16. NAMES AND ADDRESSES OF WITNESSES OF FIRST TEST [illegible] Place, Santa Ana, California

17. DATE, PLACE, DESCRIPTION AND RESULTS OF LATER TESTS (Name witnesses) Later tests which are continuing at present writing have achieved improved performance.

Jon Erickson, 814 W. Williams, Champaign (witness)

John Koerner, 27 [illegible] Drive, Colonial Mobile Park, Champaign, Ill.

18. IDENTIFY RECORDS OF TESTS AND GIVE PRESENT LOCATION OF [illegible], LPV-2, LPV-4 and input impedance charts in notebook entitled "LPV Impedance Data", Antenna Laboratory

19. PRIOR REPORTS [illegible] Log-Periodic Dipole Arrays invented by D.E. Isbell and reported in Antenna Lab Technical Report No. 39, June 1, 1959.

20. OTHER KNOWN CLOSELY RELATED PATENTS, PATENT APPLICATIONS AND PUBLICATIONS

PATENT OR APPLICATION NO.	DATE	TITLE OF INVENTION OR PUBLISHED ARTICLE	NAME OF PUBLICATION
760297	20 May 1959	Log-Periodic Dipole Array	University of Illinois Antenna Lab, Rep. No. 39

21. EXTENT OF USE, PAST, PRESENT AND CONTEMPLATED [illegible] Should be useful as receiving antenna for television and other communication applications.

22. DETAILS OF INVENTION HAVE BEEN RELEASED TO THE FOLLOWING COMPANIES OR ACTIVITIES

NAME AND ADDRESS	INDIVIDUAL OR REPRESENTATIVE	CONTRACT NO.	DATE
Collins Radio Company, Cedar Rapids, Iowa	R. H. DuHamel	-------	9/11/59 (dinner)
Boeing Airplane Company, Seattle, Washington	D.E. Isbell	-------	6/15/59

SIGNATURE OF INVENTOR *Paul E Mayes* *Robert L. Carrel* DATE *Oct 6, 1959*

RECORD OF INVENTION
NAVEXOS-2374 (4-52)

NAVY CASE NO. _____

OFFICE OF NAVAL RESEARCH

5278

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COGNIZANT BUREAU	RECOMMENDED SECURITY CLASSIFICATION	REC. OF INV. NO.

1. NAME OF INVENTOR: Paul E. Mayes — RANK, RATING, TITLE OR POSITION: Research Associate Professor

2. EMPLOYER'S NAME AND ADDRESS: University of Illinois, Urbana, Illinois

3. DATES OF EMPLOYMENT OR MILITARY SERVICE: September 15, 1954 to present

4. PRESENT ADDRESS (No. Street, City, County, State): 1902 Broadmoore Dr., Champaign, Illinois — TELEPHONE: FI 6-1165 — PERMANENT OR UNTIL: Permanent

5. PERMANENT ADDRESS (No. Street, City, County, State): 1902 Broadmoore Dr., Champaign, Illinois — TELEPHONE:

6. NAME(S) AND ADDRESS(ES) OF CO-INVENTORS (If any): Robert L. Carrel 1017 S. Anderson, Urbana, Illinois

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
BEFORE JUDGE HOFFMAN
DEFENDANT EX. NO. 10
DOROTHY L. BRACKENBURY
OFFICIAL COURT REPORTER

7. DESCRIPTIVE TITLE OF INVENTION: Log-Periodic Resonant-V Array

8. LIST DRAWINGS, SKETCHES, PHOTOS, REPORTS, DESCRIPTIONS, NOTEBOOK ENTRIES, ETC. WHICH SHOW OR DESCRIBE INVENTION: See attached drawings.

9. EARLIEST DATE AND PLACE INVENTION WAS CONCEIVED (Brief outline of circumstances): On June 11, 1959 Mr. E. M. Turner of Wright Air Development Center asked if the angle of dipoles on a log-periodic dipole array had been used as a design parameter. This was tried with no significant change in performance. The idea of operating at higher frequencies so that a change would be obtained then lead to the present invention.

10. DATE AND PLACE OF FIRST SKETCH, DRAWING OR PHOTO: August 18, 1959, Antenna Lab.

11. DATE AND PLACE OF FIRST WRITTEN DESCRIPTION: August 18, 1959, Antenna Lab.

12. DISCLOSURE OF INVENTION TO OTHERS

NAME, TITLE AND ADDRESS	FORM OF DISCLOSURE	DATE AND PLACE OF DISCLOSURE	WAS SIGNATURE OBTAINED (YES OR NO)
R.E. Hooks, Professor — New Mexico State Univ. Las Cruces, New Mexico	Written and oral	August 18, 1959 Antenna Lab.	Yes
R.A. Shubert, Res. Ass't — University of Illinois	"	"	
R.E. Allen, Research Ass't — University of Ill.	"	"	

13. DATE AND PLACE OF COMPLETION OF FIRST OPERATING MODEL OR FULL SIZE DEVICE: June 25, 1959

14. PRESENT LOCATION OF MODEL: Antenna Lab.

15. DATE, PLACE, DESCRIPTION AND RESULTS OF FIRST TEST OR OPERATION: June 25, 1959, Antenna Lab., radiation patterns were first measured for V-elements in 3 half-wavelength mode. A unidirectional pattern was obtained which, although somewhat variable with frequency and possessing lossy structure at some frequencies, was sufficiently good to indicate further tests were desirable.

(other)

PX-15

PLAINTIFF