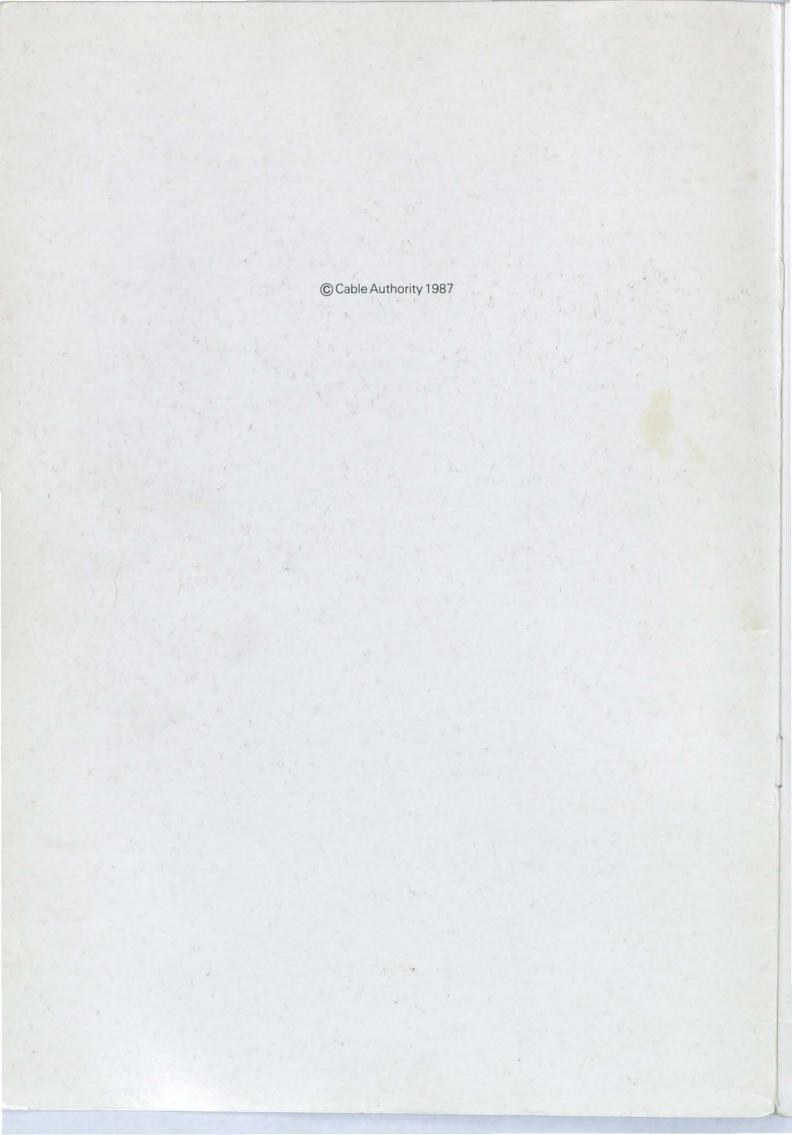
# Cable

ANNUAL REPORT and ACCOUNTS 1986-87





The Rt Hon Douglas Hurd CBE MP Secretary of State for the Home Department Home Office 50 Queen Anne's Gate LONDON SW1H 9AT

12 July 1987

Dear Secretary of State

I have pleasure in sending to you, in accordance with section 21 of the Cable and Broadcasting Act 1984, the second Annual Report of the Cable Authority, together with the statement of accounts, covering the period from April 1986 to March 1987

Anton 1:

Yours sincerely

Richard Burton



Mr Richard H. Burton

#### **MEMBERS OF THE AUTHORITY**

Chairman MR RICHARD H BURTON

Deputy Chairman PROFESSOR JAMES RING CBE

MRS ANNE BALLARD

MR PHILIP DARWIN

MR PAUL JOHNSON

MRS ELIZABETH MACDONALD-BROWN

MR PETER S. PAIN CBE DFC

### Chairman's Foreword

This second annual report of the Cable Authority, while pointing to the progress which has been made during the year, must inevitably reflect some disappointment with the slowness of that progress.

In my foreword to our first report, last year, I commented on the foolishness of doubting the long term prospects for cable because its initial development had not been faster. That comment is still true today. Progress is slower than we had hoped yet the fundamental question is still not whether cable will develop but when.

We still need badly to get more cable into the ground. Only in that way can its potential be demonstrated more clearly. At the time of our last report we had hoped that the ensuing year would see cable becoming more firmly established so that there would be firm signs to cable operators of the return on the large capital investment required to install a cable system. Only when this happens will it seem worthwhile to investors to develop the innovative new services which will mean so much in the future. While the cable market remains so small, and grows so slowly, those with imaginative ideas for exploiting the full capabilities and enormous potential of such a flexible medium are discouraged. In the circumstances much is being accomplished, but the apparent remoteness of a commercial return is a disincentive.

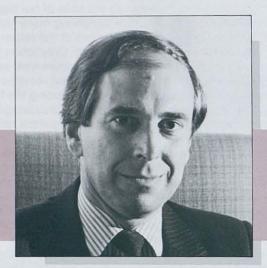
Clearly investors are still not wholly convinced of the sense in investing in broadband cable systems. It is lack of finance which is restricting cable's development and causing problems both to existing operators and to those with franchises who are struggling to make a start. It causes problems too to the Authority in inhibiting our ability to pursue a continuing franchising programme. Yet interest in cable grew during the year; it is to be hoped that it will soon be translated more frequently into the reality of investment!

It is worth noting that there is evidence both of foreign interest and foreign investment in British cable from inside and outside the EEC. The removal of the restrictive requirement in the Cable and Broadcasting Act that no-one outside the EEC may control a cable operation would increase that foreign interest and investment and perhaps also help to focus the attention of national investors in the UK.

The publication by the Peacock Committee of its vision of the cabled society with access to a multitude of television channels also helped to stimulate interest in consumer choice in television, as did the granting by the IBA of a franchise for three channels of satellite broadcasting founded, as cable is, on the expectation that a commercial market exists for more television.

DBS is founded on nothing more than that. Cable is founded on much more. Not merely does cable release television - and radio - from the constraints of scarce frequencies to an abundance with which DBS cannot compare, it opens the way to a host of non-entertainment services for businesses in cabled areas as well as households. The legislative framework encourages cable operators (who in any event will be the principal "customers" for DBS) to engage not only in competing for television viewers but in providing competitive telecommunication services.

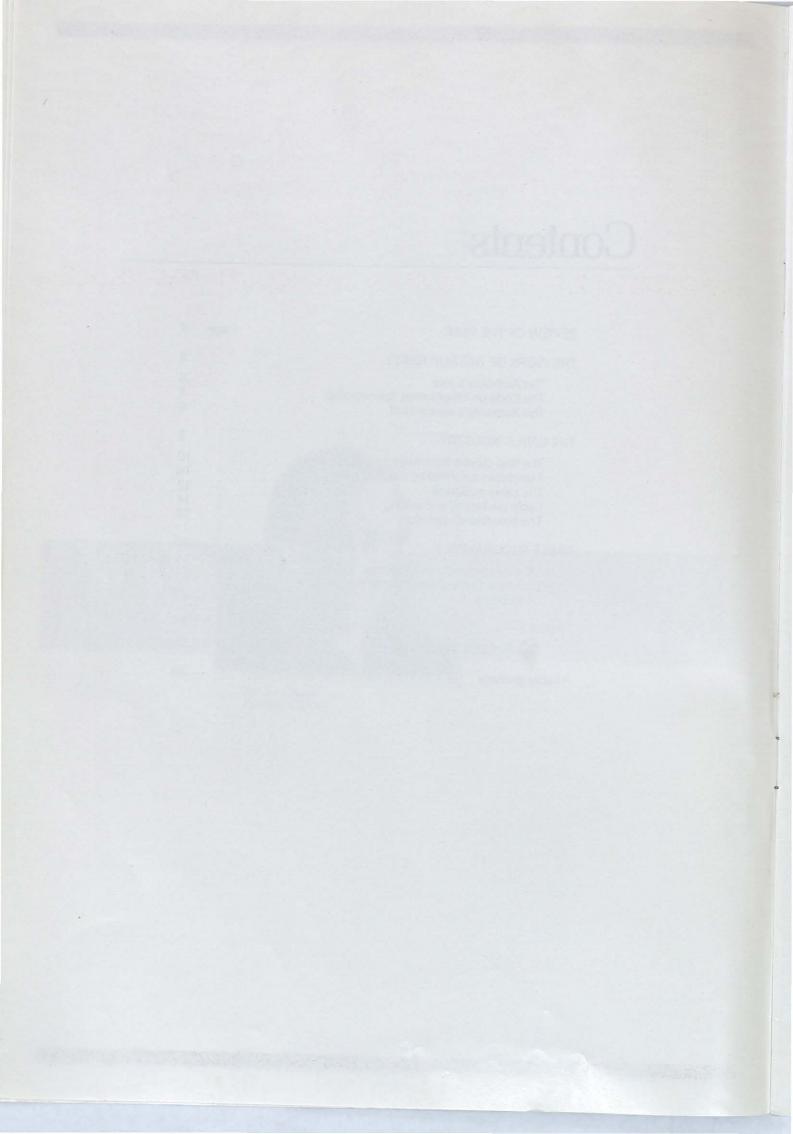
I believe that the future for cable is a bright one. I hope that the coming year will see that perception spread more widely.



Mr Jon Davey Director General

## Contents

REVIEW OF THE YEAR	Page	1
THE WORK OF THE AUTHORITY		3
The Authority's role The Code on Programme Sponsorship The Authority's senior staff		3 4 6
THE CABLE INDUSTRY		9
The first eleven franchises Franchises awarded by the Authority The cable audience Cable packaging and pricing The broadband operators		10 10 12 14 16
CABLE PROGRAMMES		20
UK cable programme channels European Community programme content Complaints		21 22 23
FINANCE		24
The Authority's accounts		25
A cable glossary		30



## Review of the Year

During this year, the Authority was able to feel for the first time that cable was gradually becoming an established reality. Although the industry is still in its infancy, the year saw many signs of real progress.

In the course of the year, the operators of six brand new cable systems completed their first full year in business. At the same time, Swindon - the pioneer of the new systems - completed its second year and commenced its second phase of development. One new broadband system, in Ealing, went live for the first time. In the course of the year, the number of homes connected to cable rose by 34%.

The sense of progress lay in much more than these mere numbers. The choice of television which is at present cable's principal attribute strengthened considerably. But, potentially of greater importance, a number of steps were taken towards the establishment of a range of other services which are likely to be of considerable long term significance to the development of cable.

Planning went ahead between Mercury Communications and several cable operators for the provision of an alternative telephone service using cable systems. Mail order companies explored the use of cable for electronic home shopping. Security companies and cable operators discussed the provision of fire and security alarms via cable, while the potential for warden call systems and panic buttons was also recognised. The use of cable systems for interactive education and energy control was the subject of study, while individual cable operators looked into various other services which they could supply to business or institutional users in their areas.

On the programming front, cable has assumed an astonishing maturity considering the tiny audience so far connected to cable systems. This is largely as a result of the attention which the programme providing companies have given to building up audiences elsewhere in Europe where cable systems are more numerous and extensive. One of the new channels to start up in the course of the year, Super Channel, is aimed specifically at a European audience. Some other channels have steadily expanded from their British base into other European countries as a means of building their audience and their revenues and thereby ensuring their survival and their ultimate success.

But exports to Europe, important though they may be, are by no means the only factor in the strengthening of cable programming. Some channels (particularly the film channels) still confine themselves to Britain. During the year a new film channel, Star Channel, started up while another, Bravo, went over to a twentyfour hour service. Super Channel broadened the choice of general programming offered to cable viewers. Other channels developed programme ideas and concluded fresh deals. The interactive Cable Juke Box was tried out, with overwhelming success. New ground was broken by programming at the very local level.

Cable audiences found themselves drawn more and more away from broadcast programmes. Audience research in cabled homes showed that in the course of twelve months the proportion of viewing time spent watching cable channels rose seven percentage points. While ITV and BBC1 still represent core viewing, cable households spend more time watching the cable film channel (usually Premiere) and Sky Channel than they do BBC2 and Channel 4.

#### Faster progress is needed

For the new broadband systems to have passed another 100,000 homes and for an extra 50,000 homes to be connected to cable is a clear sign of progress. It is however a level of progress with which the Authority cannot feel satisfied. It represents only a tiny step towards the widespread cabling of the country. The rate of progress needs to be very much higher if the country is to gain the full benefits of broadband cable in the foreseeable future. It is not merely a question of the scale on which the benefits will be available: there is a real sense in which a certain critical mass is required before cable can realise its potential. The programme channels need audiences; and non-entertainment services will be comprehensively developed only when cable is able to provide markets of a size to justify them.

The slowness of cable's development is therefore frustrating, to the Authority as well as the existing cable operators, aspirant cable operators, programme providers and potential users of cable systems. Why is progress not faster?

A number of difficulties can be identified. But most of them have their roots in one prime problem: lack of investment. The major constraint on the speed with which cable systems are constructed lies in the shortage of finance. This is a problem to which the Authority drew attention in its first Annual Report, last year. The year under review saw little sign of the problem being solved.

Contrary to the approach taken in other European countries, the investment in cable in the United Kingdom is left entirely to the private sector - to those who think that they can earn a return from the large capital expenditure needed for what is a major infrastructure project. That return can only be long-term and, because the industry is new, there is so far no evidence of the size of the returns that can be made. The typical investor reaction so far has therefore been cautious.

This is not to underrate the extent of the investment so far. Over the last two years the investment in cable construction - leaving aside programming and other aspects of cable - has been of the order of £60 million, a substantial expression of confidence in the future of cable. But if the expectations of four years ago were to have been realised, five times that amount would have been required.

Part of the effect of the lack of finance is that not one of the franchises granted by the Authority had begun full operations by the end of the period under review. Only one of the eleven had reached the stage, having successfully raised its finance, of being issued with the Authority's full licence, and that one - East London - switched on shortly after the end of the year covered by this report.

Another part of the effect was the Authority's inability during the year to advertise any new cable franchises. The Authority is guided by demand in deciding the stage at which specific areas should be advertised and applications for the franchise invited. Although interest was expressed in a number of new areas during the year, the Authority concluded, taking account of the experience of those to whom franchises had already been awarded, that it would be wrong to advertise at this stage new areas for which either no one was ready to apply or the financing of a new system would be just as problematical.

2

## The Work of the Authority

The year has seen considerably less activity on the franchising of new cable systems. Two new franchises were awarded during the year. One was for Southampton and Eastleigh, the two applications for which had been left over from the previous year. In the event, one application was withdrawn and in September the Authority agreed to award the franchise to Southampton Cable Ltd.

At the end of the previous year, the Authority had invited applications for a franchise for Luton and South Bedfordshire. One application was received and, having followed the usual consultative and evaluative processes, the Authority decided in July that the application, from Cablevision Bedfordshire Ltd, should be approved.

As has already been explained, no new franchises were advertised during the year. In the second half of the year, more new areas were discussed with interested groups than for some time, but none of these reached the point of a public advertisement before the end of the year.

The second half of the year also saw a growth in the number of applications for SMATV licences. A number of such licences were granted and several systems were switched on.

During the year, the Authority decided to modify the licensing rules for SMATV systems and for old 'upgrade' systems in one respect. It had originally been decided that, in order to strike a balance between giving precedence to broadband franchises and giving confidence to those constructing new SMATV systems, a licence term of 5 years should be fixed. Recognising that in many if not most cases, a renewal would be granted at the end of 5 years, the Authority concluded that additional reassurance could be given to SMATV operators by

#### THE AUTHORITY'S ROLE

The Authority came into existence on 1 December 1984 as a result of the Cable and Broadcasting Act 1984. The Authority is charged by Parliament with

- granting franchises for the installation and operation of large-scale broadband cable systems
- licensing the provision of cable programme services in addition on older systems (upgrades) and new smaller systems (SMATV)
- licensing the provision of television for public showing
- drawing up codes on programme standards, advertising practice and sponsorship
- exercising oversight of cable programmes to make sure that the rules are kept
- exercising its licensing functions in the way that best promotes cable services, especially those on the new generation of broadband systems.

changing to a rolling term subject to termination with three years' notice. The three year notice is sufficient to protect the interest of any new franchisee proposing to install a full broadband system in the area; but it is of significant help to the existing operator whose system may need further investment to know that, if he has not been given notice by the Authority, he has at least three years' further use of his system.

Other issues which had to be considered during the year included a number of questions surrounding the licensing of restricted services. This has turned out to be a grey area of considerable complexity where developing practice has exposed a number of anomalies in the cable programme and telecommunications licensing regimes. More radical steps than the Authority can take may be necessary if legitimate new businesses are not to be stifled at the outset.

#### CODE OF PRACTICE ON PROGRAMME SPONSORSHIP

#### 1. TYPES OF SPONSORSHIP

A programme is deemed to be sponsored if any part of its costs of production or transmission is met by an organisation or company other than a Cable Operator or recognised Programme Provider. For convenience, operators and providers are referred to in this Code as programmers.

Sponsored programmes may involve one or more of the following:

- i) coverage of all or part of a sponsored event;
- ii) supply to a programme maker of goods or services at less than wholesale cost:
- iii) funding, in part or in total, of the costs of a programme's production or transmission.

These three broad categories of sponsorship are dealt with below in sections

2-4.

#### 2. COVERAGE OF A SPONSORED EVENT

- i) Where (a) an event will take place regardless of whether it is covered in a cable programme, and (b) the full cost of coverage is met by the programmer, the programme is not deemed to be sponsored and the provisions of this Code do not apply. Other Authority Codes must still be observed (see section 5 (i)).
- ii) In all other cases, section 4 (below) shall apply

#### 3. THE SUPPLY OF GOODS OR SERVICES

i) Programme makers who accept goods or services from suppliers at less than wholesale cost may give an acknowledgement in sound or text at the beginning or end of the programme, which may include a brand name and a brief advertising copyline in support of the product.

No undue prominence should be given in the programme to goods supplied in this way.

- ii) Prizes in game shows
  - In addition to (i) (above), a second acknowledgement to the supplier may be given once during the programme. This acknowledgement may include a brand name but **not** a copyline.
- iii) Programmers may accept informational services at reduced or no charge in return for a screen acknowledgement to the information provider, which should appear in a proper proportion to the information displayed.

#### 4. FUNDING BY SPONSORS

Sponsors may provide funding to programmers in two ways:

 a) In a way that gives the sponsor no editorial involvement whatsoever (for example, by contributing to the costs of the acquisition of a previously-made programme, or by contributing to the costs of production of a cable programme where total

- editorial control rests with the programmer). This type of sponsorship is referred to below as underwriting.
- b) In a way that gives the sponsor editorial involvement, permitting him to exercise an influence over a programme's content or selection. This type of sponsorship is referred to below as commissioning (the ultimate form of commissioning would be where the sponsor provided a programme which he had made himself).

In either case, it is the programmer who is ultimately responsible for ensuring that the programme's content complies with the Authority's Codes.

#### i) Underwriting

A sponsor who underwrites part or all of the cost of a cable programme must receive a credit immediately before or after the programme which may contain a short copyline.

#### ii) Commissioning

A sponsor who commissions a cable programme must be credited in sound and text immediately before and after the programme. Such a credit

- a) may contain a short copyline;
- b) must use the word 'sponsored' in vision
- c) must detail for the viewer any of the sponsor's (or his associates') products, commercial activities or special interests not named which are relevant to the programme's subject matter. This information should be presented in a straightforward factual manner.

#### 5. APPLICATION OF OTHER CODES

#### i) Programme Codes

All programmes, whether sponsored or not, are equally subject to the Authority's Code of Standards and Practice in Cable Programmes. Sponsored programmes should not, therefore, display any undue emphasis on the products, services or name of a sponsor or his associates. Where, in the Authority's opinion, a programme contains an undue element of advertisment it may be treated instead as an 'infomercial' and be subject to the Code of Advertising Standards and Practice ('the Advertising Code').

#### ii) Sponsorship Credits

A sponsor's credit and any associated product copyline must comply (in terms of content) with the Advertising Code.

Credits may be inserted in breaks within a cable programme service at the discretion of the Programmer. Each insertion of a credit (with or without copyline) counts as advertising when determining the total advertising time on that service with the exception of the mandatory credits required by Section 4 of this Code.

#### The regulation of content

The Authority made further progress with establishing the rules for cable programmes. The 'Green Code' on Sponsorship which had been adopted in December 1985 was reviewed during the year in the light of experience and of the comments made on it. It had stood up to testing extremely well and the Authority decided that, with only minor adjustments, it could be adopted more formally.

New guidelines on the showing of feature films were also adopted. The Authority had initially applied guidelines drawn up by the Home Office before the Authority was established but thought it right that programme companies should accept the responsibility for establishing their own arrangements for ensuring the suitability of the films they show. The new guidelines are framed accordingly.

#### iii) Spot Advertising

Programmers are free to offer sponsors spot advertising in breaks before, during or after the programme. All such advertising must observe the provisions of the Advertising Code.

#### 6. RESTRICTED/PROHIBITED SPONSORS AND PROGRAMMES

#### i) Unacceptable Products

Goods or services which are excluded from cable advertising by the Advertising Code (e.g. cigarettes) are not acceptable for sponsorship, other than as described in Section 2 (i) (Coverage of Sponsored Events).

No sponsor's credit is acceptable which, in the Authority's opinion, would publicise directly or indirectly any goods or services so excluded.

A sponsor is not acceptable for a particular programme if his advertisements could not (under the Advertising Code) appear in or around that programme.

#### ii) Political Sponsorship

Any organisation whose aims and objectives are wholly or mainly of a political nature is prohibited from cable programme sponsorship.

Sponsorship by non-political organisations is not acceptable where the sponsoring of a programme is directed towards any political end or has any relation to any industrial dispute.

#### iii) News and Current Affairs

News and current affairs programmes may not be sponsored other than with the specific approval of the Authority.

#### **NOTES FOR GUIDANCE**

(The numbered paragraphs correspond to the sections of the Code).

2. The arrangements described in Section 2 will not be treated as applying where the programmer has been influential in setting up the event and/or the sponsorship of it. In this situation the rules about prohibited sponsors (see Section 6) will apply and, in particular, sponsorship of an event by a cigarette brand or tobacco house will not be acceptable. Where the event takes place in the UK, the programmer's influence will normally be presumed. This would not prevent programmers from purchasing the rights to overseas tobacco sponsored events based on the material's programming merits.

#### 4.(i) Underwriting

Suitable expressions might include 'presented by' or 'brought to you by'.

#### 4.(ii) Commissioning

Each programmer is encouraged to develop uniform

presentation of credits where programmes have been commissioned. Devices to achieve this might include standardising the typeface, colour and text of an announcement so that it becomes readily accepted as a label in much the same way as "There now follow a Party Political Broadcast."

6.(i) The use of a tobacco company's house name as an underwriting or commissioning credit would normally be considered unacceptable by the Authority as indirectly publicising cigarettes.

#### 6.(ii) Political Sponsorship

This clause places no restrictions on cable operators' ability to offer local channel access to both political and non-political organisations representing a wide diversity of opinion, nor on the freedom of programmers to offer 'opinion' time to anyone they wish, subject only to the Programme Code.

The sponsorship of political programming is not ruled out. The test for considering sponsorship by a non-political organisation or company should be whether the decision to sponsor that programme has the purpose of promoting a political end or is related to an industrial dispute. In making this judgement, the interest of the sponsor in the political end or the industrial dispute will clearly be relevant.

#### 6.(iv) News

This clause places no restriction on documentary sponsorship. Programmers should consult the Authority in advance if in doubt about the distinction between news and current affairs and documentary material.

The Authority has a particular duty to ensure the impartiality of news and therefore will consider sponsorship in this area only by underwriting.

#### 'brief'

The Authority would not normally expect copylines contained in credits given under Section 3 to exceed five seconds.

#### 'short

The Authority would not normally expect copylines contained in credits given under Section 4 to exceed ten seconds.

#### 'undue emphasis's

Some considerations might be

- i) Are these products/services consonant with the argument or germane to the plot of the programme, or are they obtrusive and contrived? Would a viewer be left wondering why they had been included?
- ii) Is the camera dwelling on the products/services? Are they in close-up for no good reason?
- iii) Without the opening or closing credits, would it be possible to deduce the identity of the sponsor?

Various steps were taken in relation to the controls applied to advertising on cable. First, in relation to the amount of advertising allowed on cable, the Authority questioned the principle of imposing restrictions. However, in the light of section 12(3) of the Cable and Broadcasting Act 1984, the Authority made a formal determination of how the law should be applied. Against the statutory criterion set out in that provision, and having consulted the IBA as the Act requires, the Authority decided that Sky Channel and Super Channel should have applied to them the same limits on the amount of advertising as are applied by the IBA to Independent Television. None of the other cable channels presently provided, national or local, needs to keep to those limits, though some particularly the film channels – have no plans for carrying any advertising.

Detailed procedures for advertising copy clearance were introduced during the year. A manual was produced for designated copy clearance officers of programme companies and cable operators and a series of seminars were held to ensure that the requirements and the pitfalls were well understood.

The first steps were taken to establish the Authority's own Code of Advertising Standards and Practice, varying at some points from the IBA's well-established Code, which was a convenient model to follow at the outset. Work was undertaken in the fields of financial advertising and charity advertising to draw up rules more appropriate to the different world of cable, but this was not concluded during the year. The experimental approval of advertising for sanitary protection products generated few problems; this kind of advertising has in any case been widely accepted in other European countries, where some of the cable channels have the larger part of their audiences.

#### Spreading the word

The Authority devoted considerable effort during the year to promoting awareness of cable, especially in the financial community and among those who might be potential users of cable systems to provide other services. Well over a hundred presentations were made or other discussions undertaken and the increase in interest in cable during the year was notable.

Apart from the bilateral meetings continually undertaken by the Authority's staff, and the opportunity taken to speak at conferences and contribute articles, the Authority took three special initiatives during the year. In July, a number of City analysts and others were invited by the Authority to visit the Cable '86 conference and exhibition in Brighton and to attend a special lunch to honour the occasion, at which Lord Orr-Ewing kindly spoke.

In October, in association with the Institute of Chartered Accountants of England and Wales and to mark Industry Year, a special seminar on the development of cable, moderated by the Chairman, was organised for an invited audience. Geoffrey Pattie, Minister for Information Technology, Professor Bryan Carsberg, Director General of OFTEL, Pat Keller, Managing Director of GEC Communications, and Sir Kenneth Cork all accepted the Authority's invitation to participate in an interesting and successful occasion.

In November the Authority organised a small stand at the CIMAP Exhibition in Birmingham to bring to the attention of those attending how broadband cable

#### THE AUTHORITY'S SENIOR STAFF

Jon Davey Director General

Keith Miles Director of Finance and Operations

Tony Currie Controller of Programmes (from January 1987)

Chris Quinlan Controller of Advertising
Edward Mercer Secretary to the Authority

(Kevin Morrison, who had been Director of Services, left the Authority in December 1986)

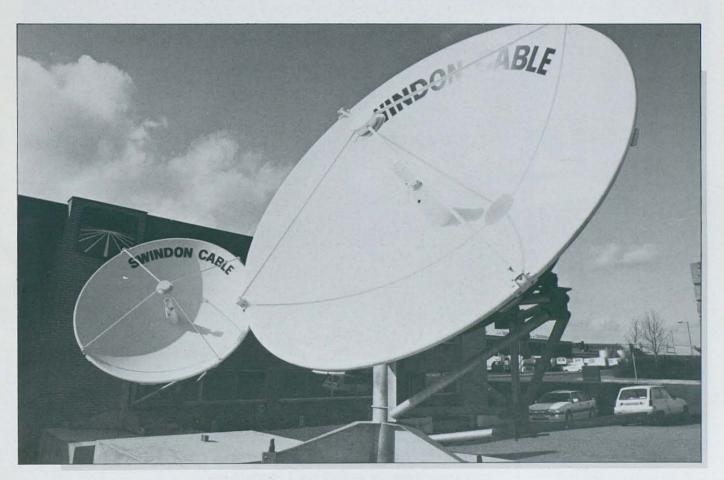
systems could be used to provide the means of linking premises for the purpose of generating greater benefits from computerised control systems. A great deal of interest was created, even though cable's presence was arranged at very short notice.

#### Safeguarding cable's interests

The Authority also took care to ensure that cable's interests were represented in various policy debates which took place during the year. The most important of these arose from the report of the Peacock Committee. That report brought forcibly to public attention the radical changes that are under way in the world of broadcasting. It saw how fundamentally different would be the way in which television would be used when the country was cabled and real multiplicity of choice was widespread. The Authority welcomed the report as a valuable contribution to the debate which needs to take place about the future of broadcasting. In making comments to the Government on the Committee's recommendations, the Authority felt able to support some but expressed reservations about others.

In particular, the Authority disagreed with the Committee as to the best ways of securing the speedier cabling of the country. Rather than to attempt to steer an unwilling British Telecom in the direction of being a national common carrier, deprived of the right to provide services over the new networks it would be encouraged to install, the Authority proposed the stimulation of greater competition. Two particular proposals were put forward to the Government, one for an earlier announcement of the end of the telephone duopoly, presently planned to be reviewed in 1990, and the other for the duct network to be regarded in common carrier terms, with greater pressure for existing ducts to be shared on appropriate financial terms and the encouragement of the public installation of new ducts utilising sources of finance not available to private businesses.

The Authority followed during the year the European debates on international agreements on television. Unlike the existing broadcasters, the Authority had expressed support for the need for a common approach towards



trans-frontier television in order to remove the barriers in the way of the development of new satellite services and to give regulatory agencies such as the Authority reassurance as to the services originating beyond their jurisdiction. The Authority continued to press for agreements on advertising standards - presently the major obstacle in the acceptability of one country's television in another - but joined with others in this country and elsewhere in deploring the erection instead of new hurdles in the shape of quota requirements.

The Authority has unrivalled credentials in putting forward views on the regulation of trans-frontier television since it is the major regulatory agency for European satellite television. This flows from the lead that the United Kingdom has built up in the provision of new television channels aimed at cable systems but distributed by satellite and thereby available in a number of countries. One problem that the Authority has encountered is that, leaving aside Pan-European hurdles, domestic legislation has yet to come to terms with this new situation. For example, the Financial Services Act 1987 is one statute that, by quite properly regulating what goes on in this country, may nevertheless unwittingly have an adverse effect on the development of services catering for audiences elsewhere.



## The Cable Industry

On 31 March 1987, eight new broadband cable systems were operational. They were (in the order in which they switched on) Swindon, Aberdeen, Coventry, Croydon, Glasgow, Westminster, Windsor and Ealing. One other - East London (Newham and Tower Hamlets) - was about to switch on, and did so on 6 April. Two other franchises had started operations on a more modest scale, Camden by constructing and switching on a small pilot scheme and Luton and South Bedfordshire by taking over an old system in their area and operating that in the meantime.



Television choice: Clyde Cablevision's transmision control

#### THE 'FIRST ELEVEN' FRANCHISES

The Government announced in November 1983 the award of interim franchises for pilot projects in eleven areas. The areas were

Aberdeen

Belfast

Coventry

Croydon

Ealing North Glasgow

Guildford

South Liverpool

Swindon

Westminster

Windsor, Slough and Maidenhead

#### FRANCHISES AWARDED BY THE AUTHORITY

Since the Authority was established, it has awarded a total of eleven new franchises. The areas are

Bolton

Camden

Cardiff

Cheltenham and Gloucester

Edinburgh

Luton and South Bedfordshire

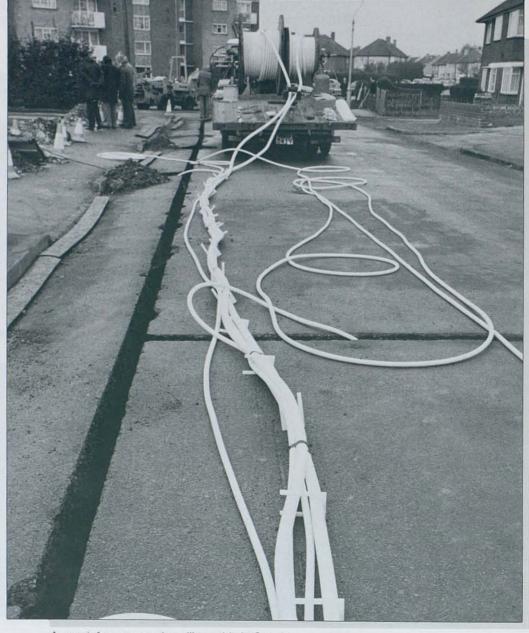
Newham and Tower Hamlets

Preston, Chorley and Leyland

Southampton and Eastleigh

Wandsworth

West Surrey and East Hampshire



A new infrastructure: installing cable in Croydon

The broadband franchises have a status in the cable industry beyond the number of subscribers they serve. They represent the future of cable. Moreover, they are the systems to which the Authority is required by law to accord precedence over others. Thus old systems will have to give way to new when franchises are awarded; and small SMATV systems will not be licensed in an area covered by a franchise.

Nonetheless, the new cable franchises - all of which are still in the course of construction - so far account for only a small proportion of the cable audience. Most cable viewers are connected to the old systems in many parts of the country installed originally to overcome problems of poor television reception. Some of these systems are as large as some franchises will be when they are fully built: that in Hull, for example, passes 76,000 homes. The main difference between these systems and the franchises lies in their capabilities and channel capacity. Most of them have no more than four television channels and no interactive capability or addressability at all. They are therefore unable to deliver either the range of television choice or the new interactive services which the new generation of systems will offer.

The year saw fresh publicity being given to satellite television, often suggesting misleadingly that this was something quite distinct from what cable was already offering. Some cable operators capitalised on what was apparently seen as a more glamorous concept by selling an easier and cheaper form of "satellite television", even though most cable operators are providing a service which is more than just satellite television. In the event the new customers watching satellite television during the year overwhelmingly used cable instead of an individual satellite dish to obtain their programmes.

The interest in satellite television and the realisation that communal reception was bound to be more cost-effective than a host of individual receiving dishes (apart from being less detrimental to the environment) led, particularly during the latter part of the year, to increased activity in the SMATV segment of the industry. The Authority granted (14) licences for SMATV systems and had (53) applications for such licences outstanding at the end of the year.

#### **Audience measurement**

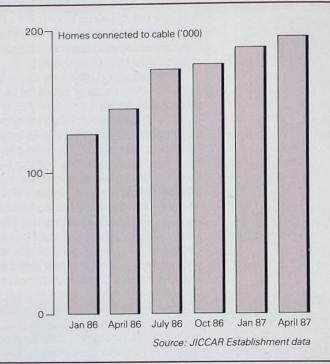
The number of homes subscribing to cable programme services increased significantly during the year, from 143,857 in 1986 to 193,173 in 1987, an increase of 34%, while the total of homes passed by cable systems increased by 20%, from 995,000 to 1,190,000. At the beginning of the year the Authority took over from the Cable Television Association the task of collecting and collating the raw information about the number of cable viewers. Processed into total numbers for the United Kingdom as a whole (and including for this purpose the Channel Islands), the figures were passed at quarterly intervals to the Joint Industry Committee for Cable Audience Research (JICCAR) and published under their auspices.

JICCAR also undertook, through Survey Research Associates, a more detailed sweep of cable audience research, timed to follow exactly twelve months after the previous survey in November 1985. Some of the results of this research are summarised in the next two pages.

#### THE CABLE AUDIENCE

#### HOW THE AUDIENCE IS GROWING

Between January 1986 and April 1987, the number of homes passed by cable systems providing new programme services increased by 22%. The number of homes connected to those systems increased in the same period by 52%.



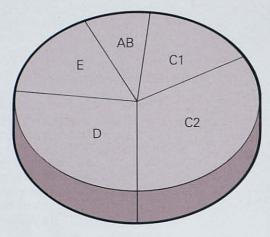
#### WHO ARE THE AUDIENCE?

#### Characteristics of cable homes

Cable households

- are larger (3.56 people)
- are more likely to have a video recorder (50%)
- are more likely to have more than one TV (54%)
- spend more time watching television (5.6 hours a day)

than the national average

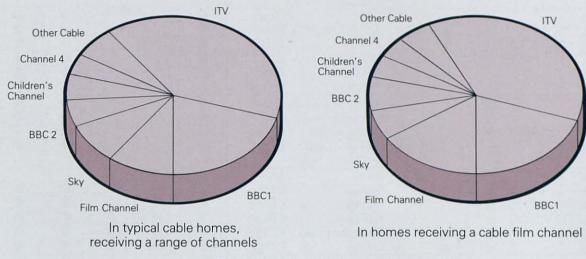


By socio-economic group

#### 50 100% WHICH CHANNELS DO THEY RECEIVE? Sky Channel Music Box Children's Channel Screen Sport A film Channel Lifestyle Arts Channel Local Programmes Other Channels Source: JICCAR November 1986

#### WHAT ARE THEY WATCHING?

The JICCAR survey in November 1986 found that over all the cabled homes surveyed, about 28% of viewing time was spent watching cable programmes as opposed to broadcast television. The equivalent percentage in November 1985 was 21%. However, since the sample included many homes with only one cable channel, this figure understates the proportion of viewing of cable programmes in homes with more choice of channels.

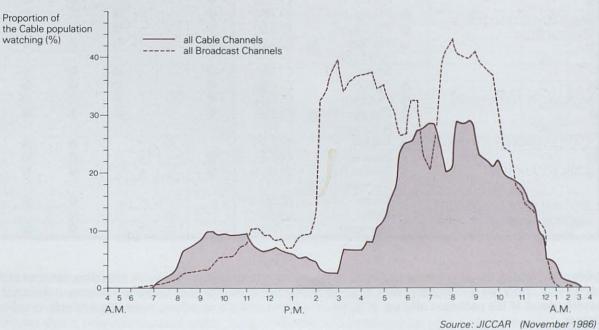


(Share of viewing; all individuals averaged over 4 weeks)

Source: JICCAR November 1986

#### THE PATTERN OF VIEWING

Compared with broadcast television, the viewing of cable channels is particularly strong in the mornings, late at night and on Sundays. This graph show Sunday viewing



FUTURE AUDIENCE MEASUREMENT

Modern switched networks enable constant precise monitoring of viewing. Some preliminary results of such monitoring show an even more startling increase in the share of viewing gained by cable channels than that outlined above.

CABLE PACKAGING	AND PRICI	NG	BROADCASTS	EXTRAITV	MONTAGE	SKY CHANNEL	SUPER CHANNEL	MUSICBOX
ABERDEEN CABLE SERVICES	Family Rainbow Rainbow Plus A la carte	£9.95 £12.95 £15.95	•			•	0	•
CLYDE CABLEVISION	Basic Senior Citizens Bronze Silver Gold Platinum	£8.00 £8.00 £15.25 £22.00 £24.95 £26.50	0			0	0	0
COVENTRY CABLE	Rainbow Bronze Rainbow Silver Rainbow Gold OAP Package A la carte	£14.95 £17.95 £7.90	0			0	0	
CROYDON CABLE TELEVISION	Relay Basic Family Rainbow Rainbow plus Gold	£5.95 £9.95 £12.95 £18.95 £23.95 £27.95	0	0	0	0	0	0
CABLETEL EALING	Basic A la carte	£12.95	•					•
EASTSIDE CABLE	Able Yellow Able Blue Able Red Able Gold	£12.95 £15.95 £19.95 £24.95	0			0	0	
SWINDON CABLE	Basic A la carte	£9.95	•			•	•	
WESTMINSTER CABLE TELEVISION	Economy Foundation Premium Big Ben A la carte	£11.50 £17.45 £23.92 £29.90	•		0	0	0	0
WINDSOR TELEVISION	Silver Gold Platinum Platinum Plus A la carte	£7.95 £13.95 £17.95 £20.95	0		0	0	0	
CABLEVISION BEDFORDSHIRE	Interim	£14.95	REBER			•	•	
CABLE CAMDEN	Darwin Darwin Plus A la carte	£12.65 £20.70	•			•	•	
BRITISH CABLE SERVICES Upgrade systems	Silver Gold Diamond	£5.95 £9.90 £12.90				•	•	

#### NOTES

- This table summarises the programme packages of the franchised operators who were providing services at the
  end of the year under review, together with those on the British Cable Services upgrade systems. It does not
  necessarily detail all the packages offered: in some cases intermediate variations were also available to cable
  customers.
- 2. Most cable operators, as indicated here, assemble available channels into ready-made packages at various prices. In some cases, however, additional channels are available at individual prices, indicated by a la carte.
- 3. This table cannot give the full content of every cable package. For example, it gives no details of sound channels; promotional channels; the specific ITV stations carried; the full range of foreign channels; or the content of various text services.

SCREEN SPORT	CHILDRENS CH	ARTS CHANNEL	LIFESTYLE	PREMIERE	STAR CHANNEL	HOME VIDEO CH	BRAVO	71/5	WORLDNET	OTHER FOREIGN	LOCAL	ETHNIC	TEXT INFM
0	•		•	•			•	•	•	•	•		•
0	•	•	•	•		0	0		•	0	•		
0	0	0	•	0	0	0	•	0	0		0		
	•	•	•			0	0	•			•		•
0	•	0	•	0	0	0	0	•	•	•			•
0	0		0	•			0						•
•	•	•	•					•					•
	•	•						•	•			•	
•	•		•	0	•				•			•	
•	•		•	•			•						
•	•		•										

- 4. Some cable packages give subscribers a choice of film channels; the channels concerned are indicated O.
- 5. **Montage** indicates the split-screen video channel enabling the viewer to see simultaneously what is on between 13 and 16 other channels.
- 6. **Music Box** is now incorporated within Super Channel but the separate listing indicates where it is given a separate cable channel of its own on which it is repeated.
- 7. Other foreign includes Moscow Television, SAT1 (Germany), RAI (Italy) and RTL Plus (Luxembourg).
- 8. In April 1987 subscribers to broadband cable systems paid an average of £18.50 a month.
- 9. Prices include VAT



#### **ABERDEEN**

Aberdeen Cable Services Ltd, 303 King Street ABERDEEN AB2 3AP Telephone: 0224 649444

**Principal shareholders:** British Telecom; Time Life International; Legal & General, Standard Life Assurance, Investors in Industry, North of Scotalnd Investment Co., Abingdon Management Co, APA Venture Capital, Royal Bank, Clydesdale Bank.

**Directors:** Sir Maitland Mackie (Chairman); Donald MacDonald (Deputy Chairman); Graham Duncan (Managing Director); Mike Frost; Martin Gilbert; Kevin Rorke; Stephen Redfarn; Fay Win.

**Senior staff:** Managing Director Graham Duncan; Finance Manager Lorna Milne; Commercial Manager Ginny Stephen; Business Development Manager Roy Summers; Television Manager David Strachan; Head of Sales & Marketing Gordon Sleigh; Sales Manager Denise Wilson.

Franchise area: Aberdeen and surrounding areas (91,000 homes). The 15 year licence commenced on 4 May 1985.

**Cable system:** a 29 channel tree and branch system is being installed for Aberdeen Cable's use by British Telecom. Construction commenced in January 1984 and the system should be the first of the new broadband systems to be completed, in 1988.

**Services provided:** Aberdeen Cable provides all the national cable channels together with several foreign channels. Its own Aberdeen Channel comprises text based and local services community access.



#### COVENTRY

Coventry Cable Ltd, Blackburn House Whitley Village, London Road, COVENTY CV3 4HE Telephone: 0203 505070

Principal shareholders: British Telecom; Courier Press; Equity & Law Life Assurance Society.

**Directors:** Brian Lawrence (Chairman); John Smith; Jeff Richardson; Alan Burke; Ken Leeson; Stanley Clark; Frank Bateson.

Senior staff: Chief Executive Malcom Arnold; Head of Finance Carl Duggan; Sales & Marketing Manager Roy Emerson.

Franchise area: The City of Coventry (119,000 homes). The 15 year licence commenced on 12 September 1985.

**Cable system:** a 32 channel tree and branch system is being installed by British Telecom, with many of the final links to subscribers being associated with BT's existing overhead telephone distribution. Construction commenced in March 1985.

**Services provided:** Coventry Cable provides an 18 channel television service as well as radio. All the national cable channels are carried, and two from overseas. One channel is devoted to COLT (Coventry's Own Local Television) in which Coventry Cable works with Mercia Sound for news services and the sale of advertising time.



#### **CROYDON**

Croydon Cable Television Plc., Communications House Blue Riband Estate, Roman Way, Croydon CR9 3RA Telephone: 01-7600 222

**Principal shareholders;** Cablevision-UK; Crystal Palace Radio Ltd; Balfour Beatty Ltd; A.S.M. Robinson; J.F. Gill; R. Subba Row.

**Directors:** Sir Paul Bryan DSO MC MP (Chairman); Alan Robinson; Graham Robertson; Peter Lynch, Jack Gill CBE; George Heggie; Matthew Oristano, Victor Oristano; Robert Stiby; Sir Richard Storey; Raman Subba Row.

**Senior staff:** Executive Vice Chairman Matthew Oristano: Finance Director Graham Robertson; Operations Director Peter Lynch; Marketing Director Gerald Dash; Manager Crystalvision Frazer Ashford.

**Franchise area:** the London Borough of Croydon (120,000 homes). The 15 year licence commenced on 15 October 1985.

**Cable system:** Croydon Cable is installing a 38 channel tree and branch cable system in a star configuration, utilising Jerrold Starcom 450 set-top decoders in subscribers' homes, with a separate institutional network laid in the same ducts. Construction commenced in June 1985.

**Services provided:** Croydon Cable provides a 31 channel television service and an 8 channel FM radio service comprising all the nationally available programme channels, several foreign channels and a range of local channels including the Crystalvision television channel. The services are available in six packages ranging in price from £5.95 a month to £27.95 a month.



**EALING** 

Cabletel Communications Ltd., Fieldway Greenford, Middlesex UB6 8UN Telephone: 01-575 9000

Principal shareholders: Ladbroke Group; Comcast Corporation; Legal & General

Directors: John Jackson (Chairman); Cyril Stein; Peter George; Gerry O'Mahoney; Julian Brodsky; Daniel Aaron; Ralph Roberts.

**Senior staff:** Chief Executive R C Yates: Chief Engineer Vic Male; System Manager Gordon Parker; Chief Accountant Duncan Cameron; Commercial Controller John Proctor; Sales Manger Joe Flay; Construction Manager Richard Deavin.

Franchise area: the London Borough of Ealing (100,000 homes). The 15 year licence commence on 15 November 1986.

Cable system: Cabletel Communications is installing its own 28 channel switched star network utilising the Cabletime switch. Construction commenced in September 1986.

**Services provided:** all the national cable channels are provided along with several foreign channels. Cabletel was the first British cable operator to carry Moscow Television. Cabletel has taken the initiative in assembling a Hindi channel, Indra Dnush, which it supplies also to Windsor Television. It also provides a locally produced Hindi cable radio channel called Radio Roshni.



#### **EAST LONDON**

East London Telecommunications Ltd., ELT House, 2 Millharbour, London E14 9TE Telephone: 01-538 4838

**Principal shareholders:** Fleming Mercantile Investment Trust; Investors in Industry; Electricity Supply Pensions; GEC; British Rail Pensions; Prudential Assurance; Ferranti; Mercury; Southbrook; Jones Intercable; Barclays Investment Management:

**Directors:** Ian Hinton (Chairman); David Cronin; Peter Davis; Derek Dawson; Kevin Lomax; Peter Maddock; Roger Marshall; Gordon Owen; Peter Richmond; Mark Sketchley; Barrie Turner-Smith; Simon Weinstock.

**Senior staff:** Managing Director Roger Marshall; Finance Director Peter Maddock; Sales and Marketing Director Barrie Turner-Smith; Technical Director David Cronin.

**Franchise area:** the London Boroughs of Newham and Tower Hamlets (127,000 homes). The 15 year licence commenced on 6 April 1987.

**Cable system:** GEC Cable Systems have been commissioned to install a switched star network. A separate optical fibre telecommunications network is being provided. Construction commenced January 1987.

**Service provided:** All the national channels except Star are provided, together with a range of foreign channels. No local television service is yet provided but local text information is carried.



#### **GLASGOW**

Clyde Cablevision Ltd., 40 Anderston Quay Glasgow G3 8DA Telephone: 041-221 7040

**Principal shareholders:** GEC: Balfour Kilpatrick; Scottish Daily Record; BCS; Cable & Wireless; Investors in Industry; Charterhouse Group; Prudential Assurance; Scottish Mutual Assurance; Scottish Amicable Nominees; Ensign Trust.

**Directors:** Sir Ian MacGregor (Chairman); A D Stewart (Deputy Chairman); David Campbell; Michael Kelly; Robert Maxwell; John Morrish, Gordon Owen, Stuart Park, Gerry Richardson; Simon Weinstock.

**Senior staff:** Managing Director Stuart Park; Finance Director John Morrish; Operations Director Jim Deegan; Marketing Director Maureen Armstrong; Technical Director Geoff Strachan; Director of Programmes Joyce Taylor.

**Franchise area:** Central and Northwest Glasgow and Clydebank (112,000 homes and 16,000 business premises). The 15 year licence commenced on 9 November 1985.

**Cable system:** Clyde Cablevision is installing a 30 channel switched star system utilising the GEC switch system. Construction commenced in July 1985. A separate optical fibre business network is being constructed in central Glasgow in association with Mercury..

**Services provided:** all the national channels are provided, as well as a range of foreign channels and Clyde Cablevision's own Glasgow Channel which includes community access. Clyde Cablevision has been the testbed for W H Smith's interactive Consumer Channel and Video Juke Box..



#### SWINDON

Swindon Cable Ltd., Newcome Drive Hawkesworth Estate, SWINDON, Wiltshire Telephone: 0793 615601

Principal shareholders: British Telecom.

**Directors:** Roy Faibish (Chairman); Alan Burke; Peter Gosling; Joan Kiernan; Ian McCall; Timothy Smith (Managing Director); Nicholas Tresilian.

**Senior staff:** Managing Director Tim Smith; Finance Director Joan Kiernan; Network Operations Manager Wally Blakey; Sales and Marketing Director Ian McCall.

Franchise area: Swindon (53,000 homes). The 15 year licence commenced on 15 September 1984.

**Cable system:** a 16 channel tree and branch system was provided by Thorn EMI for the first phase of the new system in early 1984, supplementing the old broadcast relay network which has existed in Swindon for many years. Following Thorn EMI's sale of the company to British Telecom, BT are now extending the system and upgrading it to 30 channels.

**Services provided:** As the system has so far had smaller capacity than most others, a more restricted range of channels has been offered. Bravo, the Arts Channel and Lifestyle are not provided. Swindon Cable's own local programming was suspended in February 1986, but it still carries community access and local text services.

#### WESTMINSTER

Westminster Cable Company Ltd., 87/89 Baker Street London W1M 1AH Telephone: 01-935 6699

**Principal shareholders:** Kleinwort Benson; British Telecom; British Information Technology; Pru Bache; Sanoma Corporation

**Directors:** Brian Deutsch (Chairman); Tapio Kallioja; Brian Lawrence; John Macarthur; Callum Macarthy; Michael Storey; Donald Wray.

**Senior staff:** Managing Director Michael Storey; Financial Controller Tony Tucker; Technical Operations Manager Roger Blakeway; Sales Manager Roger Bell; Videotex and Advertising Manager Helena Kania.

**Franchise area:** the City of Westminster (73,000 homes and 14,000 business premises). The 15 year licence commenced on 15 October 1985.

**Cable system:** British Telecom are installing for Westminster Cable's use an advanced switched star system using BT's own switch. It is the only British broadband network currently to be making extensive use of optical fibre, in all the trunks down to each local switching point.

**Services provided:** Westminster Cable provides all the national cable channels except Star, along with some foreign channels. One channel is devoted to full live coverage of procedings in the House of Lords. It provides in addition an Arabic Television Channel, using programmes acquired from Dubai. Although no local programes are yet available, it provides extensive local text services and is experimenting on part of the system with allowing access to a library of interactive videodiscs..



#### WINDSOR

Windsor Television Ltd., The Keep 21 Victoria Street, Windsor, Berkshire SL4 1YE Telephone: (0753) 856345 Telex: 846717 Cable G Facsimile: (0753) 850075

**Principal shareholders:** Standard Life Assurance; Compagnie Generale de Chauffe; CIN Industrial Investment; McNicholas Construction; Investors in Industry; Drayton Consolidated Trust; Sharp Technology Fund; Kleinwort Grieveson Investment Management; County Development Capital; Grosvenor Technology Fund; Fountain Development Capital Fund.

**Directors:** Michael J Davis (Chairman); The Rt Hon the Earl De La Warr DL (Deputy Chairman); David A Whitaker (Managing Director); A Scott Bell; Alan Boyd; Hugh David; Joe Delahunty; Tim Halfhead; Stephen Kirk; Peter Knowles; Bernard Lecomte; Jean-Pierre Machart; Philip Maskell; Robin Oliphant; Nicholas Taylor.

**Senior staff:** Managing Director David Whitaker; Production Director Hugh David; Technical Director Joe Delahunty; Marketing Director - Television Tim Halfhead; Finance Director Peter Knowles; Marketing Director - Cable Services Robin Oliphant; Chief Engineer Reg Smart.

**Franchise area:** Windsor, Slough, Maidenhead, Ashford, Staines, Stanwell and Heathrow Airport (99,000 homes). The 15 year licence commenced on 2 December 1985.

**Cable system:** Windsor Television is installing its own switched star network using the Cabletime switch. Construction commenced October 1985.

**Services provided:** All the national cable channels are provided. Two foreign channels are carried, and it provides the Hindi channel Indra Dnush. Local text services are provided, plus a new local information and advertising channel called Arcade, but no local originated programming is yet produced.

#### OTHER CABLE FRANCHISES SO FAR AWARDED

#### CAMDEN

(Franchise area: the London Borough of Camden - 70,000 homes)

Cable Camden Ltd, 13 Hawley Crescent, Camden Town, London NW1 8NP

Tel: 01-485 4121. Chief Executive - Jerrold Nathan

As a preliminary step, Cable Camden have constructed a small pilot scheme serving 104 flats, using the Cabletime switch, which was switched on under an interim licence in March 1987.

#### **LUTON AND DUNSTABLE**

(Franchise area: the Districts of Luton and South Bedfordshire - 91,000 homes) Cablevision Bedfordshire Ltd, Camp Drive, Houghton Regis, Dunstable,

Bedfordshire LU5 5HE Tel: 0582 865095. Managing Director - Phillip Morgan.

Under an interim licence, Cablevision Bedfordshire are operating some old systems in their area pending the construction of a new network.

#### **GREATER GUILDFORD**

(Franchise area: Guildford, Woking, Camberley, Aldershot, Farnham,

Farnborough, Fleet and Godalming - 137,000 homes)

British Cable Services Ltd, 170 Walnut Tree Close, Guildford, Surrey GU1 4RX

Tel: 0483 505200. General Manager - John Pitt.

Construction of the new broadband network, using the System 8 switch, commenced in Guildford in June 1987.

#### BELFAST

(Franchise area: the whole of Belfast - 136,000 homes) Ulster Cablevision, 40 Victoria Square, Belfast BT1 4QB Tel: 0232 249141. Executive Vice Chairman - George Alton.

#### BOLTON

(Franchise area: the Metropolitan Borough of Bolton 135,000 homes)
Bolton Telecable, c/o National Telecable, 19 Stratford Place, London W1N 9AF
Tel: 01-493 8388. Managing Director - Patrick Scott.

#### CARDIFF

(Franchise area: Cardiff and Penarth - 103,000 homes)

British Cable Services Ltd, 187 Coombe Lane West, Kingston-upon-Thames,

Surrey KT2 7DJ

Tel: 01-942 8900. Managing Director - Chris Medd

#### **CENTRAL LANCASHIRE**

(Franchise area: Preston, Chorley and Leyland - 114,000 homes) Lancashire Cable Television Ltd. c/o Oyston Cable, 1 Chapel Street, Preston PR1 8BG

Tel: 0772 202505. Managing Director - Rod Griffiths

#### **CHELTENHAM AND GLOUCESTER**

(Franchise area: the two urban areas - 90,000 homes)

Cotswold Cable Television Ltd, The Quadrangle, Imperial Square, Cheltenham,

Gloucester GL50 1YX

Tel: 0242 519111. Director - Tim Osborne.

#### **EDINBURGH**

(Franchise area: the whole of the City - 183,000 homes)

Cablevision (Scotland) Plc, 4 Melville Street, Edinburgh EH3 7NZ

Tel: 031-453 1919. Director - Eric Sanderson

#### **LIVERPOOL**

(Franchise area: South Liverpool - 125,000 homes)

Merseyside Cablevision Ltd, c/o Oyston Cable, 1 Chapel Street,

Preston PR1 8BG

Tel: 0772 202505. Co- ordinator - Bob Nixon.

#### SOUTHAMPTON

(Franchise area: the City of Southampton and the urban part of Eastleigh - 97,000 homes).

Southampton Cable Ltd, 87 Jermyn Street, London, SW1Y 6JD

Tel: 01-839 7106. Chief Executive - Richard Tripp.

#### WANDSWORTH

(Franchise area: the London Borough of Wandsworth - 100,000 homes)

Wandsworth Cable Ltd, c/o Southampton Cable Ltd, 87 Jermyn Street, London SW1Y 6JD

Tel: 01-839 7106. Chief Executive - Richard Tripp.

## Cable Programmes

Most of the television choice offered by cable operators is supplied to them by separate companies usually known as programme providers. The overheads of providing cable programmes are therefore spread by making each channel available to as many cable operators who wish to offer it to their customers and have the capacity on their system to do so.

The general picture of cable programming has been encouraging. Channels have expanded and the choice for viewers (on the systems with multiple channels at least) has grown during the year. All the British channels described in last year's report have continued to provide services throughout this year, sometimes over longer hours. They have been joined by two other channels.

Star Channel was started by British Telecom in August 1986 as an alternative film channel. Like Home Video Channel, whose management it shared, it has been distributed to cable operators in videotape form rather than by satellite. However, discussions on a merger between the film channels were begun and concluded and Premiere, Star Channel and Home Video Channel are all now programmed and managed by a reconstructed Premiere partnership. For the time being, Star Channel continues as a separate channel but is unlikely to do so indefinitely.

Super Channel was launched on 30 January 1987 as a general entertainment channel drawing largely on past BBC and ITV programmes, though it has a specially made half-hour news programme produced by ITN every weekday evening. Super Channel now incorporates Music Box, though many cable operators continue to play Music Box out as a separate channel. The shareholders in Super Channel are the Virgin Group and all of the ITV companies other than Thames Television and TV-am. Although one of the advantages of the multiplicity of cable is the diversity it introduces into the provision of television programming, the entry into the cable field of the established broadcasters - evident also in the new participation in the Children's Channel by Thames Television and Central Television - is an interesting and welcome further recognition of the increased seriousness with which the cable medium is being taken.

#### Overseas and ethnic channels

Cable viewers on many of the broadband systems were also able to choose between an enhanced array of foreign programming. Satellite and cable make the world a much smaller place, and it is both educative and fascinating for the cable viewer to be able to tune in live to French, American, Russian, German and Italian television without the distortion that can too easily occur when extracts are selected for inclusion in British television programmes. Modern technology permits the free flow of information as never before and cable television can contribute, in a small but significant way, to the removal of barriers and increased understanding

Foreign channels may also be a valuable service to expatriate minorities in this country. There are also other services specially designed to meet those needs. During the year the Indra Dnush channel of Hindi films and television programmes started on the Ealing and Windsor systems and at the end of the year this was supplemented in Ealing by a sound-only channel called Radio Roshni. Westminster Cable started during the year its Arabic Channel offering a service of programmes supplied from Dubai Television.

#### Local services

Services of particular appeal to local communities continued during the year. Locally produced programmes were regularly seen on the new systems in Coventry, Croydon, Glasgow, Aberdeen and Swindon, sometimes produced by the cable operator and sometimes shown by the operator under arrangements for community access. Samples of these programmes reaching the Authority often impressed by their flair and inventiveness and by their ability to reflect the real activities, interests and concerns of local communities never before served by television. They augured well for the service likely to be available once cable has developed more extensively.

#### **UK CABLE PROGRAMME CHANNELS**

**SKY CHANNEL-**the longest-established satellite-delivered general entertainment channel, available throughout Europe between 7.45 am and midnight..

- Satellite Television plc, 31-36 Foley Street, London W1P 7LB Tel: 01-636 4077

**SUPER CHANNEL** - the newest satellite channel, providing BBC and ITV entertainment programmes, with news from ITN, throughout Europe, and incorporating Music Box 24 hours a day.

-19-21 Rathbone Place, London W1P 1DF. Tel: 01-636 7888

**THE CHILDREN'S CHANNEL -** satellite-delivered children's programming from 5 am to 3pm.

- Starstream Ltd, 44-46 Whitfield Street, London W1P 5RF. Tel: 01-580 6611

**SCREEN SPORT-** the European satellite sports channel, every evening from 5 pm to midnight.

- W H Smith Television, The Quadrangle, 180 Wardour Street, London W1V 4AE Tel: 01-439 1177

**PREMIERE** - feature films from 3pm to 3am delivered to British operators by satellite

- 56 D'Arblay Street, London W1A 2AD. Tel: 01-434 0611

**THE ARTS CHANNEL -** 3 hours a day of music, jazz, opera, ballet, visual arts, drama etc delivered by satellite to Britain and other European cable operators. - P.O. Box 7, Ebbw Vale, Gwent NP3 5YP Tel: 0495 306995

**LIFESTYLE** - daytime programming for those at home, distributed by satellite.
- W H Smith Television, The Quadrangle, 180 Wardour Street, London W1V 4AE Tel: 01-439 1177

**STAR CHANNEL** - feature films from 6.30pm to 2am delivered to British cable operators on videotape.

Managed as agent by Premiere, 5 D'Arblay Street, London W1A 2 AD Tel: 01-434 0611

**HOME VIDEO CHANNEL -** feature films from 7pm to 6-7 am delivered to British cable Coperators on videotape.

5 D'Arblay Street, London W1A 2 AD Tel: 01-434 0611

**BRAVO** -'Golden oldie' feature films 24 hours a day, delivered to British cable operators on videotape.

-Cablevision UK, Communications House, Blue Riband Estate, Roman Way, Croydon CR9 3RA Tel: 01-680 1444

#### **European Community programme content**

The Authority needs to look again this year, in accordance with its statutory duties, at the question of what constitutes a proper proportion of European Community programme material to be included in licensed cable programme services. As a general issue, this has caused concern to the Authority in the context of the draft directive being considered by the European Community and the draft Convention on Broadcasting being prepared by the Council of Europe. Some would like those draft instruments to have stringent requirements about European quotas, lacking the flexibility which United Kingdom law provides. That would make impossible some of the channels available on British cable systems, to the general loss, and the Authority has urged strongly the need, if quota provisions exist, for them to be flexible.

The need for flexibility is illustrated by the diverse nature of the cable programme channels available. An increasing number of cable systems carry programme channels from other countries, some from within the European Community (from France, Italy and Germany) but others from beyond it (Moscow Television and the Worldnet service from the USA). The Authority does not believe that it would be in the general interest (or in accord with the United Kingdom's attachment to the principle of the free flow of information) to restrict cable operators as to the foreign channels they may carry and accordingly takes the view that whatever the amount of European community programmes they contain, even if none, that proportion must be regarded as proper.

As last year's annual report pointed out, there is also a special case relating to film channels. No channels specialising in providing cinema films for an English-speaking audience can realistically carry more than a small proportion of British or European Community-made product. The Authority has to accept that the small percentage actually shown represents a proper proportion in the circumstances.

There are other general considerations. Prime must be that these are still the early days when programme services are being provided for what is a small if growing audience. Programme providers generally are shouldering short term losses for the sake of the prospect of future profits. The Authority must take an understanding view of the commercial realities: it cannot seek to insist that more original programming is undertaken if there is no money available and simple survival is the main preoccupation of the channel concerned



In the case of two channels, Screen Sport and Lifestyle, there has been a change in the proportion of European Community material over the last year on which comment is appropriate. Screen Sport continues to suffer from the actions of the British broadcasters and their EBU colleagues in systematically excluding an unwanted competitor from deals for European events. The difficulty of breaking into this cartel has meant that Screen Sport, in consciously making an effort to raise the level of its programming with more big events and more live coverage, has been forced to look elsewhere in the world (where in any case a large proportion of the events appropriate to an international sports channel take place). The proportion of European material has fallen as a result. The Authority regrets the machinations behind this reality but in the circumstances cannot expect Screen Sport to include a higher proportion of European material in its service.

Lifestyle has also been improving its service by seeking more attractive programme material and this, coupled with increasing competition for what British programming is available - particularly with the launch of Super Channel which relies heavily on British television programmes - has meant that it too has increased its percentage of programme material from non-European Community sources, particularly the USA and Australia. The Authority hopes that Lifestyle will be able to include more home produced material in the coming months, but regards the present situation as acceptable.

13 WEEK SAMPLE (figures in hours)	EEC PROGRAMMES	NON-EEC PROGRAMMES	TOTAL OUTPUT (excluding advertising)	EEC CC % 1986		AVERAGE DAILY OUTPUT
THE ARTS CHANNEL BRAVO THE CHILDREN'S CHANNEL HOME VIDEO CHANNEL LIFESTYLE PREMIERE SCREEN SPORT SKY CHANNEL STAR CHANNEL	174 886 570 80 127 136 171 853 54	51 1346 330 694 217 933 466 668 783	225 2232 900 774 344 1069 637 1521 837	84 8 62 13 55 13 54 51	77 40 63 12 37 13 27 54 6.5	2.5 24 10 8 4 12 7 17

ETHNIC CHANNELS (INDRA DNUSH AND THE ARABIC CHANNEL) are predominantly non-EEC.

FOREIGN SATELLITE CHANNELS have not been measured but contain varying amounts of EEC programme material.

LOCAL CABLE CHANNELS tend to consist predominantly of EEC programmes, but some buy in a certain amount of material from elswhere.

Fuller details are in the table. The Authority thinks it worth emphasising, as it did last year, that this has been prepared in a straightforward way to give a picture of what each channel is in fact doing in relation to European Community programming. Since no arbitrary requirements have been set in advance, there has been no need to establish a complex set of exceptions or calculation formulae by which the magic number can be achieved. The proportions quoted here are therefore not comparable with the figure of 86% used by the broadcasting authorities. The Authority regards them as representing a proper proportion.

#### Complaints

The Authority received no complaints about cable programmes during the year.

#### 5

### **Finance**

The audited accounts for the year to 31 March 1987 are appended to this report.

The basis of the Authority's financing is laid down in sections 18 to 21 of the Cable and Broadcasting Act 1984. The general position is that the Authority is to support itself from the fees it charges to its licensees. It is required to secure at the earliest practicable date that its revenues are sufficient to enable the Authority to meet its obligations and to discharge its functions under the Act. Until that is practicable, the Authority receives loans from the Home Secretary - up to a maximum of £2 million - which are to be repaid, with interest, as directed by the Home Secretary.

The principal activities of the Authority, following the functions laid upon it by the Act, are described on page 3 of this report. The manner in which the Authority has undertaken these activities is described in greater detail in earlier sections.

The fees receivable by the Authority from its licensees, and from applicants for licences, amounted to £277,000 (compared with £334,000 for the previous period of 16 months). The Authority reviews from year to year what level of fees should be fixed, bearing in mind its obligation to become self-supporting. It takes into account the size of the industry (in particular the small number of licensees and the relatively few households connected to cable systems at this stage of the industry's development) and another of its statutory obligations, that to exercise its licensing powers in the manner best calculated to promote the provision of services by cable. The Authority is conscious that its fees bear heavily on the early licensees at a time before they are receiving substantial revenues. Because of this the Authority still believes that it would be premature for some time to come to expect the industry to meet the full costs of the Authority's activities, especially the exceptional start up costs of the Authority.

At the beginning of 1987 the Authority felt obliged to increase its fee scales significantly though there remains a substantial shortfall between the revenue and costs which still needs to met by borrowings. The deficit for the year amounted to £238,000 (compared with £198,000 for the previous period of 16 months) before interest due on the loans from the Home Office and provision for taxation.

The expenditure on fixed assets in the year was £68,000 (1986 - £153,000), of which a sum of £54,000 had been committed in the previous year. This represents the completion of the first stage of equipping the organisation.

The Authority will continue in the forthcoming year to pursue its statutory functions, and expects to make progress on those aspects of programme regulation not so far undertaken. The number of licensees is expected to increase, although the fact that cable development has to be privately financed means that the Authority is not in a postition either to control or to predict the rate at which new licences are sought.

The Members of the Authority, as appointed by the Home Secretary, are set out at the beginning of this report. There were no changes during the year. The salaries of Members are determined by the Home Secretary but paid out of the Authority's funds.

Messrs Peat Marwick Mitchell & Co have changed their name to Messrs Peat Marwick McLintock and will continue in office as auditors to the Authority.

#### **BALANCE SHEET AT 31st MARCH 1987**

	And 17		87	198	
Fixed assets	Note	£'000	£'000	£'000	£'000
Tangible assets	10		154		128
Current assets			101		120
Debtors	13	74		85	
Cash at bank and in hand		107			
		181		106	
<b>Creditors:</b> amounts falling due within one year	14	(109)		(55)	
Net current assets			72		(51)
Total assets less current liabilities			000		470
Financed by:			226		179
Provisions for liabilities					
and charges	15		8		4
Capital and Reserves					
Loans from the Home Office Income and Expenditure	16	750		400	
Account		(532)	218	(225)	175
			226		179
			=		111

The notes and statements on pages 28 and 29 form part of the accounts.

Richard Burton Chairman Jon Davey Director General

REPORT TO THE CABLE AUTHORITY BY THE AUDITORS APPOINTED UNDER SECTION 20 (2) OF THE CABLE AND BROADCASTING ACT 1984

We have audited the Accounts of the Authority set out on pages 25/29 in accordance with approved Auditing Standards. In our opinion the accounts, give a true and fair view of the state of affairs of the Authority at 31st March 1987 and of its results and source and application of funds for the year then ended and comply with the Cable and Broadcasting Act 1984.

London, 29th June 1987

PEAT MARWICK MCLINTOCK Chartered Accountants

### INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st MARCH 1987

	Note	19	87		986
		£'000	£'000	(Sixteen £'000	Months) £'000
Income Operating expenses	2		277		334
Staff costs Depreciation Other operating charges	3 2 3	309 37 180	526	258 25 256	539
Operating deficit Interest receivable	4		(249)		(205)
Deficit before taxation and interest payable			(238)		(198)
Provision for taxation  Deficit before interest payable	5		(4)		(198)
Interest payable	2&6		(65)		(27)
Deficit for the year Deficit brought forward			(307) (225)		(225)
Deficit carried forward			(532)		(225)

#### SOURCE AND APPLICATION OF FUNDS FOR THE YEAR ENDED 31st MARCH 1987

	1987 £'000	1986 £'000
Source of Funds:		
Deficit before taxation and interest payable Adjustment for items not involving the movement of funds;	(238)	(198)
Depreciation	37	25
Provision for repairs	4	4
Funds absorbed by operations Funds from other sources	(197)	(169)
Loans from the Home Office Proceeds from sale of fixed assets	350 5	400
Application of funds:	(00)	(4.50)
Purchase of fixed assets Interest payable to Home Office	(68) (65)	(153)
	25	51
Components of increase in working capital		
Debtors Creditors: amounts falling due within one year Movement in net liquid funds:	(11) (50)	(55)
Increase in cash at bank and in hand	86	21
	25	51

#### **NOTES TO ACCOUNTS**

1. These accounts have been prepared in a form determined by the Secretary of State for the Home Department, with the approval of the Treasury in accordance with Section 20 (1) of the Cable and Broadcasting Act 1984.

- **Accounting Policies**2. The following is a summary of the principal accounting policies which have been adopted in preparing these accounts.
- The accounts have been prepared under the historical cost convention. The accounts comply with the statements of Standard Accounting Practice issued by member bodies of the Consultative Committee of Accountancy Bodies, and, so far as appropriate, meet the requirements of the Companies Act 1985.
- The income of the Authority consists of licence and application fees and is accounted for on the basis of fees statutorily due
- (c) The amortisation or depreciation of tangible fixed assets is calculated on a straight line basis by reference to the cost and estimated useful lives. The rates of depreciation are as follows:

Expenditure on leasehold premises- over period of lease (8 years).

Motor vehicles at 25% per annum.

Furniture and equipment at 15% per annum.

Office computer equipment at 20% per annum.

In accordance with government practice , loans from the Home Office are treated as capital and the interest payable thereon is not shown as an operating expense.

Operating Expenses
3. Included in operating expenses are the following:

1987 £'000 56 196 25 32 5 4 48	(Sixteen Months) 1986 £'000 61 151 18 28 3 4 34 4 15
1987 £'000 11	(Sixteen Months) 1986 £'000
	1987 £'000 56 196 25 32 5 4 48 - 9

#### Taxation

5. Apart from taxation on interest received the Authority is not liable to Corporation Tax

Interest Payable

6. Interest on loans from the Home Office (see note 16) 65

**Members and Employees** 

The remuneration for Members of the Authority excluding pension costs as determined by the

27

		Allitual
		rate at
		31 March
	1987	1986
	£'000	£'000
Chairman	25	24
Deputy Chairman	9	8
Other Members (in total)	22	20

The number of employees at the end of the year was 10. (1986 - 9)

The number of employees whose emoluments (excluding pension cost) exceed £30,000, fell within the ranges

	1986
	Annual rate
1000	2
2	1
1	

#### **Pensions**

8. The Authority operates a pension scheme designed to accord with recent trends and practices. Contributions are based on each member's pensionable earnings and are charged to income and expenditure account as payments are made. The scheme assets are funded completely independently of the finances of the Authority.

#### Value Added Tax

9. The Authority is not permitted to register under current legislation

#### Tangible Fixed Assets

Total Short Furniture Motor Computer Leasehold and Vehicles Property Equipment £'000 £'000 £'000 £'000 £'000 COST at 1.4.86 153 68 64 54 35 Additions in year Disposals in year 9 57 (11)(11)Cost at 31.3.87 210 65 55 33 57 AMORTISATION/ DEPRECIATION at 1.4.86 Provided in year 25 37 9 8 8 8 8 12 Eliminated on disposal (6) (6)Depreciation at 31.3.87 56 16 16 12 12 Net book amount at 31st March 1987 39 154 49 21 45 Net book amount at 31st March 1986 128 56 46 26

**Operating Leases** 

11. At 31st March 1987 the Authority had annual commitments under non-cancellable operating leases as set out below:

	1987	7	1986			
	Land and Buildings	Other	Land and Buildings	Other		
	£'000	£'000	£'000	£'000		
Operating leases which expire:						
within one year		=		4		
in the second to fifth year inclusive	48	4	48	-		
			_	_		
	48	4	48	4		
		-				

#### **Capital Commitments**

12. There were no capital commitments outstanding. (1986-£54,000 contracted for).

Debtors 13. Debtors consist of:	1987 £'000	1986 £'000
Debtors for fees Other debtors Prepayments	51 2 21	71 1 13
repayments	74	85
Creditors: amounts falling due within one year		
14. These consist of:	1987 £'000	1986 £'000
Other creditors and accruals Social security and PAYE income tax	95 10	45 10
Income Tax on Interest received	4	
	109	55
	_	-
Provision for Liabilities and Charges 15. Provision for leasehold repairs and renewals		
Balance at 1 April 1986	4	
Charge for the period in the Income and Expenditure Account	4	4
Balance at 31st March 1987	8	4

#### Loans

16. Loans from the Home Office are as follows

Date Advanced	Interest Rate per annum %	£'000
1. 3 December 1984	10.875	50
2. 25 March 1985	11.875	25
3. 6 June 1985	11.375	100
4. 7 November 1985	10.625	125
5. 21 January 1986	12.000	100
6. 2 May 1986	8.625	87
7. 16 June 1986	8.625	88
8. 7 October 1986	11.500	87
9. 9 December 1986	11.500	88
		750

The above loans were provided by the Secretary of State for the Home Department with the consent of the Treasury under Section 19 (1) of the Cable and Broadcasting Act 1984. The repayment dates are subject to discussion and agreement with the Home Office after consultation with the Treasury. The aggregate amount outstanding by way of principal advanced may not exceed £2 million under Section 19 (2) of the Cable and Broadcasting Act 1984.

#### A CABLE GLOSSARY

Access channel. A channel that the cable operator makes available for use by anyone with something to say or present (community groups, individuals, etc.) usually - though not necessarily - with facilities made available free of charge by the operator.

Addressability. The facility by which the subscriber's home equipment may be controlled remotely by the cable operator, in order to allow disconnection, the provision of pay-per-view, or changes in the level of service.

Bandwidth. Part of the frequency spectrum; that part of the spectrum required for a specific purpose; eg a television channel occupies a bandwith of 8 Megahertz whereas a telephone conversation utilises only 4 Kilohertz.

Basic service. The service obtained by a cable subscriber paying the minimum charge. It will normally comprises the broadcast services plus a range of other "free" channels. A "basic channel" is one included in the basic service.

Bird. Coloquial description of a satellite.

Bit. Unit of measurement of data transmitted in digital form. Hence the measurement of the capacity of a cable system to carry information will be in terms of Kilobits or Megabits per second (Kbits/s, Mbits/s).

**Broadband.** Cable with the capacity to carry a large number (eg 25 or more) television channels. Interchangeable with wideband.

CATV. Community antenna television. A cable system covering a whole community, eg a town.

Churn. Turnover of subscribers/cancellation of subscriptions. Usually quoted as a percentage rate.

Closed user group. Cable channel available only to a specific group of subscribers.

Coaxial cable. Cable consisting of a central conductor (usually copper) surrounded by, and insulated from, another conductor. It is the standard material used in present-day cable systems. Signals are transmitted through it at different frequencies, giving greater channel capacity than is possible with twisted pair cable but less than is allowed by optical fibre.

CTA. Cable Television Association. The United Kingdom trade association.

DBS.Direct broadcasting by satellite. The use of a satellite to transmit high-power television signals for reception direct by individual viewers, though such services will also be carried on cable systems.

Downlink. The tranmission from a satellite to an earth station.

**Downstream.** The direction of signals transmittled from the cable headend to the subscriber.

Drop. The cable connection from the street in to the subscribers' premises. The term is sometimes (but not always) confined to those subscriber connections from overhead rather than underground cable.

Earth station. Transmitting or receiving point for satellite transmissions.

ECS. European Communications Satellite. A series of satellites operated by Eutelsat. The first of the series, ECS1, carries nine European television channels distributed to cable systems, including two British channels (Sky Channel and Super Channel).

Footprint. The earth coverage area of a transmission from a satellite. Like a torch beam, the strength of the signal will weaken the further one moves from the centre, but this can be compensated for by using a larger receiver (for example, a cable system receiving Sky Channel in England will use a 3 metre dish; in Finland a 5 metre dish will be necessary).

Franchise. The right to install and operate a cable system in a given area, bestowed by the licences granted by the Authority and by the Department of Trade and Industry.

FSS. Fixed service satellite. A term used for satellite in a fixed orbital position providing telecommunications services. Also called low-powered satellites or telecommunications satellites. In contradistinction to DBS.

Gigahertz. (GHz). Frequency of one billion cycles per second. These higher frequencies have not so far been used for broadcasting purposes but they can be utilsed for satellite television transmissions. The 12 GHz band to be used for DBS has previously been allocated to outside broadcast microwave links.

HDTV. High definition television. A clearer sharper picture using considerably more lines than the present 625. Cable systems already have capacity to carry such services when they are introduced.

Headend. The control centre of a cable system.

Hertz. The unit of frequency of electromagnetic waves (cycles per second) (see also Gigahertz and Megahertz). "Hertzian" is sometimes used as a description of over-the-air transmissions, as opposed to cable.

Homes passed. The expression in common usage as the measurement of the size of a cabled area, meaning the total number of premises which have the potential to be connected to the cable system.

Hubsite. An intermediate control point in a switched cable system between the headend and the local switching point. In systems provided by BT, it is planned to locate hubs withing each local telephone exchange.

**Infomercial.** A long-form advertisement designed to give information about products or services.

Interactivity. The facility for two-way communication, though the sophistication of the interactive capability may vary depending on the technology used in the cable system.

Leased access channels. A category of cable channel (particularly in USA) made available by the local operator on a commercial basis rather than as a free community service, as will normally be the case with access channels.

MATV. Master antenna television. A cable system confined within a block of flats, small housing development etc, served by a common aerial. In contradistinction to CATV.

MDS. Multipoint distribution service. A television distribution system to subscribers using omnidirectional microwave transmissions (sometimes now called MMDS, with an additional M for microwave or multichannel, or MVDS with a V for video). It depends on line of sight between transmitter and aerial and has a range of about 10-20 miles. It has grown in the USA as a new medium for pay television. It has not been authorised by the UK Governments.

Megahertz (MHz). Frequency of one million cycles per second.

Microwave. Wireless transmissions at very high frequency as a means of providing telecommunications links (including television distribution) between two places. Depends on line of sight. Operated in the UK by British Telecom and Mercury.



MSO. Multiple systems operator. A cable operator running a number of different cable systems.

Must-carry. The obligation on cable systems to carry certain channels, usually the broadcast services.

Narrowband. As opposed to broadband and wideband. It is a relative term without explicit definition. Sometimes the telephone network is described as narrowband to distinguish it from a system capable of carrying television signals; at other times, an existing cable television system carrying 4 or 6 channels is so described to contrast it with one capable of carrying 25 or 30.

Narrowcasting. Sometimes used to distinguish cable from broadcasting. More particularly, the function of distributing a range of television channels or programmes designed to meet various minority interests rather than to offer mass appeal.

NCTA. National Cable Television Association. The representative industry body of the USA.

New build. Cable system installed in area not previously cabled. A term used to distinguish new systems, or parts of systems, from upgrades.

OFTEL. Office of Telecommunications. The licensing and monitoring body established by the Telecommunications Act 1984, headed by the Director General of Telecommunications (Professor Bryan Carsberg).

Off-air. Normal broadcast television signals. A term often used to distinguish aerial reception from cable reception, or broadcast channels (BBC, ITV, etc) from cable channels.

Optical fibre. Cable made of glass fibres through which signals are transmitted as pulses of light. Capacity for a very large number of channels can easily be provided. Not yet widely used in cable systems.

Penetration. The measurement of the take-up of cable services. The number of subscribers is expressed as a percentage of the homes passed.

PPV. Pay per view. Payment made for individual cable programmes as opposed to a monthly subscription for a whole channel or group of channels. Not currently used in the UK, but envisaged as a means of providing certain popular sporting events or blockbuster movies for which subscribers may be prepared to make a special payment. Cannot very effectively be done on an old-fashioned cable system but is straightforward with a system providing control of each subscriber's services from the headend (addressability).

**Premium channel.** Channel available only for additional subscription over and above the basic service.

**Programme provider.** Company assembling programmes into a service to be provided to cable systems.

Return path. The means by which messages are transmitted back through the cable system from the subscriber to the headend.

**SMATV.** Satellite master antenna television. An MATV system with a receiving dish for picking up and distributing satellite television signals.

Star switched system. New generation of cable system in which full bandwidth is provided from the headend to local switching points which are programmed to supply each subscriber, through an individual line of lower bandwidth, with whichever channels he pays for. Channel selection then takes place at the switch, rather than in the TV set or a set-top box, but in response to the subscriber's operation of his remote control. Such systems have greater interactive capability.

Strand mapping. Preparation of preliminary maps prior to the detailed system design showing the likely route of cable ducting. So called from USA usage, where the strand is the wire support for overhead cable strung between poles.

Subscription channel. A channel for which the subscriber pays a specific subscription over and above the charge for the basic service.

Tap. The feed off a main cable (usually in tree and branch system) to the subscriber's 'drop'.

Tier. A level of cable service depending on the amount of the subscriber's payment. It reflects the packaging of channels at different prices.

Transponder. A transmitter on a satellite.

Tree and branch. Topology of one type of cable system, of traditional design. It comprises a trunk cable from which each subscriber link is tapped off. Because all parts of the system carry the totality of the services provided, it is difficult to build much interactive capability in to such systems.

TVRO. Television receive only. The dish for receiving satellite television signals.

Twisted pair. Type of cable used extensively in British cable systems in the past, comprising twisted pairs of wires each carrying one channel. Most systems of this kind have capacity for four television channels; some have six, none have more.

**Upgrade.** An old cable system installed for broadcast relay purposes but now utilised for the provision of new programme services.

Uplink. The transmission from an earth station to satellite.

**Upstream.** The direction of signals transmitted from a cable subscriber to the operator's headend.

Wideband. Cable system with the capacity to carry a large number (eg 25 or more) television channels. Interchangeable with broadband.



Published by

## Cable

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