Vehicle Health Management (IVHM) requirements needed for UAS, working with BAE Systems on an EPSRC Industrial CASE scholarship. During his PhD studies, he was a finalist for the Royal Aeronautical Society UAS Group's Innovation Award at the 2012 conference. He joined the University of Central Lancashire's Civic Drone Centre in 2014 to investigate the legal, ethical and policy issues with growing use of civilian drones and the push to establish laws and regulations around their use.



Dr. Siamak Tavakoli

Siamak specialises in research and development around embedded engineering; exploring sensor data collection platforms. Over the past 23 years, Siamak has worked on a number of projects across manufacturing, environment, semiconductor, subsea robotics, and military sectors at national and international levels. He led, managed, conceptualised, designed, developed, and was instrumental in Technology for Nature for wildlife tracking and drone platforms, TRIDEC and GEMECD for disaster early warning and rapid response systems, VoiceTalk and Hybrid Fingerprint Maker for signal processing, to mention just a few. Currently, he is enjoying transferring his skills into the convergent space between IoT and drones.



Dr. George Ogola

George is a Senior Lecturer in the School of Journalism, Language and Communication. He previously worked as a journalist at the Standard Media Group in Nairobi and as a news and features correspondent for a number of newspapers and magazines based in Kenya, South Africa and the UK. He has published widely on the political economy of the media in Africa, the impact of new media technologies on the broader media ecology in the developing world and how they address questions of power and democratisation and the interface between popular culture and the media in Africa.

INTERNS

We regularly welcome student interns to the Studio. Because we are a diverse team with a broad range of interests and a great portfolio of projects, there's plenty of opportunities to get involved in something that's possibly exciting, probably cool and definitely stretching.

Our interns make a valuable contribution to all areas of the Studio. They bring with them new ideas and fresh perspectives. Their energy and enthusiasm is infectious. In the past we've had interns whose duties included working on a university crowdfunding platform, creating multimedia project reports, mapping innovation projects from around the UK and working on UAV platforms and services.

Current members of the intern team, Benjamin and Richard, joined the Civic Drone Centre to engineer UAV solutions for dangerous environments. More recently, we've just welcomed Glenn Matthys who joins us from Belgium, working on the littleBits platform continuing the work achieved so far.



Richard Kenyon

Richard was part of the Media Innovation Studio 2015 summer intern team working for the Civic Drone Centre. During this time, he worked on an 'in the wild' project for a commercial company that involved a drone anti-collision system: developing hardware and software. Since then, he has spent several weeks continuing his work, working with NASA and UCLan. Whilst interning he gained essential skills and experience in his field of interest.



Benjamin Watkinson

Benjamin took part in the Media Innovation Studio 2015 internship scheme working on the Civic Drone Centre project. He worked on an image stitcher designed to transform images taken from a UAV into a single image. Furthermore, he designed and implemented a vision system for a localisation system that allowed a UAV to hover above a beacon. Benjamin has continued the work at UCLan as a research associate. His main focus is working with NASA on a project to take high resolution images of the sun.

Working With Us

Whether you're an academic, business, charity, NGO or community, there are many routes to work with us. This could be through simply talking to us about your work and interests over a cup of coffee, joining us on a current project, collaborating on a new RCUK or EU research bid, commissioning training or support, or sponsoring a Ph.D. or internship.

Whatever the opportunity, we'd love to hear from you and start a conversation.

Get in touch via social media, email or through more traditional means via the telephone or post.

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Interactive

CLOSING WORDS

We will continue to work in those liminal spaces that connect artists, designers, engineers, chemists, health professionals, historians, musicians and technologists. Our work will be driven by our values and sense of social purpose. The passion and commitment of our team will be refreshed each time new people enter the Studio, bringing with them fresh perspectives, different approaches, cool ideas, innovative thinking and alternative ways of exploring the world around us.

It's going to be a fascinating experiment. I suspect we'll be as surprised as we are now when we come to look back over the next 12 months.

I hope you've been challenged, encouraged and maybe even inspired by the sheer volume and variety of what's here. More importantly, I hope you'll consider working with us, participating in projects or studying here. Whatever the basis for a conversation, we look forward to having it with you - and hope you'll keep in touch and join us for the next review.

Thanks for reading, and interacting. You can join the discussion by tagging your stories on Facebook and Twitter with #MISReview

Professor Paul Egglestone

SELECTED PUBLICATIONS

Anderson, P., Ogola, G. and Williams, M. (eds). (2014). The future of journalism in the developed and developing world: A cross continental analysis. London and New York: Routledge

Anderson, P. and Egglestone, P. (2012) The development of effective quality measures relevant to the future practice of BBC news journalism online, *Journalism: Theory, Practice and Criticism*, Volume 13 Issue 7 October 2012 pp. 921 - 940.

Blum-Ross A., Egglestone, P., Mills, J. and Frohlich, D. (2011) Participatory video and design: examples from the Bespoke Project Participatory Innovation Conference 2011, Mads Clasen Institute, University of Southern Denmark.

Blum-Ross, A., Mills, J., Egglestone, P., and Frohlich, D., (2013) Community media and design: *Insight Journalism as a method for innovation: Volume 14, Number 3, 1 September 2013, pp. 171-192(22)*

Cook, C., and Dickinson, A. (2013). 11 UK Social Media, Citizen Journalism and Alternative News. *The Future of Quality News Journalism: A Cross-Continental Analysis*, 7, 202.

Cook, C. E. (2016). Fragile finance: The revenue models of oppositional news outlets in repressive regimes. *The International Communication Gazette*.

Dickinson, A. (2014) *Data Journalism: Making it real* in Mair and R. L. Keeble, Eds., *Data Journalism*. Bury St Edmunds: abramis, 2014.

Dickinson, A. (2015) *Data Journalism: Making it real* in T. Felle, J. Mair, and D. Radcliffe, Eds., *Data Journalism: Inside the global future*. abramis, 2015.

Dickinson, A. (2016) *Media Mill: Exploring the ecosystem for hyperlocal open data journalism*, NODA16, Papers and Notes

Dickinson, A., Lochrie, M. and Egglestone, P. (2015). *DataPet: Designing a participatory sensing data game for children*, CHI Play 2015, Papers and Notes

Dickinson, A, Lochrie, M and Egglestone, P .2015o UKKO: Enriching persuasive location based games with environmental sensor data, CHI Play 2015, Papers and Notes

Egglestone, P. (2013). Finding viable business models for developed world broadcast news in *The Future of Quality News Journalism: a cross continental analysis* Edited by Peter J. Anderson, George Ogola and Michael Williams, Routledge, New York, 2013

Egglestone, P. and Blum-Ross, A. (2010). Reflections on the use of community journalism in digital design, *Media, Communications and Cultural Studies Association Conference*.

Egglestone, P., Ansell, D. and Cook, C. (2013) UAVs in crowd tagged mountain rescue, *Proceedings of International Conference on Making Sense of Converging Media*, Pages 286, New York, NY, USA ©2013 ISBN: 978-1-4503-1992-8

Egglestone, P. and Mills, J. *Interactive Newsprint: The Future of Newspapers? Printed electronics meets hyperlocal and community co-design.* (2012) *Proc. ICMC* <http://icmc2012.wordpress.com>.

Egglestone, P. and Rogers, J., (2010), *Bespoke: Increasing Social Inclusion Through Community Journalism and Bespoke Design*, *Digital Futures All Hands Conference*.

Frohlich, D, Egglestone, P. et al, (2011) *Crossing the digital divide in the other direction: Community-based innovation on the Bespoke Project Include 2011 - The Role of Inclusive Design in Making Social Innovation Happen*, RCA.

Garbett, A., Egglestone, P., et al: (2014), *Finding "Real People": Trust and Diversity in the Interface Between Professional and Citizen Journalists*, CHI 2014, Papers and Notes

Gradinar, A., Huck, J., Coulton, P., Lochrie, M., and Tseklevs, E. (2015). *Designing for the dichotomy of immersion in location based games*. Paper presented at *Foundations of Digital Games 2015*, Pacific Grove, United States.

- Light, A. and Egglestone, P. "Participant-Making: bridging the gulf between community knowledge and academic research", *The Journal of Community Informatics*, Vol 8, 2011-12.
- Light, A., Wakeford, T., Egglestone, P. and Rogers, J. (2011) *Research on an Equal Footing? A UK Collaborative Inquiry into Community and Academic Knowledge*, Indigenous Knowledge Technology Conference 2011, Nov 2011.
- Lochire, M. (2016). "A messaging app for teams who... think differently". Falk-Bartz, Sabine & Stockleben, Björn: *Think Cross - Change Media 2016*. Books on Demand. Norderstedt, 2016
- Lochrie, M., Mills, J., Egglestone, P., and Skelly, M. "Paper Gaming: Creating IoT Paper Interactions with Conductive Inks and Web-connectivity through EKKO." In *Proceedings of the 2015 Annual Symposium on Computer-Human Interaction in Play*, pp. 619-624. ACM, 2015.
- Kljun, M., Kopic Pucihar, K., Lochrie, M. and Egglestone, P., 2015, October. *StreetGamez: A Moving Projector Platform for Projected Street Games*. In *Proceedings of the 2015 Annual Symposium on Computer-Human Interaction in Play* (pp. 589-594). ACM.
- Mills, J., Egglestone, P., Lochrie, M. and Skelly, M. "Paper-based web connected objects and the Internet of Things through EKKO." In *Proceedings of the 2015 British HCI Conference*, pp. 279-280. ACM, 2015.
- Mills, J., Egglestone, P. and Rashid, O. "MoJo in Action: The use of mobiles in conflict, community and cross platform Journalism", *Continuum, journal of media and cultural studies*, Issue 26 (5) October 2012 *Wising Up: revising mobile media in an age of smart phones*
- Mills, J., Lochrie, M., Dickinson, A., Metcalfe, T., and Egglestone, P. "Connected Paper, EKKO and Analytic Futures: News and Paper Data." In *Proceedings of the 2015 International Conference on Interactive Tabletops & Surfaces*, pp. 253-258. ACM, 2015.
- Ogola, G. 2010. "Media at cross-roads: Reflections on the Kenyan news and the coverage of the 2007 political crisis" in *Africa Insight* 39 (1): 58-71
- Ogola, G. 2010. "If you rattle a snake, be prepared to be bitten': Popular Culture, Politics and the Kenyan News Media" in Wasserman, H. *Popular Media, Democracy and Development in Africa*. London: Routledge
- Ogola, G. 2011. "The political economy of the media in Kenya: From Kenyatta's 'nation-building' press to Kibaki's fragmented nation" in *Africa Today* 57(3):77-95
- Ogola, G. 2012. "Kenya's Diasporic Cyber Publics and the Virtual Negotiation of Identity: Exploring the Conjunctions and Disjunctions" in Ogude, J et al. *Rethinking Eastern African Intellectual and Literary Landscapes*. Trenton, NJ.: Africa World Press Inc
- Ogola, G. (2014) "Our listeners would rather call than post messages on Facebook": New media and community radio in Kenya" in Mwabeazara, H et al. *Online Journalism in Africa: Trends, Practices and Emerging Cultures*. London: Routledge
- Ogola, G. (2014) "(Re-)framing the quality debate: The Arab media and its future journalism" in Anderson, P, Ogola, G and Williams, M (eds) . *The future of journalism in the developed and developing world: A cross continental analysis*. London and New York: Routledge
- Ogola, G. 2015. "Social media as a heteroglossic discursive space and Kenya's emergent alternative/citizen experiment' in *African Journalism Studies*
- Ogola, G. 2015. "African Journalism: A journey of failures and triumphs" in *African Journalism Studies* 36(1): 93-102
- Ogola, G. (2015) "Constructing images of Africa: From troubled pan African media to sprawling Nollywood", in Gallagher, J (ed). *Images of Africa: creation, negotiation, subversion*. Manchester: Manchester University Press

Ogola, G and Mike, O. (2015). "Citizen journalism in Kenya as a contested 'third space'", in Mutswaviro, B (ed). Participatory politics and citizen journalism in a networked Africa. London: Palgrave

Ogola, G., Schumann, A. and O'látúnjí, M. 2010. "Popular Culture, New Media and the Digital Public Sphere in Kenya, Cote d'Ivoire, and Nigeria" in Okoth, F. et al (ed) African Media and Digital Public Sphere, Palgrave Macmillan: Basingtoke

Ogola, G and Ylva-Rodny, G. (2014) "The future of quality journalism and media accountability in South Africa and Kenya" in Anderson, P, Ogola, G and Williams, M (eds). The future of journalism in the developed and developing world: A cross continental analysis. London and New York: Routledge

Pekkala, P., and Cook, C. (2012). 4. Sustaining journalistic entrepreneurship. Chasing sustainability on the net, 108.

Sirkkunen, E., and Cook, C. (2012). Chasing Sustainability on the Net: International research on 69 journalistic pure players and their business models. University of Tampere.

Taylor, N., Frohlich, DM., Egglestone, P., Marshall, J., Rogers, J., Blum-Ross, A., Mills, J., Shorter M. and Olivier, P. "Utilising insight journalism for community technology design." In Proceedings of the 32nd annual ACM conference on Human factors in computing systems, pp. 2995-3004. ACM, 2014.

Taylor, N., Marshall, J., Blum-Ross, A., Mills, J., Rogers, J., Egglestone, P., Frohlich, DM., Wright and P., Olivier, P. Viewpoint: Empowering Communities with Situated Voting Devices (2012) Proc. CHI 2012, p. 1361-1370, New York: ACM.

Vataaja, H. and Egglestone, P. (2011) Briefing News Reporting with Mobile Assignments – Perceptions, Needs and Challenges, (Conference proceedings <http://cscw2012.org/>)

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