

**THE YOUTH INTERNET RADIO NETWORK:  
A RESEARCH PROJECT TO CONNECT YOUTH ACROSS QUEENSLAND  
THROUGH MUSIC, CREATIVITY AND ICT**

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Jo Tacchi is a social anthropologist specialising in ethnographic research on old and new media technologies and the development of online streaming projects. She is a Senior Research Fellow in CIRAC and a Visiting Fellow at the Oxford Internet Institute (OII), University of Oxford. Jo has conducted research on radio and the internet in the UK, Australia, India, Nepal, Sri Lanka and South Africa. She is also working with the UNESCO to test and develop 'ethnographic action research' for their ICT and Poverty Reduction Program in South Asia.

### **Marcus Foth**

Marcus Foth is a PhD candidate in the Creative Industries Research and Applications Centre at QUT. He holds a Bachelor of Multimedia from Griffith University, a Bachelor of IT (Media) from Furtwangen University, Germany, and a Master of Arts (Digital Media) from QUT. His PhD project is entitled 'Towards a design methodology for online communication networks to grow sustainable communities of place'. Marcus is also a tutor and research associate in the Creative Industries Faculty, and web designer of several commercial and community internet sites (see [www.vrolik.de](http://www.vrolik.de)).

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**ABSTRACT**

This paper proposes that interactive technologies can combine with training and enterprise development, and young people's desires for content creation, to establish a network of users across differing geographical and social ecologies, creating new cultural forms and economic outcomes. The research project described merges innovative internet design, policy analysis and ethnographic methods. Young people from urban, regional, remote and Indigenous environments will learn, network, and create their own content on a Youth Internet Radio Network, contributing to community capacity building. Analysis will describe and influence the creative, social and technical processes, and identify opportunities for innovation, enterprise development and regional sustainability.

**INTRODUCTION**

After Tasmania and the Northern Territory, Queensland remains Australia's most regional state, with half its population living outside major cities (Australian Bureau of Statistics, 2003, p. 7). Queensland is therefore ideal for modelling regional networking

and for exploring problems of youth engagement with both cultural and employment opportunities. These issues are of national significance, because all states face a ‘digital divide’ (Servon, 2002) that shadows existing city/country and ethnic/mainstream distinctions. Research that can identify how outer-metropolitan, regional and Indigenous youth can utilise creativity to address problems of social exclusion, under-employment and low participation in formal education is applicable to policy development across Australia.

This paper describes the rationale and proposed approach of the “Youth Internet Radio Network” (YIRN)<sup>1</sup> research project. The project will establish and investigate a streaming website which will be developed and hosted at Queensland University of Technology (QUT) with content produced by youth in regional Queensland.

Groups of young people across Queensland will participate in the design of the site. They will have access to, and be trained in how to produce creative content for the site. Through this network and the website, young people will be provided with a distribution platform for their locally created content. In addition, the network will allow groups of young people to interact with each other and with others, including Government, on the topics and issues that are relevant to them – through discussion forums, messaging services, notice boards and email. In essence, this project will connect young people across Queensland through music, creativity and the use of new

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<sup>1</sup> The Creative Industries Research and Applications Centre at QUT in cooperation with industry partners (Brisbane City Council, Arts Queensland, and the Office of Youth Affairs – Queensland) and local councils in Queensland has secured an Australian Research Council (ARC) grant to establish YIRN. The project proper will commence in August 2003. Further information is available at: [cirac.qut.edu.au/yirn](http://cirac.qut.edu.au/yirn)

media technology. It will allow them to learn skills relevant to new employment needs as well as providing an interactive distribution platform for their locally created content.

YIRN provides an ideal research opportunity to investigate how information and communications technologies (ICTs) are used for interaction and creativity, and thence for building new enterprises. Findings will be used to evaluate policies that inform infrastructure in regards to existing and emerging public programs such as “Networking the Nation” (Department of Communications Information Technology and the Arts, 2003) and Australia’s broadband policy (Broadband Advisory Group, 2003). Research findings will also support the development of new directions in youth policy, knowledge economy initiatives, employment and skills development. The research will add to the academic body of knowledge on the social and cultural implications, uses and possibilities of ICTs.

The aims of YIRN include:

- to establish a network of young content providers in urban, regional, remote and Indigenous locations across Queensland,
- to provide training to young people in new media content development,
- to research how young people interact as both producers and consumers of new media content and technology,
- to identify and model how different communicative ecologies within the network influence and learn from each other,
- to identify opportunities for enterprise development and regional sustainability flowing from media communication ecologies,

- to understand how culture and creativity can be a seedbed for innovation and enterprise, and
- to gauge the appropriateness of policies around infrastructure, broadband, youth policies, cultural policies, knowledge economy initiatives and employment and training.

## **RESEARCH THEMES**

In effect, the project will establish a network of media communication ecologies which differ from each other as region does from region, but which influence and learn from each other. As such, the project models a much more general shift from passive (mass) audiences towards users who interact with media in ‘read/write’ mode rather than ‘read only’. Cultural expression and production are mediated between local and global spaces. For consumption to be engaging, the product has to speak to the local cultural milieu, and to the everyday thoughts and lives of young people either embodying, contrasting or providing paths of aspiration and/or subversion.

Networking the Nation (DCITA, 2003) provided a series of initiatives to develop regional communications infrastructure. However, strategies for content creation have yet to be developed to maximise this enhanced – and other already established – infrastructure in regional Australia. Local content production provides a sense of local identity crucial to community engagement, self-respect and enterprise. This project will foster the growth of community capacity, civic engagement and social capital towards regional enterprise development at the interface of ICTs and creativity.

The following section outlines the three distinct research themes that YIRN embodies:

1. networks,
2. enterprise, and
3. policy.

## **Networks**

A new conceptualisation of the relationship between community and culture sees these not as subsidised or ‘welfare’ sectors but rather, when combined with new media networks, as fertile ground for innovation, wealth creation (Castells, 2001, Leadbeater, 2000) and the growth of social capital (Arnold, 2003, Putnam, 2000). Indeed creative activity can be seen as one important defining feature of the new economy (Florida, 2002). Technological and organisational innovation enables new relationships with customers and the public that are less reliant on mass models of centralised production and privatised consumption.

Castells (2001, p. 197) suggests the internet offers ‘the freedom to bypass the global culture’ to satisfy the needs of ‘local identity’ – it is a ‘global network of local communication’. Rifkin (2000) sees markets and capitalism as the very foundations of modern life, but argues they are beginning to disintegrate. In the new economy ‘markets are making way for networks, and ownership is steadily being replaced by access’ (2000, p. 4). Rifkin terms this the ‘Age of Access’, where servers and clients/users are replacing the primacy of sellers and buyers. Access is becoming as important as exchange, if not more so. Intellectual capital is a driving force: ‘concepts, ideas and

images – not things – are the real items of value in the new economy. Wealth is no longer vested in physical capital but rather in human imagination and creativity’ (2000, p. 5). In the new economy the high value commodities are information and knowledge. In the creative industries, local and often small scale production of content is seen as a key element in new global markets (Leadbeater, 2000). This research proceeds critically from theoretical claims such as these, to investigate the meaning to actual Australian lives of the impact and possibilities of new technology, connectivity, new forms of consumption and production, and new social formations. As such it will establish the relevance of those theories to the Australian situation. New academic theories with both policy and practical applications will result.

## **Enterprise**

The internet extends the distributional potential and reach of the content creator, hence YIRN contributes to micro- and small-business opportunity. Such initiatives may also encourage young people to stay in regional centres and country towns and to develop requisite skills and experiences for the new economy. Garlick (2001, p. 5) argues that there needs to be greater focus on the ability of regional communities to be ‘enterprising’, where they can create a local environment for investment activity to occur and generate a return – jobs, income, exports, new business growth, community cohesion, etc. Along with the economic focus of this conception, Garlick notes the critical importance of ‘untraded processes’ such as valuing social capital and networks and partnerships in the development of enterprising communities (2001, p. 7).

This project answers Garlick's call by providing a new model of local enterprise development, but one that is realistic about the cultural impediments and opportunities.

This model of local enterprise development will:

- leverage micro- and small-business enterprise development off government funded technical and human infrastructure provision,
- help communities migrate from old media and communication ecologies toward mixed old/ new media ecologies,
- seed and harvest creativity throughout the local community,
- recognise the 'deep culture' nature of demand and exploitation which in this context are not supply-driven but opportunities of growth from within the community over time, and
- learn from global experiences whilst building on local assets.

Although high level commercial outcomes are not anticipated in the short term, the potential to understand the emergence of commercially relevant components is very real.

Furthermore, in the Indigenous context, initiatives such as the Cape York Digital Network, the National Indigenous Radio Service (NIRS) and organisations as varied as 4AAA, and Goolarri Media Enterprises, demonstrate the urgency and flair with which new interactive technologies have been taken up within Indigenous communities. Yet, public policy in this context is still organised around a rhetoric of rights and subsidy rather than enterprise and sustainability. New models of local Indigenous business are needed that draw on creative cultural activities, bringing together activities that have previously been seen as unconnected, e.g. traditional cultural expression ('ceremony')

with tourism; music and performance production with broadcasting/datacasting; creative arts with training and employment; enterprise with education (Keane & Hartley, 2001). This project will contribute to existing Indigenous-originated initiatives by demonstrating how YIRN connects creative cultural expression with training, enterprise development and portfolio employment practices. The intercultural aspect of YIRN also allows for market research and analysis to be undertaken by Indigenous creative entrepreneurs.

## **Policy**

It is increasingly important to gain understanding at a deeper level of the actual processes at work locally when people become engaged with networks, innovative and creative practices and enterprise development, in order to ensure that policy initiatives are relevant and effective. Arts and cultural practices that are originated and distributed in new technology applications continue to challenge culture and media policy development worldwide. In Australia, the national youth arts and cultural policy framework (Australia Council, 1999) remains firmly meshed in supporting established art forms. Such approaches marginalise the practices of young people (Gibson, 2001) and those that have their genesis in new technologies. To develop culture and media policies that are more centred on and responsive to young people's emerging creative practices, a greater understanding and knowledge of young people's cultural environments and their applications of new technologies is essential. This research project will therefore prompt direct policy implications.

Limited research into young people's creative activities and the application and relevance of new technologies to their cultural, social and economic participation has been conducted in Australia. Hunter (1999) argues that the current use of cultural statistics applied by public policy-making bodies, such as the National Culture-Leisure Industry Statistical Framework (DCITA, 2002), are inadequate measures of young people's cultural participation because of their overt economic overlay. Alternatively, YIRN provides a multifaceted research initiative, able to progress current research methodologies and practices for the ongoing support of young people's cultural development. This research is timely as State as well as Local Governments in Australia are adopting whole-of-government approaches to cultural development where the support for youth specific cultural policies is gradually being relinquished. It is expected that the successful execution of the YIRN project will:

- develop skills for young people,
- build sustainable youth-oriented enterprises,
- help with retention of youth in regional areas,
- give voice to youth issues and a forum to discuss and debate these.

## **APPROACH AND METHODS**

### **Technology Rationale**

From a user perspective, the technology itself and the way YIRN is set up, will provide fertile ground for innovation. Lessig (2001) writes about the three layers within a communication system. For the internet these are:

1. the physical layer (computers, wires that connect them)

2. the logical or code layer (the code that makes the hardware run)
3. content layer (the content that gets transferred around and across the network).

The code layer is what makes a network of computers and servers work and it was set up initially as an 'open' architecture. Early developers of the internet did not know what the network would or should become, so they worked – through the creation of protocols – to ensure it could develop in ways as yet unforeseen. Open architecture minimised the opportunities for control on the understanding that less control led to more innovation (Lessig, 2001, p. 140). The network was built on the principle of 'end to end' (e2e) which keeps the intelligence of a network at the ends and the centre as simple as possible. The intelligence is in the applications (at the ends), not in the network itself. These features of the internet are what Lessig says creates an 'innovation commons', encouraging creativity and innovation. YIRN will be set up with an e2e architecture. The code layer will be built to ensure that those at the end (content providers) are able to develop the network to suit their own needs and innovations.

YIRN will establish a streaming website which utilises existing capacity across Queensland, adapting processes of collecting and distributing content depending upon the resources available in different locations. Essentially, YIRN will cater for various levels of streaming and digital technologies available to the content providers and audiences to establish a network based upon a mix of old/new technologies and sophisticated/basic ('fat'/'thin') means of circulating content. This will allow participation from a variety of groups with different levels of access to infrastructure and equipment while at the same time uncovering innovative connectivity solutions at local levels.

Training in content creation will provide this project with an important way of interacting and getting to know the content providers in their localities. A series of workshops will be carried out in each locality. Using computers, audio recorders, editing software, and basic HTML scripting, the workshops will encourage young people to produce creative local content such as audio (music, sound art, speech), text (stories, journals, reports, rants) and visual (photographs, artwork). All of the young people who take part will have a story to tell, a feeling, opinion or experience to express, a creative work to share based on their own lives and talents. The workshops will focus on localness – how the young people choose to express their lives and their location. A rich soundscape, supplemented by text and visuals will be streamed on the internet and archived for time shifted consumption to produce a mosaic of local content reflecting the diversity of the lives of young people across Queensland as well as their shared experiences and interests. Through the workshops young people will learn about the possibilities (and restrictions) of new technology, and through their experimentation they will shape the content of the YIRN site.

The project comprises of general, wide-ranging, background research and very specific focused research. Researchers will spend considerable amounts of time with each participating group, developing studies of each location, exploring and documenting the communicative ecologies that the young people inhabit and interact with. Each local study will be placed within the framework of the total research project allowing comparison across geographical and demographic axes. At the same time, the local studies and actions will be situated within their local, regional, state and national

contexts, including profiles of infrastructure provision, government policies and public debates on ICTs, youth, economic and development policies.

### **Method: Ethnographic Action Research**

The methodological paradigm chosen for the research is based on combining two research approaches: ethnography and action research. The authors in cooperation with colleagues from the London School of Economics (LSE) have developed ethnographic action research specifically for the investigation of ICTs and their social applications (Tacchi, Hearn, & Ninan, 2003, Tacchi, Slater, & Hearn, 2003). It was informed by fieldwork in Sri Lanka (Slater, Tacchi, & Lewis, 2002) and rural Queensland (Lennie & Hearn, 2003, Lennie, Simpson, & Hearn, 2002). Ethnography is used because of its ability to place people within a wider and holistic context – in this case the young people's interactions with new technology and their wider communicative ecologies. Action research (Hearn & Foth, forthcoming, Reason & Bradbury, 2001) is used to bring about new activities based on new understandings of situations achieved through ethnography. The ethnographic element guides the research process, action research links the findings back into the network's ongoing development and affects change.

The approach focuses on actual practices of use and interaction with technologies in the wider context of young people's lives – what we term 'communicative ecologies'.

Placing users and producers at the centre of the research process is important, if useful analytical frameworks are to be developed. For our purposes, an ethnographic approach aims to make sense of the complete range of social relationships, processes and

implications within which a project is doing its work (Bentz & Shapiro, 1998). This includes:

- the immediate circle of participants – how they are organized, how the project fits into their everyday lives,
- the wider social context of the project, e.g. social divisions within the community, language issues, community economy, social and cultural resources, community power and institutions, and
- the social structures and processes beyond the locality that nevertheless impacts upon it, e.g. infrastructure, government policies, economic developments.

The research process will be based on working with each of the local groups following a four-phase model in a flexible manner:

1. Immersion: researchers will use ethnography to understand the local youth culture, identify potential participants and build a relationship with them,
2. Initiate training: content-creation workshops and web-based activities,
3. Ongoing research: build understanding of the cultures of production and consumption,
4. Action: continue development of creative and technical activities (the network).

One of the key benefits of combining action research with ethnography is the opportunity it offers for developing the network itself. It is envisaged that if the network proves to be of value, the research will be used to develop a plan for sustainability beyond the lifetime of the research project.

Ethnographic action research works with the idea of a ‘methodological toolkit’ which contains basic ethnographic and action research methods which can be utilised as and when appropriate, including:

- Participant observation
- Baseline/background studies
- Mapping activities (relationships, uses, access)
- Content analysis
- In-depth interviews and group interviews
- Participative design

These methods will be used by the researchers in each participating location. They will spend considerable amounts of time in the field conducting research and training workshops for participating youth and other stakeholders. Because of the complexity of data sources, all data will be organised within an integrated qualitative data software frame which can accommodate the complex and flexible coding of multimedia, mixed-format data. Comparative analysis will take the form of a matrix of questions and indicators, developed over the course of the research, that indicate the kinds of processes, issues and structures that are in place and that are being constructed by and/or through the network.

## **OUTLOOK AND CONCLUSION**

New technologies always generate excitement when they are first introduced. Because they do not come pre-formed, how they are shaped in their first few years of integration into societies can have lasting effects, as was the case with radio (Spinelli, 2000).

Governmental regulation and policies also shape their development in specific contexts. The emancipatory rhetoric around internet technology echoes that of earlier technologies (Meikle, 2002, Spinelli, 2000). Meanwhile, Oakley & Campbell (2002) have described an 'internet backlash' that followed the dot.com crash, the slowing rate of take-up of the internet in the home and the lacklustre e-commerce environment. They challenge this backlash, arguing that 'we are trapped in a cycle of over-hype followed by excessive pessimism' (2002, p. 1). This boom/bust cycle occurs, because too much attention is paid to the technology rather than the uses people make of it. A United Nations Conference on Trade and Development report (2001) attributes the boom/bust phenomenon to 'hype, herd instincts and unrealistic business models', all of which have accompanied previous technological revolutions. Spectacular market fluctuations did not halt the development of earlier communications technologies, both physical (railroads, automobiles) and mediated (cinema, broadcasting). What is needed is neither evangelism nor pessimism, but an understanding of the cultural form and its social impact – a more nuanced analysis of business threats and opportunities. New technologies can allow for the creation of spaces for enterprise development by small scale and local groups and organisations. As the emphasis switches from hard and software developments to content, it is important to keep step with the various developments. This project looks specifically at content creation and the kinds of infrastructures (technical, communicative, social) that can aid active participation of young people in Australia.

If the new economy is a network economy, if the new raw material is information and knowledge, and if the new workforce needs content creation skills, how will these young people actually utilize, be a part of and develop the network we present them

with? Will it make them more employable, and will it enrich their local social and cultural lives? How do creativity, access, networks and connectivity work together – what are the results of ensuring access and training at this level to a diverse and dispersed set of groups of young people, living in urban, regional and remote locations, with different socio-economic backgrounds, gender and racial heritage? The results of this research will be significant, nationally and internationally, as it seeks to answer these questions.

## REFERENCES

- Arnold, M. (2003). Intranets, Community, and Social Capital: The Case of Williams Bay. *Bulletin of Science, Technology & Society*, 23(2), 78-87.
- Australia Council. (1999, October). *The Australia Council Framework for Youth and the Arts*. Retrieved 3 July, 2003, from <http://www.ozco.gov.au/resources/publications/priorities/youth/>
- Australian Bureau of Statistics. (2003). *Australian Social Trends* (No. 4102.0). Canberra: Australian Bureau of Statistics.
- Bentz, V. M., & Shapiro, J. J. (1998). *Mindful inquiry in social research*. Thousand Oaks, Calif.: Sage.
- Broadband Advisory Group. (2003). *Australia's Broadband Connectivity*. Canberra: National Office for the Information Economy.
- Castells, M. (2001). *The Internet galaxy: reflections on the Internet, business, and society*. Oxford; New York: Oxford University Press.

- DCITA. (2002, 22 Jul). *Cultural Ministers Council: Statistics Working Group*. Retrieved 4 July, 2003, from [http://www.dcita.gov.au/Article/0,,0\\_1-2\\_1-4\\_12445,00.html](http://www.dcita.gov.au/Article/0,,0_1-2_1-4_12445,00.html)
- DCITA. (2003, 27 Jun). *Networking the Nation: the Commonwealth Government's Regional Telecommunications Infrastructure Fund*. Retrieved 3 July, 2003, from <http://www.dcita.gov.au/ntn/>
- Florida, R. L. (2002). *The rise of the creative class: and how it's transforming work, leisure, community and everyday life*. New York: Basic Books.
- Garlick, S. (2001, 1 - 3 Oct). *The 'Enterprising Region': Policy and Practice*. Paper presented at the 25th Annual Conference of the Australian and New Zealand Regional Sciences Association (ANZRSA), Bendigo, Victoria.
- Gibson, L. (2001). *The Uses of Art*. St Lucia, QLD: University of Queensland Press.
- Hearn, G., & Foth, M. (forthcoming). Action Research in the Design of New Media and ICT Systems. In K. Kwansah-Aidoo (Ed.), *Current Issues in Communications and Media Research*. New York: Nova Science.
- Hunter, M. A. (1999). Redefining 'industry': Young people and cultural policy in Australia. *Media International Australia incorporating Culture and Policy*(90), 123-128.
- Keane, M., & Hartley, J. (2001). *From Ceremony to CD-ROM: Indigenous Creative Industries in Brisbane*. Brisbane: Creative Industries Research and Applications Centre (CIRAC).
- Leadbeater, C. (2000). *The weightless society: living in the new economy bubble*. New York London: Texere.
- Lennie, J., & Hearn, G. (2003, 9 - 11 July). *Designing inclusive communication and participation processes: Interim findings from the trial of a participatory*

*evaluation process involving diverse rural communities and organisations.*

Paper presented at the Australian and New Zealand Communication Association (ANZCA) conference, Brisbane, QLD.

Lennie, J., Simpson, L., & Hearn, G. (2002, 30 Oct - 1 Nov). *Can the participatory evaluation of new communication technology initiatives assist in building sustainable and inclusive rural communities?* Paper presented at the Australasian Evaluation Society's International Evaluation Conference, Wollongong, New South Wales.

Lessig, L. (2001). *The Future of Ideas: The Fate of the Commons in a Connected World*. New York: Random House.

Meikle, G. (2002). *Future Active: Media Activism and the Internet*. New York: Routledge.

Oakley, K., & Campbell, T. (2002). *On the Move: A Look at the Social Uses of Mobile and Wireless Communications*. London: Local Futures Group.

Putnam, R. D. (2000). *Bowling alone: the collapse and revival of American community*. New York: Simon & Schuster.

Reason, P., & Bradbury, H. (2001). *Handbook of action research: participative inquiry and practice*. London: Sage.

Rifkin, J. (2000). *The age of access: how the shift from ownership to access is transforming modern life*. London: Penguin.

Servon, L. J. (2002). *Bridging the digital divide: technology, community, and public policy*. Malden, MA Oxford: Blackwell.

Slater, D., Tacchi, J., & Lewis, P. (2002). *Monitoring and Evaluation of Alternative/Community Media*. London: Department of International Development.

- Spinelli, M. (2000). Democratic rhetoric and emergent media: The marketing of participatory community on radio and the Internet. *International Journal of Cultural Studies*, 3(2), 268-278.
- Tacchi, J., Hearn, G., & Ninan, A. (2003, 7 - 9 January). *Ethnographic Action Research: A method for implementing and evaluating new media technologies*. Paper presented at the International Conference on Communication for Development in the Information Age, Banaras Hindu University, Varanasi, India.
- Tacchi, J., Slater, D., & Hearn, G. (2003). *Ethnographic Action Research Handbook*. New Delhi: UNESCO.
- United Nations Conference on Trade and Development. (2001). *Electronic Commerce and Development Report 2001*. New York, Geneva: United Nations Conference on Trade and Development (UNCTAD).