



# Corporate News

Rediffusion has launched its new computer controlled switched star multichannel cable system called Star Network.

The system has been designed to meet the requirements of large scale, multichannel, interactive cable networks. It has the flexibility to permit any expansion — or enhancement — to the range of services that might be required well into the 21st century.

Initially it is intended to install a system with a downstream capacity of 30 television channels and 20 FM radio channels. In addition there will be a two-way data communication facility between each domestic outlet and the central equipment. The latter will provide TV and radio reception from terrestrial and satellite transmitters and include video origination equipment such as studios, videotape machines and cabletext signal generators. The centre also houses computers for control of access to services, system fault analysis, routing and provision of data and automatic subscriber billing. Interface arrangements are also provided for connections via BT and Mercury to distant information providers and for such services as security or meter reading.

Each of the network cables from the central equipment to the switching centres will comprise seven coaxial circuits under a single sheath. Amplifiers along these cables will be widely spaced and will be bypassed by data signals.

These primary distribution cables connect concentrator points, whose function is the control of the two-way flow of data between subscriber outlets and the central equipment for the town. The concentrators are generally connected to seven switching centres employing secondary cables similar to those in the primary network.

A switching centre is the hub of a star network serving up to 64 homes. Each of these is fed by a single cable and can have up to three independent TV outputs. All outlet points will provide a full radio programme choice and data services.

The basic home equipment for each outlet consists of a cordless, hand-held control unit and a wall outlet plate with TV and FM radio sockets. There is no need for a domestic electricity connection into this basic home equipment.

## How the system works

The system has been designed to enable the subscriber to make full use

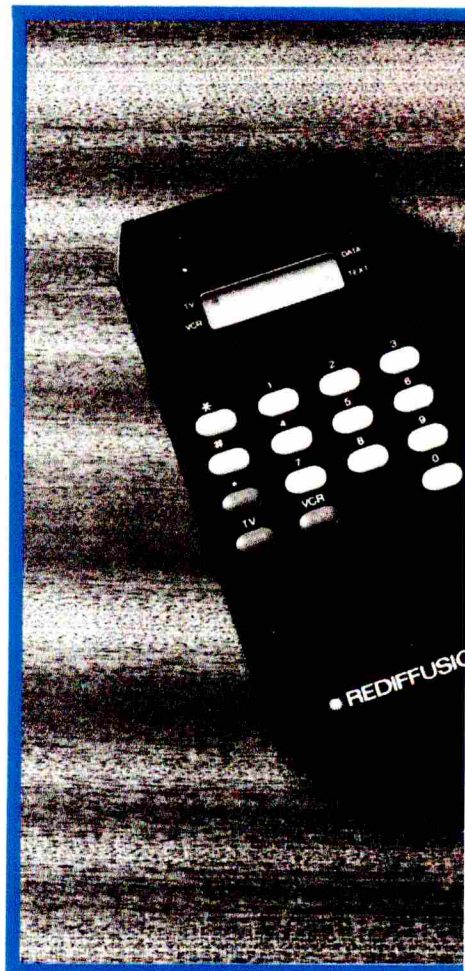
# REDIFFUSION LAUNCHES THEIR STAR NETWORK CABLE SYSTEM

## Britain's link to the future

of the services as simply as possible. The normal UHF TV set, which is tuned to one channel for all cable programmes, is plugged into the cable socket. When required a VCR can be connected into this lead and the tuner is adjusted for two channels — one for recording the programme that is being viewed and the other for recording an alternative programme. Any tuneable Band II radio may be connected to the FM socket. To select a programme the viewer can consult a visual index and then bring up the channel he wishes to watch by entering the channel number on his touchpad.

A second independent input for the VCR can be selected. One of the sophisticated features of the system is that the delivery of TV services can be preprogrammed.

Peripheral items can extend the use and enjoyment of the facilities offered by an advanced network and they should be compatible with competitive systems. To achieve standardisation a domestic data bus connection can be made to the outlet plate. The adoption of a domestic data bus standard is currently being discussed by international standards committees. The data bus will permit any of the domestic equipment to be addressed, controlled or to interact. For example, it will allow a VCR to be controlled or a cable programme to be selected through a TV receiver. The cable system could also enter data or





control signals into the bus. Eventually, it is expected that the data bus will be used for interfacing alarm and meter reading services with the cable system and for connections to printout devices to provide hard copies of incoming and outgoing information.

At least three independent outlets can be wired in any home fed by one coaxial cable, 6-10mm in diameter. The cable will carry TV services at UHF, radio programmes at VHF and data signals at LF and HF.

All signals — to and from — the household pass through a switching centre. The subscribers' signals are interpreted and the requested service delivered provided that the system's computer has allowed access. This will be withheld if payments for the basic service are in arrears or if a premium channel is selected for which no contract has been signed. Certain other channels will be inhibited except to authorised recipients. These could be channels directed to specific groups

such as police or doctors.

In the case of an emergency, such as flooding, it is possible to control all switches from the cable system centre so that all TV screens carry an alarm announcement.

The keypad is equipped with a 'parental control' facility. This allows access to premium services or adult films to be withheld at any time.

## Interactive Services

Interactive services can be divided into three broad categories:

(a) Those where a response is made through the numeric keypad. On some channels polling can take place. Questions can be posed and viewers asked to vote, perhaps by expressing a preference from a number of options. To do this the subscriber presses a particular button on the touchpad. The replies are registered at the central

computer and the results displayed on the screen.

The classified advertisements channel will not be inhibited by the inherent restrictions imposed by the limited number of characters that can be shown in the screen area. The advertisements will be scrolled and pass from the bottom to the top of the screen. Not more than 10 items, which will be numbered, will be visible at any time. An interest in any item can be registered by pressing the appropriate button on the touchpad. The central computer will then deliver the name and address of the subscriber to the advertiser.

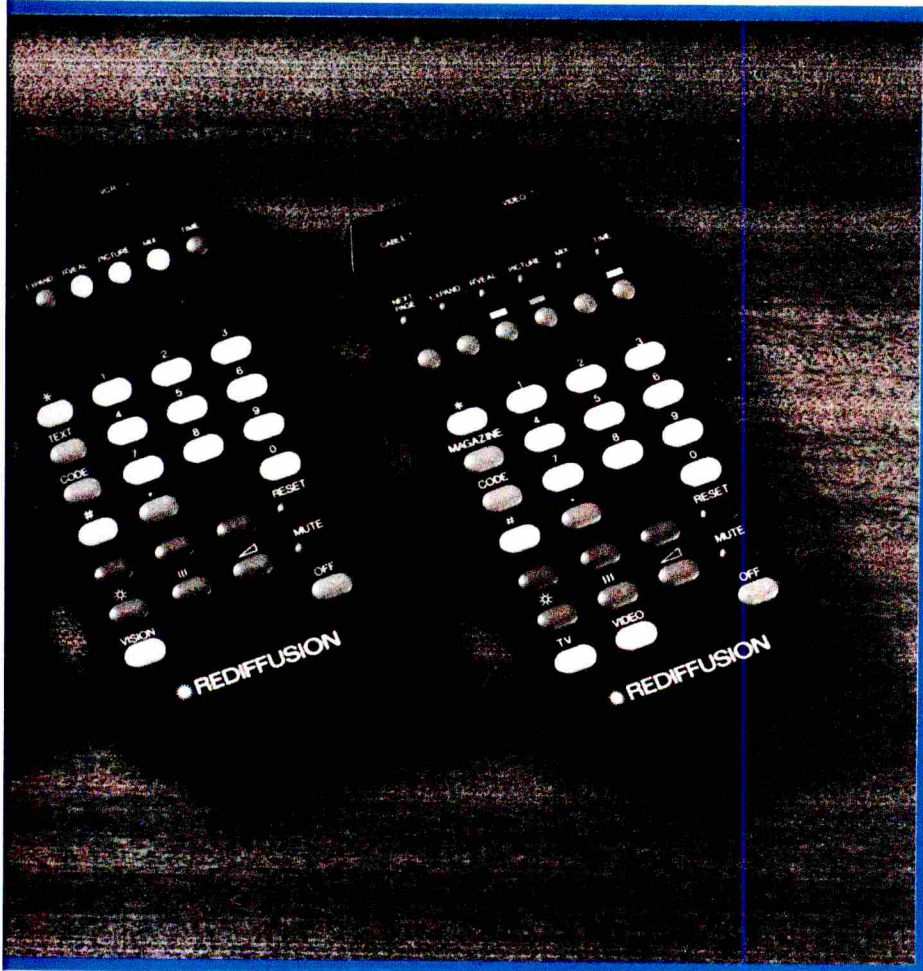
(b) Where a cable borne reply occurs or data is delivered on demand. This facility requires a more advanced receiver and keypad. A subscriber with a teletext set, or a standard set with a teletext adaptor, can receive messages in the form of two line, alpha numeric 'sub titles'. If he is watching a channel where products are being displayed he cannot, without a teletext set, do more than indicate an interest in a particular item. With a teletext set he can enter his personal number on his teletext keypad and then his wish to make a purchase.

This order will be displayed as a subtitle and by pressing the appropriate button a second time he can confirm or cancel. If he confirms then the order will be acknowledged in the subtitle and delivery arrangements indicated. This type of 'tele-responding' can also be used for some education programmes. As there can also be over one million discreet subtitle addresses, the 'tele-responding' facility is reasonably private and might be used for personal messages or account statements from stores.

By using the same system bets can be placed. A list of runners is superimposed on the pictures from a race-meeting and the subscriber, using his personal account number, can place a fixed bet on a horse to win. The acceptance of the bet will be confirmed using the teletext sub title technique.

(c) Where two-way communication is more expensive, a special computer terminal can be connected to a system outlet, using the domestic TV receiver as a display device. Access is then available to the central computer, making full computing facilities available in the home.

Three variants of the hand set for use with a Rediffusion switched star cable system. The first (left) operates the wall unit to control a standard television receiver. The second (centre) is designed for use with a remote control teletext set whilst the third (right) has added facilities to operate a full field teletext receiver.



Continued on page 16



# Cable services

Cable is the infrastructure on which an information technology based society will be built. Subscribers will only be attracted to cable initially if it provides a range of entertainment services not available by other means which are perceived as being value for money.

## Structure

A basic tier, or core package, or services will be provided numbering about 14 channels in all, at a price of around £5-£6 per month in today's terms. It will be necessary for

subscribers to take this service before they are able to subscribe to one or more additional services at an extra charge. Other premium services will be charged on a monthly subscription basis. The capability exists for 'pay per programme' as well as for fixed monthly charges.

## Interactive Services

Three levels of interactivity are capable of being provided. Simple subscriber response is available for all services from the standard numeric

keypad. The installation of a standard teletext set enables individual messages to be displayed on subscribers' sets. For highly sophisticated uses a computer terminal is required.

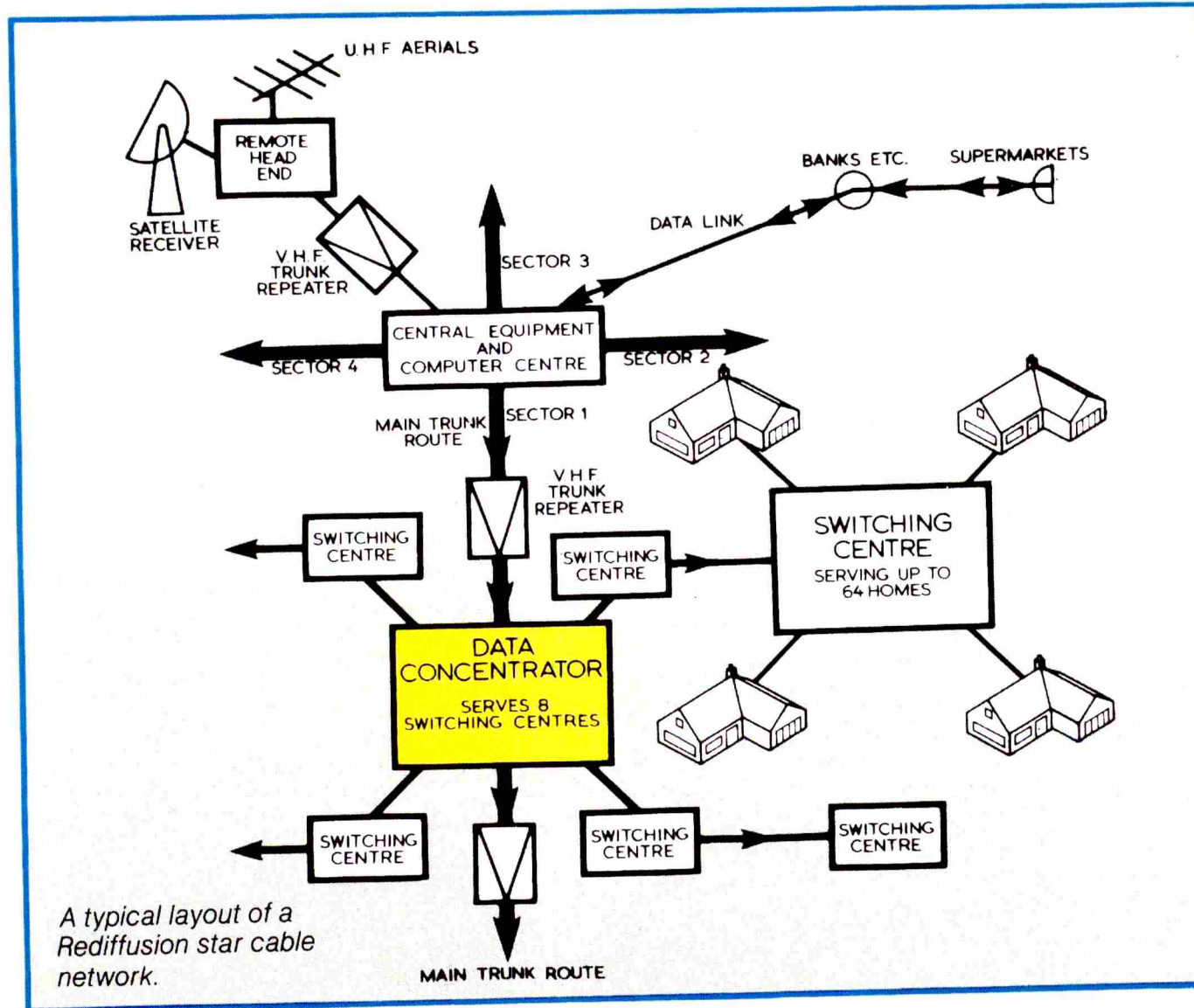
## Data Services

Ample capacity is available for such services as meter reading, security and audience measurement.

## BASIC TIER

## Channels 1-4

These are the regular broadcast channels.





### Channel 5 — Distant ITV

In most parts of the country a sophisticated antenna is capable of picking up a neighbouring ITV service, which, with its different off-peak scheduling and local news is of some interest to subscribers.

### Channel 6 — Living Today

This is a cable only service targeted at women and entirely supported by advertising. It would probably run from 2.00pm-6.00pm daily, with an evening repeat.

### Channel 7 — MTV

Music Television (MTV) is the television equivalent of a pop music radio station, and could well have an album orientated rock format. Transmitted initially between 6.00pm and 1.00am, it will be based on pop videos with some specially recorded concert material, and purpose designed presentation. It is clearly targeted at the teenage/young adult audience, at which its advertising will be aimed.

### Channel 8 — Golden Channel

The Golden Channel is a noon to midnight service — again supported by advertising — of classic feature films from the 1920s to the 1950s.

### Channel 9 — Programme Guide

A major problem with multichannel systems is informing subscribers of the programme schedules. Channel 9 will comprise mosaic displays showing what is playing on up to 16 channels by means of split screens. A text display of summarised programmed schedules will also be provided, so that the viewer, in the space of a minute or two, is able to get a clear idea of what is available. Combined with this will be promotion of the premium channels by means of trailers and extracts, with details of costs and special offers.

### Channel 10 — Full Channel Teletext

When a teletext receiver is used, a full field teletext service will be available on this channel giving immediate access to a thousand pages or more of text information, including weather and news.

### Channel 11 — Teleshop

Teleshop is a continuous 'admag' enabling advertisers to demonstrate their wares, using the basic interactive capability for subscribers to request product information, etc.

### Channel 12 — ETV/Access

Channel 12 use is divided between the local education authority and community access groups. Simple opinion polling appears to be of interest on this channel using the interactive facility.

### Channel 13 — Local/National Government

An information channel made available without charge to local and national government. Again, opinion polling seems to be the main use for the interactive capability.

### Channel 14 — DBS Channel

The BBC will be broadcasting, by satellite, one free entertainment channel.

## PREMIUM CHANNELS

### Channels 15-18 — DBS

These channels will distribute the other four proposed DBS channels from Unisat.

### Channel 19 — Starview

This is 'The Movie Channel', a service of recent feature films without any advertising.

### Channel 20 — Cablesport

Cablesport is likely to comprise daily live horse racing, a weekly football league match in season, county cricket coverage and so on. By using a teletext receiver, betting will be possible and confirmation of bets made and winnings (if any) displayed on the subscriber's screen.

### Channel 21 — Arts Cable

Arts Cable is a cultural channel showing the best in music, opera, ballet, theatre and art films.

### Channel 22 — Cablenews

Cablenews is a continuous live action news service.

### Channel 23 — Financial Service

This is a specialised financial text service.

### Leased Channels 24-30

Seven channels have been reserved for leasing to third parties.

One of these could be devoted to religious programming, another leased to local newspapers for a teletext classified advertising service. Others would be made available for private communications to specialised groups such as the police or the medical community. Channels for public viewers could be part of the basic tier, or available on a premium basis as necessary.

### Private Data Services

Ample capacity is available for such purposes as meter reading and audience measurement. In addition the facility will be provided for the downloading of software into a subscriber's computer terminal. This will enable the subscriber, for example, to access games, instruction material, personal finance programmes and data from his place of work.

While the text of this article deals with domestic services, the system has many business applications.

## PROGRAMMING

An example of the type of channel allocation that is possible:

### Basic Tier

1. BBC1
2. BBC2
3. ITV
4. Channel 4
5. Distant ITV
6. Living Today
7. MTV
8. Golden Channel
9. Programme Guide
10. Full Channel Teletext
11. Teleshop
12. ETV/Access
13. Local/National Government
14. Reserved for free BBC Satellite Channel

### Premium Channels

- 14-18 4 DBS Channels
19. Starview
20. Cablesport
21. Arts Cable
22. Cablenews
23. Financial News

### Leased Channels

24-30 Seven channels available

### Private Data Services

Security, meter reading, audience measurement, education learning, electronic funds transfer, downloaded software.