

ENGINEERING

The quarterly for BBC engineering, technical and operational staff

SPRING 1992 No. 48

DAVENTRY CLOSES

The Daventry transmitting station officially closed on 29th March, 1992, at an historic ceremony attended by current and former staff of the station.

Bert Gallon (Chief Engineer, Transmission and Project Services) adds:

When the idea of inviting staff and former staff to a closure ceremony was first mooted, it was anticipated that somewhere between 100 and 120 people would turn up. The reality was just under 500. Staff, ex-staff along with their wives and husbands and, in some cases, children, travelled from all corners of the UK. It was a very enjoyable day. The air was thick with the greetings of old friends and with fond remembrances stretching back, in some cases, to the early 1930s, and the inevitable sadness that the oldest of the BBC's Transmitting Stations was being taken out of service.

The station staff had mounted an exhibition charting Daventry's history from its opening in 1925. Photographs, newspaper and magazine articles, photocopies of correspondence, circuit diagrams, staff lists and reams of anecdotes lined the walls interspersed with technical memorabilia of Daventry's proud

past. It certainly prodded memories and settled one or two differences over "what and who was here and when".

There was a special feature about the station on the World Service *News Desk* programme - the final transmission from Daventry - and a thank you to the Daventry staff in the closing announcement, for their efforts over 67 years before Bill Bird switched off Sender 2 ... and an era ended.

Tributes were paid to the staff for their commitment and dedication and to the town of Daventry for having us. Entertainer, Stanley Unwin, recalled some happy memories of his time at Daventry and Councillor John Shepherd, Chairman of the Daventry District Council and Councillor Alf Goodridge, Mayor of Daventry, both expressed their sadness at the station's closure and presented plaques to Bill Bird and to the Corporation as a memento of the occasion.

The Buffet Lunch followed and a task that appeared to be comparable with the feeding of the 5,000 was executed with commendable efficiency - typical of Daventry you might

say. Shirley Denny, wife of Director of Engineering, Bill Denny (an ex-member of the Daventry staff) cut the celebratory cake - the creation of Sylvia, wife of Senior Antennae Engineer, Peter Wagstaff. By late afternoon, throats slightly sore, feet aching a little, the goodbyes began and Daventry transmitting station was silent for the first time in 67 years. The dismantling process started in earnest the next day. This should be completed by the end of the year and yet another "occupation" of the historic Borough Hill site will come to an end.

A brief history of the station by Tony Ratcliff starts on page 21.

CONTENTS

DAVENTRY	
- A brief history	21
DIGITAL HDTV	
- RD demo at WARC 92	15
ELECTRONIC GRAPHICS	
- Part 2: digital formats	8
- Paint systems in use	10
FAMILY TREES	
- World Service Engineering	3
NETWORK RADIO	
- Three Neve 66 desks installed	17
NORTH REGION	
- Lightweight link units	16
REGIONAL BROADCASTING	
- The new English regions	2
RESEARCH DEPARTMENT	
- Controlled reflection zones	18
- The <i>Wings</i> computer system	4
TELECOMMUNICATIONS	
- Part I: optical routing	12
TRANSMITTER NEWS	2
WALES	
- New TV continuity suites	7
WORLD SERVICE	
- The <i>EDiT</i> computer system	19



BBC Transmission

The Daventry masts in 1989

ENG IN/F Transmitter News

Edited and designed by EID, Room 3402,
White City. Tel: White City (07) 24316

Editor Mike Meyer
Secretary Tracy Quinn
Graphic Artist Paul Ashton May

Typeset by Townsend Typesetter Ltd of
Worcester, with additional material by
Giselle Austin of EID.

* * * *

As *Eng Inl* is an internal BBC
magazine, it would be appreciated if no
reference was made to it in articles,
magazines, etc, published outside the BBC.

* * * *

Stories for the Summer issue should be
forwarded to the editor by Friday 15th
May, 1992. The deadline for the Autumn
issue is Friday 14th August, 1992.

The following services have opened, changed or closed since our last issue:

New TV relays

Foxdale Isle of Man
Haden Hill West Midlands
(Halesowen)
Worlds End (Chelsea) London

Addition of BBC2 (Scotland)
Sandale Cumbria

Addition of Nicam Stereo
Divis (BBC 1) Belfast

New FM Stations

Calne Wiltshire
Carnmoney Hill Country Antrim
Darwen Lancashire
Egford Hill Somerset
(Frome)
Luddenden West Yorkshire
Porth Mid Glamorgan

Radio 1 on FM

Douglas Isle of Man
Les Platons Jersey

Radios 1 and 4 on FM

Llangollen Clwyd

Completion of FM re-engineering

Rosemarkie Highland

FM frequency changes

Les Platons Jersey

MF closures

The *Radio 3* mf network (1215 kHz/
1197 kHz) closed on the 28th February,
as the frequencies are required by
the Radio Authority for the second
national commercial radio network
(INR2).

Additionally, the following BBC Local
Radio frequencies have been relin-
quished to the Radio Authority for
INR2 and ILR use in the future:

Radio Cleveland	1548 kHz
Radio Gloucestershire	603 kHz
BBC Hereford & Worcs.	819 kHz
Radio Northampton	1107 kHz
Radio Nottingham	1521 kHz
Radio Oxford	1485 kHz

HF closures

After nearly 67 years of service, the
Daventry HF station closed on 29th March.

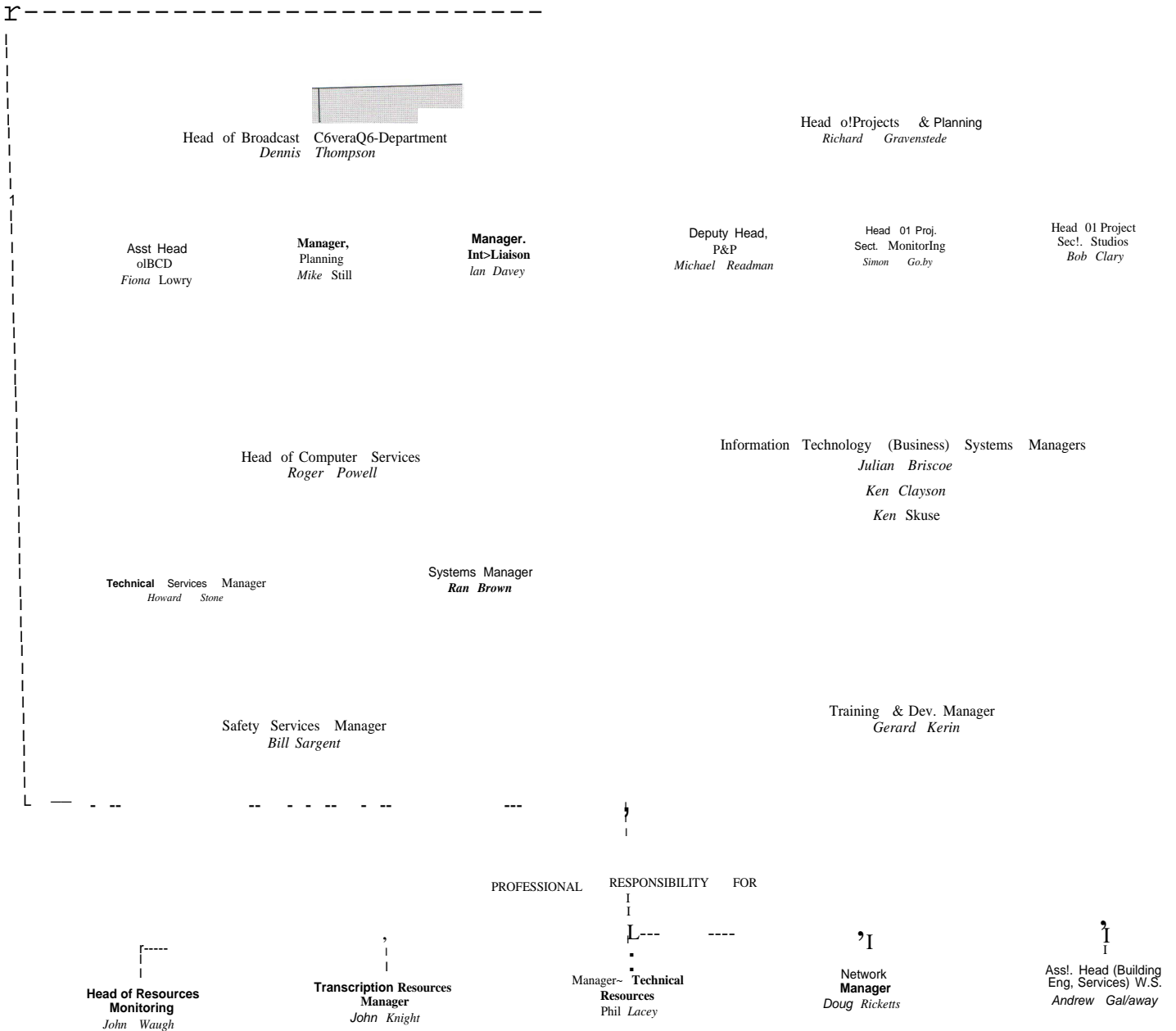
REGIONAL BROADCASTING The new English regions from 1st April



FAMILY TREES

World Service Engineering

Chief Engineer, World Service
Gordon Harold



RESEARCH DEPARTMENT

The *Wings* computer system

Mark Lee describes the *Wings* system which is used by Research Department and EID to display transmitter coverage information on a computerised map.

For many years, Research Department has predicted and stored transmitter coverage data on computer. In the past, the only way of displaying this data in a graphical form was to use a pen plotter to produce a 'hard copy' on transparent film, which could then be overlaid on a printed map. More recently, developments in the personal computer world - particularly on the speed, storage and display fronts - have offered the possibility of displaying the data in a more flexible 'interactive' manner.

In late 1989, a company called Systems Options - in conjunction with Research Department - developed a package called *Wings* (WINDows Geographical Information System) that runs under Microsoft Windows. In its original form, *Wings* enabled the user to overlay features in the form of symbols, links or areas on to a screen image of a map. It could also store data associated with each occurrence of a feature type.

Symbols are features that have a single geographical location; transmitters, for instance. *Links* are jointed lines (eg roads, power lines, etc) which connect symbols together, and *areas* are defined by a closed set of links. The *Wings* user can display (in a 'dialog box') data relating to

Preferred uhf coverage around the Solway Firth.

a particular feature, simply by moving the onscreen pointer to that feature and then clicking the mouse button. The software uses National Grid Reference (NGR) co-ordinates as its frame of reference, providing a resolution of 1 metre.

In conjunction with Systems Options, Research Department developed a number of extensions to the standard *Wings*

package, particularly so that the system could display existing coverage information (which is to a resolution of ~km).

The EID system

In 1990, a requirement arose from EID for an on-line and easy-to-use display of FM transmitter coverage information, to be used in conjunction with the *Radio 2 Helpline*. This telephone service operated between May and September that year, when Radio 2 lost its mf network to Radio 5 (see *Eng InfNo 42*).

What was wanted was a system that could be used by a Helpline operator who had no special knowledge of the transmitter network (eg, a Radio 2 Presenter). By typing in a place name, the user would be presented with information showing which transmitter(s) served that location, together with a list of frequencies for the four national networks. The response time had to be fast enough to be used for answering telephone enquiries.

To meet the EID requirement, the basic *Wings* package was extended in two principal areas. Firstly, the *Wings Find* feature was modified to use place names and grid references extracted from the Ordnance Survey 1:50,000 scale gazet-

Terrain heights in northwest Wales.