V1

Cardeovis Technologies Ltd.

SURGEON LASER MACHINE

Business Plan

2021

CONTENT

Business Plan

The Concept / Mission

Cardeovis Technologies Ltd. ("CaT" or the "Company's") revolutionary new Surgeon Laser Machine (SLM), new surgical procedure and technology improve the quality of operation and improve quality of life of the cardiac patients after the operation.

SLM is a new surgical instrument needed in every operation room around the world. SLM can be used not only for cardiac operations.

Our mission is to improve life quality of millions and millions people suffering from cardiac and other diseases. The way to carry out our mission is to design and produce SLM devices, to prove the new technology advantages and to design new medical accessories needed for such kind of operations.

Introduction

Coronary artery bypass surgery (CABG) is one of the most prevalent surgical procedures performed. Only in USA more than 700,000 patients requiring coronary revascularization underwent CABG surgery. The surgery itself is relatively complex with multiple decision points to be carefully crossed, starting with the midline sternotomy which is the most commonly incision used by cardiac surgeons. It provides the most advantageous access for most cardiac operations because it can be quickly performed and allows for surgical exploration of the thoracic cavity. It is also useful for accessing anterior mediastinal lesions and for bilateral pulmonary procedures.

Midline Sternotomy

Midline sternotomy is one of the most critical phases of the operation mainly because of the potential for injury to the underlying organs or blood vessels. Therefore, during sternotomy surgeons tend to ask the anesthesiologist to deflate the lungs and to minimize ventilation in order to avoid displacement of the heart and lungs towards the operative incision field and to minimize the potential injury of these organs.

The operative approach of sternotomy begins with vertical skin incision made from below the suprasternal notch towards the half way between the xiphpoid process to the ombelicum. Subsequently the sternum itself is longitudinally dissected with the use of an oscillary cast cutter and it is highly important to inspect all the dissected surfaces. The incision itself may have unlimited consequences both peri and postoperatively and meticulous incision is mandatory to avoid troublesome long run complications

Disadvantages and complications of midian sternotomy

Unfortunately, sternal and chest wall pain after median sternotomy have a debilitating prolonged effect on a patient's recovery and long term functional status after operation. In fact, the main limitation to activity after open heart surgery is healing of the sternum which may take up to 12 weeks following conventional bypass surgery. Complication rate for midline sternotomy range from 0.5% to 5% and mortality rates from these complications ranges from 7% to 68% according to various reports. Sternal wound infections dramatically increase morbidity, mortality and cost, requiring in certain circumstances a complete surgical removal of the sternum and plastic surgical reconstruction of the chest wall. In large series of patients, a 9% incidence of sternal fracture was observed. This was mainly associated with extensive sternal devascularization owing to bilateral internal thoracic artery harvesting. Also, the need for re-sternotomy incision has increased over the last two decades since an increasing number of patients are undergoing a second and even third coronary revascularization or other surgical procedures which required open thoracotomy.

Anatomic implications of midian sternotomy

The sternum is an elongated flattened bone with relatively low density. It composed of three main fused parts in the centre of the chest that articulates with and provides support for the clavicles and for the ribs. Its average length is 17 cm and it is rather greater in the male than in the female. Width is 30-40 mm and thickness 10-11 mm. It is composed of highly vascular cancellous tissue covered by a thin cortex layer of compact bone. The mean distance from the sternum to the most medial vessel is 1 cm of either the right or the left side. Sternal size does not affect chest stability unless it is related to the patient's body weight which is a widely known risk factor for sternal instability detected in 7% of patients undergoing midian sternotomy.

Midian sternotomy from the xiphoid to the manubrium of the sternum carries a substantial risk of infection, injury and healing especially among diabetic patients, obese, patients with chronic illness including COPD, PVD or when both mammary arteries are used as arterial conduits for revascularization. Serious sternal wound infection and dehiscence and consequent instability of the chest closure represents the most feared complication, facilitating tissue infection, osteomyelitis and mediastinitis. It occurred in almost 2% of patients undergoing midsternotomy. In this context, the depth of incision is crucial and it is often difficult to determine the cut off edge of the incision. Several techniques like upward traction of the sternum are being used to limit the depth of penetration of the oscillary saw. However, it has been suggested that an optical evaluation like multidetector CT (MDCT) with three-dimensional volume reconstruction can be useful for surgical planning, giving rise to a "road map" for the surgeon, providing anatomic valuable information with respect to the adjacent mediastinal structures and the surrounding pericardium and vasculature.

Surgical closure of the sternum

Conventional closure of the sternum at the end of the operation is accomplished by reapproximation of the two sternal halves and the use of four to six stainless steel parasternal sutures, the ends of these sutures are securely twisted and buried in the sternal tissue. The sternal wires are a common site of post operative bleeding and consequently for surgical re-exploration encountered in up to 5% in large series of patients, as well as a source for infection. Bleeding tends to occur on the internal site of the sternum into the thoracic cavity. Titanium plates and stainless steal coils or cables have been tested in substitution of the traditional wires in an effort to improve postoperative sternal stability.

The sternum has a three-dimensional structure and closure of the sternum should be as meticulous as the opening. The encircling wires applied to retain the two dissected parts of the sternum in an effort to restore the chest wall and the anatomic and functional integrity of the sternum, minimizing chest discomfort and disability. Nevertheless, all these potential hazards set the stage for an alternative surgical access rather than mid sternotomy. The minimal invasive bypass procedure is one of the options adopted by the cardiac surgeons to tackle and to spare the problematic issues associated with mid sternotomy as described.

The Therapeutic Use of Lasers in Cardiothoracic Surgery and Interventional Cardiology

Overview

Laser is a generation of light, based on the stimulated emission of radiation from the active medium of the laser. The active medium must be in the state of the inversion of electron population reached by pumping the energy from the outside. Lasers can be divided according to the active medium (solid, liquid, gas) or to the manner of emission (continuous or pulsed waves).

Lasers are widely used in medicine and the effect on living organs depends on its wave length, intensity and shape (continuous or pulsed). In the visible range, thermal effects are due to absorption of the radiation where lasers with longer wavelength can penetrate deeper.

Lasers for medicine use were traditionally classified into two groups: Lasers with higher output (>500 mW) for surgical interventions and lasers with lower output (<500mW) defined as soft lasers. Using the laser as a surgery tool, its advantage consists of its accuracy. Packing all the lasers punch into one wavelength allows high selectivity of an absorbing target serving as an optical lancet cutting with no tissue contact. The tissue itself which does not have to be touched is evaporated, the "broken" vessels are coagulated, the cut does not bleed and no blood loss occurs. The lasers most frequently used are infrared range including gas CO2 laser or solid Nd: YAG lasers. The advantage of using lasers in surgery stems largely from the fact that a laser light can be focused to size of the head of pin. Laser fibers can reach inaccessible anatomic places, often without incisions.

Application of lasers in cardiothoracic surgery and cardiology

Application of laser technology in cardiothoracic surgery began in 1973 with the use of CO2 laser to ablate benign space occupied lesions, first benign tumors and later on malignant obstructive tumors of the tracheobronchial tree. The Nd-YAG

laser was extensively used in bronchology with its superior hemostatic biological qualities. Lasers were then applied to seal lung tissue, resection of pulmonary nodules and metastatic lesions.
In the Cardiology field, lasers were used for transmyocardial revascularization (TMR) in cardiac patients suffering from angina with no option for revascularization, either surgical or by balloon angioplasty. Lasers in these patients are used to create small channels through the tissue muscle of the left ventricle in an effort to improve perfusion of the heart muscle and to relieve symptoms of angina.
A prototype fiber photo-catheter for surgical treatment of atrial fibrillation with laser radiation has been recently used to make continuous photocoagulation lesions for effective Maze procedure treatments as an alternative for the conventional radiofrequency ablation surgical procedure.
New experimental application is a bipolar Nd-YAG laser. This was examined for a venous dissection and introduced for the vein graft harvesting in patients undergoing coronary artery bypass graft surgery.
Excimer laser was extensively used in the early-mid nineties as an adjunctive tool in percutaneous coronary angioplasty, treating unfavorable rigid complex calcified obstructive coronary lesions including aorto-ostial lesions where conventional interventional PTCA techniques failed to provide fair angiographic and clinical results. Excimer laser was also used for intracardiac pacemaker lead extraction, releasing the lead from the encapsulating fibrotic tissue.

Lasers and Optical Assessment in Midline Sternotomy

The use of laser for mid sternotomy with optimal optical guidance may offer several advantages. First, the very precise cutting of the laser beam yields a very good healing outcome in comparison to the current conventional methods used. It highly supports the use of lasers for clinical surgery involving bone tissue where a much higher degree of precision is required than that obtained with current surgical tools. The combined technology may enable the physician to precisely control the cutting procedure and to avoid potential damage to the surrounding structures. Furthermore, the real time imaging could provide anatomic data with respect to the bone thickness and consistency parameters, delivering energy amounts in relation to the individual size of the sternum.

Limitations

The laser energy delivered is subjected to thermal attenuation because of the applied heat. The dose should be adjusted by the temperature data of the evaporated tissue to enhance the laser effectiveness and at the same time to avoid heat necrosis of the surrounding tissue and to carefully maintain the safety margin of the procedure.

Experimental protocol

Introduction

Poor healing of median sternotomy can significantly increase mortality, morbidity and hospital costs. Needless to mention that its tremendous impacts on patients wellbeing following cardiac surgery. Effective reunion and sternal healing requires first optimal incision technique as well as reliable sternal fixation.

Laser treatment of bone tissue has already been explored in a variety of clinical subsets in an effort to find substitute for mechanical tools and devices used in orthopedics. Cutting vital bone as the sternum by using laser beam offers many advantages. These are above all a non-contact blood hygienic and sterile technique, a vibration-reduced surgical technique, free choice of cut geometry, avoiding friction and external forces, a small operation field and the prevention of massive bone flour and metal abrasion. The most important prerequisite for the acceptance of laser approach are thereby an effective and fast bone ablation with avoidance of any thermal or thermo mechanical damage of the treated object and the surrounding tissue. All of these promise better healing conditions following mid sternotomy.

With application in bone surgery, thermal damage of tissue can be minimized by the selection of an appropriate wave length to be responsible for a high absorption in the bone matrix. Since calcium hydroxyapatite and water indicate the optimal

absorption rate at a wave length of the CO2-laserlight, the CO2 laser is suitable for cutting bones. Previous experimental studies using CO2 laser and polarized light microscopy have shown no alterations in the inorganic structure of the bone at the cut borders and minimal damage to bone ablated at various specified parameters of laser pulses.

It is well known that limitation of motion between broken bone segments is beneficial for rapid boney healing. The current incidence of severe sternal wound complications after mid sternotomy favors a more stable sternal fixation method to improve sternal reapproximation and thus healing as an alternative to the conventional wire fixation technique. At the same time, a newly fixation approach should address the difficulty of reentry to the chest cavity in emergency post surgical situations.

To improve the healing and to reduce the rate of complications with median sternotomy, we created a model which co involved the use of pulsed CO2 laser for midline sternotomy and a specific fixation method using fixation plates with titanium screws for sternal closure. In the context of this project, a CO2-laser beam can be controlled and tightly focused so that a precise narrow cut can be planned along a predefined vertical line combined with accurate dental incisions. A computer assisted scanner allowing guidance of the laser beam will be tested as part of the protocol.

Methods

Stage I. In vitro study using 6 animal fresh cadaveric sternal plates stored at 2C for preliminary CO2 laser application: On the test day, the specimens will be uniformly prepared at room temperature. A vertical laser incision along the sternum will be carried out in the presence of surface coolant sterile water. Subsequently the two sternal parts will be legated as described above.

Stage II. In vivo study. Group I. The protocol described above will be applied to 6 mature pigs. Animals will be sacrificed at 30 days post midsternotomy. Histological sections will be examined by microscopy and polarized light microscopy using specific stains to assess histological alterations related to heat exposure, tissue injury and osseous regeneration.

In vivo study. Group II. A comparative study in 6 mature pigs will involve a mechanical conventional saw for midline sternotomy and the closure sternal approach as in group I. Animals will be sacrificed at the same stage as in group I , assessing histological parameters in comparison to group I animals. Tridimensional assessment of sternal displacement (longitudinal, transverse and vertical alignments) will be tested using CT scanning with 3-5 mm slice thickness and 3D image reconstruction. Mechanical stability of the sternum will also be tested by in vitro biomechanical model.

Market Potential

Company believes that in every operation room, especially in the western world SLM should be installed for different kind of operations, mostly for cardiac operations.
Today statistics show that total amount of US hospitals is:

US Hospitals by Bed Size

Hospital Bed Size	Number of Hospitals
<100	2922
100-199	1426
200-499	1339
>=500	326
Total amount:	6013 Hospitals in USA

the average number of Operation Rooms (OR) per hospital in the US is 6.

Total number of OR (operational rooms) in USA is: 6x6013=36078 operational rooms

Say one SLM price is US$100,000.

36078 operational rooms x US$100,000 = US$3,607,800,000 =US market

US market is 40% of the world market

The world market is US$ 9,019,550,000 if SLM price is US$100,000 (worst case) and more than US$ 22,5B if the price is US$250,000 (real price)

The Product

The SLM is a surgeon instrument in operation room

The SLM includes 3 main parts:

1. Optical part. This part will include the laser, the optical interface, and the illumination optics for imaging and the software for image analysis during the surgery.
2. A Control System for Optical part movement control
3. Auxiliary hardware and software for proper functioning of the instrument. This part includes ventilation, auxiliary cutting fiber optic instrument and new medical accessories needed for such kind of operations.

Technology

CaT performed a patent survey that didn't find any proof for existence of patent registration of the product or the process. The unique method of the inventors is using an existing knowledge in the surgery for developing a product that does not exists in the market.
SLM permits a new surgical procedure that was impossible by using old methods and procedures. This procedure is patentable.
The new technology needs new medical accessories to be developed and patented.
Notwithstanding the above mentioned in order to increase the barriers of entry, it is crucial to protect the technology widely in order to prevent or to delay potential competitors to produce a similar product.

Competition

To date there is no direct competitors in the market. No laser cutting instruments for Midline Sternotomy exists on the market. The proposed technology can not be implemented with existing Midline Sternotomy cutting instruments. Nobody produce and market the new medical accessories needed for SLM.
There are on the market many types of laser cutting machines but none of them can be used for Midline Sternotomy. Only patentable combination of Midline Sternotomy cutting machine, new operation procedure and new medical accessories needed for SLM can give positive results for cardiac surgery.

Marketing Strategy

While the industry offers numerous opportunities for the SLM, Company management will focus on its efforts to market the product directly to hospitals in Israel, Europe and the US. Cardeovis Technologies Ltd. will focus on the high end leading hospitals and science centers, in order to bring the company to profitability in a short term , and to establish the SLM brand name (which was not chosen yet) as a synonymous for quality and reliability.

- Short term marketing strategy – Company will forge cooperation with AMS –Advanced Measurement Systems Ltd. in order to produce and market in Israel the first series of SLM. After collecting the data and according to the results of operations, after solving initial problems, Cardiovis Technologies Ltd. shall produce enlarged series of SLM and shall propose the machine and technology to European, American and Japanese markets.
- Mid/Long term marketing strategy – after acquiring a brand name through the sales in Israel and other countries Company intends to propose cooperation to leading producers of medical equipment. Company plans to increase the product production or to make successful exit.

Revenue Model

Company is expected to generate revenues from the sales of the SLM to hospitals, science centers and universities (medical faculties)

AMS Ltd. will manufacture the Company the first series of SLM. The SLM manufacturing will be done in Israel by AMS Ltd and sub-contractors. The Company will consider in the future a sale of manufacturing licenses to other manufacturers.

The Company estimates that the SLM will be sold at a price range of US$100,000-250,000 when the manufacturing cost shall be US$30,000-35,000. The business revenues forecast estimates a sale retail price of US$100,000.

Management

The management team at Cardeovis Technologies Ltd. ("Management") in this project consists of Dr. Eldad Rechavia and Mr. Boris Fradkin. Dr. Rechavia is the director of the Cardiac Care Unit and in charge of the Cardiology Department, "Hashron" Hospital, RMC, Petach – Tikva' affiliated to Tel Aviv University Sackler School of Medicine. Dr. Rechavia is a Senior Lecturer within the frame of Tel Aviv University. He has together with his colleagues more than 90 publications in different fields of cardiology including basic research in experimental cardiac labs. He spent two years of research in the Medical Research Councul Hammersmith Hospital, London UK, and three years of combined research and clinical fellowship in Interventional Cardiology in UCLA School of Medicine, LA, USA. He is currently acting as a Clinical Cardiologist.
Mr. Fradkin brings with him more than 30 years of experience in designing and manufacturing of electrical and electronic devices and in management of development projects of multidisciplinary systems. Mr. Fradkin registered so far 13 patents. Resumes of Dr. Rehavia and Mr. Fradkin are attached in this Business Plan.

Capital Requirement

Based on detailed financial projections attached, the company is expected to turn profitable in year 5 and cash flow positive at the end of year 5 Cumulative cash flow deficit is projected to reach a high of $4,059M at the year 5 The capital will be used for R&D and for marketing the product to Israel, US, Japan and Europe in the first years.

By Year 7 , the company projects Revenues of $52.1M, EBITDA of $28.194M and Accumulated Net Cash Flow of $17.598M

Subcontractor

AMS – Advanced Measurement Systems Ltd.

AMS specializes in Electro-Optics, Electronics and Fine Mechanics. **AMS Ltd.** develops designs and manufactures products for the high-tech and medical industries. AMS provides all in house, comprehensive solutions to meet all our requirements. From the idea to the final products.

AMS - Advanced Measurement Systems LTD. is a privately held company, founded in 1990 by Dr. Naftaly Menn and Dr. Yossi Krimerman. AMS Ltd. develops, designs and manufactures products for the High-Tech and Medical and Life Science industries.

AMS team includes highly qualified specialists in Optics, Electronics, Fine Mechanics, Software and Life Sciences. AMS Ltd. manages 3 major kinds of activities:

Serial OEM production, either developed in **AMS Ltd.** or accepted as built-to-print

Developing and manufacturing of advanced products for hospitals and life sciences laboratories

Developing and manufacturing of electro-optical systems as turn-key solutions

AMS main fields of expertise include

Computerized Imaging, Image Processing and Pattern Recognition

Motorized Microscopy and Motion Control

Spectral Analysis

Automatic Inspection for industrial applications

Electrical Signal Processing and Analysis

In 2008 AMS-USA was founded. Expending our activities to the US has allowed us to improve our support and availability to our growing number of customers in North America.

AMS Ltd. Management Team:

Dr. Naftaly Menn, Co-founder, CEO and CTO of AMS Ltd.

Dr. Menn has over thirty years of experience in electro-optic, industrial automation and computerized systems for medical applications. Before the foundation of **AMS Ltd.**, Dr. Menn headed the northern branch of El-Op (A part of Elbit Systems).

Dr. Menn is an associate professor at the Faculty of Mechanical Engineering of the Technion- Israel Institute of technology and the author of the book "Practical Optics" (2004) and over 50 scientific publications.

Dr. Joseph Krimerman, Co-founder, R&D Manager of AMS Ltd.

Dr. Krimerman has over thirty years experience as a manager in the Hi-Tech industry. Headed over 50 projects related to fine mechanics, electro-optics and signal processing. Dr. Krimerman is a leading specialist in the fields of fluid dynamics, motion control, image processing and pattern recognition.

Mr. Lior Landesman, Co-founder and CEO of AMS-USA Ltd.

Twenty plus years combined experience as a manager in Hi Tech, Defense Systems and Industrial Control. Mr. Landesman was a co-founder and the

Chief Technology Officer of Tenta Technology, acquired by MKS Instruments (NASDAQ:MKSI) in 2002.

AMS Ltd. Facilities include:

Regular assembly rooms

Clean Environment assembly rooms

Workshop for mechanical parts manufacturing

Workshop for rework and treatment of optical parts and light sources

Optical/Physical laboratory

Electronics laboratory

Testing laboratory

AMS Ltd. has fully implemented the Quality Assurance System and is certified for both development and manufacturing according to ISO 9000 standard since 2001.

AMS Ltd. Customized solution

AMS Ltd. vast experience in the different aspects of electro-optics enables to offer technical solutions tailored to a specific need of customer.

AMS Ltd. team of specialists in Optics, Thermal Physics, Fine Mechanics, Electronics and Computer Sciences works closely with her customers from a very early stage of the project – even when it is a only an idea.

AMS Ltd. finds the most technically feasible and cost effective solution to the problem.

Based on the customer's requirements, AMS Ltd. provides:

Product definition and detailed specification

Feasibility study and comparison of alternative approaches

Optical design

Electronic circuitry design

Mechanical design

Thermal and heat transfer analysis

Image processing algorithms

Prototype fabrication and testing

Designing of assembly process and tooling

Software code writing, algorithms implementation and DLL for special hardware functions

Preparation of a complete production file

Serial production of the final product

Projects at AMS Ltd. usually fall into one of the categories below:

Developing, Designing and Manufacturing of a new product according to the customer's specifications

Built-to-print projects, i.e. manufacturing of the products according to the production files supplied by the customer

AMS Ltd. can manufacture and supply the products at serial production rates.

AMS - *Advanced Measurement Systems Ltd.*

Carmel Business Park, 3 Tnufa St., Tavor Bldg, Tirat Carmel 39101, ISRAEL
***Mail address*: P.O.B. 104, Tirat Carmel 39101, ISRAEL**
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REF: PABF 01

PROPOSAL

For development and fabrication of the optical system for surgery with laser

Contents

1. General

The present proposal is based on limited information supplied by the Initiator and Inventor (Boris Fradkin) during the meeting held in AMS. According to what was agreed and understood, AMS will be responsible for the optical part of the system. This part will include the laser, the

optical interface, and the illumination optics for imaging and the software for image analysis during the surgery.

2. Technical description

The work will include the following stages:

2.1. Stage 1 - Feasibility study – definition of the system architecture and search for critical elements (including manufacturers' data sheets, performance, prices, delivery time etc.)

2.2. Stage 2 – Development and fabrication of the 1st prototype for surgery. This prototype will include the laser and the optical interface, but will not address the imaging optics and image processing algorithms.

2.3. Stage 3 – Testing of the 1st prototype (limited participation of the AMS team in the testing experiments)

2.4. Stage 4 - Development and fabrication of the 2nd prototype. It will include improvement of the optical system, been based on the results of the testing experiments, and also will include the illumination module, the imaging optics and basic image processing functions.

2.5. Stage 5 - Testing of the 2nd prototype (participation of the AMS team in testing experiments)

2.6. Stage 6 - Development and testing of the full scale image processing program

2.7. Stage 7 - Manufacturing and run of the system in final configuration and testing in real conditions, including use of image processing software.

3. The Work Program and the Milestones.

3.1. Time table of the project activities

Stage 1 - two months ARO
Stage 2 – 3 additional months
Stage 3 - 1.5 additional months (subject to the schedule of the testing experiments)
Stage 4 - 4 additional months
Stage 5 - 2.5 additional months (subject to the schedule of the testing experiments)
Stage 6 – 4 additional months
Stage 7 – 3 additional months

Thus, the whole work will be completed in 20 months ARO

3.2. During this period of time the following ***Milestone***s will be carried out:

a) Preliminary Design Review (PDR) – after feasibility study

b) Design Review (DR) (6.5 months ARO) – after testing of the 1st prototype

c) Critical design Review (CDR) (13 months ARO) – after testing of the 2nd prototype

c) Final Design Review (FDR) (17 months ARO) – after finishing the image processing program

4. The prices and payment conditions:

Feasibility study – 100K USD
1st prototype – materials and subcontractors – 70K USD
Working hours - 102K USD
2nd prototype - materials and subcontractors – 80K USD
Working hours - 130K USD
Stage 6 (image processing), working hours – 90K USD
Testing experiments (w.h) – 20K USD
Stage 7 - final system - materials and subcontractors 80K USD
Working hours - 40K USD

Sub- total - 712K USD

Profit 20% - 134 K USD

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Total price – **846K USD**

5. Payment conditions:

Payment per each stage - net + 30 days after the Invoice date

Payments for stages 2, 4 and 7 should be divided for two parts each – for materials and subcontractors- at the beginning of the corresponding stage, for working hours –net+ 30 days after the end of the stage.

20% profit should be added to the price of each stage and therefore included in each payment.

Dr. Naftaly Menn

Regulation and Standardization

Every product in the medical field has to get the approval of the regulation institution. Cardeovis Technologies Ltd. will apply for the Israeli, the US and European Common Market institutions. A standardization of such product can help, first of all to form the industry in each country and in addition to set high standards that will prevent low quality manufacturers to get into the market.

A.L.F. is planning to invest efforts in negotiating with the regulation institution in each country with the help of advisors and potential customers that generally maintain business relationships with those institutions.

CURRICULUM VITAE

Eldad Rechavia

ID 051893832

Cardiology Department, "Hashron" Hospital, RMC, Petach – Tikva, 7 Keren Kayemet St. 49372, Israel.

DATE AND PLACE OF BIRTH: September 21, 1953; Jerusalem, Israel.

Home address: 57 Zamir st. Hod Hasharon, 45350 Israel. Tel. 09-7480062 Fax. 09-7469367

Marital Status: Married + 3

Place of work: Cardiology Department, Rabin Medical Center, Petach Tikva, 49100, Israel, affiliated to the Tel Aviv University Sackler School of Medicine.

Tel. (03)9372520/2211; Fax. (03)9372444; Mobile: 054-4610932 E mail eldadr2@clalit.org.il

1959 - 1971 - Primary & Secondary School

1971 - 1975 - Military Service, Israel Defense Force

1976 - 1982 - Medical Studies

1983 - MD diploma; Tel Aviv University Sackler School of Medicine, Israel.
Thesis: Primary Endocardial Fibroelastosis. Supervisor: Prof. A Shem Tov, Heart Institute, Sheba medical Center, Tel Hashomer, Israel.
1983 - Internship; Sheba medical Center, Tel Hashomer.
1983 - 1985 - Resident, Internal Medicine, Rabin Medical Center.
1985 - 1988 - Fellowship in Cardiology, Rabin Medical Center.
1986 - 1988 - Postgraduate studies in Cardiology, Sackler School of Medicine, Tel Aviv University.
7/1988 - 12/1988 - Research Fellowship, Medical Research Council, Royal Postgraduate medical School, Hammersmith Hospital, London, UK.
Basic science thesis: The Detection of Viable Tissue in the Reperfused Dysfunctional Myocardium Assessed by Positron Emission Tomography.
Supervisor: Prof. Attilio Maseri, Royal Postgraduate Medical School, Hammersmith Hospital, London, UK.
1989 - Cardiovascular Division, Hammersmith Hospital, London, UK.
1990 - Passed Specialty Board Examination in Cardiology.
1990 – 1993 - Attending Physician, Cardiology Department, Rabin Medical Center.
1993 - 1996 - Cedars Sinai Medical Center, UCLA School of Medicine, Los Angeles, CA, USA. Clinical and Research Fellowship in Interventional Cardiology
Since 1/1996 - Attending Physician, Cardiovascular Division and Cardiac Catheterization Unit, Rabin Medical Center.
Since 11/1999 - Director of ICCU and In Charge Cardiology Department, Hasharon Hospital, Rabin Medical Center.
Since 1986 - Major, acting as Flying Surgeon, Israel Defense Air Force.

ACADEMIC NOMINATIONS

1992 - Lecturer, Sackler School of Medicine, Tel Aviv University.

1996 - Senior Lecturer, Sackler School of Medicine, Tel Aviv University.

AWARDS

1988 - Awarded the Henry Neufeld Award Fund by the Israel Heart Society for original clinical investigation.

1989 - Awarded the Annual Medical Research Council Grant, Hammersmith Hospital, London, UK

1998 - Awarded the Israel Heart Society Award for best presentation; Annual Meeting of the Israel Heart Society.

2006 – Awarded the Tel Aviv University Sackler School of Medicine for Tutorial academic achievements in Cardiology

PROFESSIONAL ORGANIZATIONS:

Member of the Israel Medical Association

Member of the Israel Heart Society

Reviewer for the: European Heart Journal; the Journal of the American College of Cardiology; American Heart Journal; Journal Catheterization and Cardiovascular Diagnosis.

LICENSER:

Israel permanent medical license No. 17449

Israel Specialist license No. 11397 in Cardiology

ATLS

ECFMG

GCP

RESUME

NAME:	Boris Fradkin, M.Sc.E.E.
ADDRESS:	9 Hadas St., P.O.Box 6225, Oranit 44813, Israel
TELEPHONE:	work: +972-3-9360186; mobile +972-544-720-827
FAX:	work: +972-3-9369163
E-MAIL	fradkin@netvision.net.il
CITIZENSHIP:	Israeli, ID# 017325408
BIRTH DATE:	June 3, 1948
MARITAL STATUS:	Married with two children
LANGUAGES:	English, Hebrew, German, Russian
PROGRAMMING LANGUAGES:	Assembler, Pascal, PL/1, COBOL, FORTRAN

PROFESSIONAL EXPERIENCE & POSITIONS HELD

1994 to present	ALF Enterprise, Life We Protect Ltd, Cardeovis Technologies Ltd. , General Manager, Project Management
Key words	Patents, Design, Engineering, Patents Search, Patents writing, Business plan, Technical writing, Translations, Consulting.
1992-2002	Special Projects Manager, Tadiran Telecom, Senior Component Engineer, ECI Telecom.
Key words:	Project Management, Budgeting, Writing of Company's Rules and regulations, SOW; Microsoft Project; Multifunctional Fax Machine Project Manager, Engineering, Production, Marketing, Customer Interface, ISO 9000 Consultant and Writer, Component Engineering.
1991-1992	Design Group Manager at Tetrad Telecom.
Key words:	Test Equipment Design, Telecommunication, ISDN, Prototyping, Budgeting, Management.
1988-1991	Project Manager of Video Block in Standard Console Project at Astronautics Ltd.

Key words:	Project Management, Budgeting, Writing of Specifications, Writing of SOW, Digital & Analog Circuits Design, System Integration, EMC, Multifunctional Color Display, Customer Interface.
1984-1988	Project Manager of Kornas 2000 (Phantom F-4 USA Air jet upgrading) -Multifunctional Video Block for Airborne Application at Elbit Computers Ltd., Aviation Division.
Key words:	Color, Displays, Video, Video Standards, Video Matrix, SSI-:-VLSI, Analog IC's, EPROMs, ROMs, RAMs, PALs, AGC, Character Generator, Analog & Digital Circuits Design, Breadboarding, PCB Design, ABEL, LRU, System Integration, Transferring to Production, Customer Interface, Diagnostic, MTBF, Thermal Analysis, CAD-CAM, Managing, Budgeting.
1980-1984	Group Leader in QA engineering Dep. at Elbit Computers Ltd.
Key words:	SSI-:-VLSI, Gate-Arrays, TTL, CMOS, Testing, Test Equipment, Maintenance, Programming, Microcode, Mil. Standards, Consulting, Speech Synthesis, Assembler, PCB design, MRB, Surface Mounting Technology, Microprocessors, Microcontrollers.
1978-1980	Chief Development Engineer at Galay Laboratories Ltd.
Key words:	Medical Equipment Design, Control, Automation, SSI-:-VLSI, Memories, State Machines, Breadboarding, Data Conversion, Data Acquisition, Measurement Equipment, Analog & Digital Circuits, Packaging, Mechanical Design, Transferring to Production, Managing, Budgeting, Customer Interface.
1974-1977	First Category Design Engineer at Laboratory for Automation of Processes of Production
Key words:	Sensors, Automation & Control Systems, State Machines, Microcode, System Integration, Displays, Relays, Transferring to production, Managing, Budgeting, Customer Interface.
1973-1974	Engineer at Laboratory for Tuning and Checking of Plague-in Units of Radar Installations.

Key words:	Radar, Microwave, Filters, Mil. Standards, Mil. Environmental Conditions. Standards Modules, Testing, Test Equipment, Customer Interface.
1967-1973	Technician-Laboratory Assistant at Electrical Engineering University, Faculty of Microelectronics and Television.
Key words:	Microelectronics, Diodes, Transistors, IC's Technology, Chip Design, TV Tubes, Plumbicone, TV Signals, Education Television.

EDUCATION

1963-1967	Leningrad College of Aviation Instruments and Automation, Faculty of Aviation Instruments and Automation Devices. Graduated with Honor Diploma #6107021.
1967-1973	B.Sc.E.E. & M.Sc.E.E. Leningrad Electrical Engineering University, Faculty of Television. Qualified as Electronic Engineer, Diploma #869381.
1974-1976	Leningrad State Courses of Foreign Languages. Certificate #593 from English Department.
1981-1982	Courses of INTEL microprocessors.
1982-1983	Programming Course of the Technion, Haifa.
1983, 1987	CAD-CAM courses: LASAR, DAISY.

ARTICLES

1. Development of Phase Filter for Separation of Frequency Modulated Signal. Bulletin of Television Institute, Leningrad, 1967.
2. Brightness Characteristics of Plumbicone Control Device. Bulletin of Scientific Research Institute, Leningrad, 1973.
3. Patent Basics,המדריך הבסיסי לפטנטים, אלקטרוניקה,הירחון לתעשיות עתירת ידע בישראל גיליון 133 2004

PATENTS:

14 Patents and Patent applications

Key words:	Patent Search, Patent Writing, Patent Office Interface & Correspondence.

CURRICULUM VITAE

Name:	Gideon Sahar M.D.	ID No.: 05115676-8
Date/Place of Birth:	21st December 1952, Israel.	
Military Service:	Lieut. Colonel. (1978-1983)	
Place of work:	Soroka Medical Center	Dept.: Thoracic & Cardiovascular Surgery
Tel.:	+972-8- 6400962	
E-Mail Address:	saharg@clalit.org.il	
Home Address:	21 HaLilach Street, Netanya, 42651, Israel	
Tel.:	+972-9-8852076	

Education

M.D. 1970-1976 Hebrew University of Jerusalem - Medical School
Advisor: Prof. D. Goor, Prof. G. Marin
Title: “Pericardial tamponade and its effects on cardiac
performance in absence of pulmonic valve”

B.A. 1981-1985 Tel Aviv University - Medical School-
Postgraduate Education
in Surgery

M.Sc. (Cum Laute) 1985-1987 Tel Aviv University - Medical School – Postgraduate
Education in Surgery

Advisor: Prof. Nathan, Prof. Yoel RackTiltle“Kinking of the carotid artery as a possible pathological factor”

M.H.A. 2000-2002 Tel Aviv University - Recanati Management School

Academic degree: Associate Professor Health faculty Ben-Gurion University - Negev

Further Studies

2006 Workshop in Repair of Mitral and Aortic Valves and P.V.T. (Percutaneous valve implantation) (Prof. Draifus) - Sivilia - Spain

2005 Repair of Mitral and Aortic Valves (Prof. Duran C) - St. Luck Brussels - Belgium

2004 Aortic surgery (Prof. Randall Griepp) - Mount Sinai, New- York

2003 ICH – GCP (Good clinical practice for clinical investigations) - Quintiles

2003 Course in ATG – Automatic Anastomotic Device - Vienna, Austria

2001 Club Mitral: Surgical repair of mitral valve disease and Maze operation (Prof. Carpentier & James Cox) - Pompidou Medical Center Paris, France

2001 Repair of Congenital Heart Disease (Prof. Chauvaud) - Pompidou Medical Center Paris, France

1998 Course in “Latest Techniques in minimally Invasive Cardiac Surgery” - (Prof. Vanehrman) - Erasme Hospital - Brussels, Belgium

1992 Aortic Surgery (Prof. De Geist)- AALST Hospital - Belgium

1991 Course in “Surgical approach to superventricular arrhythmia” - (Prof. Girondon – Canada) - AALST Hospital - Belgium

1991 Course de Transplantationc Cardiaque et Pulmonaire Pitie Sale Petriere - Hospital
Paris, France
1988 Course on innovations in pacemakers - Erasme Hospital Brussels, Belgium
1983 ATLS
1980 Diving Medicine - Rambam Medical Center
1979 Aviation Medicine - Sheba Medical Center
1977 ECFMG

Employment History

2006- Head of Cardiothoracic Surgery department - Soroka Medical Center
2002 - 2006 Head of Transplantation Program - Cardiothoracic Surgery Transplantation Unit, Rabin Medical Center
2000 - 2003 Deputy Head of Department - Cardiothoracic Surgery, Rabin Medical Center
1992 - 2000 Senior Surgeon - Cardiothoracic Surgery, Rabin Medical Center
1992 - 1998 Senior Surgeon - Congenital Surgery, Schneider Children's Medical Center
1989 –1992 Fellowship - Adult Cardiothoracic Surgery and Heart & Lung Transplantation, Erasme Hospital, Brussels, Belgium
1988 – 1989 Senior Surgeon - Thoracic and Cardiovascular Surgery, Tel Aviv Medical Center
1987 – 1988 Senior Surgeon - Thoracic and Cardiovascular Surgery, Rabin Medical Center
1986 – 1987 Department Cardiology, Rabin Medical Center

1985 – 1986 Basic science - Anatomy and Anthropology - Tel Aviv University Medical School

1984 – 1985 Surgery A - Rabin Medical Center

1981 – 1987 Resident - Thoracic and Cardiovascular Surgery, Rabin Medical Center

1977 Internship - Sheba Medical Center

Professional Activities

(a) Position in academic administration

1999-2006 Founder, Coordinator and Head Instructor - Postgraduate Course in Cardiothoracic Surgery - School of Continuing Education, Tel Aviv University

1982 Instructor - Sackler faculty of medicine - Tel Aviv University

(b) Professional functions outside universities

2005 European Society of Cardiology

2004 Israel Medical Association (Hari) - Cardiothoracic board committee

2004 Israel Medical Association (Hari) – Appeal board committee

2004 The Israel National council for surgery anesthesia and intensive care

2001 Head of Cardiothoracic Surgery Examining Board - Israel Medical Association, Scientific Council

2000 Board Member - Israeli Working Group on Heart Failure

1998 Head of Research Program - Cardiothoracic Surgery Department, Rabin Medical Center

1997 The Israel medical council for organ transplant

1996 Scientific Secretary, Mediterranean Association of Cardiology and Cardiac Surgery, (9th Annual Meeting)

1995 Member - Quality Control Committee Israel Council of Organ Transplantation

1992 Coordinator Program for Tel Aviv University students - Cardiothoracic Surgery
Department, Rabin Medical Center

(c) Professional consulting

1995-1997 Automatic anastomotic device

(d) Member of editorial board of scientific or professional journal

2002- Review of medical journal I.M.A.J – (Israel Med. Assoc. Jour)

(e) Membership in professional/scientific societies

2002 Society for Medicine and Law, Israel
2000 Israel Association of Heart Failure, Israel
1999 European Association for Cardiothoracic Surgery
1998 Mediterranean Association of Cardiology and Cardiac Surgery
1995 International Society for Heart and Lung Transplantation
1994 Israel Transplantation Society, Israel
1988 Israel Heart Society, Israel
1987 Israel Surgical Society, Israel
1973 Israel Medical Association, Israel

Education activities

(a) Courses taught

2006 Clerkship – 5th year, Medical school , Ben Gurion University (Distinguished lecturer)

2006 Organ transplantation - 3th year, Medical school , Ben Gurion University

1996 - 2006 Introduction to cardiac surgery - Sackler School of Medicine, Tel Aviv University

1999 - 2006 Founder, Coordinator and Head Instructor - Postgraduate Course in Cardiothoracic Surgery - School of Continuing Education, Tel Aviv University

2001- 2006 Head of Education Program - Cardiothoracic Surgery Department, Rabin Medical Center

2003 - 2006 Lecturer in postgraduate cardiology course

2003 - 2006 Lecturer in postgraduate cardiology course

2003 - 2006 Lecturer in postgraduate geriatric course

(b) Research students supervised

2006 NAKASH Uri - M.D. - Goldman Medical School, Soroka University

2006 COHEN - M.D. - Goldman Medical School, Soroka University

2004 SHAVIT Reut - M.D. - Sackler School of Medicine, Tel Aviv University

2002 KVINT Rotem - M.D. - Sackler School of Medicine, Tel Aviv University

1999 MEIR Avraham - M.D. - Sackler School of Medicine, Tel Aviv University

1996 YANKO Moshe - M.D. - Sackler School of Medicine, Tel Aviv University

Awards, Citations, Honors, Fellowships

(a) Honors, Citation Awards

2006 - Ben Gurion University, Medical School- distinguished lecturer

1985 - Tel Aviv University, Sackler School of Medicine - M.Sc., Cum Laude

1974 - Hebrew University, Jerusalem - Scholarship

1972 - Hebrew University, Jerusalem - Scholarship

1971 - Hebrew University, Jerusalem - Scholarship

1970 - Hebrew University, Jerusalem - Scholarship

(b) Fellowships

1989 – 1992 Adult Cardiac Surgery Heart & Lung Transplantation, Erasme Hospital,
Brussels, Belgium

1991 Cours de Transplantationc Cardiaque et Pulmonaire Pitie Sale Petriere -
Hospital Paris, France

SCIENTIFIC PUBLICATIONS

The author of the following scientific publications

(a) 84 Articles

(b) 2 Newsletter

(c) 1 Authored Book

(d) 4 Conference proceedings

Lectures and presentation at meetings and invited seminars

(a) 1 Invited Paper in Scientific Meetings

(b) 134 Presentation of papers at conferences/meetings

Active Participation in Scientific Meetings

1986 Israel Medical Association Meeting, MEDAX, Jerusalem, Israel

1988 XVI Annual Meeting of the Israel Surgical Society, Tel Aviv, Israel

1999 36th Annual Meeting of Mediterranean Association of Cardiology and Cardiac
Surgery, Corfu, Greece

1994 World Congress of the International Society of Cardiothoracic Surgeons, Jerusalem, Israel

1995 Annual Meeting of the Israel Heart Society, Tel Aviv, Israel

1995 International Society for Cardiovascular Disease, Kyoto, Japan

1996 Annual Meeting of the Israel Transplantation Society, Eilat, Israel

1997 3rd Annual Meeting, Israel Transplantation Society

1998 2nd International Conference on Work Environment and Cardiovascular Disease,
Tel Aviv, Israel

1998 4th Annual Conference, Israel Transplantation Society, Eilat, Israel

1999 12th Annual Meeting, Mediterranean Association of Cardiology and Cardiac
Surgery, Montpellier, France

1999 Israel Heart Society Meeting, Tel Aviv, Israel

1999 5th Annual Conference of Israel Transplantation Society

2000 International Forum on Cardiology and Cardiac Surgery into the New Millennium,

Tel Aviv, Israel 11-12 April

2000 49th International Congress of the European Society for Cardiovascular Surgery,

Dresden, Germany, 24-27 June 2000.

2000 16th Annual Conference of the Israel Transplantation Society, Jerusalem, Israel, 1-

3 June

2001 48th Annual Conference of the Israel Heart Society, Jerusalem, Israel, 1-3 April

2002 New Trends in Immunosuppression, Geneva, Switzerland, 7-10 February

2002 49th Annual Conference of the Israel Heart Society together with the Israel Society

of Cardiothoracic Surgery, Tel Aviv, Israel, 2-22 April

2002 9th Annual Conference of the Israel Transplantation Society, Haifa, Israel, 20-22 June

2002 On Course Toward Improved Outcomes, Monte Carlo, Monaco, 13-15 November

2003 10th Annual Conference of the Israel Transplantation Society, Dan Acadia Hotel,

Herzeliya, 6-8 February.

2003 23rd Annual Meeting of the International Society for Heart and Lung Transplantation,

Vienna, Austria, 9-12 April.

2003 50th Annual Conference of the Israel Heart Society together with the Israel Society of

Cardiothoracic Surgery, Tel Aviv, Israel, April 30 – May 1.

2004 AATS 84 the annual meeting, Toronto, Ontario, Canada, April 25-28

2004 International Symposium transplantation, Berlin, Germany, 6-8th October

2005 Heart and Lung Transplantation. Philadelphia, February 2005

Chairman, Moderator etc. in scientific Meetings

2002 49th Annual Conference of the Israel Heart Society together with the Israel Society of

Cardiothoracic Surgery, Tel Aviv, Israel, 2-22 April.

2003 50th Annual Conference of the Israel Heart Society together with the Israel Society of

Cardiothoracic Surgery, Tel Aviv, Israel, April 30 - May 1.

2006 3th Annual Conference of the Israel Heart Society together with the Israel Society of

Cardiothoracic Surgery, Tel Aviv, Israel, April 26 -27.

Research Grants

2005 Physiological properties of radial artery, Shkezak foundation, 6,000$

2002 Mechanism of modulation of human cardiovascular Ca channels by angiotensin II and a protein tyrosine kinases, 2 years, ministry of health, 80,000$ per year

2005 (Submitted) Planning myocardial revascularization by experimental based simulations (CO-PI)

Present Academic Activities

Research in progress

1 Subject: Physiological aspects and histology of distal IMA and its subdivisions
Expected date of completion: 2006

2 Subject: Paradoxical movement of the septum after open heart surgery, Expected date of completion, 2008

3 Subject: Traumatic damage to the internal thoracic artery cause by external closure instrument, Expected date of completion, 2008

4 Subject: Cognitive disturbance after cardiac surgery with regard to the site of aortic cannulation, Expected date of completion: 2008

5 Subject: Planning myocardial revascularization by experimental based simulations

Fiscal info.

Appendix G-1 Projected Revenues by year ($000's)

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Sternum Systems Sales							
No. of cardiologic surgery rooms (US)	10,000	10,000	10,000	10,000	10,000	10,000	10,000
No. of cardiologic surgery rooms (WW)	25,000	25,000	25,000	25,000	25,000	25,000	25,000
No. of sold units				15	40	150	400
Penetration of System	0.00%	0.00%	0.00%	0.06%	0.16%	0.60%	1.60%
No. of Customers	-	-	-	15	55	205	605
System Price ($000's)	$0	$0	$0	$100	$100	$100	$100
Revenues from systems sales	$0	$0	$0	$1,500	$4,000	$15,000	$40,000
Support (20% of system cost)	**$0**	**$0**	**$0**	**$300**	**$1,100**	**$4,100**	**$12,100**
Total Sales ($000's)	**$0**	**$0**	**$0**	**$1,800**	**$5,100**	**$19,100**	**$52,100**

Appendix A-8 *Projected System Cost ($000's)*

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
System Manufacturing Cost				$27	$27	$27	$27
Packaging and Shipment to Customer				$3	$3	$3	$3
Training the customer at his facility (1 week @ hospital) t&a				$3	$3	$3	$3
Total Unit Cost	$0.00	$0.00	$0.00	$33	$33	$33	$33

APPENDIX A FINANCIALS cont.

Appendix A-7 *General Assumptions*

Description		
Customers credit terms	60	days
Suppliers credit terms	60	days
Advisers Commissions	10%	
Commissions credit terms	60	days
Debt Interest ($)	6%	
Credit Interest ($)	2%	

	Q1	Q2	Q3	Q4
Revenues Breakdown to quarters	15%	20%	30%	35%

R&D	Yearly cost		Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Y	
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Expenses	K$																											
Optical System by AMS																												
Feasibility Test			120																									
Dev. of 1st prototype					206.4																							
Dev. Of 2nd prototype							252																					
Dev + testing of full scale imaging processing system									132																			
Manufacturing and run of system in fnal configuration										144																		
Product design according to medical requirements																												
elecronic device designer						25	25																					
the system							70	100																				
Tools + Accessories designs																												
company design						70																						
system accessories manufacturing						70																						
Phisycal Testing																												
Testing Accessories on Pigs						90	90																					
Testing system on Pigs											90	90																
QA- System + Mechanic part						5	5	5	5	5	5	5	5	5														
Standartization in Europe																												
Notification Body									30																			
Israeli Standartization Institution									20																			
Israeli Lab)									20																			
Clinical tests											150	150																
Other											50																	
Medical advisors			3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	20	20	20	20	20	20
Seats			9	0	6	0	0	0	3	0	0	0	3	0	13.5	0	12	0	21	0	12	0	37.5	0	0	0	39	0
Travel															12	12	12	12	24	24	24	24	36	36	36	36	36	36
Tot. Cost			132	3	215	263	445	108	213	152	298	248	11	8	29	15	27	15	48	27	39	27	94	56	56	56	95	56
Annual Total						613				918				565				86				141				262		

R&D	Employer Yearly cost	Employee BRUTO monthly salary	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
car	K$	K-NIS																									
engineer (Boris)	100	26.7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Electronic Engineer	85	22.7	0	0	1	1	1	1	1	1	1				1	1	1	1	1	1	2	2	4	4	4	4	6
Software Engineer	63	16.8	0	0	1	1	1	1	1	1	1				1	1	1	1	1	1	2	2	4	4	4	4	6
Mechanical Engineer	85	22.7	1	1	1	1	1	1	1	1	1				1	1	1	1	1	1	1	1	1	1	1	1	1
Standartization	90	24.0							1	1	1	1					1	1	1	1	1	1					
Technical writer	60	16.0																	1	1	1	1	1	1	1	1	1
Secretary	40	10.7															1	1	1	1	1	1	1	1	1	1	1
Tot. Manpower			46	46	83	83	83	83	106	106	106	48	25	25	83	83	116	116	131	131	168	168	219	219	219	219	293
Annual Total						259				378				203				398				597				877	

Operations	Employer Yearly cost	Employee BRUTO monthly salary	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
car	K$	K-NIS																									
Operations manager	80	20.5													1	1	1	1	1	1	1	1	1	1	1	1	1
Technical Support	50	12.8																	1	1	1	1	3	3	3	3	5
QA	60	15.4																			1	1	1	1	1	1	1
Training	80	20.5													0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3	3	3	3	6
Tot. Manpower			0	0	0	0	0	0	0	0	0	0	0	0	30	30	30	30	43	43	58	58	133	133	133	133	218
Annual Total						0				0				0				120				200				530	

Operations			Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Expenses	K$																									
Variable expenses are registered on product cost																										
Seats cost - see line 44 (seats)																										
Tot. Expenses			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual Total						0				0				0				0				0				0
Total Investment			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Integration headcount				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1

Marketing	Employer Yearly cost	Employee BRUTO monthly salary	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
inc. car	K$	K-NIS																								
Sales & Marketing Manager	180	46.2															1	1	1	1	1	1	1	1	1	1
Salesman	120	30.8											1	1	1	1	2	2	3	3	3	3	6	6	6	6
Marcom	60	15.4																	1	1	1	1	1	1	1	1
Secretary	40	10.3																			1	1	1	1	1	1
Tot. Manpower			0	0	0	0	0	0	0	0	0	0	30	30	30	30	105	105	150	150	160	160	250	250	250	250
Annual Total						0				0				60				270				620				1,000

Marketing			Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Expenses	K$																									
Marcom - tech + marketing													5	5	2	2	2	2	2	2	2	2	5	5	5	5
travel			0	0	0	0	0	0	0	0	0	0	25	15	15	15	40	40	55	55	55	55	100	100	100	100
Tradeshows													40			20		40		40		40		100		100
Web design											5				10				10				10			
Marcom prints													5			5				20				20		
Tot. Expenses			0	0	0	0	0	0	0	0	5	0	75	20	27	42	42	82	67	117	57	97	115	225	105	205
Annual Total						0				0				100				193				338				650

Management	Employer Yearly cost	Employee BRUTO monthly salary	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6					
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Manpower inc. meals, not inc. car	K$	K-NIS																										
CEO	125	32.1											1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CFO	115	29.5																	1	1	1	1	1	1	1	1	1	1
Secretary	25	6.4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
Bookeeper	40	10.3																	1	1	1	1	3	3	3	3	3	3
Tot. Manpower			6	6	6	6	6	6	6	6	6	6	38	38	38	38	38	38	83	83	83	83	103	103	103	103	103	103
Annual Total						25				25				88				150				330				410		

Management			Year 1				Year 2				Year 3				Year 4				Year 5				Year 6					
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Expenses	K$																											
Office service + accounting			0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	2	2	2	2	2	2	2	2	4	4	4	4	4	4	4	4	6	6
Rent + Taxes (20 m2/emp, $12/m2)			3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	8	8	8	8	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
Office supplies			1				1		1		1		1		1	1	1	1	5	5	5	5	5	5	5	5	5	5
Telecommunication			1	1	1	1	1	1	1	1	1	1	3	3	3	3	3	3	15	15	15	15	20	20	20	20	20	20
Tot. Expenses			6	5	5	5	6	5	6	7	8	7	10	9	14	14	14	14	46	46	46	46	51	51	51	51	53	53
Total in a year						21				24				32				56				182				202		

Total		Year 1				Year 2				Year 3				Year 4				Year 5				Year 6					
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
	K$																										
R&D - Salary		46	46	83	83	83	83	106	106	106	48	25	25	83	83	116	116	131	131	168	168	219	219	219	219	293	29
Management - Salary		6	6	6	6	6	6	6	6	6	6	38	38	38	38	38	38	83	83	83	83	103	103	103	103	103	10
Operations - Salary		-	-	-	-	-	-	-	-	-	-	-	-	30	30	30	30	43	43	58	58	133	133	133	133	218	21
Marketing - Salary		-	-	-	-	-	-	-	-	-	-	30	30	30	30	105	105	150	150	160	160	250	250	250	250	370	37
R&D exp.		132	3	215	263	445	108	213	152	298	248	11	8	29	15	27	15	48	27	39	27	94	56	56	56	95	5
Marketing exp.		-	-	-	-	-	-	-	-	5	-	75	20	27	42	42	82	67	117	57	97	115	225	105	205	175	38
Operating exp.		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management exp.		6	5	5	5	6	5	6	7	8	7	10	9	14	14	14	14	46	46	46	46	51	51	51	51	53	5
Tot. Expenses		191	61	310	358	541	203	331	271	423	308	188	129	250	252	371	399	566	595	609	637	963	1,036	916	1,016	1,306	1,47
Total in a year					919				1,345				1,048				1,273				2,408				3,931		
Total Head count		3	3	5	5	5	5	6	6	6	3	4	4	9	9	13	13	20	20	24	24	36	36	36	36	49	
R&D Head Count		2	2	4	4	4	4	5	5	5	2	1	1	4	4	5	5	5	5	7	7	10	10	10	10	14	
quarters		0.15	0.2	0.3	0.35																						

APPENDIX A FINANCIALS cont.

Appendix A-1 *Projected Income Statement - Yearly*
($000's)

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Revenues	**0**	**0**	**0**	**1,800**	**5,100**	**19,100**	**52,100**
Operating Expenses							
Advisers Commissions on sales	0	0	0	180	510	1,910	5,210
Manufacturing Cost	0	0	0	495	1,320	4,950	13,200
Salaries / Wages	259	378	263	788	1,417	2,407	3,523
R&D	613	918	565	86	141	262	263
Operations	0	0	0	0	0	0	0
Marketing / Sales	0	0	100	193	338	650	1,090
General / Administrative	46	49	120	206	512	612	620
Total Operating Expenses	919	1,345	1,048	1,948	4,238	10,791	23,906
EBITDA	**-919**	**-1,345**	**-1,048**	**-148**	**862**	**8,309**	**28,194**
Depreciation	0	0	0	0	0	0	0
EBIT	**-919**	**-1,345**	**-1,048**	**-148**	**862**	**8,309**	**28,194**
Interest Expense	17	94	179	229	244	108	0
Profit Before Taxes	**-936**	**-1,439**	**-1,227**	**-377**	**618**	**8,201**	**28,194**
Taxes on Profit (20%)	0	0	0	-75	124	1,640	5,639
Net Profit	**-936**	**-1,439**	**-1,227**	**-302**	**494**	**6,561**	**22,555**
Cumulative Net Profit	**-936**	**-2,375**	**-3,602**	**-3,904**	**-3,409**	**3,152**	**25,707**

APPENDIX A FINANCIALS cont.

Appendix A-3 *Projected Balance Sheet - Yearly ($000's)*

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Assets							
Current Assets							
Cash	-757	-2,269	-3,578	-4,072	-4,059	468	18,067
Accounts Receivables	0	0	0	420	1,190	4,457	12,157
Inventory	0	0	0	0	0	0	0
Sub Total Current Assets	**-757**	**-2,269**	**-3,578**	**-3,652**	**-2,869**	**4,925**	**30,223**
Fixed Assets							
Equipment + Computers	0	0	0	0	0	0	0
Accumulated Depreciation	0	0	0	0	0	0	0
Sub Total Fixed Assets	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	-		-		-	-	-
Total Assets	**-757**	**-2,269**	**-3,578**	**-3,652**	**-2,869**	**4,925**	**30,223**
Liabilities / Net Worth							
Liabilities							
Accounts Payable	179	106	24	252	540	1,773	4,517
Sub Total Liabilities	**179**	**106**	**24**	**252**	**540**	**1,773**	**4,517**
Shareholders' Equity							
Original paid-in Capital	0	0	0	0	0	0	0
Retained Earnings	-936	-2,375	-3,602	-3,904	-3,409	3,152	25,707
Sub Total Shareholders' Equity	**-936**	**-2,375**	**-3,602**	**-3,904**	**-3,409**	**3,152**	**25,707**
Total Liabilities / Net Worth	**-757**	**-2,269**	**-3,578**	**-3,652**	**-2,869**	**4,925**	**30,223**

APPENDIX A FINANCIALS cont.

Appendix A-5 *Projected Cash Flow Statement - Yearly*
($000's)

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
CF from Operating Activities							
Net Profit	-936	-1,439	-1,227	-302	494	6,561	22,555
increase in Accounts Receivables - net	179	-73	-81	-193	-482	-2,033	-4,957
Depreciation	0	0	0	0	0	0	0
	-757	**-1,512**	**-1,308**	**-494**	**12**	**4,528**	**17,598**
Capital Expenditures	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CF from Financial activities	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Investment	0	0	0	0	0	0	0
Net Cash Flow	**-757**	**-1,512**	**-1,308**	**-494**	**12**	**4,528**	**17,598**
Accumulated Net Cash Flow	**-757**	-2,269	-3,578	-4,072	-4,059	468	18,067

Appendix A-2 *Projected Income Statement*
- Quarterly ($000's)

Description	1st	2nd	3rd	4th	1st	1st	1st	4th	1st	2nd	3rd	4th
Revenues		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Operating Expenses												
Advisers Commissions on sales	0	0	0	0	0	0	0	0	0	0	0	0
Manufacturing Cost	0	0	0	0	0	0	0	0	0	0	0	0
Salaries / Wages	46	46	83	83	83	83	106	106	106	48	55	55
	13		21	26								
R&D	2	3	5	3	445	108	213	152	298	248	11	8
Operations	0	0	0	0	0	0	0	0	0	0	0	0
Marketing / Sales	0	0	0	0	0	0	0	0	5	0	75	20
General / Administrative	12	11	11	11	12	11	12	13	14	13	47	46
	19		31	35								
Total Operating Expenses	1	61	0	8	541	203	331	271	423	308	188	129
	-191	**-61**	**-310**	**-358**	**-541**	**-203**	**-331**	**-271**	**-423**	**-308**	**-188**	**-129**
EBITDA												
Depreciation	0	0	0	0	0	0	0	0	0	0	0	0
	-191	**-61**	**-310**	**-358**	**-541**	**-203**	**-331**	**-271**	**-423**	**-308**	**-188**	**-129**
EBIT												
Interest Expense	1	3	5	9	15	21	27	31	37	42	48	52
	-191	**-63**	**-315**	**-366**	**-555**	**-224**	**-358**	**-302**	**-459**	**-351**	**-236**	**-181**
Profit Before Taxes												
Taxes on Profit	0	0	0	0	0	0	0	0	0	0	0	0
	-191	**-63**	**-315**	**-366**	**-555**	**-224**	**-358**	**-302**	**-459**	**-351**	**-236**	**-181**
Net Profit												
	-191	**-255**	**-570**	**-936**	**-1,491**	**-1,715**	**-2,073**	**-2,375**	**-2,834**	**-3,185**	**-3,421**	**-3,602**
Cumulative Net Profit												

Appendix A-4 *Projected Balance Sheet - Quarterly ($000's)*

Description	1st	2nd	3rd	4th	1st1	1st	1st	4th	1st	2nd	3rd	4th
Assets												
Current Assets												
Cash	-99	-249	-423	-757	1,191	1,640	1,927	2,269	2,627	3,015	3,357	3,578
Accounts Receivables	0	0	0	0	0	0	0	0	0	0	0	0
Inventory	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Current Assets	**-99**	**-249**	**-423**	**-757**	**1,191**	**1,640**	**1,927**	**2,269**	**2,627**	**3,015**	**3,357**	**3,578**
Fixed Assets												
Equipment + Computers	0	0	0	0	0	0	0	0	0	0	0	0
Accumulated Depreciation	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total Fixed Assets	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Assets	**-99**	**-249**	**-423**	**-757**	**1,191**	**1,640**	**1,927**	**2,269**	**2,627**	**3,015**	**3,357**	**3,578**
Liabilities / Net Worth												
Liabilities												
Accounts Payable	92	5	147	179	301	75	146	106	207	170	64	24
Sub Total Liabilities	**92**	**5**	**147**	**179**	**301**	**75**	**146**	**106**	**207**	**170**	**64**	**24**
Shareholders' Equity												
Original paid-in Capital	0	0	0	0	0	0	0	0	0	0	0	0
Retained Earnings	-191	-255	-570	-936	-1,491	-1,715	-2,073	-2,375	-2,834	-3,185	-3,421	-3,602
Sub Total Shareholders' Equity	**-191**	**-255**	**-570**	**-936**	**-1,491**	**-1,715**	**-2,073**	**-2,375**	**-2,834**	**-3,185**	**-3,421**	**-3,602**
Total Liabilities / Net Worth	**-99**	**-249**	**-423**	**-757**	**1,191**	**1,640**	**1,927**	**2,269**	**2,627**	**3,015**	**3,357**	**3,578**

Appendix A-6 *Projected Cash Flow Statement Quarterly ($000's)*

Description	1st	2nd	3rd	4th	1st	1st	1st	4th	1st	2nd	3rd	4th
CF from Operating Activities												
Net Profit	-191	-63	-315	-366	-555	-224	-358	-302	-459	-351	-236	-181
(increase in Accounts Receivables) - net	92	-87	142	32	122	-225	71	-40	101	-37	-106	-39
Depreciation	0	0	0	0	0	0	0	0	0	0	0	0
	-99	**-150**	**-173**	**-335**	**-433**	**-449**	**-287**	**-342**	**-358**	**-388**	**-342**	**-220**
Capital Expenditures	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CF from Financial activities	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Investment	0	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow	**-99**	**-150**	**-173**	**-335**	**-433**	**-449**	**-287**	**-342**	**-358**	**-388**	**-342**	**-220**
Accumulated Net Cash Flow	**-99**	-249	-423	-757	-1,191	-1,640	-1,927	-2,269	-2,627	-3,015	-3,357	-3,578

Exhibit I *Revenue, EBITDA & Cash Flow by Year ($000's)*

Description	2010	2011	2012	2013	2014	2015	2016
Revenues	0	0	0	1,800	5,100	19,100	52,100
EBITDA	-919	-1,345	-1,048	-148	862	8,309	28,194
Cash Flow	-757	-1,512	-1,308	-494	12	4,528	17,598
NPV ($m, i=15%)	$17						

Operating Expenses Yearly ($000's)

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Operating Expenses							
Marketing / Sales							
Advisors commissions	0	0	0	180	510	1,910	5,210
Marketing / Sales Salaries	0	0	60	270	620	1,000	1,480
Marketing / Sales Expenses	0	0	100	193	338	650	1,090
	0	**0**	**160**	**643**	**1,468**	**3,560**	**7,780**
Operations & R&D							
Operations Salaries	0	0	0	120	200	530	870
Manufacturing Costs	0	0	0	495	1,320	4,950	13,200
R&D Salaries	259	378	203	398	597	877	1,173
R&D Expenses	613	918	565	86	141	262	263
	872	**1,296**	**768**	**1,099**	**2,258**	**6,619**	**15,506**
Management Expenses							
Management Salaries	25	25	88	150	330	410	410
G&A Expenses	21	24	32	56	182	202	210
	46	**49**	**120**	**206**	**512**	**612**	**620**
Depreciation	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Operation Expenses	**919**	**1,345**	**1,048**	**1,948**	**4,238**	**10,791**	**23,906**
Total year-end head count	**5**	**6**	**4**	**13**	**24**	**36**	**36**

Appendix A-9 *Break Even Calculation*
($000's)

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Total Yearly Costs	919	1,345	1,048	1,948	4,238	10,791	23,906
Variable Costs (solutions integration cost)	0	0	0	675	1,830	6,860	18,410
Fixed Costs	919	1,345	1,048	1,273	2,408	3,931	5,496
Avg.Price per sold System	$0.0	$0.0	$0.0	$100.0	$100.0	$100.0	$100.0
Break even no. of *System* unit sales (000's)	**na**	**na**	**na**	**13**	**24**	**39**	**55**
No. of sold *S*ystem Business Plan (000's)	-	-	-	15	55	205	605