~~SECRET~~ [redacted]

HRB-Singer, Inc. [redacted] E. C. DeMARK 10 Feb 1969

[redacted]

Code 5614 G. E. Price

Statement of Work for Microwave Amplifiers

1. This task will include the design, fabrication and testing of eight microwave amplifiers. Each amplifier will include as output a detector diode. The sensitivity of these detectors should be at least [redacted] The specifications of these microwave amplifiers are as follws:

[redacted]

Mechanical specifications - (1) The unit will have a gold finish. (2) The RF connectors will be OSM. (3) The power connector will be Microdot. (4) The size will be 1 ¼" x 1 3/4" max.

Enviromental specifications - (1) This unit should hold its electrical specifications over the temperature range minus 10°C to +60°C.

Delivery date - A prototype unit should be available in one month's time. The remaining seven units should be completed and tested within two and one-half month's time.

George E. PRICE VIA
HANDLE VIA
COMINT CHANNEL SYSTEM ONLY

[redacted]

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SUGGESTIONS FOR ADM. MOORER'S VISIT TO NRL..... 18 Feb'69

INDRODUCTION .....

Simple statement of goals for this visit:

1. View the NRL Hardware
2. Stimulate the thinking of CNO toward future utilization of a Program similarto this in providing Navy with a Tactical and a Stratigic Tool.
3. View most stiking evidence of Navy-type capability as now demonstrated in this Program.

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CONTROL SYSTEM ONLY

ADM. MOORER's visit.....

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I. Hardware

Historic summary of evolution of ELINT hardware.
Amplifiers.
Filters.
Tunnel Diode Units.
Labels showing comparison of OLD vss NEW:

HUT vs Indoor station data reception complexes

II. NRL distribution of Responsibility.

III. Typical evolution of Payload
Concept, detailed design goals, NRO Approval and funds, Separate Subsystems certified for flight, Total systems certified for Flight through a series of meticulous Temp, Vibration, Vacuum and Magnetic and Balance testing. Transport to Vandengerg, Tested fully again as a Goof Check prior to installation for flight. NRL Participation in Count-down and flight team. Flight Bench Marks.
Post Flight Period
Deployment of stabilization systems after attaining correct up-down attitude, Full Test of all command systems, and ELINT systems, Careful monitoring of general Health and vigor. OVERSEAS Evaluation of ELINT/PAYLOAD compatibility in the environment of the the Soviet spectrum. Then less than 4-wks into flight these payloads will be turned over to the NRO for Operational tasking....

Continuously through the lifetime of the payloads NRL will monitor various temperature and voltage levels to assure the payloads are capable of performing in a highly known manner. Thrusting effort will be needed periodically to maintain station-keeping so the separation between cooperative birds is optimum.

IV. Desire to Stimulate interest in furthering the use of this program in direct support of the NAVY Tactical OPINTEL

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OUTLINE FOR CNO VISIT TO NRL 25 March 1969....

Duratio

I: Introduction.....HO. LORENZEN RM -409.

A. Outline of agenda for his visit.

B. Basic Run-Through.

II: HARDWARE: . .. . P.G. WILHELM 409 =

A. System diagram
B. hardware description [redacted]
C. Techniques
   1. Thrusters
   2. Stabilization
   3. long life/Reliability

III: RESULTS: .. .. HO.LORENZEN L"# 123 =

A. CNO mandate of April 68 charging POPPY to get demonstable capability by using the present resources.

B. List of Restraints under which this demstration was made;

1. Spacecraft separation
2. Spectrnal coverage not optimum for ship targets.
3. Tasking opportunitikes were only about 12% of total capability.
4. a single ground data-collection station used
5. Ocean surveillance effort secondary priotityat Site.

C. NIPSSA/NRL POPPY history

1. Ship tracks vs. POPPY Locations . . . . [redacted] #123 =

IV: TECHNICAL CONSIDERATIONS FOR FUTURE:

A. NRL participation

B. SHORT TERM
   1. Present POPPY sites
   2. adjusted NAVY/National site network.
   3. Collection system for shipboard deployment.

C. LONG TERM

1. Spacecraft design

~~SECRET~~ [redacted]

[redacted]
CONTROL SYSTEM ONLY