19. NAME AND ADDRESS OF WITNESSES WHO SAW TESTS. Palo Alto, California

19. DATE, PLACE, DESCRIPTION AND RESULTS OF LATER TESTS (Were successful units which are satisfying all present writing have achieved improved performance.

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

John Keenan, 27 Baltimore Drive, Colonial Mobile Park, Champaign, Ill.

19. INCIDENTALLY, RECORDS OF TESTS AND GIVE PRESENT LOCATION OF LPV-1, LPV-2, LPV-4 and input impedance charts in notebook entitled "LPV Impedance Data", Antenna Laboratory

19. SUBSEQUENT PROGRESS OF INVENTION. Logarithmic antennas 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 |
|---|---|---|---|
| 70257 | 2 May 1959 | Log-Periodic Dipole Array | University of Illinois Antenna Lab, Rep. No. 39 |
| | | | |
| | | | |
| | | | |
| | | | |

21. STATE EXTENT OF USE, PAST, PRESENT AND CONTEMPLATED, BY YOURSELF OR OTHERS. 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 | N. H. Dufamel | [redacted] | 5/11/59 (Memo) |
| Boeing Airplane Company Seattle, Washington | D.E. Isbell | [redacted] | 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

*This is an important legal document. Read instructions carefully before filling in data*

| 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 Brookhaven Dr., Champaign, Illinois — TELEPHONE: EL 6-1165 — PERMANENT OR UNTIL: Permanent

5. PERMANENT ADDRESS (No. Street, City, County, State): 1902 Brookhaven 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) |
|---|---|---|---|
| E. Wells, Professor New Mexico State Univ. Las Cruces, New Mexico | Written & oral | August 18, 1959 Antenna Lab. | Yes |
| A. Shubert, Res. Ass't University of Illinois | - | " | |
| 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.

(over)

PX-15