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Memorandum

To: Code 1000
From : 5430
Via: Code 5400, 5000 & 4000

~~1. History~~

1. The personnel in Code 5435 of the Countermeasures Branch have since March 1958 been working in the same general Program which today is granted ~~one of~~ the highest priorities in the Nation and is funded in excess of \$2M / year. During the period of years while this priority was established, ~~and during which~~ ^{while the} ~~the~~ magnitude of the effort has steadily increased both here in this Branch and in the associated Branches ^{which} ~~which~~ are cooperating in this overall NRL effort, ^{manning} ~~personnel~~ in 5430 who are directly and continually active in this program remained essentially

~~2. Service Contract for this NRL Effort~~

In order to fulfill the obligations of Logistic support of the overseas sites utilizing the NRL Huts, it has been necessary in the past 1 1/2 years to employ under Service type contract, ~~xxx~~ three representatives of the HRB*-Singer Co. The high ^{technical abilities} ~~abilities~~ of these three individuals has been applied toward supporting ^{in a major way} ~~the~~ design and evolution of the future Receiving Timing and Recording systems for use in the NRL Huts. At this time and certainly in the future this Contract ^{HRB SINGER} ~~will~~ continue to be, in jeopardy at the whim of DOD. Loss of the ~~of~~ support ~~of~~ will be disastrous to the Program in these areas, since there is no one to replace them.

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3. Demands in the past year, upon the personnel in Code 5435 have been extreme, requiring many long hours of intensive effort ^{on the} ~~on~~ ^{few available} ~~beyond that for which they have been reimbursed.~~ Mr. Rose in particular is the "Pace Setting" ~~single~~ individual on the entire NRL effort for which 54R06-29 is the parent problem. ^{He has} ~~no back up or assistant who is cleared.~~ Two years ago the Program required the preparation of only twelve "Sub-Systems"; Last year the effort ~~has~~ ^{expanded} to a requirement for 32 and next year ~~will~~ ^{be} at least forty at this time and will likely increase in the future months. During this ^{of three years} ~~the~~ the dollar value of the commercial ^{portions} ~~portions~~ of the overall effort has grown from \$ ^{to} ~~to~~ \$

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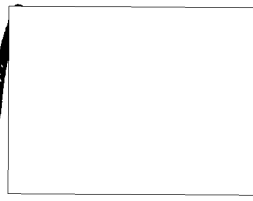
3. continued. . . .

The ex-service man who is experienced in this Program could assist by removing some of the day-to-day logistic support for this program from the work load on Rose and Mayo and allow them more time ~~to work on the~~ ^{to} for reasearch, ~~and~~ ^{and} advancement ~~of~~ of the state of the art which is now impeding the evolution of this "Collection System". With ~~proper~~ training this type of person could be extremely valuable in expediting the procurement phases of the majority of the ~~outside purchases on this program.~~ ^{outside purchases on this program.}

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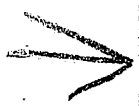
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the Laboratory's ability

1a The Future of this program depends upon expansion of the program to be responsive to the National Requirements on a very rapid basis. This Program has been extremely successful; in its area there is no competitor and it is the nearest to being an Operational System which exists in the ^{specific} National effort. This has been a NAVY "IN-HOUSE" Program from its very conception and will continue only so long as the weak points are recognized and strengthened, and ~~the~~ ^{an intensive} effort toward the future requirements is carried forth.

an intensive

In the stature of this Program within the Countermeasures Branch four major areas of effort are now or should be identified:



- 1. Airborne Experimental Systems Mr. V.S. Rose (WE Withrow)
- 2. NRL H₁ts at overseas sites. (Receiving and Recording) R.D Mayo & HRB Singer men)
- 3. Coordination effort
 - a. within NRL (Mayo/Rose)
 - b. With NSA for Analysis and New Systems (Mayo/Wald/Misner/Rose)
 - c. With NSG for Operations (Mayo)
 - d. With CSWG for requirements (Mayo)
- 4. Research, Theory and Development of New Concepts (Rose/Mayo/HRB Singer)



at least six

4. It is therefore imperative that ^{Branch} additional personnel be assigned to the Com to support the NRL Problem 54R06-29 in the Countermeasures branch. *and a permanent basis to support NRL Prob 54 R06-29*

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4. Overtime ~~utilization~~ in Code 5614 during the preparation for Mission 7105 has been used extensively in the preparation of the Flight Sub-systems. This ~~maximum~~ has enhanced this effort by as much as 50% beyond that which would have been possible without overtime.

5. Additional personnel could help only to the degree that they do not impose demands in excess of the service which they perform...certain ~~ingenious~~ ingenious types have been tried ~~in the past~~ in the past but with very limited success since they are always trying to make improvements and do things in a superior manner which causes delays in interpretation and in some cases the work has had to be repeated by Mr. Rose in order to make the results conform to the criterion of comparison. A Cleared Technician would be useful if he could learn to make measurements in a certain very specific manner and be consistent and repeatable over a long time interval. In addition to this ability his personality must be such that he can work without supervision and without distracting other efforts in the close proximity. Few engineers have these necessary traits and they are extremely difficult to appraise from Form -57's or even from personnel interview. We keep hoping that the right combination will find our effort, and avail himself for our appraisal. Fred Hellrich did serve in this capacity but has far too much critical talent in the areas of the Overseas and the domestic computer to be relegated to this Technician job for the long haul....Paul Oesterling of HRB Singer is the next member of our team to get clearance and does have some of the important attributes for this effort so that his services ~~will~~ will give us significant increased capability to relieve Mr. Rose.

6. Increased Sensitivity in 7106 ~~will~~ versus delayed Launch is a complex trade-off which will vary for each collection band. Bands below 550 Mc are inclined to produce extremely tough RFI problems within the payloads and are not easily instrumented. The final decision on this should await operational experience with the 10 and 12 db High-Gain bands in 7105. It is possible that the data stream will be completely ~~xxx~~ beyond the ability to sort or deinterleave. says that it will ~~make~~ make the rare intercept of the past missions commonplace for Mission 7105 and those commonplace intercepts of the past missions ~~will~~ be seen from three to five times as long for each illumination.

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