

RADIOactive

BY THE year 2000, Australia could have not one, but two digital radio broadcasting systems. One will be via a terrestrial system that the Federal Government is planning to introduce, and the other a more ad hoc selection of broadcasters that use the Internet as a backbone for digital radio.

Communications Minister Richard Alston recently endorsed a European digital radio broadcasting (DRB) system known as Eureka 147, which could support the existing AM and FM bands as well as new entrants to the market.

However, some commentators, such as Perth academic Tony Lapsley, say that decision is shortsighted, as the Internet is already set to become the medium to broadcast digital radio.

Dr Lapsley, who has recently completed a major research project at the University of Western Australia on the development of broadcasting, says the Government has never been able to effectively control the industry.

He says the DRB system being considered will be redundant as soon as it was introduced.

"There is a definite redundancy there that hasn't been taken into account. It was envisaged before Internet broadcasters came along," Dr Lapsley says.

Senator Alston lent his support to the European DRB system following a report from the Digital Radio Advisory Committee (DRAC).

Video never killed the radio star, as the song once claimed. But the Internet is about to transform radio into a truly interactive medium, as Geoff Long discovers

He called DRB the "most significant event in radio technology since the introduction of FM", and he believes its impact will be far-reaching.

Terrestrial digital broadcasting provides better reception and higher quality sound than existing analog services. It also allows for the introduction of new services such as music on demand and personalised information.

However, despite ministerial backing, it won't be seen here until 2000 at the earliest, by which time radio broadcasting over the Internet will have matured.

Brian Simpson, a former program director with Melbourne radio station 3MP and now managing director of Internet broadcaster WiredAudio (www.wiredaudio.com.au), is critical of the time it has taken to implement digital radio.

He says the government first started looking at it in 1990 — the same time that radio stations first converted to the FM band.

"They've dragged their heels. There is no reason why it couldn't have been delivered this year," Mr Simpson says.

He believes digital radio will probably be delivered via traditional means and the Internet, but he couldn't predict a winner.

The advantage with the terrestrial system is that it will be free to air and portable. It is also a much more mature system than Internet broadcasting.

However, with the Internet the cost of entry for new broadcasters is significantly lower, allowing them to attract niche audiences.

Using streaming audio technologies such as Progressive Networks' RealAudio or the more recent Liquid Audio software, music can be transmitted either live or on demand.

While the sound quality is still variable, it is quickly approaching a level comparable with FM radio.

The ability to combine sound with other information such as text and graphics is also producing new hybrid forms for the medium.

WiredAudio has transmitted radio using dial-up modem connections, ISDN lines, and cable modems.

Mr Simpson says the quality over a cable modem connection already is better than comparable FM radio and equivalent to CD quality.

It is this maturing of the technology and the ongoing media convergence that has led many commentators to predict a shake-up in the broadcasting industry.

Dr Lapsley says this will include the formation of a number of international "superstations" that will

broadcast over the Internet. The differences between radio and television will be content rather than technology, he says, with radio "sound-dominated with incidental visuals".

Convergence will mean that extra services are an increasingly important part of radio, with direct purchasing of music expected to be available soon.

A number of Australian radio broadcasters and multimedia producers already have been experimenting with Web broadcasting.

One of the main stumbling blocks at the moment, according to Mr Simpson, is not the technology but finding a way to make the services pay.

WiredAudio has collaborated with 3MMM to broadcast the AFL grand final in recent years, and had up to 11,000 listeners in 65 countries — a relatively small audience but one gained with little or no publicity.

But the company has stalled in its broadcasting initiatives recently, largely due to the setbacks to Optus cable Internet network. Mr Simpson says that the delays in the network have put a "big dent" in its plans.

The ABC and specialist multimedia developers have also been experimenting with streaming audio technologies.

Andrew Garton, a music composer and multimedia artist with Melbourne-based Toy Satellite, has created a Web site for ABC radio's Listening Room that will broadcast one of his experimental pieces until the end of October.

Mr Garton has also been commissioned to do another dual radio/