

Q & A

CENTENNIAL PARK IN SYDNEY AND WOLLONGONG, NSW, HAVE TAKEN PART IN A CABLE TELEVISION TRIAL. TELECOM CHOSE BOTH AREAS AS SUITABLE SITES TO TEST THE ENGINEERING REQUIREMENTS OF A CABLE TELEVISION ROLL OUT, IN PREPARATION FOR THE REVOLUTION IN HOME ENTERTAINMENT ABOUT TO ASSAULT THE HOME TELEVISION VIEWER. WE ASKED A REPRESENTATIVE FROM TELECOM ABOUT THE TRIAL AND ITS IMPLICATIONS.

What does the trial in Wollongong and Centennial Park involve?

The Wollongong trial, from our point of view, is mainly an engineering trial. The programs are provided so that people have something to watch, but the emphasis is on engineering.

We are trialling a number of things. The first is fibre to the kerb. We run optical fibre down the street and from there to the residence use coaxial cable. We are serving a very small number of customers with the system in Wollongong. It is very high bandwidth, up to 1 GHz, and we were also transmitting signals at very high frequency. The reason for that is at the time of early satellite development no one was sure whether the programs would be available at the high or low gigahertz range. We wanted to try out a very high bandwidth network.

The people involved in the Wollongong trial are homes and businesses as well as the University of Wollongong and we have given them a platform to experiment with software applications running on such networks.

In the Centennial Park trial we took the most advanced, off-the-shelf cable television equipment and built a network similar to the more advanced networks in the US. The aim was to learn how to do a commercial rollout.

We cannot commercialise what we have done in Wollongong because it is really a research and development type network. A lot of it was custom built for the purposes of the trial — they are not off-the-shelf, high volume, manufactured items. Whereas the Centennial Park trial was a full services trial to learn how the plant would sit in the ground, how to do customer service, how to do fault management, how to install parental control capability. We have learnt a lot — now we know how to roll out a network throughout Australia.

Who provides the programming?

We approached organisations on the basis that they would give us the programming to enable the trial to proceed. ABC and SBS did not object to us retransmitting their content which was beneficial to those living in Centennial Park, as reception of their signals is not very good. TV Oceania gave us permission to rebroadcast their program — two channels, one in English and one in Japanese. NASA gave us permission to rebroadcast their programming which is mainly about space and science. CNN also gave us permission. We also have a community channel, Metro TV, and an educational channel which comes across from Edith Cowan University in Western Australia and is broadcast two hours a day five days a week.

How does the signal from Edith Cowan University get here?

We use standby fibres. Standby cables are used to cope with sudden demand, for example a sporting event, and we have access to the cable, subject to commercial use taking priority.

Do you broadcast anything else?

We are about to start trialling a type of interactive television which uses the telephone to get access to the visual data base at the State Library of New South Wales. They have a series of digitised pictures and we will have access to some of those. The telephone key pad works as a mouse for sending instructions.

The next generation of set tops enables you to do far more with the remote control. It has a set up similar to Windows and the operator can navigate using all kinds of functions.

Does the set top contain the disabling device?

Yes, it is a feature of the set top from the remote control. The disabling system

uses the PIN number method which is independent of the program. We called for worldwide tenders, the initial 17 were reduced to seven and Telecom is currently evaluating those seven. The final set top selected will be based upon the recommendations from the trial. The set top will be half the size of a VCR.

How many people are involved in the trial?

About 300 residences are connected in Centennial Park — there are about 120 houses and 180 flats. We are trialling a range of demographics, a range of housing structures and the associated engineering challenges.

What sort of response have you had?

Very good. We have regular meetings with the participants — we meet every three months. We also have focus group discussions, to talk about various aspirations and hopes for the service. We discuss what they would like to see on their screens and how they would like us to do things better.

When did the trial start?

We started on 13 August 1993 and will go until the end of 1994. The participants will then have the choice of subscribing to a commercial service provider or disconnecting.

It is pretty much the same network as Telecom is building elsewhere. Telecom have started laying cables in a number of other suburbs as part of the rollout.

Does Telecom own the cabling?

Yes. We will be providing an overlay network using the existing pit and pipe network we have in the street but this will be a hybrid fibre-coaxial cable. The network will be a Telecom asset. Telecom provides the lead in from the street and the set top unit and trains the customer in how to use it.

Will the cable television operators be renting the cabling?

The cable television operators will rent channel capacity much like the 0055 access on telephony for horoscopes and recipes etc. We put in the network and the service providers buy the number of channels they want. We can also provide them with customer service and billing if they wish. If someone has 10 channels and they want to provide their own support systems, they can do that. We would just give them the pipeline. But if someone wants to run just one channel and they don't want to do the billing etc., then we would provide them with a value-added service for a fee.

Is there a limit to capacity?

Yes, the cables have about 67 channels in the forward direction, but because of all the newer types of services, such as say video on demand, the roll out network will have greater capacity to start with — something like 150 channels. The prospective service providers come to Telecom and state their capacity needs.

Does an interactive service require greater capacity?

Near video on demand requires more channels because the same program, such as a film, starts at 10 minute intervals. So whenever you switch on to watch a particular movie, you just go to the channel where it is about to start. If the movie lasts for two hours and starts every 15 minutes, eight channels are needed, if it starts every 10 minutes, 12 channels are needed.

True video on demand is also coming and that will chew up channel capacity. It gives the householder virtual VCR. The householder will be able to choose a movie to watch and it will be delivered instantly. Not only that, the householder can stop it, rewind it — it can be used just like a VCR.

Can any of the cable operators decide to set up a service like this?

Yes. The technology for true video on

demand or virtual VCR is being developed now. It is working now in a prototype form but the costs are quite high. The computer manufacturers are racing to build the video servers, like those installed in local area networks.

Is this research being conducted overseas?

Overseas rather than here, yes. Certainly there is a lot of activity in America.

How long before this type of service is available?

Probably within the next 12 months. It is being demonstrated now at overseas shows — at cable shows etc.

What are the advantages of Telecom's cable system?

Telecom puts the lead in equipment

more than an unscrambling device. It gives a lot of home functions, that's why it is tied in with the network equipment. There is a government requirement that people be able to buy or rent the equipment, so the set will be available for purchase. However, we expect people will wait until the technology has matured more before they buy.

The cable system can retransmit any signal from satellite or microwave.

The cost for cabling connection will be similar to a telephone connection fee. Installation will be by appointment and, depending on the layout of the house and grounds, will take from two to four hours. Repair services will be available 24 hours a day and the cost will be covered in the rental. The cable



Laying cable in Centennial Park

photo: courtesy Telecom

from street to the house, provides the set top unit and trains the customer in how to use the unit. The set top unit is part of the network.

The programmer provides the content. Telecom's network is not just for broadcasting, although that will be the major use at first. It can also be interactive — used for home shopping, video on demand, educational needs, games like Nintendo, interactive games, a local area network. The set top is much

customer pays for access to channels and not by time, as with ISD or IDD.

What does the rental fee cover?

The expected rental fee includes network access — connection to the network and the set top rental fee. It covers operation and maintenance as well as the programming cost. We expect the cost to be in the \$30-50 per month range.

