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FSD Headquarters
Rockville, Maryland
December 3, 1960

Memorandum To: Mr. N. P. Edwards

SUBJECT: Results of Intelligence Meeting - Bethesda, November 30,
December 1, 1960

Although Mr. R. Farrell will write official minutes of this meeting, I have a few comments which I would like to get off my chest.

The meeting was well attended by representatives of FSD, ASDD, DSD and Research. Most of the talks were well prepared, presented, and received. The meeting was certainly successful in educating both Marketing and Engineering personnel -- particularly the junior personnel present.

Nevertheless, I was quite discouraged at the close of the meeting by the general apathy and indecision evidenced by all in the face of the clear requirements described and the straightforward proposed programs to meet these requirements. Except for one program (which is going ahead under contract anyway), there was no unanimous agreement on any of the proposals.

The following are the tentative goals discussed, my comments on each, and the action decided upon at the meeting:

1. To test a model for target matching and identification using the Photo Image scanning and processing technique.

This is a very exciting program with a great future for the use of digital computers in a new area. The work is presently under contract to Fort Belvoir for one year.

Action: Dr. Cypser and Mr. Farrell will spell out a program by January, 1961.

2. To build a prototype associative memory.

The concept of an associative memory has been around for a long time waiting for some company to seize it and put it into use. The legitimate arguments against it have all been economic in the past. The changing state of the art and changing needs have cancelled most of these objections. The tremendous usefulness of such a device cannot be seriously questioned by anyone knowledgeable in intelligence applications.

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2. (continued)

Action: Mr. Courtney and an ad hoc committee will study for three months to determine application and requirements in order to give guidance to Engineering.

3. To devise a prototype auto-abstracting procedure.

This subject has been pushed and blasted unmercifully in the past. Most of the controversy has raged over extrapolations of the method not over the research actually being done. This is a field where the quiet workers on specific applications will eventually win. Some very promising work is going on behind the scenes now.

Action: The Systems Center will set up a seminar to survey the state of the art.

4. To develop an early operational Language Translator.

IBM has been putting all its eggs on Dr. Gil King's photostere and the word-by-word translation scheme. There are serious indications that we may be "scooped" by others using general purpose computers with more logic and syntax capability. We should have long since started a program for attaching the photostere to the 7090, in an attempt to head off this threat.

Action: Mr. C. R. Green will look into marketing problems. Dr. J. Stone will set up a committee to examine requirements.

5. To develop an initial display capability for systems like 438L.

I find it hard to remain coherent when discussing this subject because of the long unpleasantness it caused us on 438L. DISPLAYS should be a black word on IBM's conscience. We have led the field in the SAGE area for years. Since 1953, there has been a clear, long-recognized and ever-growing need for such devices in government and commercial real-time applications. Yet, we have frittered away our lead and never developed a simple off-the-shelf device which is needed for systems like the 438L. We are still caught in the hopeless circle that we cannot develop a display without a contract and we cannot get a contract without a display.

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5. (continued)

Action: FSD Product Planning will start a study to evaluate possible market requirements.

6. To develop an operational page reader.

The input problem is already, or soon will become, a major bottle-neck to the use of data processing equipment in the intelligence area. Its usefulness in the commercial area is also very large and obvious. The basic principles as to how to design and build such a device have been known in IBM since 1957 if not earlier. In spite of this, the small GPD program in this area has been slashed and nothing is planned for at least two years.

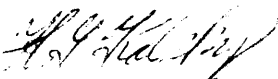
Action: Marketing will check into the status of present FSD-GP proposal in this area.

7. To do research on advanced analytical techniques.

Most progress in this area (e.g., Discriminant function theory) has come from trying to solve specific problems, then generalizing. Certainly such work should continue wherever it can.

Action: Systems Center will look into such studies in Dr. J. Stone's group.

The only other comment I can make is that I hope FSD management will now take the initiative in pushing forward in the intelligence area and not fall back on the usual "let's study and report back in six months" approach.


H. G. Kelsky ←
Senior Engineer

HGK/del

cc: Mr. R. Farrell, Bethesda