

Music 2.0: a framework to examine next-generation digital arts environments

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Abstract

In the last decade, the Internet has served to enable the explosion of social networking and new forms of creative practice. 'Web 2.0' has come to describe an online participatory culture which continues to transform value systems, undermine notions of authority and power, while simultaneously creating new pathways for autonomous creativity and innovation. In this keynote, Paul Draper discusses these phenomena through the lens of 'Music 2.0' as a vehicle to examine digital arts practice in action: from a brief historical overview of industrial and collaborative shifts since the dot-com boom & bust, through to more recent e-learning and e-research projects which profile 21st century artistry.

This presentation features a recent case study in the Fullbright-supported 'iOrpheus: Art Among Us' project (aka, the iPod Opera), held on the South Bank Parklands in August 2007. This involved the work of US Internet music pioneers William Duckworth and Nora Farrell, as well as students and staff from the Queensland Conservatorium and the Griffith Film School. A 10 minute documentary film made about the iOrpheus events will screen on state-of-the-art projection and 5.1 surround sound systems, followed by a live cross to New York to iChat with William and Nora. Film producer and director, Paul Davidson will speak about the documentary process as research, submitted as part of his MA (Honours) thesis requirements at the Griffith Film School.

KEYNOTE ADDRESS [AN EXCERPT]

Implications for higher education

The higher education sector now attracts many students eager to learn, create and prosper through increasingly familiar technologies. Degree offerings have expanded in response to such digital demand, for example, in 2007 the UK's [University and Colleges Admissions Services](#) indicates that some 298 music technology specialisations now exist across Britain's colleges and universities. In Australia, Edith Cowan's WAAPA, Griffith University, QUT, RMIT, Victorian College of the Arts and others continue to attract, retain and graduate significant numbers of artists, and according to [DEST statistics \(2007\)](#), steadily growing at the rate of 2% per year.

Meanwhile, from MySpace to YouTube, Flickr and Last.FM, an on-line participatory culture is transforming value systems and creating new pathways for autonomous innovation. In this so-called 'web 2.0' phenomenon, social networks continue to define the information society and in turn, redefine artistic career opportunities quite different to traditional training preconceptions of a former era.

Yet in music, although the romanticised 70s styled, star-driven model of the record company, the artist and the multi-million dollar recording studio is no longer widespread, the classroom reveals that many students maintain outmoded ideas of just what professional musicians do and how they make a living. Inexperience, together with the folklore of the trade magazines and mass media hyperbole continues to assert this. Similarly, faculty staff and administrators may remain decades out of touch with contemporary, perhaps puzzling new viral practices, as recently argued by MIT researchers([Jenkins, 2006](#)):

Our schools are still focused on generating autonomous learners; to seek information from others is classified as cheating. Yet, in our adult lives, we are depending more on others to provide information we cannot process ourselves. Our workplaces have become more collaborative; our political process has become more decentered; we are living more and more within knowledge cultures based on collective intelligence. Our schools are not teaching what it means to live and work in such knowledge communities, but popular culture may be doing so (p. 129).

University-based creative arts faculties rightly argue be places of higher learning: art for art's sake, not necessarily connected to commercial outcomes, but rather, to promote higher order thinking, creativity and excellence in craft. Still, neither can music educators afford to ignore the fact that many students desire vocational success and to be able work rewardingly as professional artists. Responsive training does not mean a shift away from core skills – it does however, speak directly to the imperative to acknowledge authentic contexts for artistic and intellectual craft. Graduate success will continue to demand high calibre artistry, but also fluid abilities and the technological imagination ([Balsamo, 2005](#)) with which respond to transformed, next generation two-point-zero opportunities.

Art among us – the iOrpheus project

This Wednesday's keynote by Su Baker from the [Victorian College of the Arts](#) examines the idea of 'Art schools as a new cultural economy in the information age'. In this, Su asks the questions:

What is the infrastructure for such a place and what tools, pedagogy and organisation systems do we set up to support it? How do we shift from a model of teaching a pre-existing body of knowledge to facilitating the discovery of knowledge not yet formed?

Here now I wish to attempt a partial response to Su's questions by turning to a recent experiment in this landscape, led by the Queensland Conservatorium Research Centre and its partners during June to August of 2007. This year was the 50th anniversary of the Queensland Conservatorium with celebrations and feature performances being undertaken throughout 2007. One central theme which was pursued was that of an operatic celebration of Orpheus, the mythical Greek musician. In all, there were four featured events around this theme:

- In June, Offenbach's parody of the legend [Orpheus in the Underworld](#) was performed in the Conservatorium theatre.
- In July, on the occasion of its 400th anniversary, Monteverdi's original version of [L'Orfeo](#) was performed in the Masonic Temple in Brisbane as part of the [Queensland Music Festival](#).
- And in September, the Con's major theatre production for 2007 was Gluck's famous opera, [Orfeo ed Euridice](#).

In other words, a 'pre-existing body of knowledge', preserved and re-cast to new audiences as befitting a world class conservatoire celebrating an important birthday. But the shift in modelling such a work to facilitate a deeper understanding of the Orpheus legend came in the form of a fourth project entitled [i-Orpheus: Art Among Us](#), an experimental work, a new kind of opera spanning time and space(s), using contemporary technology, opening the famous mythical themes to interpretation, echo and improvisation, and led by US Internet music pioneers, [William Duckworth](#) and [Nora Farrell](#). Let me introduce them to you:

Nora Farrell is a software designer specializing in programming web applications for the publishing and music industries, for clients such as Pearson, Thomson, Cablevision, Microsoft and AT&T. In performances and web works exploring the theme of public art for private spaces, Nora draws from net sources such as webcasts, RSS and data feeds, virtual

instruments, public posts, and the open source community to assemble her sound palette. Uniting these parallel spaces, she mixes the multiple streams live in connected performance. She also builds custom applications and virtual instruments, including the [multiuser PitchWeb](#) that allows people to play together online in real-time, and the [mobile PitchWeb](#), premiered in Tokyo in March 2007.

William Duckworth is a [Professor of Music at Bucknell University](#), a composer, performer, and author whose work is known worldwide. In 1997, Duckworth and Farrell began [The Cathedral Project](#), the first interactive work of music and art on the web. Visitors to the Cathedral site now total over four million, and the development of the project is chronicled in Duckworth's book, [Virtual Music: How the Web Got Wired for Sound](#) (2005). Duckworth's recent honors include the 2001 ASCAP-Deems Taylor Internet Award, the 2002 Award in Music from the Foundation for Contemporary Arts, and a Senior Fulbright Specialists Award awarded specifically for the [iOrpheus project](#).

Also known locally as 'The iPod Opera', iOrpheus was a public opera based on the myth of Orpheus and Eurydice and written for and with South Bank Precinct in Brisbane, Australia. From June through August, Bill and Nora worked with Conservatorium staff, undergraduates, technicians and research higher degree students to come to a different understanding of the art, to inject their interpretations and improvisations in a new kind of fluid opera and to take this out into the parklands and the local communities. Performed on iPods, mobile phones, and laptops, along with interactive installations and live performers,

iOrpheus took place on Friday, August 31, 2007 in the streets, parks, and promenades of South Bank. The performance, and the preparation leading up to it, were documented by Griffith Film School students, led by MA (Hons) candidate, film producer and director, [Paul Davidson](#). It now gives me great pleasure to present this first public screening of [iOrpheus – The Movie](#).

DOCUMENTARY FILM SCREENING



Video: *iOrpheus – The Movie*, www29.griffith.edu.au/radioimersd

WILLIAM DUCKWORTH & NORA FARRELL – NEW YORK VIDEOCONFERENCE

Everyone, please make welcome the artistic directors of iOrpheus, live from New York City – William Duckworth and Nora Farrell.

Q1PD *Bill – we've all just enjoyed the movie. Can you let us know a little more about your thinking about music, Internet culture and what led you to this point?*

A1WD Nora and I have been working on-line for about ten years. We're really happy that music 2.0 has come along because we've spent the last decade working in music 1.0. Our web project 'Cathedral' went on-line in June of 1997 – it was the first interactive work of music and art on-line. It consisted of a website, new virtual instruments that we created, and a live band that played both in concert and on-line.

Our first five years of development culminated in 2001 in a 48 hour webcast through 34 concerts on five continents. Between 2001 and 2005 we established the presence of the Cathedral band both live and online and married it to the online Pitchweb band that we had created and we gave concerts around the world – including some in Australia in 2002, in Japan in 2003 and in various places in New York in 2004/05 including the Cutting Room and the Wintergarden.

And then for the past two years, 2006 and 07, we've been working on the Orpheus Trilogy, and what you just saw was the third part of that trilogy. It began in April of 2006 as an iPod Opera that was podcast in 26 episodes ending in February of 2007. We entered the project live and on stage in Phoenix Arizona in February of 2007 and then into the streets of South Bank precinct Brisbane in August of, 2007.

In all of this work on-line, one of the things we found out is that people are willing to organize themselves into communities – look at flickr, look at facebook – and, for creative artists, what that gives us is the ability then to blur the distinction between the amateur and the professional. And it allows for elements of chance because the collective contributions of people on-line always have uncertain outcomes.

So, when Nora and I look at the future, what we're seeing is an entirely new landscape made possible by music 2.0 that involves availability, portability, collectivity, and communications, and we can talk a little more about that later if you'd like to.

Q2PD ***Nora – where is your technological imagination going to take you two. What do you think the future holds and what excites you about it?***

A2NF Our future is clearly oriented toward object oriented authoring -- that's where the future is taking us. For the next 18 months we'll be authoring courseware for three music titles, as Bill is a highly regarded textbook author as well.

The US publishing industry is currently undergoing a tremendous change that seems to me to be redefining the concept of the book as we know it. The emphasis is on providing a customized learning experience with print and digital material closely integrated as courseware, rather than the old model of the media supplemental to the print material.

So the tenth edition of his book on Music Fundamentals will be the lead music title in Thomson-Cengage's new Learning Lot portal, which is a database driven content management system which employs all of the features of what we've come to identify as web 2.0 – video, audio, blogs and RSS feeds to extend and enhance the print material. Plus we'll be providing a skills assessment piece for students that generates a custom set of practice exercises finely-tuned to their individual level and learning needs.

Bill and I are also co-editors of a new music appreciation title for Prentice-Hall. Called Music iPreciation, it's organized around the core theme of the click-wheel, and learning is reinforced by leading students to create and publish their own custom playlist that traverses music through time and genre.

I built a WIKI, which we're using to author the print version and website simultaneously. Each of our eight contributing authors posts the material and editing and annotation is ongoing. This authoring model is a first for Prentice Hall and we're finding it a really efficient way to organize and build the material. And creatively, we're throwing ourselves into the mobile phone. Bill and I feel very strongly that this is the future of computing, or at the very least, the place where we want to focus our energies as creative artists. The present state of mobile software development feels very similar to where the web was in 1996. And it isn't that hard to imagine where it could take us. And if we're right, I hope you'll invite us back in a few years to talk all about Phone 2.0.

AUDIENCE Q/A & DISCUSSION

We'd now like to take follow-up questions and discussion with everyone here today. We have wireless mics to pass around and if you wouldn't mind standing when you're using the microphone, this would be helpful for the film crew. Please identify yourself and your affiliation, and to whom you'd like to address the question. Comments, questions please?

Q3A1 You said that you were excited about some future direction in web technologies (please explain further?)

A3NF I was talking more about . . . getting very excited about mobile software. Developing applications for the mobile telephone . . . we've got our own virtual instrument called the Pitchweb which we recently debuted in Tokyo. We'll be adding a second level of interactivity to that, and debuting that in Seattle in October. And so I think that will bring us closer to our concept of integrated mobile telephones that also exchange on a one-to-one basis.

Q4A1 OK. How do you feel about compression algorithms and the reduction in audio quality and the movement away . . . or the movement into MP3 is a reduction in audio quality. Do you think that in the future that we might see a resurgence or a move back towards audio quality . . . maybe if we can get different compression algorithms that can actually handle that?

A4NF I don't think that either one is mutually exclusive of the other. If you look at iTunes itself for example, you can order the lower bandwidth version because it's a smaller file, or you can go ahead and buy the audio file version. I think what's very important for us as artists and educators is to make sure that our audience gets to hear both.

Because if you have students coming up who have never heard a 96k feed in surround sound or 7.1, they have nothing to compare the sound to. So I think as long as we maintain exposure of all types of formats and sampling frequencies, we'll be able to really run the spectrum of preserving proper audio quality.

Q5A2 Hi Bill and Nora. Seeing the iOrpheus Movie on-line now, to me feels like a kind of coming full-circle of a web-based concept that turned into live on the 31st of August this year, and now returned to the web. And having been part of that genesis, could you reflect on how you see the two and half hour event condensed back to ten minutes of YouTube video?

A5WD Well, I'm not sure we actually look at it that way. I see it more the way Paul [Davidson] sees it, which is as a new invention using the same basic material. Paul has been calling it iOrpheus The Movie, and we've been calling it iOrpheus the iPod Opera and I think those two things intersect. But I don't think they're exactly the same thing. I believe I agree with Paul Davidson about that.

CLOSING REMARKS

In closing, I'd like to thank you all for attending and providing such a stimulating round of questions and discussion. I'd like to sincerely thank Paul Davidson, to be able to work with him on the sound for the project, and also for his enlightening presentation here today. Our great thanks go to Nora Farrell and Bill Duckworth for taking their Sunday night in New York to join us here in Brisbane, and to provide us all with such inspirational insights.

Goodnight Bill & Nora. For those of you who may wish to follow up on aspects of today's presentation, here's some on-line resources that will be of use:

- If you'd like to know more about the literature and research behind the Music two-point-zero concept, this is available via vodcast subscription at [this feed address](#) (or just search the iTunes Store podcasts).
www29.griffith.edu.au/radioimersd/content/blogcategory/16/28
- For more about the iOrpheus project, its foundations, concepts, ongoing development and Blogspot activity from Bill and Nora, the iOrpheus website is [available here](#).
www.iorpheus.com
- And, if you'd like to see the movie again, this is available, both on [YouTube](#) and [RadiolMERSD](#). www29.griffith.edu.au/radioimersd/content/blogcategory/17/27

Thank you everyone.

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Contributors details

Paul Davidson is an experienced documentary maker based in Marlborough New Zealand and a writer member of APRA. Paul's earlier career was in communications engineering where he worked until studies in photography drew him to the audiovisual world. He has produced and directed numerous short pieces on a range of subjects and several award-winning documentaries. He is presently completing a Master of Arts (with Honours) in Media Production at the Griffith Film School, the iOrpheus film project forming part of his Honours dissertation. Paul describes his short iOrpheus piece as "It's documentary, Jim - but not as we know it." Email: paul@bytesize.co.nz

Paul Draper is a [Professor of Digital Arts at Griffith University](#) and Head of [Music Technology](#) at the Queensland Conservatorium. His portfolio includes strategic leadership for digital arts communities across Griffith's visual and performing arts faculties. As an educator, he has written and convened degree programs in music technology, multimedia and popular music and is the recipient of grants and awards in these areas. Paul is the Director of [IMERSD](#), the Australian university sector's premier 5.1 surround-sound recording and post-production studio, engaging in industry projects, consultancies, work-integrated learning and postgraduate research training. He publishes as an active record producer and writes on education and the arts. Email: p.draper@griffith.edu.au

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