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EFRAT
CORPORATION

"TAVOR"

TONE-ACCESS VOICE-OPERATIONS

RECORDER/RETRIEVER

BUSINESS PLAN

Recipient: _____

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BUSINESS PLAN SUMMARY

INTRODUCTION

EFRAT Corporation, a U.S. company with experience in computerized voice processing, seeks $2,750,000 to develop a proprietary micro-processor-based Second Generation Voice Store & Forward System ("SVSF") called TAVOR, which can handle not only voice but also data and text transmission. In addition to the funds sought hereby, a minimum of $500,000 is expected to be raised through grants from governmental and quasi-governmental entities which have been established to encourage investments in high technology products manufactured in Israel. The $3,250,000 will support the Company until it is self-financing. EFRAT is projected to achieve revenues of $29 million and net income after taxes of $7 million in the sixth year of operation.

TAVOR will be developed in Israel and is expected to be ready for market in 1984 after 21 months of development. Thereafter, a series of related products will be developed, establishing EFRAT as one of the leading companies in the voice-processing marketplace.

MARKET SIZE

The market for Voice Store & Forward Systems ("VSF") has emerged in the past 2-3 years and is growing rapidly. According to two of the leading research organizations, the Yankee Group of Cambridge, Mass. and International Research Development, Inc. (I.R.D.) of Norwalk, Conn., the annual market for non-telephone VSF systems should exceed $500 million by 1985.

Research indicates that now is the time for EFRAT to start development of an SVSF system, such as TAVOR, which will have unique features and an unsurpassed price/performance ratio as compared to its VSF competition. As a second generation system, TAVOR will be able to serve different markets, thus giving it unprecedented flexibility and potential in the marketplace. The primary targeted markets are those of office automation, telephone companies, answering services, radio common carriers and defense establishments.

MARKETING

As discussed above, the VSF market is multisegmented. EFRAT's strategy is to concentrate on those segments in which it believes it can gain significant market share. EFRAT believes it should devote its efforts to research and product development and that the product should be marketed via an existing vendor or distributor, who will also provide field support. Since each segment has special characteristics, the Company intends to have different marketing partners in each market. Currently, it is in negotiations with several potential marketing partners in the U.S., but it is also seeking other partners with expertise in the markets not already the subject of negotiation. The Yankee Group, feeling that a substantial market for EFRAT's products exists, has encouraged the Company in its efforts.

VOICE STORE & FORWARD ("VSF")

"VSF" refers to the use of the computer to accept voice messages spoken over the telephone, store them in its memory bank, and forward them for delivery to any telephone(s) inside, or external to, the office. VSF gives the user an automated, electronic "mailbox" capability, with a variety of supporting features to insure efficient use.

Research shows that a high percentage of office communications is non-interactive in nature -- i.e., no dialogue is required -- yet considerable effort is expended under conventional methods just to convey messages between parties. "Telephone-tag" is a constant phenomenon of the modern office.

VSF is expected to significantly reduce the time and costs associated with this type of communication, because it allows all message traffic to be relayed and managed via the computer. In the typical office, a smoother system of communication results. In the paging or answering service business, operating costs can be reduced and revenues increased through the replacement of human operators and the enhancement of customer services.

Improvements in micro-processor and digital storage technology, coupled with the need for increased productivity in the office, have spurred the development of VSF. To date, several systems dedicated to VSF have been introduced. The basic features of these systems are similar, but differences show up in number of lines (or users) which they can support, in the price of the product, and in their special features which vary from one system to another.

SECOND GENERATION VOICE STORE AND FORWARD ("SVSF")

As an SVSF, TAVOR will continue to offer the features provided by standard VSF systems. For example, it will provide "mass calling" which permits a message to be recorded only once and automatically delivered, via the telephone, to a specified group or list of recipients. Another feature will be the TAVOR "message minder", a small device with indicator lights attached, which alerts a recipient who has returned to the office that a message awaits in his mailbox. Yet another feature will be "future delivery", allowing a sender to specify the date and time for delivery of the message, such as at night when the rates are low.

However, TAVOR will be distinguished from its VSF competitors in several important ways and will offer a bridge to the office and business of the future. TAVOR's unique modular architecture will allow it to serve from one to 10,000 users. Thus, it will need not be dedicated to specific limited market segments, like VSF systems, but could serve the small office, the Fortune 500 Company, and the answering service and paging systems markets. Moreover, it could initially be purchased in a small configuration and expanded gradually. TAVOR's proprietary "T-LINK" and "T-TALK" features will allow it even more flexibility, permitting local and global networks of SVSF systems (see Figure 2-1). "T-EDIT" will also allow the user to edit his voice message.

In addition to a voice store and forward system, TAVOR's "T-DATA" will offer software packages to support the system's interfacing with most computers, local area networks, and data communication networks, using standard protocols, such as X-25. Additional software packages will support office automation services, including text transmission, electronic mail, telex, facsimile, and word processing. As a result, TAVOR could serve as a future executive terminal. No existing VSF system offers this data and text transmission capability.

Leading researchers see voice recognition technology as an area of significant future growth. TAVOR's integration of voice and text represents a first step toward the utilization of advances in voice recognition.

RESEARCH & DEVELOPMENT

R&D and manufacturing of TAVOR will take place in Israel. Factors contributing to this choice of locale include financial aid and tax incentives, a ready pool of skilled labor, lower costs, and strong ties with the U.S. and the European Common Market. EFRAT's President, Mr. Boaz Misholi, a permanent resident of the U.S., is a native of Israel and will return there to lead the TAVOR project.

During trips to Israel in 1981 and 1982, potential team members were interviewed and prospective sites were reviewed. Discussions were also initiated with Government authorities, who indicated a positive interest. EFRAT expects to qualify for tax exemptions and financial aid.

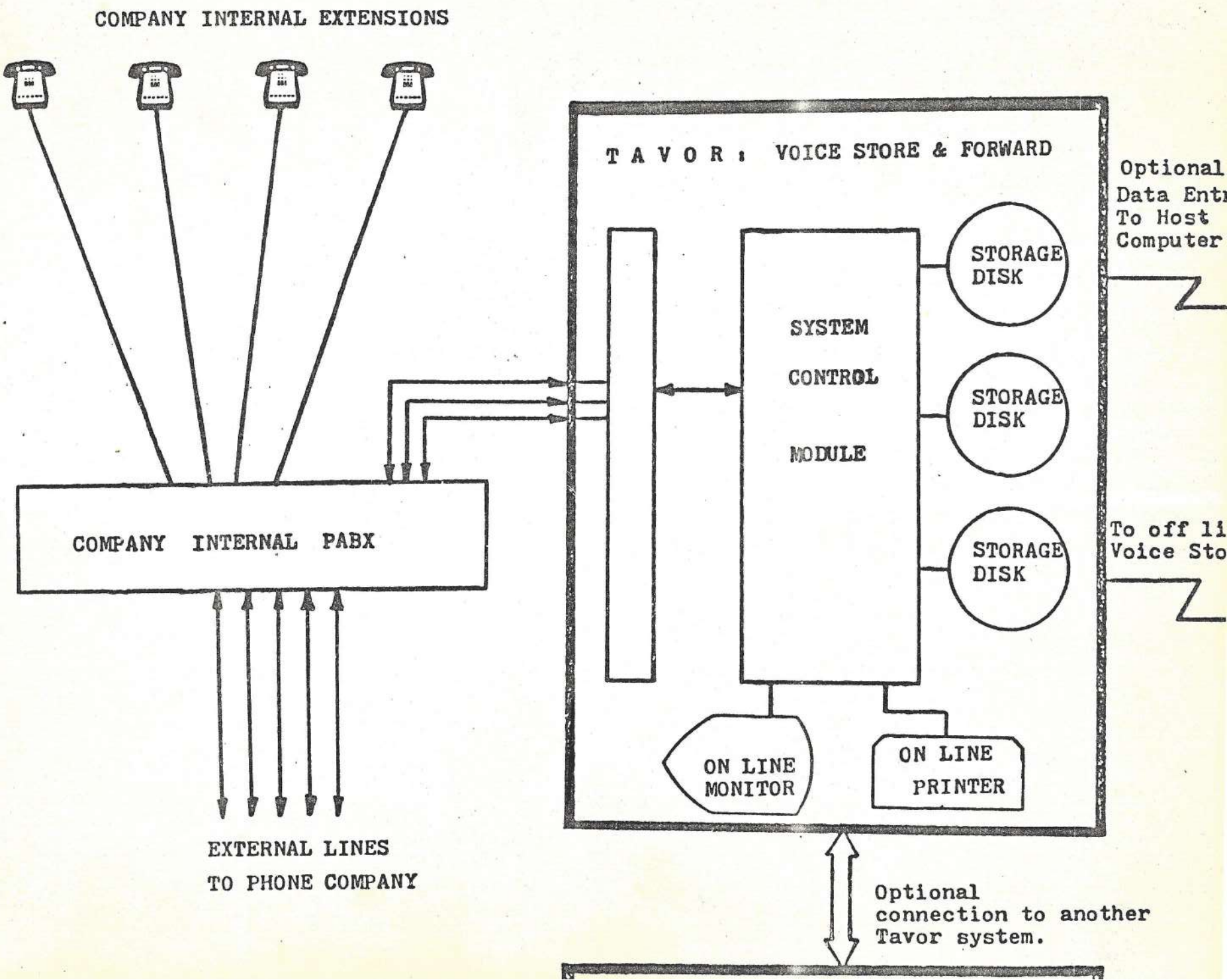
SUMMARY

With the development of TAVOR, EFRAT Corporation will have a significant impact on the voice processing market. The price/performance of TAVOR will rapidly gain the company a strong foothold in the marketplace at a time when the market is just emerging.

TAVOR will be the first in a series of voice and communications products to be developed by EFRAT. Ongoing research will be conducted in voice storage, voice compression, voice recognition and other leading-edge voice processing areas. The TAVOR project, therefore, offers a promising entrée to this specialized and growing field and will help generate the capital necessary for future expansion.

--- End of Summary ---

FIGURE 1.1 : TAVOR IN THE OFFICE



SECTION 2
THE TAVOR PRODUCT

The features referred to throughout this memorandum as TAVOR's features, represents management's best estimates of what will be incorporated into the final TAVOR product.

2.1 Basic User Features

TAVOR belongs to a new realm of telecommunications - the storage and delivery of voice messages via the telephone and the computer anywhere in the world. TAVOR accepts messages from, and can deliver them to, anyone anywhere at any time.

TAVOR's major benefit is in managing telephone time - eliminating "telephone tag", reducing phone interruptions, etc. Estimates of the time which would be saved through use of a VSF system amount to 20 minutes or more per person per day. Productivity would be correspondingly increased.

This section describes the principal basic features of TAVOR.

1. Storage. TAVOR stores all voice messages on-line using hard disks, with optional off-line storage on tape. Disks can be added to fit the specific storage needs of the user.

2. PABX Interface. TAVOR interfaces to any existing PABX. It works separately from, but in tandem with, the PABX, expanding its functions to include Voice Store and Forward. TAVOR also works independently, without a PABX.

3. Service Classes. TAVOR allows different levels of usage to be assigned to different users on the system, similar to the Service Classes offered by the PABXs. This feature improves utilization of system resources.

4. Message Deposit. Messages may be deposited into the system by anyone from any telephone. The Service Class will determine the maximum message length, which may be unlimited, depending on the user's preference.

5. Access. Access to the system and to recorded messages is restricted to authorized users through a system of passwords and access codes. These codes may be varied according to individual users or the "access classes" to which they belong.

6. Retrieval. Retrieval of messages is at the user's discretion. Upon calling in to TAVOR the user is informed of how many messages await, from whom (if they are from "registered" users or outsiders), how long the messages are, and other pertinent summary details. Messages may then be retrieved in any order or portions of the messages may be audibly "scanned". After completion, messages may be erased or kept for later retrieval.

7. "Message Minder". This small device attaches to the telephone. A system of indicator lights on its panel informs the user that a message has been received by TAVOR in his/her absence. If the messages are accessed from a different phone before the user returns to the office, TAVOR automatically turns off the indicator lights of the Message Minder. A small LED panel on the Message Minder may indicate the code of the caller, the number of messages waiting, or other data which can be transmitted from TAVOR directly to the user.

8. Message Transfer. Messages may be transferred to other mailboxes and "prefixed" with additional messages from the second sender. For example, a message about an account inquiry received originally by the Billing Department can be transferred to the Accounts Receivables Clerk and a message inserted at the beginning saying, for example, "Jane, this is Andy from Billing, please attend to the following request."

9. Automatic Message Delivery. As described, the system will notify most users about their messages via the TAVOR Message Minder. For individuals who do not have Message Minders or have travelled away from the office, TAVOR may be programmed to repeat its calls periodically until the phone is answered or to try locating the recipient at one of a series of phone numbers in the case of an emergency message.

10. Mass & Selective Calling. An important feature of TAVOR is the ability to record one message and deliver it automatically to a pre-selected list of mailboxes. There are no limits on the number of recipients, nor on the number of "groups" which may be assigned. Access classes determine who may initiate mass calls. Alternatively, temporary lists of recipients may be assembled by authorized users to send out one-time messages, e.g. to call an emergency meeting. Upon completion of the specific call, the list will be automatically eliminated.

11. Future Calling. TAVOR may be instructed by the caller to record a message now, but deliver it later at a time when the callee is in his office, thus overcoming a time-zone difference. Alternatively, the messages may be sent at night when telephone rates are cheaper.

12. Traffic Reporting. TAVOR includes a complete set of traffic reporting functions, including statistical analyses of the usage of the system during the course of the week, month and year. The system may be programmed to produce various combinations of analyses and detailed reports. Output is produced in hard copy or, for "spot" inquiries, specific details may be accessed directly through the telephone.

13. Archival Storage. For security installations, disks may be copied to provide permanent records of all recorded messages.

14. Purging. TAVOR may be programmed by the user to purge from the system all messages which have not been picked up within a certain period of time. This period may be varied according to service class or particular user.

15. Personalized Greeting. Optionally, TAVOR can provide a personal greeting for each user's telephone in the manner used by the telephone answering machines in wide use today. For example, a person calling John Smith's number will receive a greeting, in John's voice, saying "Hello, this is John Smith. I am out of the office right now, but upon hearing the tone please leave your name, number and message, and I will get back to you soon. When you have finished your message, please press the number 4 key. Thank you."

16. Security. TAVOR has been designed with security in mind. Security is an important consideration and various levels of security are provided in TAVOR. These include passwords to access mailboxes, create distribution lists, obtain traffic and analysis reports, etc.

17. "Briefcode" Commands & "Help" Functions. TAVOR's voice prompts can be abbreviated for experienced users to shorten the length of the interaction with the system. At the other extreme, the system will contain "help" functions to "rescue" the uninitiated.

18. Maintenance. On-line diagnostics will detect most problems before they occur. Automatic calls to the local support center will deal with most problem cases. Mechanical problems will be few because the system is predominantly electronic. The ability to effect most repairs through the substitution of p.c. cards will allow maintenance to be done on-site and quickly. Maintenance will be carried out periodically to further prevent the occurrence of problems.

19. Optional Features. Due to the differences in individual requirements, TAVOR allows many of its features to be programmed by the user to suit particular preferences. These programmable features include:

- Maximum message length
- Maximum message storage time
- Service classes
- Personalized greetings
- Warning tones to indicate time limits
- Timing and frequency of automatic message delivery
- Number of repeated playbacks of messages
- Full or 'briefcode' commands
- Standard system voice responses
- Dictation capability

2.2 TAVOR's Second Generation Features

The following features differentiate TAVOR from VSF systems. They give TAVOR the ability to serve many different market segments and companies of varied size within each segment. Moreover, by providing a full range of voice, data and text services, TAVOR combines many required office systems within one at significant cost and time savings.

1. "T-LINK" - "Piggybacking" Systems. Capacity on existing systems is limited by the number of lines and the maximum disk storage. TAVOR overcomes these limitations in several ways. One of these is the "T-LINK" feature, which allows multiple systems to be linked together to provide, in effect, a very large system which will accommodate many thousands of users.

2. "T-TALK" - Inter-System Transfer. TAVOR has the ability to deposit a message into the mailbox of a user on a remote TAVOR system. This eliminates the need for TAVOR to try repeatedly to "deliver" a message over long-distance phone lines to a recipient who is absent from the office. This feature allows widely-separated TAVOR systems to be combined into a network.

3. "T-EDIT" - Message Editing. Current systems provide no ability to edit messages once they have been recorded. The only option is to delete an entire message and repeat it correctly. "T-EDIT" is an editing feature unique to TAVOR which allows the user to edit messages, insert or delete parts of a message, or merge different messages together to produce one combined message. "T-EDIT" will prove extremely useful for dictation purposes. "T-EDIT" will be a self-instructing feature so that it can be utilized by any untrained caller.

4. "T-DATA" - Data Entry. Office communication systems of the '80s must be able to transfer data as well as voice, and the ability to combine both these capabilities into one system is seen by Office Automation researchers as important. TAVOR, therefore, will provide a comprehensive set of data entry and data communication tools in addition to its SVSF capability. These multi-capabilities are not possible with any of the systems currently in the market.

"T-DATA" is comprised of a set of software packages. One software package will allow interfacing with a local area network. A second will be a set of standard protocols, such as X-25, which will allow interfacing with data communication networks. A third will support telex, facsimile, and other types of data transmission, which could be stored, forwarded over a local network, or sent to another computer.

5. Office Automation Functions. Since the TAVOR system already includes the requisite hardware, the Company intends to offer various office automation software packages. One package will provide word processing with voice-over capabilities. A second will add electronic mail to the word processing functions. Another feature to be offered will be a calendar package. This program will store system users' calendars and schedule meetings when all participants are available, confirming with each participant his or her availability.

6. "T-QUEST" - Voice Response. TAVOR has the unique ability to serve as a Voice Response unit, to collect data or to provide a sophisticated database inquiry system. Voice Response represents a market with strong potential for TAVOR and is dealt with more fully elsewhere.

2.3 How TAVOR Works

Chart 1-1 shows the part which TAVOR plays in the network of office communications facilities. Following is a brief scenario depicting how TAVOR may be used in an actual case.

XYZ Company has installed a TAVOR system to augment the digital PABX which is serving the Corporate Headquarters, where three thousand employees work. In its initial phase, following a successful pilot operation in one HQ division, 400 employees have been provided with access numbers on the system. To serve the expected demand of these 400 employees, 16 telephone lines have been dedicated to TAVOR use.

At 1pm, John Smith, Manager of Corporate Finance, has to inform three of his staff to convene for an urgent meeting at 4pm. Two of the staff are out of the office attending a seminar, and the third is presently at lunch. Fortunately, the Corporate Finance Department is a user of the recently installed TAVOR system.

John picks up the telephone, and the following interaction takes place between John and TAVOR:

JOHN: Dials "777" to access the system.

TAVOR: Answers the phone automatically and says "Please enter your personal account code."

JOHN: Enters "2258#"

TAVOR: "Hello, this is TAVOR. What do you wish to do?"

JOHN: Enters "6#" to indicate that he wishes to send a message to several recipients.

TAVOR: "You've asked to send a message to several people. First, please speak the message into the phone."

JOHN: "Ted, Margaret and Bill, we have an urgent meeting at 4 o'clock this afternoon, January 17, in my office to discuss some special reports requested by the Treasurer. Please be prompt and remember to bring your notes from yesterday's discussion. See you all later." John then presses "#"to indicate that the message is complete.

TAVOR: "Thank you. Do you want to hear the messages repeated?"

JOHN: Presses "*" to indicate "no."

TAVOR: "Ok, to whom do you want to send the message?"

JOHN: Presses "2263#" "2261#" and "2269#" and then another "#" to indicate completion.

TAVOR: "The message will be delivered to extension numbers 2263, 2261 and 2269. Do you wish to change any of this?"

JOHN: Presses "*" to indicate "no."

TAVOR: "Ok, that message is complete. Anything else I can do for you?"

JOHN: Presses "4#" to check his own mailbox.

TAVOR: "You have three messages waiting. The first is from Al Benton, the second is from Mary Fine, and the third is from an outsider. Do you want to receive the messages?"

JOHN: Continues with his dialogue until he has heard all three messsages and responded immediately to one of them.

The entire session has taken only a few minutes.

Training. While TAVOR is a simple system to operate, EFRAT recognizes that training is very important, since SVSF will tend to become a personalized system, and users must feel comfortable with it. Therefore, a variety of training programs and materials will be developed to meet in-house, self-paced or outside classroom training needs.

2.4 Structure of the TAVOR System

TAVOR is a turnkey system with unique architecture of hardware and software. This architecture, which is multiprocessor-based, is necessary in order to support the system's huge throughput requirements and modularity. Software is the heart of the system and will support TAVOR's unique features.

The software structure is modular in nature. The system comes with a core package which is used in all system applications. Other package modules can be added to the basic system for each different application and for customized needs. These additional packages will support the following uses, among others: office store and forward ("OSF"); radio common carrier service ("RCC"-paging systems); and telephone answering service ("TAS").

TAVOR's hardware can be divided into that which is necessary for the basic system and that with which the system may be extended. The basic system hardware consists of those modules which are crucial to the operation of the TAVOR unit as a whole. These parts include: a central processing module, memory, a storage disk driver, a storage disk controller, and peripheral interfaces. The parts with which the customer can extend the system include: phone line interfaces to increase the number of users and more disk drivers to increase voice storage capacity.

The system modules are contained on printed circuit boards which plug into a card cage which uses a standard bus. Those of the modules which do not have to be specifically manufactured to Company specifications will initially be purchased off-the-shelf. The entire system is contained in one cabinet.

2.5 The Uniqueness of TAVOR

TAVOR's uniqueness stems from the fact that it is an SVSF system. Thus, the Company has been able to benefit from the experience of earlier manufacturers and concentrate on providing a broad range of features which will be desired in the future. TAVOR will be unique in the following areas:

Integration: Integration of muli-media forms of communication will be required in the office of the future, and TAVOR is designed to provide such integration. In addition to providing voice processing capabilities, TAVOR can also use its large storage capacity, processing ability and the fact that it is already integrated into its owner's telecommunications system to support a whole range of data communication functions. As a result, the system can interface with data communication networks, such as Tymnet and Telenet, and with local area networks, such as Ethernet.

Integration also allows TAVOR to perform multiple functions simultaneously, making TAVOR cost justifiable. For example, TAVOR could also be used as a touch-tone input/voice response system for data entry or information retrieval from other computers.

Modularity: New office technologies require gradual introduction rather than sudden imposition upon their users. Implementation of VSF systems is expected to occur in phases, encompassing increasing numbers of a corporation's employees. This phased approach translates into the need for systems which can grow in tandem with a user's needs.

TAVOR has been designed as a modular system. A basic TAVOR may have as little as one line and minimal disk storage requirements or as many as 256 lines and significant amounts of disk storage. The TAVOR system may be increased in increments by adding more lines, increasing storage, or adding new software modules. All of the hardware components are modular and can be upgraded at the customer site. For example, the addition of a new line merely requires the addition of one board. This modularity will have a significant advantage in TAVOR's penetration into large companies. By contrast, systems offered by ECS come in only two configurations - 16 and 64 lines.

TAVOR's modularity permits redundancy of the system's crucial modules. Consequently, the system is able to offer a failsafe capability where the loss of messages or downtime would be troublesome.

The system's modularity is also hierarchical. Separate systems can be linked together ("T-LINK") to form a larger system. Additionally, separate TAVOR sites can communicate over phone lines ("T-TALK") forming a network of TAVOR systems.

Just as the TAVOR hardware is modular, so is the software. Thus, applications can be added when needed, including custom features.

Capacity: TAVOR has a user capacity considerably in excess of its current or expected competition. The maximum number of lines possible to date on VSF systems is 64 (in the ECS system). Both Wang and IBM's versions are substantially lower in capacity, with a maximum of 16 and 10 lines respectively.

TAVOR can accommodate up to 256 lines in a single system. Furthermore, TAVOR systems can be linked together in a network, effectively increasing the number of lines to well over one thousand. Management believes that a 256 line system could support 10,000 users.

In addition to limitations on the number of lines, current systems are limited to 80 hours of voice storage. Management believes that such capacity is insufficient for 3,000 users. TAVOR's users can tailor voice storage capacity to their needs even if such needs greatly exceed 80 hours. A leading Office Automation and telecommunications user recently praised VSF systems for their usefulness, but criticized current offerings for their limited capacity, particularly in the 5,000 user range. EFRAT believes it has found the answer to such large scale needs.

Special Features: As described earlier, TAVOR boasts many useful features not offered by the competition. EFRAT believes that these will be competitively advantageous, since VSF and SVSF systems will be chosen partly on the basis of range of features. "T-LINK," "T-EDIT," "T-DATA," "T-QUEST" and "T-TALK" are currently believed to be features proprietary to EFRAT, and will make TAVOR a second generation VSF system.

Price: TAVOR's price/performance ratio far surpasses those of its competitors, without compromising quality.

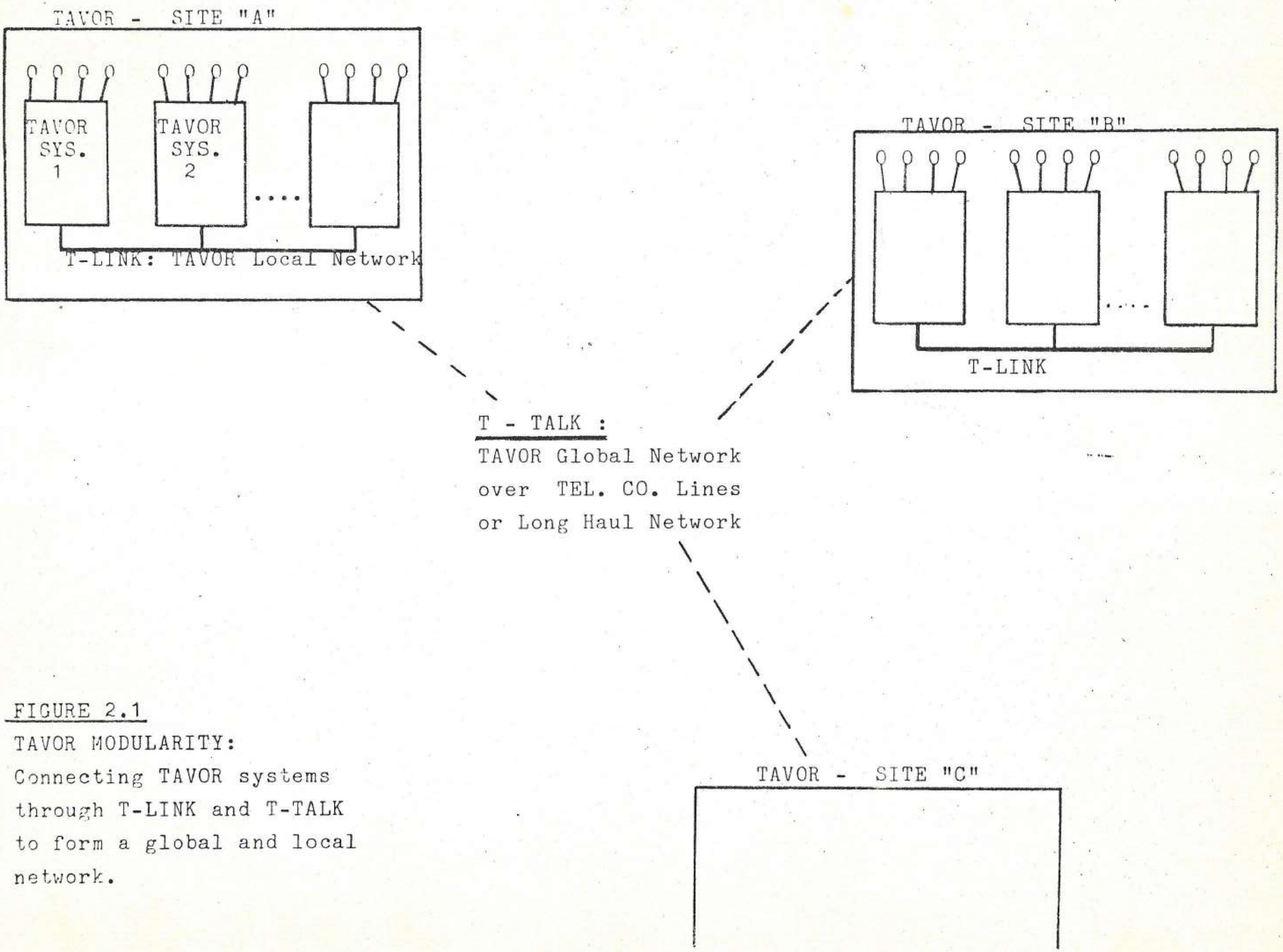


FIGURE 2.1
TAVOR MODULARITY:
Connecting TAVOR systems through T-LINK and T-TALK to form a global and local network.

SECTION 3
THE MARKET

3.1 Second Generation Voice Store & Forward Users

SVSF systems will be characterized primarily by their modularity and integration capabilities. These characteristics will offer two primary advantages. First, SVSF systems will be able to serve different markets, and, second, they will be able to serve different segments within each market.

Current VSF systems are designed to serve only one market segment; i.e., one type of user. Wang and IBM, for example, serve the medium office with up to 800 users; ECS and Voice & Data serve larger offices with up to 3,000 users; Delphi serves only very large telephone answering services; and Commterm supports only small radio common carriers and telephone answering services (see Section 4).

TAVOR, on the other hand, will be able to serve each of the above described markets at a very competitive price. TAVOR's modularity will also allow it to have combined and customized applications. Finally, TAVOR's redundancy will allow it to penetrate markets where a failsafe capability is crucial.

3.2 The Office Market

The primary current market for VSF is that of the business office. The time and cost savings in office efficiency from VSF systems justify even today's high prices.

The office market could be divided into three segments: (a) the "small office" with less than 250 users; (b) the "medium office" with from 250 to 2,000 users; and (c) the "large corporation" with from 2,000 to 5,000 users. Current VSF systems are targeted to the medium office. They are too expensive for the small office and do not have sufficient capacity for the large corporation (see Table 4-1).

The medium, as well as the large office VSF market may be divided into two categories: that of the standalone VSF and that of the integrated VSF. The Standalone VSF system is loosely tied to a PABX. It is self-contained and much easier to implement. Currently, all the VSF systems in the market are of this type. There are indications that PABX manufacturers are planning to integrate VSF systems into their PABX systems (closely tied). An integrated VSF system benefits from sharing resources with the PABX, enabling it to optimize the functioning of the system and to reduce its cost.

The Yankee Group projects that the PABX-VSF integrated market will grow at a very rapid pace, climbing from $0 in 1981 to over $90 million by 1985. Standalone sales will grow even faster from $2 million to $300 million by 1985. After that, the market share of integrated VSF systems will increase at a faster rate than that of standalone systems. However, the share of standalone systems will continue to be substantial at least until 1990.

TAVOR has two major advantages in the medium and large Office Automation markets. Because of its modular design and its distributed architecture, TAVOR can either be easily integrated into existing or future PABX systems, or sold as a standalone VSF system. Additionally, TAVOR incorporates particularly well-engineered user-friendly interface features and new features such as voice editing and networking. Human engineering factors were given the highest priority by the TAVOR team.

EFRAT has already initiated contacts with several PABX manufacturers in order to obtain an OEM manufacturing contract to integrate TAVOR with their PABX systems.

According to the Yankee Group report, until 1985, only medium to large VSF systems will be sold due to the high price per user. "By 1985, however, a substantial market will exist for small (250 lines and under) VSF systems that appeal to small independent users as well as large companies with multiple small sites...Although large system vendors will not be immediately affected by small VSF manufacturers, the inherent penetration direction of small systems could eventually threaten the large system supplier."

One of the major advantages of TAVOR is its low price, which will allow EFRAT to serve also this small office VSF market immediately, rather than having to wait until 1985.

In summation, TAVOR will be able to serve all three office markets. It will serve the small office because it will be relatively inexpensive. Additionally, TAVOR will offer multi-functions, not only voice store and forward, further justifying the cost. TAVOR will serve the medium office at a lower price than existing systems and, again, with more functions. Finally, TAVOR can also serve the large corporation and its high capacity needs.

3.3 The Telco VSF Market

Voice Store and Forward systems will be a significant source of revenue for telephone companies, which will offer voice store and forward services out of their central office installations. As much as $1 billion of Voice Store and Forward equipment will be sold to telephone companies worldwide by 1990.

The Yankee Group has estimated in their January 1982 market research that the market for telco VSF in the U.S. will develop over the next two to three years, as a host of regulatory, and technological issues are resolved. Between 1985 and 1990, almost $500 million of such systems will be sold to U.S. telephone companies, at an average system price of approximately $850,000.

All indications are that the U.S. and overseas markets for telco-based VSF will develop almost simultaneously and will be approximately of the same size. Because of the restrictions on private interconnection to the telephone network in most countries, the PTT will be best able to offer voice storage capabilities to subscribers.

This particular segment of the market requires very large VSF systems with high performance standards at the level of the central office equipment. Thus, very high reliability, fail-safe and redundancy features are necessary. Since the design of TAVOR has addressed the technological challenges in developing such a system, EFRAT management believes that TAVOR will be the first VSF system suitable for the telco market segment. In order to penetrate this market, EFRAT management is considering joining forces with COMMTERM Inc.

3.4 Telephone Answering Services

There are several thousand answering services in the U.S. Most are labor intensive and relatively expensive, because it is difficult to adjust manpower to match the ebb and flow of business. The most frequently voiced complaints about traditional answering services are that they are slow, lose messages, make mistakes, are impolite and offer no security.

VSF will answer all these complaints at a cost effective price. It will not be labor intensive; the cost to the customer will be less expensive; it will provide fast automated mistake-free service; it will not be impolite; and it will offer security since no human intervention is involved.

Since many people like the human touch, TAVOR Answering Services will allow the customer to program the times, if any, when he wants human operators in lieu of the less expensive computer service. TAVOR will also allow the user to specify his phone location and will reroute selected messages to him directly.

In addition to its answering features, the system will offer the user the other features of voice mail. More revenue will also be generated for the answering service bureau by the other services TAVOR can offer. These include: electronic dictation and wakeup services.

In its application to the telephone answering service bureau, TAVOR can support human operator CRT's. These terminals will be used to efficiently store and retrieve text messages. In addition, the operator will be able to view customer data, while answering his phone, such as special instructions for certain messages.

TAVOR will also allow a multi-city service to link its various bureaus into one large system. This linkage could save significant amounts of money.

Currently, only two companies, Delphi and Commterm serve this telephone answering service market. Commterm is limited to only 6 hours of voice storage and 32 lines; while Delphi costs over $3 million. TAVOR offers significant advantages over each.

3.5 Radio Common Carriers

RCC's are companies in the paging business which sell or rent pagers and paging services to individuals. Regardless of the method used by various RCC's, the use of voice message retention for and playback to the paged party would be a valuable addition to the service and attract new customers.

There are approximately 700 RCC's, some with as many as 10 transmission towers scattered over 300 square miles and 20,000 users. TAVOR could service such capacity.

3.6 Defense Applications

Management believes a secure failsafe redundant voice store and forward system has far-reaching defense applications in the defense establishments of the world.

3.7 Other Applications for TAVOR

TAVOR is a new concept in hardware designed specifically for voice processing applications. In addition to its potential for VSF, TAVOR will be well suited for a Tone-Input/Voice-Response (TVR) Unit, the use of which is described briefly below.

A Voice Response System is one in which the touch-tone telephone serves as the access terminal to a computerized database. The phone may be used to enter data into, or retrieve information from, the computer. Data is input via the touch-tone pad. The computer's responses are in the form of prerecorded human voice messages.

TVR systems are used in a wide variety of applications today, including airline or hotel reservations, credit-verification, order entry, inventory control and bank-by-phone. TAVOR will serve as the "front-end" to the computer database, and will interface to the customers existing computer system.

There are a number of TVR vendors in the market today. However, current TVR systems are limited in their line capacity (maximum of 96 in the largest system presently in use) and in the range of features offered. TAVOR will significantly improve upon all known existing designs and is expected to be attractive to the TVR market. The TVR market is presently being researched so that EFRAT can adequately assess its potential for TAVOR. Mr. Misholi, EFRAT's President, has substantial experience in the design of TVR systems.

3.8 Market Size and Growth

Research studies from leading Office Automation researchers such as the Yankee Group and I.R.D. show a growth in the annual market for TAVOR-like systems from less than $10m in 1980 to $500m by 1985. This figure excludes the expected revenue to the telephone companies from VSF services, which is projected to amount to $700m, and a substantial European market.

EFRAT believes that this rapid growth provides ample opportunity for TAVOR to become well established. However, due to the 1-2 year lead time required to develop and introduce the product, EFRAT also believes it is important to begin the development process as soon as possible. As described in a leading research report "the window of opportunity" for non-telephone company VSF vendors will be open until 1985.

3.9 The Future

As progress is made in voice compression and VSF systems become less expensive, the demand for them may explode into a multi-billion market. EFRAT intends to incorporate such technological advances into its future systems.

Even more revolutionary will be the introduction of viable voice recognition, since people will be able to "type" and input data solely by voice. Systems like TAVOR which integrate voice and data will be at the forefront of this revolution.

SECTION 4
THE COMPETITION

The large anticipated growth in VSF has drawn limited contenders so far, but the market is expected to open up considerably in the coming 2-3 years, as indicated in the previous section. This chapter will address the present competition by comparing their capabilities to those of TAVOR.

Management views the fact that other VSF systems already exist as positive. Such systems and their well-known manufacturers legitimize the market. Furthermore, management will be able to learn and profit at the expense of others.

4.1 Comparison of TAVOR With Office VSF Systems

Table 4-1 compares the principal features of TAVOR to those of its major four competitors' systems in the office market. Note TAVOR's superior range of features and competitive pricing.

4.2 Competition in TAS & RCC Markets

To the best of management's knowledge, competition is very limited in both the telephone answering service and radio common carrier markets. This relative lack of current competition combined with the tremendous potential of these markets make them very attractive targets for TAVOR.

Only two major competitors presently serve these markets. One is Delphi Communication Corporation. Delphi offers a failsafe system only for the TAS market with large capacity (10,000 users), but at a price of over $3 million. A comparable TAVOR system would cost approximately $1 million.

The other major competitor, which serves both markets, is Commterm, Inc. Commterm's system is relatively inexpensive, but limited to 32 lines and, more significantly, only 6 hours of voice storage capacity.

As mentioned earlier, TAVOR will be able to serve both markets. TAVOR's competitive advantages in both markets will be enhanced by its ease of customization, an important feature in these areas.

TABLE 4.1

FEATURES COMPARISON
TAVOR VOICE STORE & FORWARD SYSTEM

FEATURE/COMPANY	ECS	V. & D.	WANG	IBM	EFRAT
System name	VMX	OUT-VOICE	DVX	ADS	TAVOR
Max. # users	3,000(1)	3,000(1)	1,000	800	10,000(2)
Max. # lines	64	64	16(5)	10(5)	256
Expandable/Modular	NO	YES	YES	YES	YES
"Piggyback" to other VSF	NO	NO	NO	NO	YES - T-LINK
Message Editing	NO	NO	NO	NO	YES - T-EDIT
Voice & Data Handling	NO	NO	NO	NO	YES - T-DATA
Voice Response	NO	NO	NO	YES	YES - T-QUEST
Inter-system "talk"	NO	NO	NO	NO	YES - T-TALK
Voice Message Length(3)	10 min.	Customer option	90 sec.		Cust. option & User Class(4)
Standard VM Features(6)	YES	YES	YES	YES	YES
Fast Scanning	NO	YES	YES	YES	YES
Message Compression	YES	NO	YES	YES	YES
"Message Minder"	NO	YES	NO	NO	YES
Future Forwarding	NO	YES	YES	YES	YES
Personal Greeting	NO	YES	NO	NO	YES
Mass Calling	10 addrs. or 10 groups any size	unlimited	8 lists 10 each	25 lists 10 each	64 lists any size or unlimited addrs. number
Availability	10 installed	???	March 1982	March 1982	Last qtr. 1983
Price (For the Greater of 64 Lines or the Max. Configuration)	$495,000	$340,000	$320,000	$235,000+	$150,000 - 16 lines $250,000 - 64 lines
Price Per Line	$7,735	$5,313	$20,000	$23,500	$3,906

NOTES TO TABLE 4.1 - TAVOR FEATURES COMPARISON

(1) This figure is drawn from the vendor's literature. However, it is doubtful that 64 lines will be sufficient to support 3000 users. The number 3000 is based on an estimated five 1-minute messages per person per day. A more realistic estimate for these systems is 1000 users.

(2) In practice, even more lines are possible with TAVOR by piggybacking multiple TAVOR systems.

(3) Partial compression of pauses.

(4) Users are divided into classes for the purpose of sharing the system resources, e.g., voice storage space.

(5) It is doubtful that the 16 lines of the Wang system or 10 lines of the IBM system will be sufficient to support 800 users.

(6) Standard voice mail features include: message deposit, message retrieval, message transfer, mass calling, voice prompt and user tone input override.

SECTION 5
RESEARCH AND DEVELOPMENT

5.1 R&D Schedule

Table 5-1 presents TAVOR's R&D schedule. Figure 5-2 presents the manpower chart. Note the following key points:

- o TAVOR's initial system will be ready within 18 months;
- o R&D will be divided broadly between two teams - hardware and software - both reporting to their own team leaders who in turn will report to the Manager of R&D. In addition there will be marketing and manufacturing divisions, whose activity will be minor during the early phases. The entire structure will report to the company head.
- o TAVOR staff will consist of ten scientists and senior engineers and seven junior engineers. The company will also have the services of a scientific advisory board composed of leading scientists and industry figures.
- o The first three months of the project will be dedicated to project organization and top-level system design.
- o A further two months will be devoted to the system software design.
- o The first prototype will be ready after 12 months.
- o TAVOR's advanced functions will be operational after fifteen months.
- o The final quarter will be devoted to additional testing and system integration. EFRAT expects to have the first system "out of the door" within eighteen months.

5.2 R&D Budget

TAVOR's R&D Budget for the first eighteen months is presented in Table 5-3. It is estimated that $2.4 million in R&D funds, exclusive of marketing costs, will be required over this period. It is only because of the unique nature of the market for scientists in Israel that EFRAT is able to support a high quality staff of twenty-two scientists and technical people with such a small budget.

5.3 R&D Future Targets

TAVOR will occupy the full resources of the Company during the first two years. However, the Company expects TAVOR to be just the first in a series of voice and telecommunications product offerings. Additional research will be conducted in the areas of voice storage, voice compression and voice recognition. These areas are currently being studied in Israelies institutions, and there will be ample experience to draw on locally in addition to research and developments elsewhere.

TABLE 5.1

R & D SCHEDULE

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
HARDWARE	Initial Stage					Support; Advance Development; Support Tools			
LINE CARD									
Wire-Up Circuits of Line Card Sub-Systems		Circuits Design							
Line Card Final Prototype			Final Prototype						
Final Tests				Final Tests					
MAIN CONTROLLER									
Bus Design, Concentrator and Bus Arbitrator		Main Bus Circuits							
			Final Prototypes						
				Final Test					
CABINETS, WIRES CABLES, CONNECTORS POWER SUPPLY			Cabinet Design						
				Final Test					
1st System Production						1st System Production			

TABLE 5.1 (Cont.)

R&D SCHEDULE

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
SOFTWARE	Initial Stage				Support Tools, Advance Level				
MAIN CONTROLLER									
Basic Top Design		Basic Design							
Basic VSF Function Software Development		Basic Functions Develop							
Advance Functions				Advance Functions					
Acception Tests					Final Tests				
LINE CARD									
Basic Top Design		Basic							
Basic VSF Functions		Basic Functions							
Advance Functions				Advance Functions					
Acceptance Tests					Final Tests				

TABLE 5.1 (Cont.)

R&D SCHEDULE

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
SYSTEM INTEGRATION									
Initial Stage	Initial Stage								
Basic Main Controller Hardware & Top Level Design		Development Tools							
Basic Prototype			Basic System Prototype						
					Final Integration & Acceptance				
Advance R&D						System Support			
Production									
Marketing									
Maintenance Tools						Advance R&D			

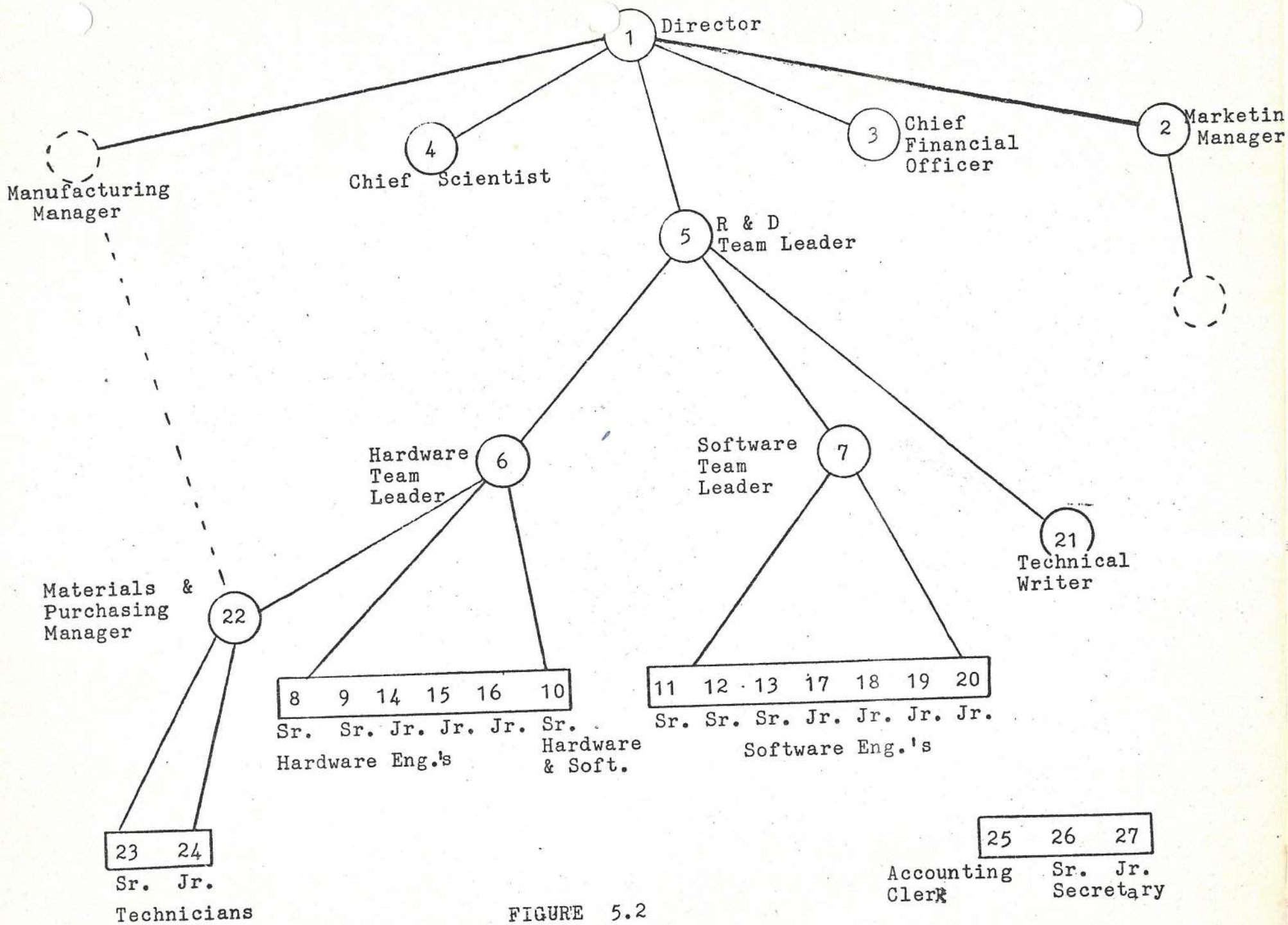


FIGURE 5.2

TAVOR MANPOWER

TABLE 5.3

TAVOR R&D BUDGET
($000)

Item/Period	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Management Compensation(1)	25.00	25.00	25.00	30.75	36.50	36.50	36.50	36.50
Sr. Scientific Staff Salaries(1)	57.00	76.00	95.00	99.75	104.50	104.50	104.50	104.50
Technical Staff Salaries(1)	-	38.75	62.50	74.50	82.50	82.50	82.50	82.50
Administrative & Secretarial Salaries(1)	5.00	5.00	5.00	7.50	13.00	13.00	13.00	13.00
Lab Equipment(2)	51.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Development Equipment & Software(3)	114.20	34.20	4.20	4.20	4.20	4.20	4.20	4.20
First System Prototype OEM Parts(4)	89.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Subcontracting(5)	-	-	3.00	3.00	5.00	5.00	5.00	5.00
Office(6)	72.00	29.00	29.00	19.00	19.00	19.00	19.00	19.00
Marketing(7)	10.75	10.50	10.50	10.50	13.10	13.10	25.85	32.10
Accounting & Legal(8)	20.00	15.00	5.00	5.00	5.00	6.00	7.00	8.00
Total (Quarter)	443.95	241.95	247.70	262.70	291.30	292.30	306.05	313.30
Total (Year)				1,196.30				1,202.95
Total R&D Budget (Two Years)								2,399.25

NOTES TO TABLE 5.3 -- TAVOR R&D BUDGET

(1) See R&D payroll and benefits -- Appendix I(a).

(2) Lab equipment includes lab instruments, hardware tools, general stock and furniture. See lab equipment -- Appendix I(b).

(3) Development equipment includes computer, peripherals and development software. See development equipment and development software -- Appendix I(c).

(4) First system prototype includes OEM parts for first system prototype. See first system prototype OEM parts -- Appendix I(d).

(5) Subcontracting includes P.C. boards design and P.C. cards production. See subcontracting -- Appendix I(e).

(6) Office includes rent, electricity, phone, office equipment and furniture. See office rent, equipment and furniture -- Appendix I(f).

(7) Marketing includes travel of marketing department personnel, support of the TAVOR system abroad, director travel, advertising, public relations, brochures, professional literature and entertainment. The major marketing expenses will be incurred by the Company's marketing partners. See marketing -- Appendix I(g).

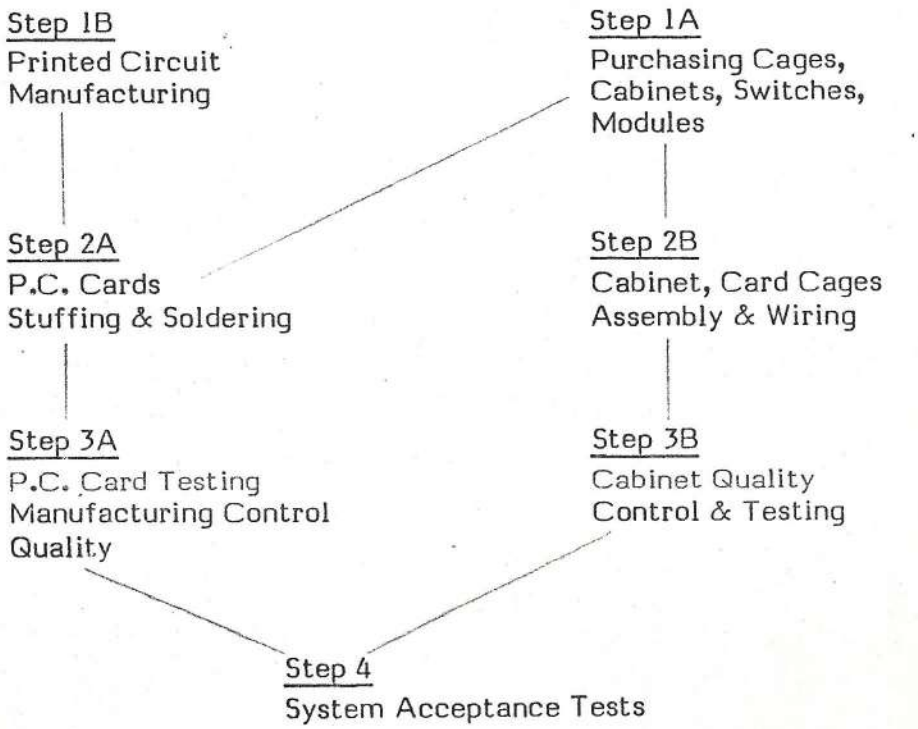
(8) Accounting and legal. See accounting and legal -- Appendix I(h).

SECTION 6
MANUFACTURING

Key components of the system will be manufactured in Israel. The primary reasons for this are the cheaper costs of labor, tax benefits, and the high degree of quality assurance for which Israel's electronics industry is noted. In addition, Government assistance is provided to encourage those enterprises, such as EFRAT, which will conduct their R&D and manufacturing in Israel.

The manufacturing diagram (Figure 6.1) illustrates the manufacturing process. Initially, the Company will perform Steps 1A, 3A, 3B and 4 in-house. The other steps will be performed by subcontractors. Beginning in 1984, management assumes that it will be cost effective to manufacture, rather than purchase, some of the modules referred to in Step 1A. Additionally, as volume increases, Steps 2A and 2B will be performed in-house.

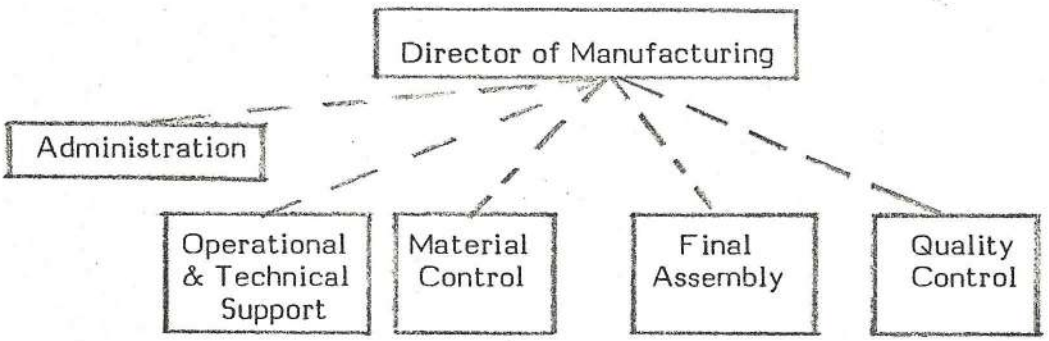
FIGURE 6-1
MANUFACTURING



The nature of TAVOR as a relatively low-volume, high margin and high price item will allow EFRAT to organize its full in-house manufacturing capability gradually. With only one system sale projected in year two and 12 sales in year three, most of the assembly work in these years will be done by subcontractors, with quality control performed by the original R&D team. Since year four sales are projected to be 40-50 systems, the Company will begin to organize its in-house manufacturing capability in year three. Pursuant thereto, eight employees will be hired for the following positions: Director of Manufacturing; Final Assembly Manager; Material and Purchasing Manager; Inventory Controller; Quality Control Manager; and three technicians. The resulting manufacturing operation will be structured as follows:

FIGURE 6.2

STRUCTURE OF MANUFACTURING DIVISION



Although the Quality Control Manager will not be hired until year three, quality control will have been performed in-house from the Company's inception. Management recognizes that Company reputation is a valuable asset, which is dependent on this group.

The Material Control Operation is another vital function. Without its proper functioning, severe and costly bottlenecks in the manufacturing process can occur. EFRAT intends to have an advanced, computerized quality control system.

The Company's projected rapid growth will cause it to rely heavily on the Technical Support Group. The Group will supply all departments with new industrial and manufacturing methods, conduct operational research, and will attempt to optimize the Manufacturing Division's operations in both a managerial and financial sense.

EFRAT's efficient manufacturing structure will allow the Company to reduce costs by conducting the production of TAVOR in-house and will insure timely delivery.

SECTION 7
MARKETING

7.1 Marketing

As discussed above, the VSF market is multisegmented. EFRAT's strategy is to concentrate on those segments in which it believes it can gain significant market share. EFRAT believes it should devote its efforts to research and product development and that the product should be marketed via an existing vendor or distributor, who will also provide field support. Since each segment has special characteristics, the Company intends to have different marketing partners in each market. Currently, it is in negotiations with several potential marketing partners in the U.S., but it is also seeking other partners with expertise in the markets not already the subject of negotiation.

7.2 Market Share

Table 7-1 represents Management's best estimates of dollar sales for the next six years. These estimates are based upon research by the Yankee Group of Cambridge, Mass. and International Research Development, Inc. (I.R.D.) of Norwalk, Conn. as well as Management's discussions with competitors and potential customers. They are at the low end of market projections.

TABLE 7.1

PROJECTED SALES

Year	Market Size ($000,000)	TAVOR Sales ($000,000)	Market Share* As a Percentage
1982-1983 (1)	-	-	-
1983-1984	150	0.15	Negligible
1984-1985	300	1.80	0.6%
1985-1986	500	5.80	1.2%
1986-1987	650	15.82	2.4%
1987-1988	900	29.16	3.2%

* The Company's sales figures are less than the systems will cost at retail, because they do not include any marketing or storage disk costs. Thus, the total revenue which will accrue from the sale of TAVOR units will be greater than the amounts listed above and, therefore, the TAVOR market share will be greater as well.

(1) The market size for 1982-1983 has been left blank because the market will still be developmental in nature.

SECTION 8
MANAGEMENT

President - Mr. Boaz Misholi has over ten years experience in computer architecture, data-communications and telecommunications, including three years direct experience in voice systems. He was the chief engineer on a large-scale specialized voice response system in the U.S. Mr. Misholi has several years of experience managing technical staffs. In addition, for two years he was responsible for marketing and customer support for an Israeli computer manufacturer. He served as lecturer in computer engineering at the Technion-Israel Institute of Technology, where he had completed his Bachelors degree in Computer Engineering.

In 1980 Mr. Misholi founded EFRAT Corporation, and has since served as its President. EFRAT specializes in Data- and Tele-Communication and provides systems design and consulting services to multi-national corporations. EFRAT's major clients to date have been Fujitsu of America and IT&T.

Chief Scientist - Professor Yechiam Yemini of Columbia University will provide EFRAT with state of the art technological expertise in the design and development of its systems. Professor Yemini has a PhD in Computer Science from UCLA and an Msc in Mathematics. His current research focuses on computer communication networks, communication protocols and distributed processing. Professor Yemini has served as a technical consultant to leading corporations and research institutions, such as AT&T Bell Labs, Aerospace Corp., Lincoln MIT Labs and Fujitsu of America. He is presently leading two major research projects at Columbia University sponsored by the National Science Foundation (NSF) and the U.S. Department of Defense Advanced Research Projects Agency. He has published over 20 technical papers and reports, and his work has won international awards.

Chief Financial Officer - Mr. Jacob Alexander has over five years' experience in finance. He holds a Bachelors degree in Economics from the Hebrew University of Jerusalem and an MBA in Finance from New York University. Mr. Alexander worked in the Corporate Finance Department of Shearson Loeb Rhoades for several years. Additionally, Mr. Alexander has served as a financial and business consultant to a number of multi-national corporations, including Consulting and Investing Co., Inc. and R. J. Walker International. Prior to earning his Bachelor's degree, Mr. Alexander was an Intelligence Officer and Instructor in the Officers' School of the Israeli Army.

Product and Marketing Consultant - Mr. A. David Cohen is a recognized Office Automation Consultant with twelve years experience as a computer systems analyst, office automation specialist and corporate consultant. Mr. Cohen worked for four years for W. R. Grace where he was systems advisor to the Treasurer and, later, resident office automation manager. Since 1979, when he left Grace, he has consulted independently to major corporations, law firms and banks, including many Fortune 500 Companies such as W. R. Grace, Bristol-Myers, IT&T and Bank of Boston International. In addition he has been consulted by major vendors, including Xerox, IBM and Wang, and by leading research houses.

Mr. Cohen was educated in England, Israel and the U.S. He lived in Israel for over five years in the early seventies, and is currently engaged in several technology transfer projects between Israel and the U.S. Mr. Cohen will contribute his skills in product design and marketing and will promote TAVOR within the U.S. office automation industry.

R&D Software Manager - Mr. Hanan Livneh is an engineer with substantial experience in data communications. Mr Livneh is a native of Israel, and has worked extensively with micros. He holds a Masters degree in Computer Science from Columbia University. Mr. Livneh's work history is with the Technion-Israel Institute of Technology, with Network Analysis Corporation (NAC) in New York and with Conrac Corporation in New Jersey. Mr. Livneh is an independent consultant, and he has expressed his desire to return to Israel to join the TAVOR project team.

R&D Senior Engineer - Mr. Y. Stern has wide experience in both mini and mainframe computers. His principal areas of expertise are data communications, operating systems and database. Mr. Stern's work experience is with the Technion in Israel, with National CSS of Norwalk, Connecticut, and with TRT Data Product. Currently, he works as an independent consultant in the area of Data Communication.

SECTION 9
WHY ISRAEL

Israel has been chosen as the site for TAVOR's research and development for the following reasons:

Government Funding and Assistance. The Israeli Government provides liberal financial incentives to companies investing in Israel, particularly where the companies provide employment locally and manufacture goods for export. There are two primary sources of financial assistance: the Office of the Chief Scientist of Israel and the B.I.R.D. Foundation. See the Appendix "Financial Incentives to R&D and Manufacturing in Israel" for a discussion of the availability of these sources of funding.

Among the favored industries, which have traditionally received assistance is electronics, one of Israel's mainstays. As a result of this policy, National Semiconductor, IBM, Intel, Motorola, and CDC. are among the companies which maintain extensive research and development facilities in Israel, drawing on the high quality of available manpower, and the monetary incentives for development in the country. Intel has recently opened its second research facility there.

During trips to Israel in 1981 and 1982, Mr. Misholi and Mr. Alexander discussed the TAVOR project with officials of the Electrical & Electronics Department at the Ministry of Industry Trade & Tourism who opined that, with the appropriate capital behind it, the project would qualify for financial aid. In addition, meetings were held with the Government Chief Scientist of Israel and the head of the B.I.R.D Foundation to review the feasibility of government funding and other forms of assistance. The project was favorably viewed, particularly in light of its potential for manufacturing export products, and emphasis was placed on the advisability of finding strong marketing partners in the U.S.

Tax Incentives. The Government of Israel also offers strong tax incentives to companies investing in the country. Initial contacts with the authorities have indicated that the project will qualify for both direct funding and special tax consideration. For a fuller discussion of the financial incentives and tax benefits in Israel. See the Appendices.

Costs of Development are cheaper in Israel, particularly the costs of manpower, a major component in TAVOR's budget. Coupled with the financial incentives, this represents an attractive package to the investor.

Manpower is readily available in Israel. Electronics is one of the country's main industries, and skilled electronics and computer engineers are available. Another facet of the labor market in Israel is that technical staff tend to be more "loyal" than in the U.S. where the market demands cause a high turnover. This is important to the TAVOR project where continuity is vital, particularly during the initial 18 months of development.

Key personnel have already been contacted during trips to Israel in 1981 and 1982 and have indicated a readiness to work for EFRAT. In addition, Management is recruiting Israeli scientists and engineers presently residing in the U.S. The project is recognized as a leading-edge effort and is attracting top technical personnel.

Export Duties. As a member of the European Economic Community, Israel can export to the Common Market without being subject to import tariffs in those countries. The EEC is expected to provide a substantial market for TAVOR. In addition, Israel has a special agreement with the U.S. to export to this country duty-free.

SECTION 10
FINANCIAL PROJECTIONS

10.1 Introduction

The financial projections contained in this memorandum represent Management's best conservative estimates of costs and revenues. Wherever possible, the Company has tried to get outside verification of its projections. Despite these efforts, the projections should only be viewed as estimates and not guarantees.

In the interests of simplifying this memorandum, TAVOR's unit sales have assumed a standard 64-line unit. The following analyses are based upon this assumption. In practice, however, the actual number of lines sold will be divided among systems of varying sizes and configurations.

10.2 Financial Projections Assumptions

The following financial projections are in 1982 dollars and are based on certain key assumptions which Management believes represent the most likely conservative case.

Assumptions:

(A) Market Size and Projected Sales

Year	Market Size ($000,000)	TAVOR Sales ($000,000)	Market Size As a Percentage	Sales in Units
1982-1983	-	-	-	-
1983-1984	150	0.15	Negligible	1
1984-1985	300	1.80	0.6%	12
1985-1986	500	5.80	1.2%	40
1986-1987	650	15.82	2.4%	113
1987-1988	900	29.16	3.2%	216

(B) Price Per Unit

The price per unit does not include storage disks, which will be purchased separately by the end user of the TAVOR system. This price also does not include direct marketing expenses. In other words, the "price per unit" is the price that EFRAT is going to charge its marketing partners for each 64-line TAVOR system.

The following are Management's best estimates of the price of a representative 64-line TAVOR system (in thousands of dollars).

	82-83	83-84	84-85	85-86	86-87	87-88
Price per unit	-	150	150	145	140	135
Price of storage disks	-	30	25	20	17	14

Management estimates that after 1985 the price of VSF systems will drop due to competition and technological advancements, especially in the storage disk market.

(C) Shipments will lag bookings by one quarter. Payment will be received upon delivery of the system.

(D) Tax Rate

The tax rate will depend on how EFRAT and its R&D are structured (e.g., in corporate form, as partnership, etc.). For the purpose of this memorandum, Management assumed an effective tax rate of 30%.

TABLE 10.3

PROJECTED STATEMENT OF PROFIT/(LOSS)*

($000)

Year	82-83	83-84	84-85	85-86	86-87	87-88
Bookings (Units)	-	3	17	47	147	271
Shipments (Units)(1)	-	1	12	40	113	216
Selling Price Per Unit(2)	-	150	150	145	140	135
Revenues (Shipments)(2)	-	150	1,800	5,800	15,820	29,160
Cost of Goods Sold(3):						
Purchased Parts	-	40	384	1,120	2,712	4,752
Direct Labor	-	20	221	1,120	2,305	3,564
Manufacturing Overhead	-	-	50	705	1,896	3,500
Total Cost of Goods Sold	-	60	655	2,945	6,913	11,816
Gross Profit (Loss)	-	90	1,145	2,855	8,907	17,344
Expenses:						
R&D Costs -- Net(5)	936	1,203	794	580	1,582	2,916
Selling, General and Administrative Expenses(6)	-	-	459	870	2,373	4,374
Depreciation(4)	130	130	-	-	-	-
Total Expenses	1,066	1,333	1,253	1,450	3,955	7,290
Operating Income (Loss)	(1,066)	(1,333)	(108)	1,405	4,952	10,054
Taxable Income(7)	-	-	-	-	3,940	10,054
Income Taxes(7)	-	-	-	-	1,182	3,016
Net Income (Loss)	-	-	-	1,405	3,770	7,038

NOTES TO TABLE 10.3 - PROJECTED STATEMENT OF PROFIT/(LOSS)*

(1) It is estimated that shipments will lag bookings by one quarter.

See Table 7-1, and Financial Projection Assumptions, Section 10.2, Notes A, B.

(2) Revenues were calculated as follows:

Number of systems actually shipped x price per unit.

See Financial Projections Assumptions, Section 10.2, Note C.

(3) Cost of goods sold

Cost of goods sold consists of:

(a) Purchased parts.

(b) Direct labor.

(c) Manufacturing overhead:

(1) Indirect labor.
(2) Factory rent, light and power.
(3) Insurance and taxes.
(4) Depreciation.

(a) Cost of purchased parts -- Cost of purchased parts per unit is as follows (in thousands of dollars):

Year	83-84	84-85	85-86	86-87	87-88
Cost of Purchased Parts Per Unit	40	32	28	24	22

The reasons for the above decline are:

(i) volume discounts;
(ii) in-house manufacture of previously purchased boards; and
(iii) technological advancements.

See Appendix II -- "Cost of Goods Sold" for breakdown of cost of purchased parts.

(b) Costs of direct labor -- In year two, EFRAT will be engaged primarily in R&D, not manufacturing. Thus, these costs are estimated to be only $20,000, since the R&D team, whose costs are "R&D expenses," will be responsible for the first few systems.

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*All figures are in 1982 dollars.

The third year of operation will be a transitional period. Most of the manufacturing will be done by subcontractors. EFRAT will do material control and quality control in-house. During this period EFRAT will also open its manufacturing division. It is estimated that during the third year the following employees will be hired:

Manufacturing Division Payroll & Benefits
(Year Three)

Detail/Period	Q1	Q2	Q3	Q4	Year
Director of Manufacturing	-	$12,000	$12,000	$12,000	
Final Assembly:					
Supervisor	-	7,000	7,000	7,000	
Technicians x 2	-	5,000	10,000	10,000	
Material Control:					
Materials Manager	-	10,000	10,000	10,000	
Inventory Controller	-	-	7,000	7,000	
Quality Control:					
Supervisor	-	10,000	10,000	10,000	
Technician	-	5,000	5,000	5,000	
TOTAL	-	$49,000	$61,000	$61,000	$171,000

In addition, it is expected that another $50,000 will be expensed for direct labor resulting in total expenses of $221,000 in the third year.

In the fourth, fifth and sixth years, costs of direct labor were set at 100%, 85% and 75%, respectively, of costs of purchased parts.

See Appendix II -- "Cost of Goods Sold" for breakdown of costs of direct labor.

(c) Manufacturing overhead -- Manufacturing overhead was set at 50% of cost of purchased parts. During the third year of operations manufacturing overhead was calculated differently. During this period the Company will not have its own factory and, as was mentioned earlier, most of the manufacturing will be done by the original R&D team. Therefore, manufacturing overhead expenses during year 3 are estimated to be only $50,000.

Manufacturing Overhead
($000)

Year	83-84	84-85	85-86	86-87	87-88
Sales in Units	1	12	40	113	216
Indirect Labor	-	50	310	756	1,301
Factory Rent, Light and Power	-	-	230	550	975
Insurance, Taxes and Others	-	-	20	50	100
Depreciation	-	-	145	540	1,124
Total Manufacturing Overhead	-	50	705	1,896	3,500

See Appendix II -- "Cost of Goods Sold" for breakdown of manufacturing overhead.

(4) Depreciation -- There are two kinds of depreciation:

(a) Depreciation of office equipment and furniture, and that of the development equipment of the R&D effort.

(b) Depreciation of factory machines, equipment and furniture.

Management estimates that it will be allowed to depreciate its investment in fixed assets over a two-year period.

(a) The R&D effort during the first two years calls for an investment of $260,000 in fixed assets. Therefore, the depreciation of office equipment and that of the development equipment of the R&D effort is $130,000 per year during the first two years of operations.

(b) Management estimates that from the fourth year of operation, its investment in factory machines and equipment will be 5% of sales (in thousands of dollars).

Year	85-86	86-87	87-88
Investment in Factory Machines and Equipment	290	791	1,458
Depreciation	145	540	1,124

Factory machines and equipment depreciation from the fourth year will be part of cost of goods sold and appears under manufacturing overhead (See Note 3).

It is estimated that part of the investment in factory machines and equipment will be financed by grants and preferred loans from the Israeli government. The figures in the above table exclude the investment in factory machines and equipment not financed by EFRAT.

(5) R&D Expenses

For the first two years of operations see Table 5-3, TAVOR R&D BUDGET, and its appendices. The purchase of $260,000 of lab equipment, development equipment and office equipment during the first year of R&D is not included in R&D expenses, because such purchase is viewed as a capital investment. The difference between total disbursements during year 1 and R&D expenses during year 1 is equal to that amount.

$1,196,000 - $260,000 = $936,000.

Since it is difficult to differentiate between R&D expenses and SG&A expenses during the R&D period (See Note 6 to projected statement of profit/(loss)) both expenses appear under R&D expenses. R&D expenses during year 3 are assumed to be $794,000.

From the fourth year of operations, R&D expenses were set at 10% of revenues. These are net R&D expenses to EFRAT. Actually, the R&D expenses will be more than 10% of revenues and the difference is expected to be financed by government grants and preferred loans.

(6) Selling, General and Administrative Expenses

SG&A expenses for the first two years of operations are combined with R&D expenses and appear as a combined figure under R&D expenses. It is difficult during the R&D period to differentiate between these two kinds of expenses, since all the office personnel will be directly involved in the R&D effort and will work at the R&D site.

SG&A expenses for the third year of operations were calculated as follows:

Management Compensation	$146,000
Adm. and Secretarial Salaries	72,000
Marketing Expenses	176,000
Office Expenses	30,000
Accounting and Legal	35,000
TOTAL SG&A (year 3-84-85)	$459,000

From the fourth year of operations, SG&A is assumed to be 15% of sales.

SG&A Expenses*
($000)

Year	85-86	86-87	87-88
Management Compensation (a)	270	300	330
Admin. and Secretarial Salaries	200	600	1,000
Marketing Expenses (b)	300	1,248	2,644
Office Expenses	50	150	300
Accounting and Legal	50	75	100
TOTAL	870	2,373	4,374

* It is difficult to predict these expenses four years into the future and, therefore, they should be regarded only as rough estimates.

(a) After the third year, two or three people will be added to the management team.

(b) Marketing Expenses include:

(1) Travel of marketing department personnel, support of the TAVOR system abroad and directors' travel.
(2) Advertising and public relations.
(3) Entertainment.
(4) Brochures.
(5) Professional literature.

(7) (a) According to the Israeli Encouragement of Industry (Taxes) Law and the Israeli Income Tax Ordinance, "Approved Enterprises" enjoy privileged tax rates during their seven-year "benefit period," beginning with the first year in which they have taxable income. It is assumed that EFRAT would be subject only to a 30% Company tax during this 7-year period.

(b) Losses arising from regular business activity may be carried forward indefinitely. Therefore, the Company will not pay any taxes during year 4 and in year 5, taxable income will be only $3,940,000, instead of $4,952,000.

TABLE 10.4

PROJECTED TAVOR CASH FLOW
(FIRST THREE YEARS)
($000)

Quarter	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Bookings (Units)(1)	-	-	-	-	-	-	1	2	2	3	5	7
Shipments (Units)(1)	-	-	-	-	-	-	-	1	2	2	3	5
Revenues (Shipments)	-	-	-	-	-	-	-	150	300	300	450	750
Cost of Goods Sold(2)	-	-	-	-	-	-	-	60	109	109	164	273
Gross Profit (Loss)	-	-	-	-	-	-	-	90	191	191	286	477
Expenses:												
R&D Costs(3)	234	202	238	262	292	292	306	313	199	199	198	198
Selling, General and Administrative Expenses(4)	-	-	-	-	-	-	-	-	115	115	115	114
Depreciation(5)	33	33	32	32	33	33	32	32	-	-	-	-
Total Expenses	267	235	270	294	325	325	338	345	314	314	313	312
Operating Income (Loss)	(267)	(235)	(270)	(294)	(325)	(325)	(338)	(255)	(123)	(123)	(27)	165
Income Taxes	-	-	-	-	-	-	-	-	-	-	-	-
Net Income (Loss)	(267)	(235)	(270)	(294)	(325)	(325)	(338)	(255)	(123)	(123)	(27)	165
Investment in Fixed Assets(6)	210	40	10	-	-	-	-	-	-	-	-	-
Increase in Inventory(7)	-	-	-	-	-	-	40	24	-	32	64	36
Subtotal	(477)	(275)	(280)	(294)	(325)	(325)	(378)	(279)	(123)	(155)	(91)	129
Add Back Depreciation(8)	33	33	32	32	33	33	32	32	-	-	-	-
B.I.R.D Grants(9)	100	-	100	-	150	-	100	-	50	-	-	-
Cash Flow	(344)	(242)	(148)	(262)	(142)	(292)	(246)	(247)	(73)	(155)	(91)	129
Cumulative Cash Flow	(344)	(586)	(734)	(996)	(1,138)	(1,430)	(1,676)	(1,923)	(1,996)	(2,151)	(2,242)	(2,113)

NOTES TO TABLE 10.4 - PROJECTED TAVOR CASH FLOW (FIRST THREE YEARS)

(1) It is estimated that shipments will lag bookings by one quarter. Payment is received upon delivery of the system. See Table 7-1, and Financial Projections Assumptions, Section 10.2, Notes A, B.

(2) See Table 10-3, Projected Statement of Profit/(Loss) and Note 3 to Table 10-3. The total cost of goods sold during year 3 is divided among the four quarters in proportion to the number of systems actually shipped in each quarter.

(3) See Table 5-3, TAVOR R&D Budget, Table 10-3, Projected Statement of Profit/(Loss) and Note 5 to Table 10-3. Total R&D costs during year 3 are divided equally among the four quarters.

(4) See Table 10-3, Projected Statement of Profit/(Loss) and Note 6 to this table. Total SG&A expenses during year 3 are divided equally among the four quarters.

(5) See Table 10-3, Projected Statement of Profit/(Loss) and Note 4 to this table.

(6) The R&D effort during the first year calls for an investment of $260,000 in fixed assets, such as development equipment and office equipment. The major portion of this investment will take place during the first quarter of operations. All calculations assume that EFRAT is buying the equipment, rather than leasing it. If it proves more advantageous to lease the equipment EFRAT will change its strategy.

(7) Aggregate units in inventory are assumed to equal 100% of the next quarter's projected sales. Each unit added to inventory costs the cost of purchased parts for this specific unit. See Table 10-3, Projected Statement of Profit/(Loss) and Note 3(a) to this table.

(8) Since depreciation does not affect cash flow, it is added back.

(9) Management assumes that it will receive approximately $500,000 from the B.I.R.D. Foundation over a two-year period. Each year the Company will receive $250,000 in the following manner: 40% at the beginning of the year, 40% after submission of a semi-annual report and 20% after submission of an annual report. See Appendix III "Financial Incentives to R&D and Manufacturing in Israel."

TABLE 10.5

PROJECTED TAVOR CASH FLOW
(SIX YEARS)
($000)

	82-83	83-84	84-85	85-86	86-87	87-88
Revenues	-	150	1,800	5,800	15,820	29,160
Cost of Goods Sold	-	60	655	2,945	6,913	11,816
Gross Profit (Loss)	-	90	1,145	2,855	8,907	17,344
Expenses:						
R&D Costs	936	1,203	794	580	1,582	2,916
SG&A Expenses	-	-	459	870	2,373	4,374
Depreciation	130	130	-	-	-	-
Total Expenses	1,066	1,333	1,253	1,450	3,955	7,290
Operating Income (Loss)	(1,066)	(1,243)	(108)	1,405	4,952	10,054
Income Taxes	-	-	-	-	1,182	3,016
Net Income (Loss)	(1,066)	(1,243)	(108)	1,405	3,770	7,038
Investment in Fixed Assets	260	-	-	290	791	1,458
Increase in Inventory (1)	-	64	132	504	893	1,080
Subtotal	(1,326)	(1,307)	(240)	611	2,086	4,500
Add Back Depreciation	130	130	-	145	540	1,124
B.I.R.D. Grants	200	250	50	-	-	-
Cash Flow	(996)	(927)	(190)	756	2,626	5,624
Cumulative Cash Flow	(996)	(1,923)	(2,113)	(1,357)	1,269	6,893

NOTES TO TABLE 10.5 - PROJECTED TAVOR CASH FLOW
(SIX YEARS)

See Table 10-3, Projected Statement of Profit/(Loss), and Table 10-4, Projected TAVOR Cash Flow (First Three Years).

(1) For the first three years of operations, see Table 10-4, Projected TAVOR Cash Flow (First Three Years) and Note 7 to Table 10-4. From the fourth year of operations, aggregate units in inventory are assumed to equal 25% of the present year's Cost of Goods Sold minus depreciation.

SECTION 11
RISK FACTORS

As in the case of any new business, certain risks are attendant which a prospective investor should consider in weighing the merits and dangers of an investment in the TAVOR project. The following is a summary of some of the risks entailed in the Company's proposed business:

11.1 Recently Organized Company

EFRAT is a recently organized company which has been engaged primarily in consulting and research and development. Although key personnel have significant experience in telecommunications R&D projects, the Company itself has no operating record on which to be judged. Therefore, an investment in EFRAT would entail the risks associated with any new company.

11.2 Technological Obsolescence

Voice Store & Forward is a field which has undergone and is expected to undergo rapid and significant technological change. EFRAT is coping with such change by designing a system which will represent a new generation of equipment, geared to the needs of the market two to three years from now. To the best of the knowledge of the management, no other vendor or company has designed a comparable system, though there can be no assurance that one is not being planned.

11.3 Competition

As discussed herein, there are a number of companies, such as IBM and Wang, already in the VSF market, which are larger and better financed than EFRAT. EFRAT does not anticipate dislodging such companies from the VSF market. Management believes, however, that this market is large enough to support many participants and that it will gain a share of the market by offering products with significant additional features at lower prices.

11.4 Protection of Company's Technology

There is no assurance that any patents covering the Company's technology will be issued or, if issued, that any patents will prove enforceable.

11.5 Marketing

As mentioned herein, the Company is still searching for a marketing partner. Discussions with potential partners are to continue in the second half of 1982. Although management believes it will find a strong partner, failure to do so would cause it to reformulate its strategic planning.

11.6 Dependence on Key Personnel

Mr. Misholi and Professor Yemini are currently the driving forces behind the Company's technology. As a result, the Company is significantly reliant upon them and intends to insure their life. Management believes that after six to twelve months of R&D, they will not be as vital to the project.

11.7 Schedule and Cost Overruns

EFRAT believes that it has realistically estimated the time and costs required to develop TAVOR, including a suitable "cushion" for unanticipated problems. Cost estimates include an employee incentive scheme to motivate personnel. There can be no absolute assurance, however, that unforeseen expenses and delays will not arise.

11.8 Doing Business In Israel

The R&D Program (and the manufacture of any products developed in the R&D Program) is going to take place in Israel. The Company's business will, accordingly, be subject to the risks of interruption should hostilities resume in the Middle East.

APPENDIX I (a)

R&D CASH PAYROLL & BENEFITS

($000)

Detail		Annual	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
MANAGEMENT COMPENSATION										
Director	(1)	50.00	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50
Sr. Marketing Mgr.	(2)	46.00	-	-	-	5.75	11.50	11.50	11.50	11.50
Chief Fin. Officer	(3)	50.00	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50
Total		146.00	25.00	25.00	25.00	30.75	36.50	36.50	36.50	36.50
SR. SCIENTIFIC STAFF SALARIES										
Chief Scientist	(4)	50.00	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50
R&D Leader	(5)	48.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Hardware Team Leader	(6)	46.00	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50
Software Team Leader	(7)	46.00	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50
Senior Engineer	(8)	38.00	4.75	9.50	9.50	9.50	9.50	9.50	9.50	9.50
Senior Engineer	(9)	38.00	4.75	9.50	9.50	9.50	9.50	9.50	9.50	9.50
Senior Engineer	(10)	38.00	-	4.75	9.50	9.50	9.50	9.50	9.50	9.50
Senior Engineer	(11)	38.00	-	4.75	9.50	9.50	9.50	9.50	9.50	9.50
Senior Engineer	(12)	38.00	-	-	9.50	9.50	9.50	9.50	9.50	9.50
Senior Engineer	(13)	38.00	-	-	-	4.75	9.50	9.50	9.50	9.50
Total		418.00	57.00	76.00	95.00	99.75	104.50	104.50	104.50	104.50
TECHNICAL STAFF SALARIES										
Junior Engineer	(14)	32.00	-	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Junior Engineer	(15)	32.00	-	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Junior Engineer	(16)	32.00	-	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Junior Engineer	(17)	32.00	-	4.00	8.00	8.00	8.00	8.00	8.00	8.00
Junior Engineer	(18)	32.00	-	4.00	8.00	8.00	8.00	8.00	8.00	8.00
Junior Engineer	(19)	32.00	-	-	4.00	8.00	8.00	8.00	8.00	8.00
Junior Engineer	(20)	32.00	-	-	-	4.00	8.00	8.00	8.00	8.00
Technical Writer	(21)	32.00	-	-	-	4.00	8.00	8.00	8.00	8.00
Purchasing Manager	(22)	28.00	-	3.50	7.00	7.00	7.00	7.00	7.00	7.00
Senior Technician	(23)	26.00	-	3.25	6.50	6.50	6.50	6.50	6.50	6.50
Technician	(24)	20.00	-	-	5.00	5.00	5.00	5.00	5.00	5.00
Total		330.00	-	38.75	62.50	74.50	82.50	82.50	82.50	82.50
ADMINISTRATIVE AND SECRETARIAL SALARIES										
Accounting Clerk	(25)	20.00	-	-	-	2.50	5.00	5.00	5.00	5.00
Senior Secretary	(26)	20.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Secretary	(27)	12.00	-	-	-	-	3.00	3.00	3.00	3.00
Total		52.00	5.00	5.00	5.00	7.50	13.00	13.00	13.00	13.00
GRAND TOTAL (Quarter)		946.00	87.00	144.75	187.50	212.50	236.50	236.50	236.50	236.50
GRAND TOTAL (Year)						631.75				946.00

APPENDIX I(b)
LAB EQUIPMENT

1. Lab Instruments

Oscilloscopes x 3	$ 9,000
Logic Analyzer	10,000
Spectrum Analyzer DVM x 3, Signal Generator x 2, Logic Probes	10,000
Power Supply and Other Probes	5,000
TOTAL	$34,000

Maintenance & Insurance of Lab Instruments: $400 per month.

2. Lab Hardware Tools

Soldering Iron, Wireup Tools, Cutter Pliers, Screwdrivers and Other Hardware Tools	$ 2,500

Maintenance and sporadic purchases of Lab Hardware Tools: $500 per month.

3. Lab General Stock

Resistors, Capacitors, IC, Cables, Wires, Connectors, Switches, Screws, Ribbon Cables and Other General Stock	$ 3,000

Maintenance and sporadic purchases of Lab General Stock: $600 per month

4. Lab Furniture

Lab Tables x 10	$ 2,500
Lab Chairs x 10	500
Lab Cabinets x 10	1,500
Electric Setting, Drawing Table, P.C. Tables and Other Equipment	2,500
TOTAL	$ 7,000

Total Lab Equipment Initial Investment

Lab Instruments	$34,000
Lab Hardware Tools	2,500
Lab General Stock	3,000
Lab Furniture	7,000
TOTAL	$46,500

Total Maintenance, Insurance and Sporadic Purchases of Lab Equipment

Lab Instruments	$ 400 per month
Lab Hardware Tools	500 per month
Lab General Stock	600 per month
TOTAL (month)	$1,500 per month
TOTAL (quarter)	$4,500 per quarter

APPENDIX I(c)
DEVELOPMENT EQUIPMENT AND DEVELOPMENT SOFTWARE

1. Development Equipment

Development System Main Computer	$ 95,000
Terminals x 6	10,000
Line Printers x 2	4,000
Peripheral Cables	1,000
TOTAL	$110,000

Maintenance and Insurance of Development Equipment: $1,400 per month.

2. Development Software

Software packages and licensing includes operating system, compilers, editors and others

TOTAL	$ 30,000

Total Development Equipment and Development Software Initial Investment

Development Equipment	$110,000
Development Software	30,000
TOTAL	$140,000

Disbursements for Development Equipment and Development Software by Quarter (includes Maintenance and Insurance)

Quarter	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Total Disbursements	$114,200	$34,200	$4,200	$4,200	$4,200	$4,200	$4,200	$4,200

APPENDIX I(d)
FIRST SYSTEM PROTOTYPE OEM PARTS

CPU Cards x 2	$ 8,000
Memory x 4	10,000
Disk Drive x 2	40,000
Disk Controller x 2	10,000
Blank Cards (wire-up) x 20	10,000
Audio Equipment	1,000
CBT-CDH x 4	1,000
Cabinets, Racks, Power Supply	3,000
Cables and Switches	2,000
TOTAL	$85,000

Maintenance Insurance and Spare Parts of First System Prototype OEM Parts: $4,000 per quarter.

APPENDIX I(e)
SUBCONTRACTING

During the R&D phase EFRAT will subcontract other companies to perform certain tasks, among them:

(a) P.C. Board design x 20

(b) P.C. Card production x 20

(c) Cabinet wiring

(d) Others

It is estimated that these expenses will be $3,000 in quarter 3 and quarter 4 and $5,000 per quarter thereafter.

APPENDIX I(f)
OFFICE EQUIPMENT, FURNITURE AND CURRENT EXPENSES

1. Office Equipment and Furniture

Work Stations x 20	$ 8,000
Office Interior and Air Conditioners	18,000
Library Shelf	2,000
Office Cars x 2	23,000
Typewriter x 2	6,000
Copy Machine	10,000
Cabinets x 10	2,000
Stationery and General Stock	3,000
Small Office Equipment	1,000
TOTAL	$73,000

2. Office Current Expenses*

Rent (5,000 square feet)	$ 6,000 per quarter
Electricity	1,800 per quarter
Telephone and Telex	3,900 per quarter
Water, Gas and Taxes	1,500 per quarter
Cars Expenses	2,500 per quarter
Cleaning	800 per quarter
Maintenance and Insurance	1,500 per quarter
Other Office Expenses	1,000 per quarter
TOTAL	$19,000 per quarter

* The above expenses include expenses which will be incurred both for general office and R&D purposes.

Disbursements for Office Equipment and Current Office Expenses

Quarter	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Equipment and Furniture	53,000	10,000	10,000	-	-	-	-	-
Office Current Expenses	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000
TOTAL	72,000	29,000	19,000	19,000	19,000	19,000	19,000	19,000

APPENDIX I(g)
MARKETING

Marketing Expenses include:

(1) Travel of marketing department personnel and directors' travel.

Year	Number of Days Abroad	Cost Per Day*	Total
1	150	$135	$20,250
2	150	$145	$21,750

*Includes: airfare, hotel, meals, etc.

(2) Advertising and Public Relations.

Year	Total Expense
1	$12,000
2	$20,000

(3) Support of the TAVOR system abroad.

Year	Total Expense
1	-
2	$30,000

(4) Professional Literature.

Year	Total Expense
1	$5,000
2	$6,000

(5) Entertainment and Employees' Gifts.

Year	Total Expense
1	$5,000
2	$6,400

MARKETING TOTAL EXPENSES
($000)

Detail/Period	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Travel	5.25	5.00	5.00	5.00	5.00	5.00	5.75	6.00
Advertising	3.00	3.00	3.00	3.00	5.00	5.00	5.00	5.00
Support of TAVOR Abroad	-	-	-	-	-	-	12.00	18.00
Professional Literature	1.25	1.25	1.25	1.25	1.50	1.50	1.50	1.50
Entertainment	1.25	1.25	1.25	1.25	1.60	1.60	1.60	1.60
Total (Quarter)	10.75	10.50	10.50	10.50	13.10	13.10	25.85	32.10
Total (Year)				42.25				84.15

APPENDIX I(h)
ACCOUNTING AND LEGAL
($000)

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
20.00	15.00	5.00	5.00	5.00	5.00	7.00	8.00