

MEETING OR CONTACT REPORT

		Date of Report:	June 17, 1959
Organization & Location: Eastern Region - Applied Science 425 Park Avenue, New York, N. Y.	Date:	June 16, 1959	
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Project: 7030 Applications	Department:	749	
	Follow-up Date:		

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The purpose of this meeting was to discuss reactions and conclusions stemming from recent 7030 presentations made by Eastern Region Applied Science Representatives. Key prospects as well as important factors affecting the total 7030 market were discussed. Opinions based on recent field contact with and appraisal of the various prospects were also requested.

The following presentations have been made:

Redstone Arsenal

Although this will be a Federal Division account, it has been handled by branch and regional personnel up to now. A presentation and prices have been given the customer. Branch office personnel are assisting in a study program which is now underway. A decision is expected within two or three months. This is considered to be a very good prospect. Reaction to the presentation was very favorable. The study program now underway has as one of its objectives the determination of the component mix which is best suited

to the range of problems involved. The amount of memory ordered will probably depend more on considerations of speed rather than capacity needed. This customer has a critical elapsed time requirement on certain of his priority applications. The problem of concentrating all of the work on a single machine will have to be worked out, but is not considered insurmountable.

Bell Telephone Labs

A presentation has been given, and the reaction was very good. An evaluation by customer personnel is now in progress. The curve representing projected work load for this customer is going up very steeply. In two years they expect to have two 7090's fully loaded four shifts. The main application involves the simulation of all development projects prior to their commitment to the hardware stage. This results in an extremely heavy machine load. The approach which is being taken by this customer to justify the 7030 is based on gross load.

Naval Reactor Board

Several presentations have been made to NRB people and to contractors' personnel. Mr. Worthington stated that he feels quite confident of at least one machine in this area. This machine would probably be followed by another in about a year based on good experience with the first machine.

Merrill Lynch

This customer has been given a general glimpse of the machine. Our own people are at work summarizing the application, which is currently occupying more than three shifts on each of two Model II 705's. The system is operating at volumes twice what it was originally designed for. The application is compute-limited on the 705. The majority of a main stream of 5600 instructions is used on each customer transaction processed. The customer's reaction to even a limited presentation was very favorable. The feeling was that this application could be handled exceptionally well on a 7030. It would need at least a 32K memory, and multiple disks would play a very important part. The first discussions indicate the probable desire for between 5 and 10 disk units.

The use of the present 705's has made possible a 50% increase in this customer's business. It is felt that the use of a 7030 will allow them to capture a significantly larger percentage of the total market. They are not now able to keep up with the market. Very often they work through the night in order to complete a day's transactions. They would like to have enough computing capacity to keep up with the market during the course of the trading day. In addition to this, they would like to extend their use of the machine into new areas such as market analysis and daily billing of large accounts. If Merrill Lynch provides this level of service to their customers, competitors will be forced to process their customer transactions in the same fashion on as fast a machine. Since none of their competitors are as large as Merrill Lynch, they probably would be forced into the shared use of at least one other 7030.

It was stated that this prospect is an extremely good one, but that we are holding back for fear we won't have a machine to give them. The 7030 can be justified on the basis of current volume and present machine cost. Because it is a single extremely high volume application, conversion from the 705 could be made very easily. It would seem to be a particularly good prospect for the Special Marketing Phase or for one of the very earliest machines in a commercial program. The impact on the general business community would be particularly favorable. This customer is very conscious of the prestige value involved and could be counted on to advertise the successful use of the 7030. A quick installation can be contemplated because of the single application. The basis for very successful use by customer personnel already exists.

Prudential Insurance

This customer was given a presentation which was kept general at his request. This supplements earlier presentations made to him on the occasion of past laboratory visits. He stated that he wanted the latest general information to mull over before making a decision on a more detailed appraisal and evaluation. It was left that they would contact Applied Science when they wanted any further information or action.

The number of presentations which might be made has been limited due to the nature of the special marketing phase on the 7030. It is feared that too much interest might be aroused by anymore presentations. A presentation is planned for the Lincoln Lab-Mitre complex, but no date has as yet been set. Applied Science is holding back on this because of the reason mentioned above. Due to this customer's desire to keep these two projects distinctly separate, there are two prospects involved here. One machine for Lincoln Lab and one for Mitre. Without any advance thought, the following prospects for a regular commercial program were named. Johns Hopkins is thought to be a good prospect in the next two or three years. John Hancock Insurance is thought to be a good prospect for replacement of the UNIVAC on which this company is getting quite poor usage. Lockheed Georgia and the Glenn L. Martin Company both ought to be prospects in the future. The GE Lynd complex of divisions is considered as a possible prospect. The GE Syracuse complex of divisions might also be a prospect if the political objections could be overcome.

The Model II CPU is considered to be an important key to many of these later prospects as well as to other unlisted marginal prospects. The possible component mixes in the installations to whom presentations have been made include a higher number of disks than had originally been expected. Also included are a larger number of memories than had been thought supportable by this class of customer. It was stated that disks particularly would play a very important part in the Merrill Lynch application.

In considering customer attitude toward the use of very large machines, the following points were discussed. (1) Fear of being dependent on a single machine without adequate backup by another machine of the same type plays an important part in the consideration of most of our customers. Formal backup arrangements become increasingly important as a company becomes more dependent on a machine of the size of the 7030. The importance that the different customers attach to this factor varies according to past experience. (2) The need for minimum elapsed time on certain priority problems is a key factor for several of our customers. Being able to quickly and conveniently concentrate all of the power of a very large machine on a single priority problem is important to these customers. In some cases it may be the single most important factor, and can probably overcome the fear of concentrating

all of the computing power in a single machine. At the least it can partially counter-balance the fear of a "one of a kind" situation. (3) A third point discussed in connection with customer attitude toward very large machines concerned the possibility of realizing all of the profit obtainable in super performance machines. Really good operating practices aren't found in a very high proportion of the present 700 series installations. This isn't too much of a handicap in those installations where a few very large applications constitute the total work load. There are a great many installations, however, some of them Stretch prospects, in which better operating practices could lead to a significant increase in total capacity using present equipment. The effect of the bad operating practices will be considerably more significant on a larger machine. It was stated that a really good supervisory program should be made available with the machine by Applied Programming in order to help overcome this shortcoming. It was thought that the supervisory program would be one of the most important parts of the utility system. (4) The importance to the large customers who constitute the group of 7030 prospects of being able to trade customer programs was almost completely discounted. It was felt that relatively few trades are actually used by any other installation in spite of the large number of customer programs published by SHARE and GUIDE. Customers have found that the difficulties in adapting a borrowed subroutine to another operating environment quite often exceeds the effort required to write the desired subroutine from scratch. (5) Finally, it was agreed that there is a real prestige value in using a very large machine for most of the customers discussed.

The possibility of any large amount of machine sharing either between departments within a single company or between companies was discussed. It was agreed that even the apparently simplest situation includes some extremely thorny problems of practical politics before any working arrangement for sharing a machine can be reached. The problem is made doubly complex by the fact that people are rarely willing to admit to their real motives in opposing cooperative use of equipment. The most often heard objection is that proper service on important priorities cannot be assured in a shared situation. The fact that most work can be anticipated and scheduled doesn't seem to ease the worries on this point too much. Perhaps this is because this reason is so often used as a cover-up for less worthy arguments against

sharing. Actually sharing a very powerful machine can have advantages in dealing with a truly unanticipated emergency. The shared machine is normally more powerful than the machine which any one of the participants could afford alone. This means that when its power is brought to bear on an emergency situation, it can handle that problem in considerably less elapsed time. Two factors which actually do work against each other in a shared situation were mentioned. The reason for two normally independent departments or companies to share a machine is to make possible a significantly lower unit cost of processing. But the best way of avoiding priority type conflicts is to have excess capacity available. However, machine capacity which is not used raises the unit cost on that portion which is used. This may partially cancel out the whole purpose for sharing a machine in the first place. The conclusion was reached that only a very healthy reduction in cost of processing would overcome the politics involved in most shared situations which might be proposed. Any reduction will have to be significantly higher to get a shared situation started than to keep it going once the fears have been overcome.

In discussing the amount of growth which may be expected in computer usage during the next five years, a difference of opinion was evident. The largest single factor affecting computer use either directly or indirectly is the matter of defense spending. Defense spending is a function of a great many parameters, most of them quite unpredictable. The inherent value of the application itself is quite insignificant by comparison. Right now we appear to be on a rather steep portion of the growth curve. If the rate of increase in computer use continues as it is doing now, the growth in the next five years will certainly outstrip the amount of growth in the past five years. A large part of this future growth is thought to be in areas and applications approachable only by a very powerful machine. Another very important factor over which we do have some control will be our ability to develop new applications rather than to rehash old ones on new machines. The feeling was expressed that the company is not doing enough at this time in this area. The feeling was expressed that even where new applications have been developed, insufficient publicity has been given to the value of the application to other potential users. A great many of these new applications areas are ones which less powerful equipment cannot touch. They are, therefore, important factors in the growth of systems such as the 7030.

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A great deal was made of the importance of developing adequate data communication links for use with the 7030. Such links are a key factor in a large number of 7030 prospects. Even in those cases where they are not the key, availability of such communication links will considerably extend the application range. The offering by IBM of workable data communication matched to the power of the 7030 at the time the 7030 is commercially announced was thought essential by this group.

The difficulty of predicting the reception which a machine like the 7030 will receive when the total machine spectrum is as unsettled as it is right now also came in for some discussion. The unsettled state of the various machine development programs as a result of the recent divisional reorganization makes it more difficult to talk intelligently about the part which any single machine system will play in IBM's share of the market.

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