



## DCT: Sooner Rather than Later

**When the Government announced last year that it would delay the introduction of satellite-delivered pay TV until digital compression technology (DCT) was available, its critics saw this as likely to cause yet another lengthy postponement.**

It now appears that Compressed Digital Video may be widely available sooner rather than later, certainly within two years. A critical factor in its acceptance and use is the agreement by international authorities of a standard for the technology. MPEG (Moving Pictures Experts Group) is the ISO/IBC group which is considering standards for digital audiovisual coding. The group comprises a cross-section of around 200 representatives drawn from areas like governments, electronics and computer companies. Telecom's Dr John Biggar, a member of MPEG, spoke about the most recent developments at a recent Sydney conference.

The work on standardisation of audiovisual coding methods is divided into two phases, MPEG1 and MPEG2. MPEG1 is already an international standard. This is a flexible standard intended primarily for coding of non-

interlaced video and associated audio, mostly for storage applications such as CD-ROM and digital tape.

MPEG2 is directed at 'generic' coding (ie for a wide range of applications) and is well suited to video entertainment applications. It is being tested using digital TV picture formats and, more recently, on High Definition TV material. The group aims to produce a draft standard by November this year, and expects an international standard to be in place by March 1995.

Manufacturers do not have to wait for the standard to be finalised, however. Television applications will be 'frozen' at the March/April 1993 meeting of MPEG and the television chip manufacturers will be able to proceed, possibly by September this year.

Dr Biggar expressed regret that Australia's involvement in the standardisation activities has been primarily on the part AUSSAT/Optus and Telecom, with no Australian manufacturers positioning themselves to take advantage of the technology. He said that while our carriers are lining up to carry the signals, it looks as if they will be produced and decoded by a very large number of imported devices. □

## TV Over the Phone?

**Meanwhile, work is proceeding on the possible use of the existing copper wires of the telephone cable system to transmit one-way video signals of acceptable quality.**

This is one of the more interesting possibilities which emerges from the development of advanced digital transmission techniques, Dr Biggar said. The individual connection to each household would allow 'new service concepts involving individual control and personalised programming' such as video on demand. There would be no limit on the potential number of channels, though only one per phone

could be in use at any given time.

Telecom is actively studying the potential for delivering a range of digital video entertainment services using this technology.

Asked about a timetable for availability of this system, Dr Biggar said that it was currently being evaluated. In the United States, there were plans to install quite a large systems of this kind over the next couple of years.

It should be noted that depending on the kind of service offered, it is possible that there would be no way of regulating content of services delivered via the telephone system under existing legislation. □

## Cards That Think

**A wafer-thin card that is really a small computer grafted on to a piece of plastic is certain to become part of Australia's way of life when pay TV finally arrives.**

The aptly-named 'smart card' is already in wide use in subscriber television systems in the United States and Europe, such as Murdoch's Sky TV.

The card has a specially designed microprocessor and up to 8MB of storage capacity. It carries basic information about the subscriber to allow for efficient accounting, and is used by the subscriber to access pay TV services. The decoder on top of the TV set is essentially an interface with the smart card.

Smart cards can be customised to the broadcasters' needs, and as they become 'smarter' they can be used to target specific demographics among subscribers, deliver electronic mail to individual subscribers (such as YOU HAVE NOT PAID YOUR BILL!), and allow for interactivity (for education programs or ordering consumer goods, for example). Millions of subscribers can be addressed over the air in minutes.

The cards' design makes illegal access and copying very difficult, and they can easily be updated or changed 'over the air'. It is even possible to order an individual card to display an ID on the screen if the service providers suspects programs are being illegally taped.

An interesting application of the smart card in the UK is its use to activate VCRs during late night/early morning downtime in order to tape programs provided via BBC Select, a pay service which offers programs such as business training or golf tuition. The cards can be programmed to tape *Visnews* without the ad breaks - a capacity which could have advertisers worried! □