

Low Power FM in New Zealand: a survey of an open spectrum commons

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Abstract

Low Power FM is one of the most under-researched forms of media in New Zealand. In late 2010 I sent out a self-selecting survey via two online groups, the LPFM User group on Yahoo Groups and the Radio Heritage Foundation email newsletter. This chapter provides a historical overview of Low Power FM in New Zealand and uses the results of the survey and my own experience in LPFM in New Zealand to help sketch a broad picture of the stations and services operating in this space. Minimal regulation of LPFM spectrum in New Zealand has created a form of open spectrum commons. While commons approaches can be innovative and experimental spaces, they are also subject to the tragedy of the commons. The benefits and limitations of open spectrum commons are explored, as are possible future developments of LPFM, community broadcasting, and spectrum management.

“The major positive impact of deregulation on the business of radio was just that – radio became a business, not just a recreational pastime for *enthusiastic amateurs*.”

(as cited in Shanahan & Duigan, 2005. Italics mine)

In 2003 I became an “*enthusiastic amateur*” by volunteering at a local radio station The Beach FM on Waiheke Island, New Zealand. The Beach broadcast on a full-power commercial frequency, had an established brand, and was owned by former New Zealand radio personality - Barry Jenkin, a.k.a. “Dr Rock”. The Beach ceased broadcasting in early 2008 and the frequency (99.4 FM) came up for tender in the 2008 government spectrum auction where it sold for \$380,000 - a price far out of the reach of Dr Rock, and most individuals or groups based on Waiheke Island.

By October of that same year there were three Low Power FM stations broadcasting on Waiheke Island. Two of them were “hobbyist” stations, Waiheke Wireless, broadcasting an automated playlist from a popular cafe in the main township of Oneroa; and Splash FM, an adult contemporary automated station run by a former radio engineer. The third station, Waiheke Radio, is a not-for-profit community radio station and media organisation run solely by volunteers.

Ten years after the introduction of Low Power FM in New Zealand, hundreds of enthusiastic amateurs are creating thousands of hours of radio in this spectrum. The creation of an open commons regime over

part of the low-power radio spectrum has created a space in which localized and independent forms of broadcasting have emerged, adding to an already interesting history of radio and spectrum in New Zealand, initially controlled by government, and then secondly, by international media conglomerates and overseas capital in an open market.

Low Power FM, ownership and environment

The fifth Labour Government of New Zealand was sworn into office on the 5th of December 1999, coming into power on a wave of dissatisfaction with nearly a decade of free-market and economic reforms. These reforms had been driven by the National government but had their origins in a radical market based restructuring of the economy by the fourth Labour Government a decade earlier under finance minister Roger Douglas. “Rogernomics”, as Douglas’ restructuring came to be known, was an abrupt and sweeping range of policy changes that included the cutting of agricultural subsidies and trade barriers, privatising public assets, and controlling inflation through monetary economics. Many in Douglas' own New Zealand Labour Party saw these changes as a betrayal of traditional Labour ideals. By the election of the fifth Labour Government ten years later a new philosophical approach was being adopted by many of the party based on principles of Third Way politics being championed at the time by Bill Clinton in America and Tony Blair in the United Kingdom. Broadcast Minister Steve Maharey, a leading proponent of the paradigm, sought for the establishment of much closer partnerships between state and civil society organisations, and rebranded the Third Way as Social Democracy (Maharey, 2001). Citizen engagement and increased access to communications technology were essential in Maharey’s vision, as he articulated it to the Foundation for Policy Initiatives in Auckland in 2001:

The implications are clear – government will be required to promote universal access to information and communication technology to ensure there is equal access to information and thereby prevent the stratification of society into haves and have nots.

Shortly after this speech the Ministry of Economic Development’s (MED) Radio Spectrum and Broadcasting Policy Group released a discussion document entitled *The Future of the FM Band* which would eventually lead to the development of Low Power FM broadcasting in New Zealand.

For over a decade communications policy treated spectrum solely as a tradable commodity in an open marketplace. It is crucial to note the impact on this program of Maori spectrum claims, that were at the time of Maharey’s thinking arguing for greater universal access to the means of communication for public discourse and involvement. Zita Joyce argues that the earliest Maori claims to spectrum came about in direct response to deregulation of radio spectrum and the reframing of radio spectrum as a saleable object (Joyce, 2008). On March 9th, 1999, twenty days before the Crown was preparing to auction the rights to manage the radio spectrum in the two gigahertz range, Claim Wai 776 was lodged by Rangiaho Everton concerning the government’s monopoly right to trade radio spectrum without prior Maori consultation. Everton’s claim was unique, arguing that spectrum was a space where the local cultural transmission of knowledge provided tangible communicative and economic benefits to a local population. This local position was in direct contradistinction to the increasing commodification of spectrum by the government

which had opened up global flows and international ownership. Conceiving spectrum not solely as a tradable commodity but also in terms of cultural communication in the public sphere aligned well with Maharey's conception of a "mixed economy of broadcasting" in which cultural, social and commercial values of communications technology would intersect.

The majority of radio broadcasting in New Zealand is highly developed as a financial commodity and is largely controlled by a co-operative duopoly¹ consisting of on the one hand APN News and Media (APN) in partnership with the Australian Radio Network (ARN), and on the other MediaWorks, owned by Australian private equity corporation Ironbridge Capital. APN's parent company is Clear Channel Communications in the USA, the largest radio station owner in that country with over 1,200 stations in its portfolio (Rosenberg & Mollgaard, 2010). Ironbridge Capital is an Australian private equity investor that largely invests in buyouts of medium to large businesses. In 2007 Ironbridge achieved a full takeover of MediaWorks which allowed it to delist the company from the NZ stock market² (Drimmen & Niesche, 2007).

The duopoly has also extended into much of the content of New Zealand commercial radio as well. There is little musical diversity in the radio offerings available from the bulk of high powered stations in New Zealand. Brendan Reilly (2011), has recently observed that even with the adoption of a voluntary 20 percent quota for New Zealand music, the amount of New Zealand music played on the ZM network (broadcasting in 19 markets across the mainland) is still relatively small with only 9.8% of all music originating from New Zealand and over half of that coming from just five artists. Seventy-four percent of the musical content across ZM originated from the USA and the UK.

It was arguably the lack of options around ownership, the relatively low amounts of local content, as well as the Maori claims in a Treaty of Waitangi Tribunal³ that inspired Maharey to consider after fifteen years of deregulation to facilitate Low Power FM broadcasting in 2001.

The General User Radio Licence

There is no definitive source for information or statistics on LPFM stations in New Zealand. The broadcasting of LPFM requires no formal process of registration with the government or any official regulatory agency. Currently the best two sources of information on existing stations are the *NZ Low Power FM Broadcasting Community Open Source Knowledge Base*, which lists 261 stations, and *The*

¹The two entities have joint ownership of The Radio Bureau, a research and sales agency that provides consultancy services to radio in New Zealand.

²In 2011, Stephen Joyce, Communications Minister for the National Party and co-founder of MediaWorks granted the two largest owners an amendment to their 20-year leases to pay for frequency renewals in five instalments plus interest rather than in full. This was after a financial report by accountancy firm Deloitte, that looked at the impact on the two dominant companies of the advertising slump after the global financial crisis, reported that while the lump payments would affect their profitability their operations "should remain viable in the long term" (Deloitte modelling report: <https://docs.google.com/leaf?id=0B6Pi1w-D4ydLOTQ1MGNjY2U0MTQ3Yy00MzY2LWI1MWEtMmEyN2ZiOGViNGNh>).

³The Waitangi Tribunal was established in 1975 by the Treaty of Waitangi Act 1975. The Tribunal is a permanent commission of inquiry charged with making recommendations on claims brought by Maori relating to actions or omissions of the Crown that breach the promises made in the Treaty of Waitangi.

Radio Heritage Foundation which estimates that there are 250 to 300 active broadcasters. These two sources are for the most part user-generated and contain large amounts of defunct station listings and out-of-date information. I estimate that there are about 150 LPFM stations currently broadcasting across New Zealand.

The General User Radio Licence (GURL) is a self-applied licence to broadcast radio content at very low wattage in New Zealand. The licence was established in 2002 after the Ministry of Economic Development's Radio Spectrum and Broadcasting Policy Group released a discussion document entitled *The Future of the FM Band* in 2001. This document sought input into the use of Guard Bands at the lower frequencies on the FM band from 88.1 to 88.7 (7 frequencies), and the higher band from 106.7 to 107.7 (11 frequencies). These bands were essentially wasted spectrum, but could be suitable for low power broadcasting that would not interfere with the commercial spectrum between them or the aviation and civil uses outside the band. The Broadcasting Policy Group was considering three alternatives for licensing Low Power FM in New Zealand:

- i. utilisation for "in-fill" coverage in order to expand the coverage of high and medium power FM broadcasting in some areas;
- ii. for "very modest" non-commercial broadcasting. The low power could ensure a true 'local' flavour at low cost;
- iii. operation of a "very modest" commercial broadcasting service on a localised basis. Again the low entry cost could be attractive to small-scale broadcasters.

A large number of respondents to the document expressed an interest in using portions of the Guard Band for both commercial and non-commercial localised low-power services. The existing full-power community broadcasters in New Zealand, the "Access" stations, argued at the time that these frequencies would not provide sufficient coverage to warrant NZ On Air funding - a somewhat expected rent-seeking behaviour given that such localised stations could quite possibly create content complying with Section 36C of the Broadcasting Act 1989 and thus be eligible to compete for already limited funding for community radio. This legislation requires that the government supply the means to ensure that a range of broadcasts are available to provide for the interests of women, youth, children, persons with disabilities and minorities in the community including ethnic minorities. Currently NZ On Air will only consider stations with potential audiences of over 50,000 as eligible recipients for such funding, and Access stations have continuously lobbied for this arbitrary listener quota to be retained.

Nearly all respondents considered that there was a need to manage the use of such frequencies, to ensure they were being used for their intended purpose and did not exceed power restrictions. There were mixed views on whether these frequencies should be made available free of charge, or through allocation of licences by auction (as is done with NZ's commercial frequencies) or in return for a fixed fee. The Radio Broadcasters Association (RBA), a political lobby group for commercial broadcasters, argued against open access to spectrum, lobbying instead for a fee system to provide for compulsory registration of LPFM operators and an initial compliance audit along with regular reviews.

In April 2002 the General User Radio License came into effect. Radio broadcasting in the Low Power FM band was to be made freely available, in an openly accessible spectrum commons, and with restrictions around wattage and liability. The current restrictions are small enough to list in full here:

- Frequencies only within the Guard Band: 88.1 to 88.7 and 106.7 to 107.7
- 1 watt maximum output
- Within a 25 km radius of any broadcast transmitter there must be *no more* than one low power FM transmitter broadcasting substantially the same programme (including simulcast or re-transmission) as that broadcast transmitter.
- Only transmissions that are broadcasting, as defined in the Broadcasting Act 1989, are permitted.
- Low Power FM transmitter operators must broadcast the contact details of the person responsible for the transmissions at least once every hour.
- Frequency use is on a shared basis and the Chief Executive does not accept liability under any circumstances for any loss or damage of any kind occasioned by the unavailability of frequencies or degradation to reception from other transmissions.

Frequency use on a “shared basis” established the LPFM spectrum commons. In response to the frequency spillover problem the government suggested that “coordination between users can minimise the risk of interference between services”, suggesting user groups or associations be established to “coordinate installations for the equitable utilisation by all users of the available frequencies.” (MED 2004). The implementation of the GURL opened up a small space for highly localised broadcasting to emerge across New Zealand, creating a political and social experiment in the adoption of an open spectrum commons for FM radio broadcasting.

LPFM and the open commons

The *New Zealand Radiocommunications Act, 1989* ushered in an almost fully deregulated open market for the licensing of high-power spectrum rights in New Zealand, initiating an often talked about but rarely implemented experiment in the use of auctions to distribute private property rights over spectrum. Winners of spectrum auctions gained twenty year ownership rights over channel assignments, yet the winners of such assignments were also free to transfer or trade property rights as well - at the time a globally unprecedented step.

The auction process, for the most part, favours existing media organisations with deep pockets as well as incumbent owners. In the first auction in July 1990 for 164 AM and FM frequencies, of the five available Wellington⁴ FM frequencies, the average winning bid was \$478,845, with the lowest going for \$120,111 and the highest for \$821,001. The total for all tenders in the AM-FM auction for that year was NZ\$ 4.755 million (Meuller, 1993). As I mentioned in the introduction, on Waiheke Island (part of the Auckland radio market) the frequency 99.4 FM, which had been originally engineered to cater for island residents, sold for \$380,000 in October of 2002 to be used to broadcast in Mandarin to the growing Chinese populations of Howick and Southern Auckland. The expensive fees paid for entrance into much of the

⁴The second most populated city in New Zealand.

New Zealand commercial spectrum market, and the earlier strict state and government control over radio spectrum, combined with an extremely limited availability and strong requirements for establishing non-commercial stations in New Zealand, has meant that for many, public access to the production of radio communication has rarely been available.

In contrast, the introduction of the General User Radio Licence in 2002 has facilitated access to radio spectrum free of charge and enabled the development of a variety of small to medium sized stations and services to emerge across the country. These stations consist of an eclectic range of broadcasters, from hobbyists to fully fledged community radio operations; Christian broadcasters to university based radio training stations. On one end of this spectrum is the lone enthusiastic amateur: automated, geeky, and with a niche audience. Chomsky FM, for example, a no longer extant Low Power broadcast that emanated from the Grey Lynn neighborhood of Auckland, broadcast speeches and talks by the linguist, philosopher, and political activist Noam Chomsky for 24 hours a day. While at the other end of the spectrum there are full community based stations like Waiheke Radio. This community based non-profit consists of approximately 26 unpaid volunteers. These volunteers contribute over 120 hours of time to the station per week, nearly the equivalent of three full time positions. Static FM, organised and administered by AUT University's radio programme has up to 40 students and staff during courses. Of the eight stations that identified in my survey⁵ as "community stations" (none of which were on the NZ on Air list of approved community stations), the average number of volunteers was 18.

In spirit the GURL was introduced to enable access to spectrum for those who were unlikely to be able to afford it under an auction process dominated by wealthy incumbent broadcasters. This has not stopped some independent locally based operators from attempting to create localised commercial broadcasting models. Chris Diack, a longtime broadcaster from Southland continues to run Classic Gold Radio often remotely from a fully operational iconic Kiwi caravan equipped with LPFM transmitter and generator. Diack's mobile LPFM has recently assisted the Brighton community in Christchurch which was badly affected by the earthquakes of 2010 and then again, more devastatingly, in 2011, broadcasting local civil defence and other community based messages on the radio (Cassandra, 2011). Diack has long expressed his model of LPFM radio as a *community commercial model*. Two thirds of the stations in the survey identified as being run as not-for-profit; although in some cases this seemed to imply that while they were trying to make profits, they had as of yet ... not made any. Four stations were incorporated societies, and four stations were administered by charitable trusts.

But, the freedom and openness of LPFM frequency in New Zealand has also allowed for owners of full-power commercial frequencies and stations to occupy LPFM frequencies. These have been for such purposes as to recruit and develop local volunteer DJ talent for eventual paid work on the commercial full-power station; or as in-fill coverage, neither of which is against the licence. This type of behaviour has received a fair bit of criticism among LPFM groups in New Zealand. A regular topic for discussion is debating amendments to the GURL that would prevent existing holders of full-power spectrum from utilising space in the Low Power FM band, but recent changes to the license have not included any such provisions.

⁵In late 2010 I sent out a self-selecting survey via two online groups, the *LPFM User group* on Yahoo! Groups and the *Radio Heritage Foundation* email newsletter and received 18 responses to 19 questions.

In the more densely populated centres across New Zealand there can be considerable jostling and frequency spillover between competing LPFM broadcasters. An example of the types of problems that can arise from the open commons approach to LPFM occurred in New Plymouth in 2008. On October 14th 2008 *The Taranaki Daily News* ran an article entitled, “Tune in, turn on, get miffed”, a story about a local frequency spillover situation that was occurring in New Plymouth. The ‘complainant’ had been broadcasting for over two and a half years, and was listened to by “taxi drivers, rest home residents and older people who appreciated the old style music and absence of advertising” (Scott, 2008). This station started having its signal overpowered by a nearby station, One Christian Radio⁶. Chris Brennan, a compliance manager from the MED Radio Spectrum Management Group, quite rightly repeated to the reporter that the terms of the LPFM licence clearly stated there was no interference protection and that two stations could broadcast on exactly the same frequency if they wanted, and he repeated that while the ministry encouraged a level of co-ordination among stations they were under no liability to intervene regarding reception problems. Self coordination eventually succeeded in New Plymouth and the two stations resolved the interference problem.

This story initially came to my attention through the *LPFM User group* on Yahoo! Groups. In the discussion that ensued, many expressed that until such time as Radio Spectrum Management modified the GURL to include some mandatory requirements, situations like this would only increase or get worse, implying that in more crowded environments the so-called *tragedy of the commons* would ensue. Recently the New Zealand LPFM Society, a non-profit group that meets periodically in Auckland has begun accepting and reviewing interference complaints which it then publishes on its website as a kind of ‘name and shame’ campaign⁷. A change to the GURL in 2010 has also reduced the former 300 kHz spacing to 100 kHz, effectively allowing more stations to broadcast in the band. As urban and suburban populations become more dense and with the ease of acquiring ready made and cheaply imported LPFM kits, more and more communities and groups will acquire the tools, skills, and individuals to locally broadcast. The commons is increasingly becoming more crowded but it has, so far, also proven fairly effective at governing itself.

Naom and Benkler have identified two approaches to spectrum management that often materialise: *open access* (Noam, 1998) and *common property* (Benkler, 1998). Open access describes a regime where anyone has access to a specified block of spectrum and nobody controls or limits such access, although payment of an entrance fee may be exacted to self-regulate congestion. Common property regimes promote spectrum as a common pool to be managed by users in a cooperative fashion, much like fish stocks, common pastures, etc., and are legitimised by governments which define their boundaries but play minimal roles in governance or in managing interference. The GURL creates the conditions for the latter common property regime. Wattage is limited to try to lower congestion and interference and user management is encouraged. New Zealand is currently the only country I know of with available open property bands for the broadcast of FM radio.

⁶One Christian Radio in an earlier article from October 8th, 2006 claimed to cover up to 75% of the city of New Plymouth. The urban population of New Plymouth is estimated at 51,000 so One Christian Radio is possibly broadcasting to a potential audience of over 38,000 people, and in fact quite few of the stations that responded to my survey had potential audiences of around this number.

⁷New Zealand LPFM Society: <http://www.lpfmz.com/>

Critics of the commons will inevitably refer to Garrett Hardin's now famous 1968 text, the *Tragedy of the Commons*, where Hardin argued that an open-access resource will always ultimately be over-exploited and subsequently degraded due to self-interest. While true commons are rarely observed in practice, Benoît Freyens (2009) has argued for a more granular approach to describing spectrum regimes and proposes that a wider vocabulary will assist "reform-minded countries" with a "near continuum of policy-options" (Freyens, 2009). He argues that while government control is an inescapable feature of any spectrum regime it is the degree to which intervention limits the commons that is valuable.

The limited scope of the LPFM commons may eventually result in two pressures from users and creators upon future spectrum allocation policy. On the one hand commons' are often sites of innovation (Freyens, 2009) and the GURL has in a decade created a truly local space in the otherwise non-accessible world of New Zealand radio for access, innovation, and a communicative determination to flourish. But on the other, the combination of the GURL's power limitations plus government and tax-payer supported funding decisions based solely on audience numbers impossible to achieve under the GURL, serves to further deter improvement of the economic conditions of most Low Power FM stations, commercial or non-profit community based. As some stations grow and become essential parts of their audiences lives and necessary tools of local community voices, I anticipate stations and communities eventually lobbying for more rights over greater pieces of the spectrum, and possibly for a power increase, although one has recently been granted⁸. Funding agencies need broader definitions and open minds to review a funding criteria to fit the changed landscape of community media. The current government appears to have very little time for reform or the development of broadcasting policy, particularly around radio, and is instead treading a well worn path towards cutting funding for the national public service broadcasters while diverting money towards a long overdue investment in national broadband internet infrastructure.

Conclusion

Most New Zealand LPFM stations display some sincere desire to engage and serve local communities, whether those communities are geographical like Waiheke Radio or audience-focused like UP FM in Auckland - a station for the local dance music community. Sixty percent of the stations that I surveyed reported playing some local music and many of them received NZ on Air's *Kiwi Hit Discs*. Most see themselves as offering an alternative to what is offered by commercial providers, although there are few Top 40 stations, and quite a number of Adult Contemporary hobbyist stations that imitate mainstream commercial station playlists and standard radio rotations.

An Australian study, "Community Media Matters: An audience study of the Australian community broadcasting sector", reported a strong desire from Australian communities for more local media ownership as well as for more diversity of content (Meadows, Forde, Ewart, & Foxwell, 2007). A similar community oriented study in the USA by Torosyan and Munro (2010) looked at the viability of local content in community radio, particularly news content, and found that residents of small towns and rural areas generally listened to a wider variety of radio programmes than respondents who lived in moderately

⁸The maximum power output for LPFM has been raised from .5 to 1 watt.

populated or larger cities and suburbs. Torosyan and Munro also report that the following criteria were considered as highly important features of local radio:

1. Speed and reliability of emergency information including weather forecasts
2. Caring about listeners
3. Being a reliable source of local news and information
4. Friendly personalities

While the least important features included:

1. Covering local high school sports
2. Offering contests, prizes, etc.
3. 'Celebrity' radio personalities

Their study also reported a majority of listeners demonstrating high levels of satisfaction with their local radio service, with over 80% of respondents reporting that they would greatly miss the station(s) if they disappeared from the airwaves.

New Zealand, is a country subject to much seismic activity, large storms and subsequent floods. Six stations that responded to my survey expressed frustration with a lack of response from officials after making enquiries about how to provide more Civil Defence services. Five stations already had some processes in place including official relationships with the Ministry of Civil Defence. Community based stations with volunteers tended to be the most prepared to serve in this capacity as their diverse membership includes locals motivated to participate in community broadcasting of civil defence messages, and locally related topics like marine weather conditions, etc.

A general lack of scholarly or reformist policy approaches enable mainstream media lobbyists and NZ on Air to ignore media such as LPFM, or worse dismiss it with claims of amateurism, and insignificance. New Zealand's cultural funding agency, NZ On Air, maintains a stated favouritism towards the funding of commercial popular music videos with "international appeal". To my knowledge only two radio shows out of the 25 funded by NZ on Air in 2011 have been made available for rebroadcast on community or access stations: Te Puutake - a Maori and Pasifika youth oriented show, and Upload - a NZ youth oriented music show⁹. Only two of the stations that responded to my survey played either of these two shows, and it is not readily apparent through the NZ on Air website as to how to contact the producers for distribution. While five stations reported playing music from *NZ Hit Discs* created and distributed by NZ On Air, when questioned about playing other pre-recorded shows, 95% of stations responded yes, with most citing that they replayed shows from overseas.

NZ on Air consists of a plethora of irregular and contradictory policy statements and positions in regards to what its mission is and what it funds. In regards to community radio, it rather arbitrarily discerns between "community broadcasting" and "access broadcasting" but fails to note any substantial distinction of what constitutes *community* as opposed to *access* radio, or why one is particularly privileged for funding over the other. I have suggested to the ministry in a review of funding in 2008

⁹Upload has recently stopped production due to funding cuts.

that these assumptions about the landscape of “radios” are not founded on any formal qualitative or quantitative analysis of the sector and that such research was currently lacking in NZ¹⁰. The assumption that only the “access” philosophy of media can contribute to the communicative social good should no longer be accepted, particularly since in such a vastly changed technological radio environment NZ on Air are relying on definitions of access and community broadcasting that they first developed over 30 years ago.

While the radio deregulation and spectrum auction experiment is nearing its 25th birthday, the adoption of LPFM broadcasting and the birth of a spectrum commons is turning 10. It is a good time to reflect on the experimental approaches that the organisation of spectrum has undergone in New Zealand. The auction process and the early development of an open access radio commons, have been innovative and valuable case studies in managing a spectrum resource subject to scarcity. Commercial radio in New Zealand is feeling the pressures of an increasingly competitive and changing media landscape in an economic downturn, and its reliance on overseas capital structuring is adding to those pressures. The experiment of an auction for spectrum rights and almost totally unregulated ownership has reduced the civic and local usage of much of the radio spectrum in New Zealand. LPFM on the other hand emerges, and one would have to say flourishes, with almost no official funding and little commercial potential. One of the questions now facing broadcasting in New Zealand, has to be how to expand on this experiment for the next decade; should we widen the commons? And can local media serve to re-balance the convivial, civic, and social functions of groups within society by ensuring adequate access to the means to communicate among ourselves quickly and effectively.

¹⁰The most recent NZ On Air Public Perception Research Quantitative survey undertaken in April 2010 still failed to ask one question about radio, instead emphasizing television and music operations.

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