favour of the public interest in protection of sources as a better solution.

Andrew Robson, a Melbourne solicitor, also raised the interesting and somewhat alarming new practice being used by Federal authorities to force disclosure of sources by threatening journalists with a charge of "aiding and abetting the commission of a crime" under section 5 of the *Commonwealth Crimes Act*.

Free speech

rofessor Cheryl Saunders of Melbourne University delivered a comprehensive paper on High Court decisions on constitutional reform in relation to the recognition of media rights. This paper was complimented by one by Professor Mark Armstrong and Vanessa Holiday of the same university. These papers raised a number of questions including:-

- 1. what are the freedoms which are inherent in the freedom of political expression which has been established by the High Court in the Nationwide News -v- Australian Capital Television cases?;
- 2. what are Australia's obligations under international treaties to which it is a party particularly the International Covenant on Civil and Political Rights ("ICCPR"), the first optional protocol to which Australia ratified in 1991.

Pointing to the case of Derbyshire County Council -v- Times Newspaper (1992) in which the influence of international covenants on the common law is considered - in this case an EEC Directive upon the right of the Council to sue for defamation - she questioned what the High Court priorities would be in such a case. Regrettably, she said that issue was not finally resolved in that case because the Court of Appeal found that there was "no inconsistency" between the Directive and the common law.

Professor Saunders also referred briefly to the options which are available to institutionalise journalists rights as aspects of the freedom of speech right:- to institute a bill of rights; or leave the Courts to slowly define these rights.

In their paper, Professor Armstrong and Ms Holiday noted a number of areas in which the Commonwealth Parliament could, if it chose, transform the law relating to freedom of speech including:-

- statutory recognition of freedom of speech and the need for editorial discretion and journalistic integrity, as a counter balance to objects and provisions already contained in Commonwealth law. This could apply to traditional laws and requirements for the newer self regulatory schemes;
- 2. enactments of specific Commonwealth shield and "whistle blower" laws; and
- Commonwealth reform of defamation and privacy laws in whole or in part.

They then briefly analysed the alternative of a constitutional bill of rights along the lines of the United States system, a "modern" bill of rights not enshrined in the constitution, the process of rights implied by the High Court and specific legislative recognition. They then briefly referred to Article 19 of the ICCPR allowing individuals to appeal to the Humans Rights Commission once they have exhausted all avenues of appeal within their own jurisdiction.

No doubt many of the issues raised and debated at the conference will be examined closely during the course of the current Senate Standing Committee on Legal and Constitutional Affairs into the rights and obligations of the media. Inquiry Chairman, Senator Barney Cooney spoke at the conference and, refreshingly for a politician, seemed prepared to be bipartisan and inquisitive about the sorts of issues the Inquiry will look at. He expressed his great concern at the system of rewards and punishment which exists where a journalist who writes favourable stories is rewarded with leaks and inside background briefings and a journalist who does not is denied such privileges.

He also defended politicians against allegations of gross neglect of defamation issues arguing that a politician in this sort of area must carry with him or her the weight of public opinion.

The pros and cons of various distribution methods for Narrowcast and Pay TV

Barney Blundell argues AAP's view that a regionalised system

is the best method of distribution of emerging TV services.

veryone with a vested interest will claim and explain why their method is the best and tend to play down their disadvantages. Technologist tend to talk of best technology, biggest capacity, what is best for Australian manufacturers, Telecom unions, etc. If we are not careful Australia once more could be in the position of having expensive technology waiting for a market.

I believe we need to start with what the customer wants: a range of services offering quality and affordability. The range of methods available for broadband distribution, include ADSL, satellite, cable, MDS, UHF or additional OFDM-derived channels on existing UHF transmitters; or most likely a combination of them all. However, there is no such thing as the perfect technology.

Cable Head Operators

AP advocates the use of satellite feeds to MDS transmitter sites or local cable feeds, to provide the quickest, most cost-effective and operationally effective way to provide Pay TV to capital cities, regional cities and major country towns.

The basis of AAP's proposals has been to operate along the lines of the US Pay TV industry, which utilises "cable head operators" on a regionalised basis. These operators gather programs from a range of national, international and local sources and then feed them into local cable systems (where available) or MMDS transmitters with up to 31 channels to choose from, to cover their various service areas.

In the Australian context AAP would envisage 6 to 10 national channels being broadcast by satellite for direct reception in rural homes and into small rural communities (some of which could be cabled to share one dish).

Cablehead operators in major population centres would also receive selected programs from satellite and retransmit the signals on MDS, cable or even ADSL systems along with perhaps some directly received overseas content, plus local insertion of video tape of both English and foreign language films.

UHF

believe this scenario could well be applicable using UHF in country areas (as is done in New Zealand) at zero cost to subscribers. However our 23 UHF channels have been allocated as high power licences to existing broadcast TV operators and it is not practical to re-use frequencies due to probable interference in other cities. From a national cost point of view, I believe it would be cheaper to compensate existing licensees to reduce power and re-use these frequencies, than have every subscriber pay to install cable, MDS or satellite receiving equipment.

The main advantages of regionalised systems are: the ability to separately franchise the marketing and operation of various regional areas; lower subscriber costs; speedy ramp up of subscriber numbers; and the ability to regionalise programming to cover local content and delay to cover time differences and to obtain regionalised advertising revenue.

This proposal does not damage Optus because it involves the utilisation of the same number of national distribution channels as a pure DBS system, but at less cost to the subscribers.

Each technology has its own characteristics and advantages; from satellite with immediate near-national coverage, to MDS and cable with the ability to add regional content.

Cable

able is the best long term solution and as an interim measure could be used to fill in small areas missed by MDS. As cable becomes available MDS transmitters can be moved and re-utilised to cover other areas of lower population density. However, rollout of cable to cover major areas is many years away.

Without pre-empting the Minister's proposed Expert Group, to simply put this task into perspective; to run cable past 80% (4½ million) of Australian residences, requires considerable effort. Leaving aside the proposed start up date of 1995, and assuming a year 2000 target with 20% of those houses taking feeds for Pay TV service, this would require street cable to be laid past 4,000 houses per working day (225 days per year) of 17,000 per week, and to further splice and terminate cable into 20% of those houses, i.e. 800 per day.

AAP's estimate for this work is about \$13 billion. It should be noted that telecommunications users will protest strongly if they believe they are crosssubsidising Pay TV.

Another factor that has emerged with cable is that it is very susceptible to the quality of joint splicing and termination errors by ongoing maintenance staff. Poor joints cause reflections that may be tolerable in any analogue system but cause errors in a digital system.

ADSL

TV program required from a database at the nearest exchange may overcome the need for cable. However, video retrieval is not a universal

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answer. The system is unlikely to operate in rural areas or with urban premises over four kilometres from the nearest exchange. Up to four kilometres has been quoted but obviously a gradual deterioration will occur over distance and the actual usable distance will be fairly subjective. Present quality looks reasonable for movies but does not look suitable for sports events. The recent announcement by Telecom that they may lose many exchanges would increase the average subscriber to exchange distance.

Obviously performance is dependent on the quality of the local lines - and we have all experienced less than optimum telephone lines. For instance it will not operate on loaded line pairs, which apparently still abound on interexchange links in many areas. We are also yet to be advised of the proposed cost of subscriber end equipment and the cost of 100 Megabit exchange switching equipment still remains a major barrier. And, of course, if several TV sets are required in one household for different programs, a second telephone line and total duplication of equipment is required.

MDS

urrent statistics indicate there are over 100 cities which are large enough to support MDS or UHF retransmit facilities: Assuming UHF remains unavailable, the networks required for MDS coverage can be broken up into capital city, major regional cities and smaller cities and towns.

To cover a major city requires a central transmitter from a high point plus a number of repeaters. For example, a difficult city such as Sydney could be covered with one high power transmitter and 6 repeaters to fill in the major blank areas to obtain around 80% coverage. However, similar coverage could be obtained in Perth with only one or two additional low power repeaters.

A major regional city of the size of Townsville or Darwin would support a franchise "cablehead" operator who could have large satellite receive systems, could provide a studio for locally inserted programs, and store and forward national programs to align them with local time zones.

Adjacent cities, such as Toowoomba/ Warwick and Bathurst/Orange could be interconnected by point-to-point microwave to allow utilisation of a single studio/cablehead to drive two separate MDS systems.

For smaller cities and towns, a satellite earth station and a rack of six low power MDS transmitters could relay the national programs more cost-effectively than each dwelling having its own satellite equipment. The disadvantage of MDS is that each area needs to be individually engineered to maximise the coverage of the MDS signal which requires "line of sight" to the transmitter antenna.

Cost

ssuming a reasonably large subscriber base, the cost of MDS is approximately one third the cost of direct satellite reception. Key to these calculations is the cost of direct reception by satellite. AAP's costs are based on the current cost of subscriber compression equipment of US\$700 which equates to over \$1,800 after exchange conversion, sales tax, freight and a 20% markup in the local operator, plus the dish and LNA.

A regionalised MDS system would allow a choice of satellite and MDS in both country areas and in city areas where line of sight for MDS reception was not possible. This would, of course, depend on the proposed availability of cost-effective subscriber and compression equipment to allow transmission of 6 channels on a satellite transponder.

The cost to cover each city needs to be examined on an individual basis along with the sales estimates for each city to ensure an adequate return on investment for the proposed number of subscribers. Otherwise direct satellite reception should be utilised.

Overall, it would appear that with a 20% Pay TV penetration some 200 cities could well be served by MDS or a hybrid DBS/MDS solution. Figures of above 3% to 5% penetration in capital cities, 10% to 15% in major regional cities and 10% in regional towns are likely to support MDS operations. This is an edited version of a paper presented at the IIC Conference held at the SBS on 14 October 1993.

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