



# i-DAT – THE STORY SO FAR: 1998 to the present day

- What is i-DAT?
- Who are i-DAT people?
- Our projects
- An i-DAT timeline

#### i-DAT: sharing the art of technology

i-DAT is an open research lab for playful experimentation with creative technology, pushing the boundaries of digital art and creative media worldwide.

We create and collaborate with artists through events and residencies, developing and producing digital art and technologies – some of which turn into tools and applications for wider uses.

Our works stimulate public participation and engagement and are designed to be shared openly for social, economic and cultural benefit.

i-DAT, an Arts Council England National Portfolio Organisation, is hosted by Plymouth University.











## Don't give up the play job...

"Combinatory play seems to be the essential feature in productive thought." — Albert Einstein

The world needs new ideas. But from where do they come?

Inspiration strikes when you least expect it. When you've stopped trying too hard. When you play.

At i-DAT - the Institute of Digital Art and Technology - we have a long history of playing with technology.

That play involves collaborations that lead to artistic practice, which pushes the boundaries of art and creative media.

We've worked with actors and audience members, doctors and patients, coders and gamers, geeks and naturalists, monkeys (but not organ grinders) and microscopic matter. We've digitised a dead artist and a great white whale. We've turned a city into a computer game.

Sometimes what we call play turns into work: our digital discoveries through this playfulness are being applied in the worlds of technology business, gaming, marketing and even medicine.

We make sure our work is shareable and accessible to as many people as possible by developing open source models whenever we can.

By playing, we connect the hemispheres of art and science. We would like there to be no separation. We work at the confluence, the intersection of these.

What happens when you mix the two together is not a dilution – it's actually a new substance. Isaac Newton the physicist was also an alchemist – nowadays no-one talks about that.

So is i-DAT the art of science or scientifically artful?

Welcome to i-DAT: sharing the art of technology.



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## i-DAT – what we do

"...the material for manifesting things that lie outside of the normal frames of reference is 'data' - things so far away, so close, so massive, so small and so ad infinitum. These digital practices use alchemical processes that enable a series of transformations: from data to code to experience to behaviour." — Professor Mike Phillips, i-DAT Research Director

i-DAT is a research lab and Arts Council England National Portfolio Organisation playfully experimenting with technology and data and pushing the boundaries of digital arts and creative media practice.

Through that experimentation, i-DAT makes and supports artists, generates opportunities for research, collaboration and production in the realm of technology.

i-DAT is located within the Faculty of Arts at Plymouth University and has been delivering world-class cultural activities since 1998. It links digital artists and practitioners with academia and transmits learning to wider audiences and the public, democratising and demystifying technology innovations.

i-DAT works with artists, engineers, scientists, companies, young people, communities and the public on artworks, events, projects and prototypes that regularly have a social and a cultural impact, locally, nationally and internationally.

i-DAT is a trans-disciplinary culture broker, supporting innovation in the arts - and in the rest of the world.

What we do is create relationships between practice-based artists and research. We're the connection between art and academia. We produce artists.

> "Stop thinking about artworks as objects and start thinking about them as triggers for experiences"

- Brian Eno, musician and recipient of Honorary Doctorate from Plymouth University











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## i-DAT – who we are

#### **MIKE PHILLIPS**

Mike Phillips is the Director of Research at i-DAT.

He is also Professor of Interdisciplinary Arts at Plymouth University, where he created the original Media Lab Arts BSc/BA Hons course that launched in 1992.

Musician Brian Eno became a digital advisor, a PhD programme was established with Roy Ascott as visiting professor and in 1998 higher education funding enabled the founding of a digital art centre of excellence: i-DAT.

Since 2012, i-DAT has enjoyed National Portfolio Organisation status by Arts Council England, cementing its position in the UK's digital art landscape.

#### **BIRGITTE AGA**

Birgitte (known as B) is i-DAT's Creative Director and specialises in researching and developing playful technologies.

Her focus is on the evolution and convergence of prototyping and real-time data and the influence of such dynamic, participatory and responsive aspects on contemporary arts/culture.

She co-founded Submerge, a talent and innovation agency for the creative industries and has also worked for clients including Arts Council England, Creative & Cultural Skills, Futurelab, Pervasive Media Studio, Plymouth City Council, Real Ideas Organisation, South West Screen, Submerge, Watershed Media Centre and Lottolab.

#### **DAWN MELVILLE**

Dawn is i-DAT's Director of Operations and works to develop opportunities for i-DAT to prosper and grow.

She has worked through the digital revolution, from print to screen, has run her own media business and won awards for her entrepreneurialism.

But she still prefers animals to people.



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#### **GIANNI CORINO**

Gianni Corino is i-DAT's Creative Producer.

He has worked for big international media firms before moving to academia "to feel the freedom of thinking, creating and developing some ideas no one in the industry will ever pay for".

His background is in performance, media and social studies, graphics and electronic communication.

#### SIMON LOCK

Simon is i-DAT's Technical Producer.

As well as a long background in digital media learning, teaching and industry, Simon's creative practice has seen him exhibiting work in venues including Old Broadcasting House (Leeds), Urbis (Manchester), Lanternhouse (Ulverston), Sage (Gateshead), Gatecrasher (Leeds), St George's Hall (Liverpool), Brewery Arts Centre (Kendal), Folly Gallery (Lancaster), Contemporary Urban Centre (Liverpool), Nuffield Theatre (Lancaster), Grand Theatre (Lancaster), Dome (Morecambe), Camelot (Doncaster), amongst others.

In recognition of his research work and industrial background, Simon has been appointed to the editorial board of the International Journal of Performance Arts and Digital Media.

#### **MIKE BLOW**

Mike Blow is i-DAT's Art Producer.

His work uses sound and visuals to "evoke a deeper consciousness of site and physical objects", prompting the imagination and weaving in chance events such as the weather or the actions of visitors.

#### **CHRIS HUNT**

Chris is currently researching and designing systems to collect and analyse experience and feedback in curated spaces.

As an i-DAT developer, he works on a number of projects across i-DAT's spectrum, including the Moby-Dick Big Read and the Confluence Project. He is also the host for Young Rewired State at i-DAT.

> "The true artist helps the world by revealing mystic truths" - Bruce Nauman, video and neon artist











## The Dome: from Plymouth to the edge of the known universe

"All the world would be dynamically viewable and picturable and radioable to all the world, so that common consideration in a most educated manner of all world problems by all world people would become a practical event"

- Futurist and systems theorist Buckminster Fuller, in 1962

i-DAT manages "the manifestation of material, immaterial and imaginary worlds". What a day-job.

We oversee the Full Dome Immersive Vision Theatre – a projection space fitted with spatialised audio where the audience can experience surround-sound-and-vision.

i-DAT is exploring ways of translating data from the world into immersive, multisensory, participatory experiences. One of the most popular presentations is to take an audience from the theatre's site in Plymouth to the edge of the known universe. And back, luckily.

The IVT creates an experience that propels the audience into a deeper engagement with the data-story. A story that might be made up of our biological, ecological or social activities, played out above and around us.

Other IVT presentations have sent people microscopic: a super-close-up study of a fruit-fly and the placing of audience members in a nano-landscape.

Our IVT launched the FullDomeUK festival in 2010 – to add to an international circuit of immersive viewing theatre events that includes peers in Brazil, Canada, Germany and Portugal. Festival sponsors have included the National Space Centre.

"Electronic aids, particularly domestic computers, will help the inner migration, the opting out of reality. Reality is no longer going to be the stuff out there, but the stuff inside your head. It's going to be commercial and nasty at the same time."

— sci-fi author J.G.Ballard











## i-DAT's projects

#### **MEDIASPACE (1998)** Experiments in convergence way before TV's Red Button

With CADE, Computers in Art and Design Education, the journal Digital Creativity by Swets & Zeitlinger, the European Space Agency, The British National Space Centre, WIRE, Why ISDN Resources in Education.

We anticipated the convergence of how we communicate before many places in the UK had broadband internet.

Whilst others were listening to the beeping of a 56k modem, we were exploring new media forms and emergent fields of digital practice in art and design.

MEDIASPACE was an experimental publishing project that explored the integration of print. online and satellite transmissions (thanks to support from the European Space Agency and the British National Space Centre, amongst others).

We investigated live studio broadcasts, ISDN video conferencing and online tutorials, before they were even a twinkle in the eyes of tech-consumers.

#### **SPECTACTOR PROJECT (1999)** Interacting through the fourth wall

We took the form of Chaucer's Canterbury Tales, a pilgrimage and pilgrims, to explore multi-user narratives - but with satellite broadcasts and virtual reality scenes instead of parchment and illuminated text.

The Spectactor project built on the experiences and experiments within MEDIASPACE, and pushed the boundaries of existing broadcast and publishing activities, which couldn't satisfy interactivity or multiple locations at that time.









#### STI - SEARCH FOR TERRESTRIAL INTELLIGENCE (2000) International artists, scientists and technologists seek intelligent life-forms ...on Earth

With STAR PhD research project and the Centre for Neural and Adaptive Systems (CNAS) at Plymouth, the National Remote Sensing Centre and ATR Media Integration & Communications. A SciArt programme supported by Arts Council England, the British Council, the Calouste Gulbenkian Foundation, SAC, the Wellcome Trust and NESTA.

While we scan the skies for evidence of alien life-forms, how do we know there is intelligent life on our planet?

This project set out to go where all men and women have gone before: Earth.

The STI Project – overseen by i-DAT – combined artificial intelligence, imaging technologies, remote sensors and online interaction to create a data picture of Earth.

But is that the same picture we get when we use our own eyes?

Said Professor Mike Phillips, Principal Investigator: "It was what Google Maps became. We were presenting satellite imagery in a format that people could navigate."

#### AUTOICON (2000) A dead artist's body (of information), preserved and 'alive' in cyberspace

With Donald Rodney (in life and posthumously), Tate Modern. Funded by Arts Council England.

Donald Rodney's death from sickle-cell anaemia did not stop him from living on in a work involving i-DAT.

The Donald Rodney Autoicon is an internet and CD-ROM record of his body - and a digital attempt to encapsulate his creative mind.

The work follows that of philosopher and founder of utilitarianism Jeremy Bentham (1748-1832), whose Autoicon (made from wax, his mummified head and his preserved vital organs) vividly anticipated the advent of web avatars.

The Rodney Autoicon, fashioned from his medical data gathered over a lifetime, created a virtual body so the late artist can exist in a pure information space. Like Bentham, Rodney has joined the distinguished club of the un-dead.







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#### ARTEFACT (2002) Where online museum visitors manipulate existing artworks and create new ones in virtual space.

With the Victoria & Albert Museum.

A column depicting Adam & Eve, a needlecase from the 1600s, and a Victorian decanter were dismantled and fused digitally in i-DAT's Artefact piece.

Visitors to a virtual museum gallery built by i-DAT could manipulate an artwork – and by doing so, created new, mutant artworks, generatively augmenting a multimedia database of objects at the Victoria & Albert Museum.

This artwork was exhibited in the real V&A from 2002-3.

## NOTES TOWARDS THE COMPLETE WORKS OF SHAKESPEARE (2003) *OR what you get when you pay peanuts.*

With six Celebes Crested Macaques and Paignton Zoo

The infinite monkey theory states that a monkey hitting typewriter keys randomly over an infinite amount of time will almost surely type a given text, such as the complete works of William Shakespeare.

i-DAT decided to test the theory and put a computer keyboard in the enclosure of six Celebes Crested Macaques in nearby Paignton Zoo, with a radio link to broadcast the results online.

Instead of infinity, the project stretched over a month, during which time the monkeys bashed the keyboard with a stone, pooped and peed on it and produced five pages consisting largely of the letter S.

This simian performance art project was publicised around the world, highlighting i-DAT globally.

The results of the experiment formed part of a larger project and were published in a limited edition book entitled Notes Towards The Complete Works of Shakespeare.

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#### I-BEAM (2003) Alphabet soup.

As part of National Architecture Week and exhibited at Plymouth Arts Centre, June 2003.

i-DAT was part of a national project to see what happens when architects, dancers and dyslexics are asked to design a typeface.

Over three years, a series of fonts were developed, demonstrating the differing creative techniques used to build the building blocks of reading and writing.

The fonts used characters including cartoon ice-cream cones, people in wheelchairs, road safety signs and even a squiggle. They were developed by i-DAT from concepts shared by Wayne Hemingway, Attik Dance, Will Alsop and a group of Cornish dyslexic schoolchildren.

#### LIQUID READER™ v1.1. (2004) Linking publication and performance

Body-based media was 'published' via our Liquid Reader project – fusing the digital and dance, theatre and performance.

Instead of page or text-based publishing, we developed an interface for the documentation, analysis and dissemination of live and body-based performance practices.

The project generated new initiatives and collaborations including: Laban Centre and William Forsythe Foundation (funded by the Calouste Gulbenkian Foundation); Ohio State University, USA; www.choreocog.net; Rosetta Life/Jabadao; University of Portsmouth/SODA/SCAN. Liquid Reader<sup>™</sup> initiated the Performance Research e-publications series.

#### OUT OF SCALE (2004) Big-name architects meet i-DAT. It's a small world...

With Plymouth Arts Centre, world-famous architecture firms, Plymouth University's Electron Microscopy Centre.

i-DAT and Plymouth Arts Centre asked famous architects to submit an object to be scanned by an electron microscope.

The scanned images were blown up to A0 size and exhibited in the Out of Scale show at Plymouth Arts Centre and Plymouth University's Portland Square Building, alongside a gold-plated version of a fragment of the original object.

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The Plymouth Arts Centre and i-DAT-developed project explored architecture's relationship with image, digital technology, structure and materials by focusing upon microscopic detail. The show revealed how architects work from tiny yet accurate models to giant edifices that dominate skylines.

Thus the Richard Rogers Partnership magnified the Welsh slate used in the building of the National Assembly for Wales; The Thomas Heatherwick studio (later to design the London Olympic flame cauldron) contributed an image of the grain of sand that informed their design of a building in Grange over Sands in the Lake District; Wayne Hemingway sent a small piece of Lego.

i-DAT helped to curate exhibits by Ron Arad Associates, dRMM, Caruso & St. John Architects, Will Alsop Architects, Sana Murrani, GHM Consultancy Group, Rick Mather Architects, Henning Larsens Tegnestue, Peter Anders, Maia Engeli, Liminal and Jonathan Wright Projects.

#### ARCH-OS (2005) An operating system for a building, producing art from an edifice

With Plymouth University's Portland Square Building

i-DAT has put the art into smart buildings.

Intelligent architecture may be able to regulate heating and lighting, but it can also generate public art.

Examples include, birdsong and projections generated by the flow of people in the building, imperceptibly-moving furnishings and a 'random' lift-button help to demonstrate that buildings can be both smart and smart-arse.

Arch-OS has spawned collaborations, workshops and interactive art pieces and was exhibited at the world's number one ICT trade fair in Germany.

The operating system was integrated into the two buildings of the Minerals and Chemistry Research and Education Precinct at Curtin University, Perth, Western Australia. Mike Phillips worked in collaboration with Woods Bagot Architects, John Curtin Gallery and the Biennale of Electronic Arts Perth (BEAP).

Arch-OS is one of a range of i-DAT-developed operating systems which use data to extend human perception.

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#### CONSTELLATION COLUMBIA (2005) In space, no-one can hear robots scream...

Commissioned by The Arts Catalyst as part of the MIR Campaign 2003 at the Gagarin Cosmonaut Training Centre, Russia. MIR Campaign 2003 supported by the European Commission Culture 2000 Fund.

Robots often look like us, but can they feel like us?

i-DAT created a working prototype robot that could freak out, in order to pose the question: will the idea of infinite space make a robot panic?

Designed to reflect our dysfunctionality when placed in alien environments, the robot incorporated simple audio/radio recording and transmission, gyroscopes, gravity switches and light sequencers. When entering zero gravity, Constellation Columbia would panic, having lost its only reference to reality - the force of gravity.

All of its sensors and stabilisers would be activated in a frenzied attempt to find a new sense of certainty.

Constellation Columbia was forced to levels of uncertainty and paranoia as an experiment to explore the potential psychosis of autonomous systems.

If androids dream of electric sheep, are certainty-deprived androids insomniacs?

#### NOOGY 1.0 and 2.0 (2006-7) Talk to the walls and the walls talk back

With Portland Square Building, Plymouth University

Noogy moved into i-DAT's building and immediately started fielding questions.

This installation would answer you via an LED ticker if you texted a request.

Later, Noogy offered a live vision-mix of the audio from users' mobile phones, turning sound into light and combining intelligent architecture and phone technologies to make a building-sized VJ screen.

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#### EUROPEAN WORKSHOP IN IMMERSIVE CINEMA & THE BIRTH of FULLDOME UK (2008) Surround-sound, vision and feeling.

i-DAT hosted the third European workshop and conference in immersive cinema in and around Plymouth University's newly-developed Immersive Vision Theatre.

The conference organisers invited international key-note speakers (including fulldome media artist and researcher David McConville) to discuss topics on the potential of fulldome as environments for and mediums of art forms and experiences.

This conference gave birth to the Fulldome UK festival, run by GaiaNova in partnership with i-DAT, The Computer Arts Society and The National Space Centre.

FulldomeUK is now in its fourth year and has become recognised as the annual UK event for fulldome art, helping domes to emerge from their planetarium-shaped incubators into a brave new world of digital projectors, real-time visualisation software, independent content producers and trans-disciplinary collaborations with high artistic qualities.

Dome works are linear and non-linear, produced or generative, interactive and noninteractive art work projected onto a domed surface, typically in a planetarium.

Our IVT creates a unique medium as well as a unique and immersive audience experience challenging human perceptions and reality.

#### SYNCRETICA.NET (2009) An online exhibition of the works by a communications/consciousness visionary

With Roy Ascott. Co-curated with Paula Orrell, Plymouth Arts Centre

Roy Ascott is a pioneering British artist who coined the term telematic art to describe art using computer and telecoms networks as their medium. He is president of the Planetary Collegium at Plymouth University.

According to Roy, telematic art makes the viewer into a participant, allowing for interactive art and experiences. He was exploring this area from his first exhibition in 1964, and since that time has pushed the boundaries of art and what it is to be an artist relentlessly.

i-DAT created Syncretica.net: an online, interactive and dynamically evolving archive of Roy's work – a folksonomy added to by various authors through content, links and tags that grew and developed through time.

Syncretica.net was displayed at Plymouth Arts Centre during The Syncretic Sense – the first UK retrospective of Roy Ascott's work.

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#### NANO-ART – A Mote It Is (2010) Molecular spectacular

With Wolfson Nanotechnology Laboratory at Plymouth University & the California NanoSystems Institute at the University of California, Los Angeles

What is art in the age of nano-technology? And is it there if you can't see it?

i-DAT joined a select group of international artists invited to 'present new ways of seeing, sensing and connecting with matter that's miniscule and abstract'. By making something you couldn't quite see.

Using an Atomic Force Microscope, i-DAT created a large-scale digital installation (how else would one see it?) that would be rendered invisible when the viewer gazed on it. When the viewer looked away, they would see the author's mote (a speck) out of the corner of their eye.

The piece was a collaboration with Plymouth University's nanotechnologists and used Game Engine technologies. It was exhibited at Perth International Arts Festival and is now in the John Curtin Gallery permanent collection.

#### LA PLISSURE DU TEXTE 2 (2010) A re-imagining of a famed telematics artwork

With Elif Ayiter, Max Moswitzer and Selavy Oh, in association with Heidi Dahlsveen, installed at Incheon International Digital Art Festival, Korea.

In 1983, the Advanced Research Projects Agency Network officially became the Internet. In the same year, cybernetics artist Roy Ascott created his famous collaborative work La Plissure Du Texte, at the Musée d'Art Moderne, Paris, from where distributed authors wrote a story via their computer network.

Nearly 30 years later, Roy's piece was re-imagined by a team including i-DAT at a Korean digital art festival.

This time around, La Plissure Du Texte 2 (LPDT2) was created within the Second Life 'metaverse' and incorporated artificial intelligence that enabled the public to enter into a text-message conversation in order to create and build worlds of non-linear text.

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#### ECO-OS CONFLUENCE PROJECT (2010) Digital art and ecology

With Beaford Arts, the North Devon Biosphere Foundation, Appledore Arts, with artists Simon Ryder, Simon Warner, Jon Pigott and Antony Lyons.

Confluence is a ground-breaking digital arts and environment project based around North Devon's River Torridge.

i-DAT is working with a team of artists, schools and communities to use digital art to explore and understand their local environment, which lies within a UNESCO Biosphere Reserve.

i-DAT-developed sensor devices called Ecoids can be attached to trees, rocks, architecture, or floated in water, or beneath balloons to collect environmental data. In Confluence, this data was used by artists and schoolchildren to make new pieces inspired by various riverside sites.

Eco-OS is one of a range of i-DAT-developed operating systems which use data to extend human perception.

#### **BIO-OS (2011)** Human Geography

With Katy Connor, Hannah Wood and Slingshot, Artshare, Active Ingredient, Plymouth University research group Message; E-Health and Health Informatics; School of Biomedical and Biological Sciences

The human body is one of the earliest and most popular subjects in art. Ice Age cave painters, Leonardo Da Vinci and now i-DAT have used our physique as artistic inspiration.

The Bio-OS project collects intimate biological information from the user's body via mobile phones, apps and wearable technologies: food consumption, heart rate, speech and activity patterns. This data is used to map your body over time, leaving a biological footprint in your personal database.

That information is also made available to the public, artists, engineers and scientists to enable social gaming, performance, and medical collaborations. Once again, i-DAT's experimentation is offering up opportunities for potential social, economic and cultural benefit.

Bio-OS is one of a range of i-DAT-developed operating systems which use data to "extend human perception". Are you looking at me?

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#### **SPECTRE (2012)** The ghosts in the machines (and the walls)

With the Institute of Visual and Media Arts at the University of Applied Arts Vienna and the Wolfson Nanotechnology Laboratory at Plymouth University

Can rooms record the events that take place within them? According to parapsychologists and i-DAT's data systems, they certainly can.

From the late 1930s to the 1940s, Professor Gustav Adolf Schwaiger, the Technical Director of the Austrian Broadcast Corporation, collaborated with the famous medium Rudi Schneider to investigate ectoplasm (a gauze-like substance said to be excreted by clairvoyants when in a trance), using the then state-of-the-art technology of TV.

These experiments were extended by the installation Spectre, which broadcast live feeds from the room at the Viennese institute, mixed with atomic microscope imagery of dust from Schwaiger's laboratory.

The TV People were there...

#### **MOBY DICK BIG READ (2012)** Whale-watching and listening

With award-winning author Philip Hoare, artist Angela Cockayne, Peninsula Arts at Plymouth University, Intercity and artist/designer Nathan Gale

"I have written a blasphemous book", said Herman Melville when his novel was first published in 1851, "and I feel as spotless as the lamb".

Deeply subversive, Moby Dick is a virtual, alternative bible – and as such, ripe for reinterpretation in this new world of new media.

i-DAT co-produced the online version, where each of the book's 135 chapters were read out, by a mixture of the celebrated and the unknown.

A chapter a day from the project's launch date was made publicly and freely accessible, via internet streaming or download.

Actress Tilda Swinton read the first chapter and was followed by a cast that included Simon Callow, Stephen Fry, Neil Tennant, Prime Minister David Cameron, Will Self, A L Kennedy, Benedict Cumberpatch, China Miéville, Rick Stein, Hugh Fearnley-Whittingstall, Sir David Attenborough, Cerys Matthews and James Naughtie.

More than 3 million people listened to or downloaded Moby Dick digitally. www.mobydickbigread.com

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#### QUALIA (2013) *Revolutionising arts audience feedback and evaluation methods*

With the University of Warwick, Cheltenham Festivals

You've seen the show, you've had a great time and now for the not-so thrilling climax: the feedback form.

It's the last thing many punters want to do when they've experienced art and culture, but the people and organisations who make and produce art and culture need to know how their work has been received.

So i-DAT is working to develop new technology to tackle this problem through its Qualia project.

By measuring audience mood and sentiment through its mobile phone app, and 'scraping' data from social media and the web, Qualia hopes to get deeper feedback data – making your event's evaluation much more accurate.

Ladies and gentlemen: a round of applause for i-DAT.

#### RESURGAM (2013) The Lost Pearl of Plymouth

With Hannah Wood, Mutant Labs and Story Juice; Rogue Theatre, Plymouth University and the City of Plymouth

Plymouth's first location-based live game brought hundreds of adventurers to the city to seek buried treasure – digitally.

Gamers used mobile technologies to navigate the history of Plymouth, bringing them into contact with theatre and immersive experiences, salty sea dogs, ghosts and demons on their way to finding the Pearl of Plymouth.

The tide was right. The winds were fair, the mainsail hoisted and the apps downloaded...

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#### YOUNG REWIRED STATE (2014) Programming the next generation of tech-heads

With 1,000 UK schoolchildren

i-DAT and Plymouth University are hosting the UK's number 1 children's coding festival, beating bids from Liverpool, London and Manchester.

A thousand of the nation's future tech-heads will come to the city in July and August for Young Rewired State's Festival of Code.

Last year Chancellor George Osborne and Wikipedia founder Jimmy Wales greeted the participants, and event sponsors include the world's biggest media brands including Google, Facebook and Mozilla.

This event generates huge PR and burnishes i-DAT's profile within the digital arts and technology sectors.

#### EMDL – EUROPEAN MOBILE DOME LAB FOR ARTISTIC RESEARCH (2014) We are part of international dome research

With the EU Culture Programme.

i-DAT is the UK partner in an international collaboration awarded €400k by the EU Culture Programme.

The project is to innovate within the emerging dome art form - a rapidly-evolving form of 360° video projections and surround-sound environments.

It's our job to push the boundaries of immersive audio-visual environment and foster an international community of artists/researchers dedicated to exploring the full-dome environment as a platform for creative innovation.

Science and education has dominated full-dome works so far, but we're from the experimental, performative and artistic angles. Even though a dome doesn't have any angles...

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## i-DAT – a timeline

YEAR	WHAT HAPPENED
1990	Tim Berners-Lee publishes formal proposal for the World Wide Web and the first known web page is written.
	Microsoft announces its latest version of its operating system: Windows 3.0
	Mike Phillips is working and teaching hypermedia and desk-top publishing and is invited to write a new media course for the Polytechnic South West (later Plymouth University). He is also working with Donald Rodney on his blood-pump/heraldic crest artwork Visceral Canker (purchased later by the Tate Modern).
	A group of Goldsmiths graduates puts on exhibitions. They later become known as the Young British Artists.
1991	Tim Berners-Lee introduces WorldWideWeb, the first web-browser and the first website goes online at CERN.
	Sonic the Hedgehog on the Sega Genesis 16-bit console is released.
	The Mac PowerBook is introduced.
	Thom Yorke (later, of rock band Radiohead) works on Mike Phillips' Mac Plus at Exeter College of Art.
	Marc Quinn creates Self – a frozen sculpture of the artist's own head, made from 4.5 litres of his own blood.
1992	In June, Mike Phillips is interviewed on his 30 <sup>th</sup> birthday for the post of programme manager for Media Lab Arts – the course he helped to write. He gets the job to establish the course within the School of Computing at the newly-renamed University of Plymouth and spends August recruiting in time for the first ever intake of 35 students in September.
	The new course was a mix of computing modules, lessons in Macromedia software, new media modules and performance.
	Windows 3.1 is announced.
	John Cage dies.
1993	Rachel Whiteread wins the Turner Prize – the first woman to do so.
	Software company Macromedia sponsors BSc MediaLab Arts.
	The first Pentium chips are shipped, improving the performance of personal computers.

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**PLYMOUTH** 

UNIVERSITY

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	Mike starts experimenting with making TV using a studio set-up at the university, making CD- ROMs and videolinking to Brian Eno among others.
	Roy Ascott becomes the first external examiner for MediaLab Arts.
1994	The first Sony PlayStation is released.
	The first satellite broadcast of Mediaspace mixed-media TV programmes – including a networked comic - takes place from BSc MediaLab Arts at Plymouth University – anticipating the arrival (10 years later) of 360-degree, multiplatform publishing.
	Due to a failed satellite link, BBC1 is unable to broadcast a remembrance concert marking the 50th anniversary of D-Day. Instead it is forced to show recorded highlights of D-Day commemoration events and a repeated <i>Wildlife on One</i> documentary about racoons. Later that year, the BBC has to apologise after its Ceefax teletext service mistakenly reports the death of the Queen Mother.
	Brian Eno becomes a digital adviser to MediaLab Arts.
1995	Windows 95 arrives with "built-in internet support, dial-up networking and new plug-and-play capabilities". Internet Explorer is released for the first time.
	Java and PHP programming languages arrive.
	Brian Eno is made Honorary Doctor of Technology for his services to MediaLab Arts (and the universe).
	<i>Toy Story</i> becomes the first feature-length computer-animated_film and the first film produced by Pixar – a company run by Steve Jobs at the time.
1996	Recruitment for Media Lab Arts peaks – there are 300 applicants for each place – and the intake has gone up to 80.
	Global graphics software company Macromedia sponsors MLA.
	The PhD programme STAR is established alongside MLA, with Roy Ascott appointed as visiting professor.
	Higher education funding to establish a digital arts centre of excellence is offered.
	Tomb Raider is unveiled and the first Tamagotchi digital pet is released in Japan.
1997	IBM's Deep Blue supercomputer defeats Garry Kasparov, the first time a computer defeated a chess grand master in a match.
	The Simpsons' first episode, Lisa The Skeptic, is broadcast in the USA.
1998	The Data Protection Act 1998 gives individuals the right to know what information is held about them, and provides a framework to ensure that personal information is handled properly.

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	i-DAT launches. Artefact is one of its early projects, encouraging visitors to manipulate and remix
	pieces in a virtual gallery in this collaboration with the victoria & Albert Museum.
	The iMac is introduced, with colour-coded computers as home furnishings.
	In April 1998, the Open Source Summit event was held. This was a pivotal event significantly boosting the idea of free, publically developed (open-source) software.
	Google opens workspace in a Menlo Park California garage in September and is recognized as one of the "Top 100 Websites" by PC Magazine in December 1998.
	Tiger Electronics launch the Furby electronic toy, the first domestic robot.
1999	Video/multimedia artist Bruce Nauman is awarded the Golden Lion prize for Lifetime Achievement at the Venice Biennale. Steve McQueen takes the Turner Prize for film installation artworks.
	Two variants were adopted for the 1997 IEEE 802.11 standard on wireless communications: 802.11a for the 5.8GHz band and 802.11b for the 2.4GHz band. The technology was soon named Wi-Fi.
	Several pundits predict total a computer system collapse because of the Y2K bug (the inability of older computers to distinguish between the year 1900 and the year 2000). Almost no problems are encountered in the New Year, but fears lead to major system upgrades throughout the global corporate environment.
2000	Stephen King's horror story <i>Riding the Bullet</i> is published in e-book format only, the world's first mass-market electronic book.
	A 'rough draft' of the human genome is announced jointly by President of the United States Bill Clinton and British Prime Minister Tony Blair.
	i-DAT co-ordinates the Search for Terrestrial Intelligence, and anticipates Google Maps in doing so.
	i-DAT helps to preserve a dead artist in cyberspace.
2001	i-DAT's position strengthens as the PhD programme becomes the Planetary Collegium and PhD student numbers increase.
	Michael Landy performs his art piece Break Down, in which he destroys all his possessions. Jeremy Deller releases his event/film artwork The Battle of Orgreave.
	Wikipedia launches.
	Apple unveils the first generation iPod portable media player.
2002	The grid emerges as a linkage of many servers into a single system to tackle complex computing tasks. The system was created to do work previously possible only with supercomputers.
	The iMac G4 is introduced.

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	Minority Report, directed by Spielberg and based on a Philip K Dick story, demonstrates a user interface operated by hand movements.
	Prof. Kevin Warwick of the University of Reading has part of his nervous system experimentally linked to a computer. On June 10 he demonstrates the first direct electronic communication between the nervous systems of two humans.
2003	The world's first digital camera with an organic light-emitting diode ( <i>OLED</i> ) display is released by Kodak.
	Apple's iTunes store is introduced, selling downloads for 99c.
	Skype is released.
	i-DAT puts an iMac in a monkey enclosure and waits to see what the animals write. The story is flashed around the world, giving i-DAT global exposure and intense media coverage.
2004	Facebook launches.
	Google indexed more than 8 billion pages on the web.
	i-DAT asks famous architects to submit an object to be scanned by an electron microscope.
	i-DAT commissions artists Peter Fend to use satellite data to demonstrate how research can generate productive dialogue about global ecological problems and be used to develop effective solutions.
2005	i-DAT unveils Arch-OS, its operating system for buildings and intelligent architecture. Arch-OS is installed into i-DAT's new home at Portland Square, including a 'random floor' button in two of the building's lifts.
	The first video is uploaded to YouTube.
	Google Maps launches – 5 years after i-DAT's satellite maps project STI.
2006	The Sony PRS500 e-book reader launches in the United States.
	Twitter, the micro blogging site opened with 140 characters maximum per message.
	iTunes downloaded its billionth file in May of 2006.
	i-DAT installs an interactive entity into its host building that can answer questions that are texted to it from mobile phones.

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2007	The iPhone is released.
	i-DAT turns a building into a giant video screen, linking mobile phones with sound and light commands.
	i-DAT exhibits experimental sound work from over 100 artists in collaboration with Sonic Arts Network in Plymouth
	i-DAT present the concept of 'Social Hacking' in partnership KURATOR as a series of international public art commissions for Plymouth
2008	i-DAT hosts the EUROPEAN WORKSHOP IN IMMERSIVE CINEMA which births the FULLDOME UK Festival, the annual event for fulldome art.
	Google and T-Mobile unveiled the T-Mobile G1, the first phone to use the Google's Android operating system
2009	Japanese engineers build the Child-robot with Biomimetic Body, or CB2, and report that it is slowly developing social skills by interacting with humans and watching their facial expressions, mimicking a mother-baby relationship.
	Avatar is released after director James Cameron develops the technology to shoot stereoscopically, creating one of the highest grossing films of all time.
	i-DAT joins the university's Faculty of Art and launches The i-500 Public Art Commission is for Curtin University's to be incorporated into the fabric of a building to encourage building users to communicate and collaborate.
2010	3DTV is the hit technology being promoted at this year's Consumer Electronic Show in Las Vegas.
	The first iPad is released.
	Scientists create robotic nano-spiders – microscopic DNA constructs able to follow programmed instructions.
	There are 4.7 billion mobile phone subscriptions (2 out of every 3 people on the planet). There are more people with mobile phones that have running water or toothbrushes.
	i-DAT's Mike Phillips collaborates with nanotechnologists and makes nano-art using an Atomic Force Microscope.
	Sensors are placed in and around Devon's River Torridge by i-DAT to generate ecological dart to use in a schoolchildren's art project.

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2011	<i>Rhein II</i> by the German photographer Andreas Gursky sells for \$4.3m (£2.7m) at Christies, New York becoming the most expensive photograph ever sold.
	There are more than 600,000 iPhone/iPad apps and 400,000 Android apps.
	There are more than 800 million Facebook users (more than 1 in 10 on the planet). Scientists and students unveil a 3D printer that makes edible food.
	A significant milestone in artificial intelligence is reached, as IBM's Watson supercomputer defeats two humans on a TV quiz show.
	i-DAT works with wearable technologies that collect data from the body and from human activity in a bid to 'extend human perception'.
2012	Herman Melville's classic of literature Moby Dick is read out by the famous and the not so famous, digitised and placed online by i-DAT. More than 3million people enjoy the Moby Dick Big Read.
	Oculus Rift is introduced.
	i-DAT is given National Portfolio Status by Arts Council England.
	Tim Berners-Lee features in the opening ceremony of the London 2012 Olympics, as does music from Brian Eno's ambient work An Ending (Ascent).
	Windows 8 touch-screen operating system is introduced.
	The number of smart phones worldwide reaches 1 billion.
2013	May 16, Heinrich Rohrer (79), Swiss physicist and Nobel Prize winner (1986), died in Switzerland. He is regarded as the father of nanotechnology.
	Google Glass is introduced.
	i-DAT develops Qualia: an arts audience feedback and evaluation tool that can measure mood and sentiment.
	The city of Plymouth is turned into a massive, multiplayer game during the transmedia event Resurgam: The Lost Pearl of Plymouth.
2014	Google is planning to invest more than \$1 billion in a new fleet of satellites that will expand Internet access to unconnected regions of the world.
	Ubiquitous connectivity is becoming the norm, call it "smart" appliances, or "the Internet of

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Things" with a shift toward mobile computing.

i-DAT hosts Young Rewired State's Festival of Code, with a thousand of the nation's young coders.

i-DAT becomes the UK partner in an international collaboration awarded € 400k by the EU Culture Programme to innovate art form and push the boundary of immersive audio-visual full-dome environment as a platform for creative innovation.

Eight years after i-DAT made a building speak, Spike Jonze releases a movie, Her, about an computer operating system so human that its owner falls in love with it. Er, her.

i-DAT's Qualia technology underpins Artory – a culture app for Plymouth that rewards users for their feedback after shows, exhibitions and gigs.

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## **Roy Ascott and The Planetary Collegium**

"When art is a form of behaviour, software predominates over hardware in the creative sphere. Process replaces product in importance, just as system supersedes structure."
— Roy Ascott, 1968

Professor Roy Ascott is a pioneering British artist and theorist. He is a consciousnessexplorer, connectivity-visionary and founding president of the research organisation the Planetary Collegium, based at Plymouth University.

His 1962 interactive artwork Video-Roget has been acquired by the Tate Gallery Permanent Collection, where it will sit alongside pieces by the most celebrated British artists of the past 500 years.

He is a big influence on i-DAT.

Roy's work focuses on the impact of digital and telecommunications networks on consciousness. He defined telematic art (art using computer/telecommunications networks) since his prophetic imaginings of a global networked consciousness as a participatory and interactive art form. Fast-forward 30 years and we are extending our networked reach to touch the edge of the solar system...

The Planetary Collegium is concerned with the advancement of art and architecture in the context of telematic, interactive and technoetic media – that's the technology of consciousness – and their integration with science technology and consciousness research. The Collegium's hub is based at Plymouth University, with nodes in Zurich, Trento, Kefalonia and Lucerne.

"In making something as immaterial as a thought into an artistic medium, Roy Ascott is instrumental in defining a set of practices that are fundamental to i-DAT's core DNA," — Professor Mike Phillips.

"Roy Ascott was among the first artists to launch an appeal for total spectator participation ... At present, Ascott is one of the most outstanding artists and theoreticians in the field of telematics." — art and technology historian Frank Popper

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