

Catalogue V0, for box-file V0.

Scope: Maurice Needham's reports, documents and photographs relating to the Comprehensive Display System (CDS) project at Borehamwood, particularly the period 1950 – 1951.

Background.

Maurice V Needham (1920 – 2015) was an electronic engineer. After working on radar for the Admiralty during the war, he joined the Borehamwood Laboratory of Elliott Brothers (London) in 1947. He worked on a CRT storage system for the Elliott 152 real-time digital computer, an essential part of the MRS5 Admiralty contract for ship-board gunnery control. From mid-1948 he transferred to the Comprehensive Display System (CDS) project at Borehamwood. This Admiralty contract produced what was probably the first electronic Command-and-Control system for a ship's operations room. Maurice Needham accompanied the X prototype CDS system to America in 1951, where it was demonstrated to the US Navy for several months.

In 1952/3, after the end of the CDS project, Maurice moved to Elliott's main factory at Lewisham, helped to set up a nuclear instrumentation division and from there moved into process control and automation – (for which see box-file V1 – V7). Upon his death in 2015, M V Needham's collection of technical documents, amounting to three large cardboard boxes, were passed to Simon Lavington. Lt Cdr Peter Marland (MOD DSTL) advised on the sub-section of the documents that relate to the CDS project. These are contained in box-file V0 (actually, a large cardboard box) which is now stored at HMS Collingwood Museum, Fareham, Hants.

Maurice V Needham's documents relating to the CDS project, box-file V0.

Box	Date	Title	Description/comments
V0	c. 1945	Framed photo of a battleship (HMS Prince of Wales?), with annotations to show radar types 271, 279, 284.	The external dimensions of the frame are: 10" x 14".
V0	1950	B/w group photo of Elliott staff & American visitors, during a meeting to discuss the CDS project.	The meeting was called the <i>UK/US Conference on Data Transmission & Allied Subjects</i> , Borehamwood, 14 th – 17 th July 1950. Maurice Needham is on the extreme right, back row.
V0	1951	CDS X-models. Volume 1, 3/9/1951. Report no. 252 of the Borehamwood Research Labs of Elliott Brothers (London) Ltd.	Originally annotated 'Secret & Discrete'. Declassified to <i>Official</i> on 20 th November 2015 by Lt Cdr P H Marland.
V0	1951	CDS X-models. Volume 2, Drawings & photographs. 3/9/1951. Report no. 252 of the Borehamwood Research Labs of Elliott Brothers (London) Ltd.	Originally annotated 'Secret & Discrete'. Declassified to <i>Official</i> on 20 th November 2015 by Lt Cdr P H Marland.

V0	1951	Three framed and captioned b/w photos of CDS, each about 8" x 10".	Captions all say: <i>Comprehensive Display System 1951</i> . Photo (a) shows (left-to-right): high definition radar tracking group; tactical plot display in foreground; early warning radar tracking group in background. Photo (b) shows fighter direction (interception) display. Photo (c) is taken from position (a) but looking in the opposite direction.
V0	1951	35 loose glossy b/w photos of CDS and related apparatus.	The subject-matter is as in the above framed photos but there are several extra close-up shots and several 'behind-the-scenes' shots. There are many duplicate images.
V0	1951	3 b/w photos of block-diagrams of the CDS system, showing how the various functional units connect via the central store.	
V0	1951	Two boxes of glass plates (b/w negatives), mostly of CDS photos.	The boxes are labelled 'Radar slides'. One box contains 3.5" x 4.5" plates and the other 6.5" x 4.75".
V0	1984 - 1990	Pink wallet-type folder. Naval Radar Trust and associated meetings, names & addresses, correspondence, manuscript drafts, reprints of JNS articles, etc. etc.	Overall theme: making sure that the history of naval radar during the Second World War was recorded. It is clear that MVN was cooperating closely with John Coales and others. Included is: type 274 & HMS Howe. Circular letter from John Coales, dated March 1985 and sent to about 50 former ASE (ie HM Signals School) colleagues. 1935 – 1946. Name & Group list, 1937 – 1942. List of manufacturing companies who worked with ASE on radar during World War II. List of reports, ND1 – ND76. Reprints of papers that appeared in JNS. Drafts of book by Derek Howse. Reunions (eg at Churchill College, Cambridge). Name & address lists, etc. etc.
V0		The Batti-Wallah's Society. (Former Naval electrical, radio, radar & signalling personnel, founded 1906).	File of historical information, souvenir programmes, etc., of The Batti-Wallah's Society. (MVW had been a member since 1960).