

CABLE TV SYSTEMS FOR VIDEO AND DATA

The Emerging Markets

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Cable Systems continue to be misunderstood. After 18 months of public debate, two government reports and a government White Paper plus numerous conferences, square miles of press coverage, TV programmes, chat shows and adversarial struggle, most people do not understand what it is, and the implications of installing and using it.

The problem of understanding has little to do with Cable per se. The problem is caused by the burden of emotional and intellectual baggage from the past, often institutionalised into our culture and society, which enables us to approach tomorrow's opportunities with the benefit of yesterday's compromises.

Cable cannot be understood outside of a perspective of telecommunications networks. The Four Circles Concept of telecommunications, homenet, local area network, local loop or metropolitan area network and national, international, intercontinental network provides that perspective.

Secondly, there are three networking media which for the next decade will be locked in competition. They are cable, broadcasting and telephony. Technological change will ensure innovation and service contention. Consumers will get more choice and become more choosy. Caveat communicator.

The comprehension problem is compounded by the concurrent changes that are taking place in broadcasting and telephony. Pace the TV-AM melodrama, public service television is expanding to discover shrinking audiences. Soon space television signals from direct broadcast satellites will pound big audiences into smaller audiences. Is this the end of the world as we know it? The broadcasters, who invented soap opera, are likely to keep us enthralled for years guessing the answer.

Meanwhile, telephony has changed and continues changing. First the Post Office divested its technological infant which became British Telecom (BT). Then the customers continued to complain about the service. The Government decided to break the BT monopoly to placate the customers and also to stick pins into BT so that it would wake-up and satisfy customers. The new government strategy was duopoly - BT and Mercury competing openly and equally for customer favour. And the necessary corollary, to ensure really equal competition in the market place, was to privatise British Telecom.

Some will find echoes of melodrama and soap opera in the telephony scenario. To complicate matters further, the telephone company has decided to diversify and enter every business vaguely

connected with telephony, including cable.

The only thing missing is sex, removed by the Home Secretary. There is a rumour that Monty Python has bought the entire networks story to make a serious documentary.

A serious documentary on cable would have to cover the history of the wired community, the technological and regulatory issues, and the emerging markets.

In the year 1982. in the United Kingdom the Wired Community took a major step forward from science fiction towards everyday reality. There will be long debates as to why it happened at this particular time but it is already possible to discern some milestones which the basic idea passed until it suddenly became an "idea whose time has arrived", to echo Victor Hugo.

An idea of the magnitude of Wired Community has to develop through a number of stages. As a generalization, these stages were Attention, Interest, Commitment and Action. The Wired Community gathered its first significant Attention in the early 1950s, following the publication in 1949 of George Orwell's "1984". In "1984" the telescreen is pervasive providing two-way audio visual communication that simultaneously allows Big Brother to propagandise the populace and permits Big Brother to spy on the home activities of everyone including the hapless Winston Smith.

Orwell wrote "1984" before television became the prime communications medium of the western world. The 1950s, 1960s and 1970s saw explosive growth in television arts and television industries. If the 1950s and 1960s provided a television service and multi-channel colour television respectively, the 1970s provided the technology to extend the use of television. The beginning of the 1970s saw the Interest phase develop.

There were four approaches to the extended television, all based upon the realization that the television receiver could be used for things other than real-time reception of public service television. In other words, the television was no longer the captive slave of the broadcasters.

Firstly, the British Post Office began researching a residential computerised information service that later in the 1970s was to become viewdata, Prestel and videotex. The idea of bringing such a service into the home through a modified television was revolutionary. It was an extension of the idea of broadcast text

that became teletext. That idea has now become a world industry.

Secondly, in 1972, the then Minister of Posts and Telecommunications, Christopher Chataway, agreed to licence five experiments in local programme origination of local nature material for transmission by cable to local communities - the so called community cablevision projects. Greenwich Cablevision began in July 1972 followed by Bristol Channel, May 1973, Sheffield Cablevision, August 1973, Swindon Viewpoint, September 1973 and Cablevision Wellingborough, February 1974. A change in government in 1974, together with the establishment of the Annan enquiry into broadcasting cast a shadow over these experiments which all ceased by the mid-1970s except for Greenwich which still exists. Meantime across the Atlantic Ocean, the 1970s witnessed a massive expansion of cable television creating large new industries.

The third approach was the development of TV games. More than anything else, the TV game demonstrated to a mass market totally new, simple and enjoyable uses for television that had nothing to do with broadcasting.

Finally, the advent of the videocassette recorder in consumer form at the end of the 1970s destroyed the real-time imperatives of broadcasting and enabled the audience to time-shift programme material.

The intensity of these developments had not been lost on thinking men. Toffler published "Future Shock" in 1970 and James Martin published "The Wired Society" in 1978.

The debut of the public Prestel service in 1979 is probably the milestone for the opening of the Commitment phase of the development of the Wired Community idea. In terms of futuristic projections of the application and value of consumer videotex, the Post Office had few peers. Whatever else they did they made everyone aware of the technology. At the same time, the broadcasters demonstrated their commitment with the opening of the teletext services - CEEFAX and ORACLE. The quality and success of these services will soon pass into legend. If consumer videotex in spite of its technological and entrepreneurial imperatives didn't quite succeed - it has become increasingly a business service - teletext hit the jackpot in 1981 to become soon a standard facility on all televisions.

And so the 1980s began with widescale commitment to the extended use of television. The personal computer revolution quickly found yet another use of television. The video camera rental

business provided an alternative to still photography and amateur movies and again needed a television. The videocassette hire business provided a cinema substitute using a television. It was hardly surprising that people began to consider the television as a multifunction system and to start researching its possibilities as part of new kinds of networks.

There were two countervailing forces. The institutional view of television, so well documented in the 1977 Annan report, saw it as the captive slave of public service broadcasting. In effect, one type of user would preserve unto itself an entire technology. It was a doomed attempt to prevent the inevitable. The other view was that of the technologists with a deterministic approach - if we can do it, why shouldn't we - based upon a philosophy that argues that the main determinant of man's progress and evolution is his ability to develop, use and control technology.

The logic of much of the argument that ensued was the classic defensive line of all established positions under threat, that, "if it is new, it must be inferior". Much the same line, taken by contemporary dramatists, condemned Shakespeare as a rather "low" playwright.

In the autumn of 1981, new cable TV experiments began, this time aimed at testing the climate for subscription television. Cable TV in spite of its lost battles of the past refused to lie down and die. In the same year the Home Office published a report on direct broadcast satellites (DBS) setting out the arguments and alternatives for establishing DBS services in the UK. Subscription television which was anathema to the broadcasters at the time of Annan was now respectable.

The Home Office DBS report and the ITAP Cable Systems report, published in March 1982, will probably be seen by future commentators as the beginning of the Action phase. Both reports were calls for action on technologies that were revolutionary. The time for the idea has arrived.

In October 1982, The Hunt report was published reconciling the broadcasting implications of cable TV. In December 1982, the government gave the wiring of Britain the green light.

April 1983 saw the publication of a White Paper setting out the proposed regulatory framework for cable. The first systems will be operational in 1984. George Orwell would be very amused.

The non-entertainment services on cable will cover three market

sectors - business telecommunications, knowledge workers at home and consumer telecommunications.

There are ten major areas where development will occur in the knowledge worker/consumer sectors:

- o information services similar to teletext delivered by a full TV channel bandwidth teletext service that would display, typically, any pages of information from a 150,000-page database in less than one second, or some 20 times faster than the existing teletext services.
- o teleshopping, with retailers and mail order houses now positioning themselves for the electronic merchandising of their goods. Minor legislation clarifying credit law and consumer protection would be needed for consumer tele-shopping.
- o telebanking, with banks being pressurised to cut overhead costs and new sources of 'money-shop' competition appearing. Retail banks would move to provide more electronic services from cash dispensers in factories to teleservices from home or office.
- o telepublishing, or the electronic distribution of magazines, newspapers and newsletters.
- o reservations services catering for airline, train, theatre, hotel and car rentals.
- o teledelivery services covering videogames, films, telesound (substituting for LP records and audio cassettes) and computer programs for home use.
- o telemail and telemessaging services, interfaces into the national, international and intercontinental telephone networks, to take messages into and out of homes and offices.
- o educational services offering computer-aided interactive video learning.
- o 'gateway' services enabling home terminals to connect to other networks and databases for teleworking purposes. Just as radio hams roam the airwaves of the world, so home information buffs would roam information networks of the world.
- o security systems based on installed home sensors to provide fire, police and medical alert and inhouse surveillance for baby-sitting and other purposes.

Finally, the alliance of cable operator and telecommunication company, particularly Mercury in the UK, will accelerate developments in business telecommunications that will spur competition and widen opportunities.

To summarise, the Four Circles delineate the ball-park. Three competing networks; broadcast, cable and telephony struggle for mastery. What will happen depends to a large extent on the referee, usually the government. The market is in three sectors - business telecommunications, knowledge workers at home and consumer telecommunications.

The stakes are high, the risks are big, the rewards are rich, the subtleties are enormous and the technology is thundering down. It could be the greatest show on earth, which by the end of this decade could make the UK the richest network country in the world.