

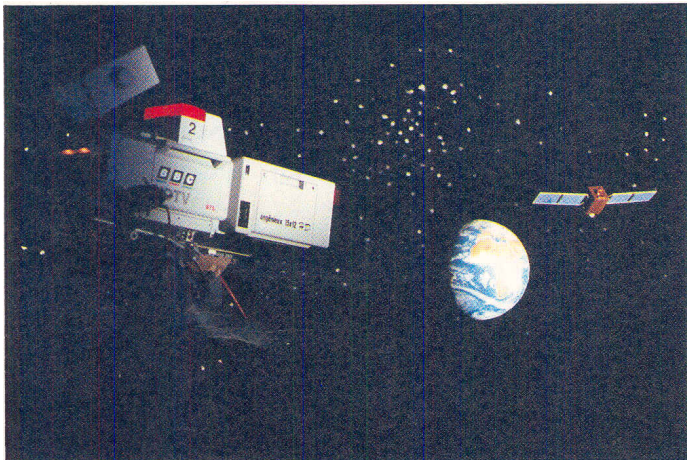
ENGINE

INF

f/atamn 1988 A1". 34

IBC 88 THE YEAR OF HDTV!

The 12th International Broadcasting Convention IBC 88 - was held in Brighton at the end of September. This year, the exhibition occupied not only the same venues as IBC 86 (the Metropole, the Brighton Centre and the Grand Hotel) but two new areas as well the West Pier Pavilion and the new Eureka Pavilion, both flanking the outdoor exhibit area on the lower esplanade. With this extended capacity, the number of exhibitors passed the 200 mark for the first time.



Opening caption for the first commissioned programme in the 1250-line format. made at BBC Milton Keynes

Bill Denny, Director of Engineering, had this to say about IBC 88:

"My own overall impression of IBC 88 was based on three elements. In the display areas, the developing of 625-line PAL production equipment - seen in its 525-line NTSC mode at previous exhibitions was obvious. Small formats for television; digital developments in audio and video equipment; more sophistication in such areas as video effects and much improved CCD cameras, were all very evident. This gave the impression of an industry consolidating an established product base."

"In the presentation of papers we saw much more of the high technology of the future, both immediate

and more distant. Many papers on enhanced television were presented whilst in the exhibition areas, with two major exceptions, such developments were presented in fairly low key. The two exceptions were of course, the Eureka Pavilion and the Hi-Vision display at the University. Both were impressive but in totally different ways, as befits totally different messages being delivered.

"Eureka, with pride, was announcing a mid-term report showing it to be on course to meet its 1990 objectives. It represents a major success of international collaboration and collective technical innovation, whilst at the same time showing how much work needs to be done and what hurdles have to be cleared before the initiative becomes a broadcasting reality."

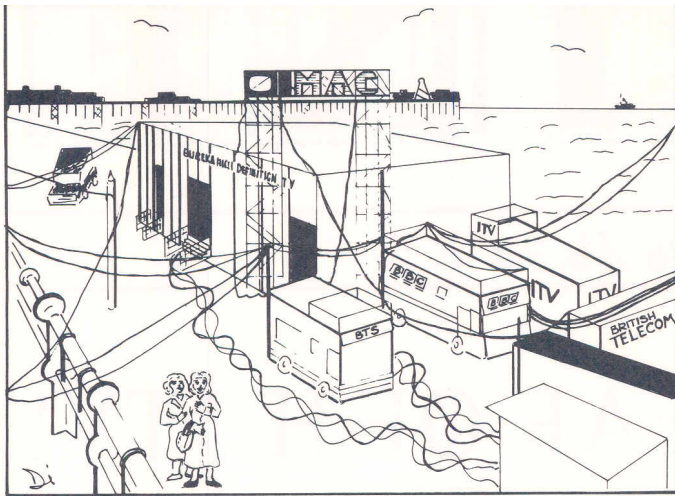
"The Hi-Vision display was what was to be expected from a system over eight years old in operation; the images, both visual and aural, were therefore suitably impressive. Eureka and Hi-Vision indicate the difficulties facing major broadcasters as we move towards enhanced television standards; my over-riding impression of IBC 88, from a personal view point, was the highlighting of these difficulties in an industry which is clearly in a robustly healthy condition."

A special feature on BBC Engineering at IBC 88 begins on page 4.

RDS TAKES OFF

RDS was launched as a new service on 20 September at a special presentation in the Queen Elizabeth II Conference Centre in Westminster, London. It was hosted by Mr Marmaduke Hussey, Chairman of the BBC, in the presence of HRH Prince Michael Of Kent, who has many links with the motoring and radio industries.

See page 3 for a report on the launching ceremony.



"So that's what they mean by 1250 lines!"

FM Radio

Black Hill replaced Kirk O' Shotts as Central Scotland's main FM station, on 1 September. At the same time, Radios 2,3 and Scotland were joined by Radios 1 and 4 - the first time the latter two services have been broadcast on FM in Scotland.

Other main stations to commence a stereo FM Radio 1 service were Sutton Coldfield (West Midlands) and Holme Moss (near Huddersfield) on 1 September and Wenvoe (near Cardiff) on 29 September.

On 29 August, Radio Bedfordshire transferred its FM service from Luton Town to Zouches Farm, near Dunstable, which improves FM coverage in South Bedfordshire and extends it to parts of Hertfordshire and Buckinghamshire.

LICENCE AGREEMENTS

A licence has been granted to ABL Engineering Inc. of Ohio, USA, which will assist them in developing a range of equipment using composite digital video signals. The original work was carried out by a small team at Research Department; the results of their studies formed the basis of - among other things - a digital video link between Pebble Mill and Television Centre.

The licence, which covers both know-how and a BBC Patent (British Patent Application number 86 12133), will allow ABL Engineering Inc. to design equipment and market it worldwide. The know-how being transferred covers such subjects as comb filters, DPCM predictors, error correction and conditional access, and applies to both 34Mbit/sec and 45Mbit/sec transmission data rates.

For further information on this, or any aspect of licensing, please contact the D&ED Liaison Engineer, Peter Jefferson, at Avenue House on telephone, AH 375.

TRANSMITTER NEWS

The following stations/services have opened since 1 July:

Television

Cumbernauld	Cumbernauld, Strathclyde
Du f fryn	Maesteg, W. Glamorgan
Eston Nab	Middlesbrough, Cleveland
Strontian	Lochaber, Highland
Wall	Hexham, Northumberland

World Service

On 25 September, World Service improved its coverage in East Africa, when the Seychelles HF relay entered service.

D&ED's OPEN DAYS

Following the EsIC Meeting, D&ED held Open Days at Avenue House on 5-7 October.

The emphasis this time was on specific exhibits and work in progress, including:

- Implementation of RDS Travel Service
- Stereo Line-up Ident. Generator
- TFM modem for over-video transmission of NICAM signals
- Colour Phasing and Delai unit
- The new one-line, field-alternate ITS signal
- Cinetrace presentation of wide-screen films on television
- HF automatic test equipment
- Software engineering methods and tools
- Digital Audio Monitor
- Digital Limiter for AES/EBU audio bitstreams
- Band III Music-Quality Link equipment
- Development of a CSO facility for the Digital Video Mixer
- 'Leopard' patching system to interface with the new QII lighting controller
- Television Downloading

Also on show was Research Department's HDTV OB vehicle (which is described in an article beginning on page 14).

RDS TAKES OFF

On 20 September, RDS was launched as an official BBC service at a special ceremony in London, hosted by BBC Chairman, Marmaduke Hussey, in the presence of His Royal Highness, Prince Michael of Kent.

Also present were: Tim Renton, MP, Minister of State at the Home Office with special responsibilities for broadcasting; Peter Bottomley, MP, Minister for Roads and Traffic and an avid campaigner for improved road safety, and Johnny Beerling, Controller Radio 1, who is chairman of both the BBC and EBU Steering Committees for RDS.

Before the presentation began, His Royal Highness was introduced by Johnny Beerling and Marmaduke Hussey to various staff involved in the realisation of RDS, including Bev Marks (the RDS Technical Project Manager), Dr Bob Ely (RD), Graham Snaith (TED), Simon Parnall (D&ED), Robert Amine (Enterprises Plc the PR company handling the RDS launch) and Mark Saunders (the RDS Business Development Manager).



HRH Prince Michael of Kent meets the RDS team, watched by Marmaduke Hussey and Johnny Beerling

Radio personalities Simon Bates and Debbie Thrower introduced the guest speakers Marmaduke Hussey, Tim Renton, Peter Bottomley and Johnny Beerling to an audience of around 150 invited journalists, manufacturers, EBU representatives and senior members of staff. With the aid of two short videos and a demonstration of the new RDS Exhibition Model, the whole presentation took just over half an hour.

Guests were then invited to put their questions to a panel comprising Peter

Bottomley, Tim Renton, Bev Marks and Johnny Beerling. After fifteen minutes of lively questioning, refreshments were served in the adjacent St James Suite where guests were able to view current RDS equipment - both car radios and domestic tuners - which invited companies had put on display.

Those attending this small exhibition included Alpine, Blaupunkt (Robert Bosch Ltd.), Clarion, the Ford Motor Company, Grundig, Panasonic, Philips, Pioneer, Revox (FWO Bauch Ltd.), Sharp and Volvo. A version of Research Department's new RDS Reference Receiver was also on display.

ENGINEERING SAFETY

The Engineering Management Safety Committee has just issued the fifth set of amendments to Engineering Safety Regulations (ESRs). These have been distributed by now to all holders of the little red binder which should be every engineer's constant companion. If by any chance you have been missed out in the distribution, please ask for a copy via your line manager.

Those with direct responsibility for other staff, eg managers, senior engineers and supervisors, should also have the Supplementary ESRs for Managers; amendments to these have also been issued.

The items mentioned above are obtainable from Ware Stores, under the following reference numbers:

- ESRs 9th Edition, reprinted
with amendments 1-4 (Nov 85).. .Ref 9367
- Amendment 5 to above (Feb 88).. .Ref 9368
- Red binder Ref 9313
- Supplementary ESRs for Managers
2nd Edition (Jan 87) Ref 9311
- Amendment 1 to above (Feb 88).. .Ref 9310

Note that ESRs are printed on green paper while Supplementary ESRs for Managers are on pink paper.

(Note from Martin Nutt, Sec. to EMSC)

BBC ENGINEERING AT IBC 88

BBC Engineering occupied Stand L12 in the Metropole Hotel but was also involved in Eureka Project EU95, based in the Eureka Pavilion. Additionally, the new Type B and Type C Radio OB vehicles were on display on the lower esplanade.



BBC Radio OB vehicles on the esplanade

In this special feature, we look at the wide range of BBC exhibits on show at Brighton, many of them in support of conference papers.

INTERNATIONAL PROJECTS

Research Department is involved in two international projects Eureka EU95 and RACE - which are supported financially by the EEC and National Governments and involve broadcasters, telecom providers, manufacturers and educational/research establishments throughout Europe. BBC work on these two projects was represented in Brighton as follows:

EUREKA EU95 (HDTV)

This project aims to produce by the 1990s, a 1250-line HDTV system for production, transmission and reception - based on the MAC system with multichannel sound. The system will be compatible with 625-line MAC services but dedicated HDTV MAC receivers will have wide screens with an aspect ratio of 16:9. RD leads the project covering Display Standards and Up-Conversions and is involved in six of the other nine projects.

The ten Project Groups have been working towards a number of demonstrations to show

the progress of their studies and hardware implementation, in the period up to 1990. IBC 88 provided an ideal opportunity to demonstrate both hardware and system performance at the halfway stage. On display in the Eureka Pavilion was a fully compatible HDTV chain, including programme material a significant advance on IFA Berlin 87 where only individual items of hardware were displayed.

Research Departments's mobile HDTV laboratory was parked outside the Pavilion. It houses 1250-line camera and vision equipment and has four 625-line VTRs configured to operate as an HDTV digital VTR, including editing. It is fully described in Geoff Key's article which starts on page 14.

On the BBC stand, HDTV exhibits included the showing of a TFS film entitled 'Kew Gardens' which was shot on 35mm film at 50fps. A Rank Cintel Mark III C flying-spot telecine, modified by Rank Cintel to operate at 50fps and with a 1250/50/2:1 raster, was used to replay the film (which

The busy HDTV display