

This is the proposed body of a letter from
Prof. Graham to myself (HES). HE wants approval
or comments from

Ken Hebert

Ernie Albright

HES

2/20/68

Phase 1 design

Approx. 6 months after completion of PTS.
Approx. 2 full time people.
Modest amounts of computer time for simulation
and check out.

Phase 2 Limited System

- a) Approx. 1 year from completion of phase 1.
- b) Will offer such items as the following:
- i) on line execution of small customer programs, with response on a character by character basis, if desired
 - ii) a file editor
 - iii) driving of several remote 2400 B/S printers and card readers
 - iv) real time data collection and device control by a customer's program
 - v) preliminary permanent file system (?)
- c) All compilation, assembly and link loading will be done under the batch system, as well as execution of large programs, and will be subject to the usual delays of a batch system.
- d) Approx. 4 or 5 full time people.
- e) Requires the following: (at least 6 months prior to completion)
- i) 1/2 of the proposed ECS, with a guarantee of no more than 1 or 2 macro seconds extra time to read or write a block of 1 or more words than if the ECS were attached to this CPU alone
 - ii) a 6400 CPU with 324 ~~control~~ memory, 10 PPU's and CEJ, MEJ instructions, modified so that *J* package determines mode, also possibly a separate control over PPU lock out during monitor mode, not requiring an XJ to turn on or off.
 - iii) 1 disk arm on the 6638 with a guarantee of no interference from the other 6400 (i.e. 1/2 of the 6638)
 - iv) Modification to operating system on other 6400 to allow sending tasks over to be performed, and getting results back.

v) a multiplexor

Phase 3

Better System

- a) Approx. 1 or 2 years after completion of phase 2.
- b) Will offer same items as phase 2 plus:
 - i) more users
 - ii) large user programs can be executed
 - iii) compilation, assembly, link loading and other facilities of most batch systems, such as SCOPE ~~etc.~~.
 - iv) batch service for those desiring it
 - v) better permanent file system
- c) Approx. 4 or 5 full time people.
- d) Requires: both 6400's, all of ECS and disk, printers, card readers, punches, tape drives, added interlock instructions on ECS such as test and set