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MEMORANDUM

6 Feb 1972

Subj: Significant elements relative to establishing a Competitive source of operational software for Program C.

1. Background:

HRB-Singer has progressed from the very first efforts to the successes of today in the ^{computer aided} ~~xxxx~~ analysis of Program C data. Their team under the leadership of key HRB and NRL personnel have provided this continuing evolution of software tools in the face of ever changing requirements and with little fiscal support or recognition. Today's successes have to a large measure overtaken ^{& surpassed} the data processing achievements being provided by NSA. The NSA jurisdictional position in processing this data is not in question and therefore they have ^{at} ~~xxxx~~ every turn of events recently, tried to impose themselves and their wishes in the architecture of the current software developments at HRB-Singer. This has resulted in a continuous effort on our part to avoid one disaster after another since the NSA guidance is so faulty; only after a great amount of education and repeated visits to the site in have they come close to agreement with the current development plan for the Second Generation computer system now underway at HRB-Singer.

The events of Ocean Surveillance have now left Project #749 with a \$2 to \$3 Million sum which must be committed by end FY-72. is the custodian of these funds and is now engaged in a great debate on how he can commit this in a large sum to the benefit of the data processing systems of Program C...this must not go to hardware though. Thus it is imperative that the significant elements ~~xx~~ in support of continued HRB effort and if possible extension of this effort so that for the first time it can materialize without the very heavy restraint of limited level funding of the past 6 years.

E 4000 ⁷ study

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2. The Processing software design must be done in extremely close association with the spacecraft design and the site collection systems. This is one of the strongest possible historic attributes of the POPPY system and with the consideration of another competitive source of processing software this/^{close}association between the vital elements of this program must be questioned. We are not saying that we can work closely ONLY with HRB-Singer, but rather we are asking can we work adequately with the other contractor, especially if he is on the West Coast. It is most imperative that we in Program C not make the job any more ~~xxxxxx~~ strungout than it is already...HRB is not just next door either but the dialog is established and the team assembled and well calibrated (as far as NRL is concerned in any case) and with this history it is possible to extrapolate where a given effort will be completed with this team. This is a critical time for the Program "C" software development since is the indoctrination of a Second Generation Computer system.~~thatxxxxxx~~ If the painful lessons of the past 6 years are to be effectively applied to the problems of introduction of a new computer it is essential that a minimum change be made at this time. The mechanism (contract) exists for the funding an accelerated effort with HRB-Singer and they have manifested the ability to Staff up to the level sufficient to accomplish both a near-time effort and a Fresh look effort. They have satisfied the requirements of Security, Plant ~~xxxxxx~~ as well as personnel expansion.

3. I would welcome competition but to select another contractor without giving HRB a chance to get the uninhibited dedicated software job after weathering the storm of limited funding and a ~~xxxxxx~~ restrained imagination climate for the past 5 or 6 years seems like we are not going to reap the/^{full}advantages of this experience. HRB Must be a part if not all of the big-scene for development of the software system for Program "C" Second generation computer.

4. Personnel at NRL have recently been taken on board from the "In-Residence/^{HRB-Singer}team" stationed at NRL, and these personnel are the ones that must be utilized to interface with the contractor who will supply this software system. These men are not dedicated solely to this effort but are required to carry out a full measure of other duties. There is no doubt that they can get a better product out of HRB-Singer than they can from any other source in a period of 1 to 1½ years. Beyond this another manufacturer might become competitive, if they were able to come on board ~~the present~~ ^{the present} team with great speed and then generate a competency equal to ~~the present~~ team.

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3. The issue of SEL-86 Software development with NSA/PM-16/NRL all visiting HRB-Singer last Thursday and Friday....the main element of concern here as far as PM-16 is concerned is whether to spend some #749 money on accelerating the software system for our program. CDR Cleary has not enjoyed a high confidence about HRB based on the running battles with Lee and others during the PM-16 Study prior to November. There was nothing that HRB-Singer could have said or done that would have convinced him that he should have put this money toward their software development program. It is just a question of prejudice against the present team based on the heavy restraints imposed in the past on this effort.

4. New Technology Development opportunities have filtered down from Codes 4000 and 7000 for us to respond to. some of these have merit and others are less interesting but possible. I have written something for all but one of these. They are preliminary at this point but may form the basis for a start in any case.

5. Funding review of FY-71 and FY-72 was scheduled for this week with Pete and Me expected to provide PM-16 with a recognition of the problem areas in funding and some suggestions of solutions for each of these problem areas. [] is most helpful in defending our recommendation

6. Security clearances for HRB-Singer is essential for the \$160K acceleration that PM-16 and NSA have provided for with their funding. We are in the early stages of submitting the billet and clearance requests at this time.

7. Bld 68 problems have arisen with limited funds on the submission. Somewhere around \$200K but the costs have risen now that the A&E is in its 30% point. The walls immediately adjoining the present exterior walls must be moved away from the present foundations by something like 36 inches so that between our space and Pete's there will be a 3 foot open space...quite wasteful but cost saving (\$60K) The footings under the new walls would tip out into the street unless underground beams were used to hold them straight and in position.

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