

Communities of Inquiry: The Development of Co-Lab, Aotearoa, New Zealand

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Introduction

Co-Lab is a collaborative network of southern pacific creative communities, which fosters social innovation by connecting practitioners, technologists, researchers and the public. Founded on a unique partnership between AUT University and MIC Toi Rerehiko, arts and media trust in Auckland, Co-Lab is engaged with communication, convergence, creativity, collaboration and communities enabled through new technologies.

This initiative draws from AUT University's recently formed Faculty of Design and Creative Technologies which brings together Schools of Art & Design, Mathematics & Computer Science, Engineering and Communication Studies. It is also supported by the position of MIC Toi Rerehiko as New Zealand's leading contemporary creative media and interdisciplinary arts centre.

This relationship underpins the unique position Co-Lab occupies and highlights the potential that can be explored both locally and internationally. The small scale, modest economy and relative isolation of Aotearoa New Zealand create both limitations and opportunities. The cultural diversity and specificity of place brings richness and complexity. The slow development of information and communication systems infrastructure since the 1980s has raised challenges for artists, technology developers, communities, arts organisations and universities. While a number of specialist groupings have been formed (for example, groups representing digital artists, games designers or telecommunications users), the development of transdisciplinary groupings that might draw from the specific strengths and different frameworks brought by cultural, educational, entrepreneurial and community sectors has been limited.

Development

Partnerships between universities, industries and the creative sector are a priority for the NZ government's Tertiary Education Commission (TEC). Co-Lab has TEC

financial support for three years to develop innovative practice and new creative technology products and projects. We expect Co-lab to reach arts organisations, diverse community groups, creative practitioners, media designers, content developers, tertiary education partners, industry bodies, technology developers & suppliers and international organisations.

Initial areas Co-lab is exploring include areas of performance and interactive technologies, social and distributed networks and visualisation technologies. Our consultations have shown the need, expressed across the different sectors, to consolidate access to expertise, develop cutting edge facilities that support technological convergence and more diverse and effective opportunities for dissemination, particularly in the context of Auckland as New Zealand's largest city. We recognised that the rapid convergences that are occurring across what were previously separate disciplinary, technological and socio-cultural domains have led to problems and needs not currently addressed within what were once very separate sectors. Co-Lab, as a partnership between AUT University and MIC Toi Rerehiko, with other partners, was proposed as an innovative model that would be an effective way of addressing, gaining insight and building cultural and economic opportunities in New Zealand through these convergences.

Co-Lab is a network of partners, facilities, resources, skills and opportunities. It will use a range of premises, services and expertise from across the two organisations. These include MIC Toi Rerehiko's performance venue Galatos; the MIC Gallery; touring and exhibiting networks; a community based digital story telling lab; public projects, and the expertise of staff, independent practitioners and members of MIC Toi Rerehiko. Resources at AUT will include teaching spaces; specialist programmes, facilities, a Co-Lab space and dedicated facility; and the expertise of staff and research students. This underpins the development of a programme of workshops, research and development projects, seminars, residencies, online events, technology

developments, exhibitions, performances, innovation and access to specialist facilities and expertise.

Partnerships are critical to this development and involve arts organizations, creative practitioners, technology developers, educational institutions, commercial enterprises, industry bodies and local communities. Cultural dialogue and social innovation are critical frameworks which underpin the development and direction of Co-Lab.

Projects

We have already established a number of interdisciplinary research and development groups. These include areas of Interactive and Performance Technologies; Mobile and Locative Media; Digital Storytelling; Wearable Electronics; Visualisation; Public Use of Technology; and Real time 3D Graphics.

The Mobile and Locative Media group are focussing on engagement and participation through the use of mobile phones, mobile identity (e.g. RFID tags), location-based systems and remote sensors. Leading programmers at AUT University have been working with Co-Lab artists to develop software for mobile phone interactive screen works. This has already been tested at public events and is to be launched at MIC's Galatos venue to provide the beginning of a suite of interactive technologies for this inner city performance space. Postgraduate students also are working on setting up sensors using Sun to develop an interactive environment for VJs at Galatos, and a test space at AUT.

Wearable Electronics: This area is being developed in partnership with AUT's Textile and Design Laboratory (www.tdl.aut.ac.nz). Projects are underway in the development of smart textiles (using smart yarns and knit technologies) and the integration of electronics into clothing solutions for health monitoring and for creative applications. Experimental work has started to explore the potential of Arduino lilypad technologies, smart costuming for theatre and performance, including gaming interaction and in the use of smart inks and textile print processes.

Visualisation: Research in this field includes exploring the potential of new data capturing and processing technologies; the organisation and communication of complex dynamic data relationships; and processes of knowledge discovery enabled through knowledge engineering and the use of intelligent agents. We are

researching modes of conceptualising, organising, outputting, and experiencing data and data relationships. Informal methods of building information structures (using semantic web technologies and open source systems) to enable greater participation by non experts are also important areas of investigation. Key partnerships in this area are with the Knowledge Engineering and Discovery Research Institute (KEDRI), AUT and Nextspace, Auckland.

Realtime 3D: This group is engaged with the development of interactive Web3D, augmented reality, 3D rendering and real-time algorithms for game engines, pushing the visual boundaries and interactive experience



Constructing Purgatory, 2006. Artist, James Charlton.

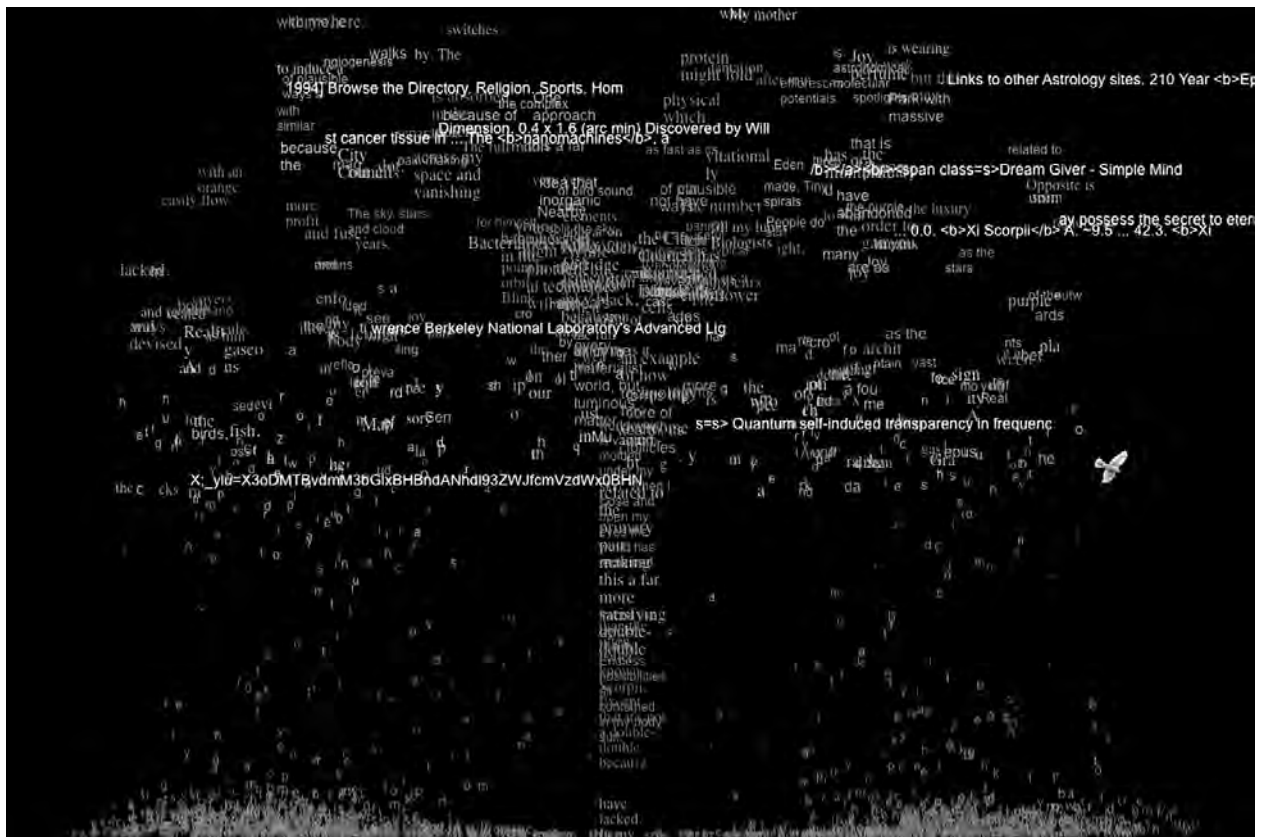
of complex virtual worlds for both real-time and offline domains. A key partner in this area is Nextspace (<http://www.nextspace.co.nz/>).

Digital Storytelling: MIC Toi Rerehiko launched a Mobile Digital Storytelling Lab this year. MIC and its partners are now staging workshops to empower people to tell a personal story using multimedia tools. This community-based education programme facilitates access, engagement and experience of digital technology

and creates new media content reflecting diverse cultural narratives. Through working with cultural communities including migrant, refugee, Maori, Pacific Island and disabled people, a developing cultural dialogue is facilitated through technology. Cultural specificity is supported through working with local traditions of oral storytelling and being prepared for political and social activism projects to be part of the mix. Through MIC's interface with the public as a new media arts organisation, content developed with the community mobile storytelling lab can be screened or broadcast to invited audiences, archived and made available for public use at MIC's public venue, online, or communicated via mobile phones or other technology.

Conclusion

The model of partnership and collaboration being developed at Co-Lab is supporting the development of a community of inquiry and a physical meeting-ground for creative and community expression, new media industries and educators that will enable the innovative and critical use of technology. As Aotearoa New Zealand's first trans-disciplinary creative technology centre Co-Lab will draw on local and international engagement to enable the development and public dissemination of hybrid ideas, research, cultural and creative practices through innovative formats, modes and networks.



World Tree Image, 2005. Artist Raewyn Turner in collaboration with Colin Beardon.