

10 November 2000

Ms Janet Holmes
Committee Secretary
House Communications Committee
Parliament House
CANBERRA ACT 2600

Dear Ms Holmes

Radio Industry Inquiry

I am writing in response to your request for submissions relating to the public inquiry into the "adequacy of radio services in regional and rural Australia and the extent to which there is a need for the Government to take action in relation to the quantity and the quality of radio services in regional and rural Australia...".

1. ntl and its Role in Delivery of Radio Services

ntl is a company recently listed on the New York Stock Exchange (ntl previously had a NASDAQ listing) with a range of communications interests in Australia, the United Kingdom, Ireland, Europe and Asia, encompassing telecommunications, broadcasting, radiocommunications, interactive services (ie. datacasting) and the Internet. Internationally, ntl has been at the technical and commercial leading edge of digital broadcasting, and is a service provider and multiplex owner in respect of both digital television and radio services.

In Australia, ntl is the owner and operator of the National Transmission Network (NTN) purchased following a tender process from the Commonwealth Government. The NTN consists of broadcasting transmission infrastructure which was established for the purpose of delivering ABC and SBS television and radio services. The NTN consists over 580 sites Australia-wide and delivers television and radio services to over 98.5% of the population.

The NTN is a key resource for both the national and commercial television and radio broadcasters delivering all analogue ABC

and SBS television and radio services and some commercial television and radio. In addition, the network provides infrastructure for the services of community broadcasters, telecommunications and emergency services providers. The NTN consists of ntl-owned sites and sites owned by other landlords. ntl has entered into arrangements to either construct ntl facilities or share existing facilities at non-ntl sites.

As part of its offer to the Commonwealth to acquire the NTN in 1999, ntl established a \$5 million Regional Communications Partnership (RCP), which following discussions with the Federal Government as to its most effective utilisation, became the joint Commonwealth-ntl \$10 million RCP announced in the May 2000 Budget. The purpose of the RCP is to provide assistance to self-help re-transmission groups, typically small rural communities to obtain access to NTN facilities for the purpose of re-broadcasting national TV and radio services via subsidised access to NTN infrastructure.

As stated above, ntl is the transmission provider for the ABC and SBS delivering ABC Radio National, Local, JJJ, Classic FM, Parliamentary and News Network (News Radio) and SBS Radio services throughout Australia. ntl's radio transmission network is even more extensive than its television network, as it has the potential to cover more than 99% of the Australian population. Of its 580 transmission sites throughout Australia, 80% are located in regional/rural Australia. ntl also delivers radio services to areas outside Australia via its HF facilities at Shepparton and Brandon.

Given that the provision of radio transmission to ABC and SBS in both metropolitan and regional Australia is a key part of ntl's business, ntl is keenly interested in the present inquiry, particularly in "the potential for new technologies such as digital radio to provide enhanced and more localised radio services in metropolitan, regional and rural areas".

2. Potential of Digital Radio Transmissions

Digital transmission technology provides the opportunity for content providers to deliver multiple services via one transmission signal. While analogue transmission technology requires one content stream per transmitted signal, digital technology allows multiple content streams per transmitted signal and hence the opportunity to deliver greater content to the public for similar transmission costs.

In the UK, ntl operates a Digital radio multiplex for "Digital One" - the UK's first commercial digital radio licensee, which provides coverage at a national level. Types of content broadcast include: Soft Rock, Classical Music, News, Jazz, Talk, Data, Schools, Announcements etc. This programming can be sourced locally or nationally. For example, local content (news, community announcements, local sports etc) can be multiplexed into a content stream with other syndicated sources (international or national news, racing etc) or the content could be generated locally. The transmissions also include program-related data such as Electronic Program Guides, augmentation of program material eg racing information or sports results. UK transmissions are utilising the Eureka Standard.

The policy parameters for the implementation of digital radio broadcasting (DRB) are still being developed by the Federal Government and radio industry. While the Government has announced the adoption of the Eureka Standard for DRB and reserved spectrum (L Band) for digital radio transmissions, there are a number of issues associated with the introduction of digital radio which are impeding its implementation. Perhaps most importantly, industry must be convinced that a robust business case exists for the required investment (content production, distribution and transmission).

a) Reservation of L Band Spectrum

Spectrum in the L Band is ultra high frequency at around 1.45GHz. While this spectrum would be adequate for use in metropolitan areas, it has the disadvantage of limited reach and would not service rural and regional areas adequately when compared with existing AM/MW or FM/Band II transmissions without the introduction of significant additional facilities which could be prohibitively expensive.

Consequently, there have been requests from potential digital radio broadcasters for VHF spectrum to be allocated to digital radio broadcasters for use in regional and rural Australia. In particular, opportunities are presented by channels 5A and 9A and channels 0,1 & 2 which will be vacated once the simulcast of analogue and digital TV transmission cease. However, allocation of Band 1 spectrum is subject to restrictions and requires negotiation at International Level. VHF has been used successfully in the UK for the rollout of their DRB.

The issue of spectrum availability is further exacerbated by the legislative requirement for TV broadcasters to simulcast digital and analogue television services for a period of 8 years. This means that broadcasting spectrum will be at a premium at least until 2012. However, this may not be such an issue in some parts of regional rural Australia where more spectrum may be available in markets where there are less than three commercial television services.

It is important to note that if digital radio operates in the VHF band for regional and rural areas, the coverage, for the most part, will be the same as analogue. This means if the current sites were fitted with digital radio transmitters operating in VHF, 98.5% of the population would still be reached.

b) Eureka Standard

The Australian government has announced its intention to adopt the "Eureka 147" standard for DRB transmissions. This standard can be employed over a wide range of frequencies ie UHF & VHF. However, as suggested above, L Band is particularly suited only to transmissions designed for local coverage rather than the wide area coverage required for rural and regional Australia. While transmissions in the VHF broadcast services Bands I & II may need to compete for spectrum in some geographical regions with FM & TV broadcasting, their extensive coverage potential/capacity for digital radio delivery means that they are deserving of serious consideration.

The lower end of the VHF broadcasting services band(s) is prone to increasing man-made electrical noise effects (impulse noise) as frequency decreases and so employing Eureka 147 becomes less attractive. Consequently, the Government's DRB Planning and Steering Committee has investigated recent developments in Japan which included the ability to make a digital radio broadcasting standard more flexible yet more robust at the lower VHF channels. Both the inadequacies of L Band propagation characteristics and the issues associated with the Eureka standard in Bands I & II have resulted in delays in the implementation of DRB.

c) DRB Implementation Timetable and Process

The implementation of digital television has been predicated on a "conversion" of existing services from analogue to digital format over an 8 year period. Ultimately, digital TV is seen as a more attractive product than analogue, providing the viewer with higher quality pictures and allowing program enhancements and new products such as datacasting. Digital television, like radio also has the potential for more efficient usage of spectrum as a number of services can be transmitted simultaneously within the 7 MHz bandwidth of a single broadcasting channel using multiplex technology.

However, while digital radio has the potential to deliver additional functionality (ie more services, datacasting etc) the cost of building new infrastructure to introduce these new digital services is high (particularly if seeking to achieve same coverage using L Band) as is the cost of simulcasting for a specific period. Simulcasting allows consumers the time and opportunity to adapt to the new technology and more importantly, to purchase the receivers required to receive DRB signals. A conversion model using L Band would require the duplication of existing infrastructure plus the establishment of "in-fill" translators, a very expensive path to achieve duplication of existing services. Hence there is general uncertainty in the radio industry about the business case for a "conversion" approach based on the television model.

ntl's view is that the more likely DRB implementation model is one which sees the introduction of new digital services competing directly with analogue radio broadcasters. In metropolitan markets and regional population centres, this could be achieved utilising the L Band; the lower frequency VHF bands would be required to reach out into the less populated areas of regional and rural Australia. However, until the standards and spectrum availability issues are resolved, the introduction of DRB will be some way off.

The situation is also exacerbated by the limited resources available to the Australian Broadcasting Authority (ABA), the national authority responsible for the planning of the use of spectrum in the Broadcasting Services Band. The ABA is currently working to a very tight timetable to deliver spectrum planning for the rollout of digital television into regional and rural Australia. It is ntl's view that the ABA may not be currently resourced to undertake planning for

DRB rollout in the immediate future. An increase in priority of the rollout of DRB may require a commensurate increase in the resources available to the ABA.

3. Increased content for Regional Australia

ntl notes the current concern in relation to the availability of content for regional and rural Australia . While ntl is not a content provider, ntl wishes to remind the Committee that transmission infrastructure is in place to deliver additional content to almost all the populated areas of rural and regional Australia. This infrastructure consists of not only ntl sites but also the infrastructure of other commercial broadcasters. However, in the case of the NTN, the capacity exists to transmit throughout Australia other broadcasting services at NTN facilities. Currently, the NTN is responsible for providing near-ubiquitous coverage for ABC Radio National and regional/local radio services, with substantial national coverage of ABC Classic FM and less coverage for each of JJJ, News Radio and SBS Radio. This current infrastructure would require further augmentation through the provision of DRB transmitter and antenna systems etc.

Delivery of additional national services however, depends on government policy in relation to the reach of such ABC networks as Classic FM, Parliamentary and News and JJJ and SBS radio, further into regional and rural Australia. The primary approach adopted by government to broaden service coverage involves funding the national broadcasters to obtain managed transmission services from providers such as ntl. This approach has been utilised by various Governments to deliver existing services of the ABC and SBS networks further into regional rural Australia (eg. expansion of SBS TV to all population centres above 10,000 through the Television Fund).

The Government has also utilised the "Self Help" model to extend the coverage of ABC and SBS television and radio transmissions. Under this model, the Government funds (either wholly or in part) communities to build and manage their own transmission services. Self Help tends to be limited to national services; commercial decisions tend to drive the delivery of commercial TV and services to regional rural Australia.

ntl understands that there are a number of particular interest groups seeking to expand the delivery of their services into regional and rural Australia eg racing radio etc. As discussed

above, services such as these could be delivered in the future as part of a multiplexed signal which carries more than one digital service.

If there is any further information which I can assist you with please don't hesitate to contact me on (02) 8425 4601 or email: clive.morton@ntla.com.au. Should the Committee be interested in discussing this submission or any other relevant issue further, ntl would be happy to appear before the Committee in person.

Yours sincerely

Clive Morton
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