

Project title: **Business Plan Holographix Corporation**

Course name: **Technological Entrepreneurship**

Course number: EMGT 510/610

Term and Year: Fall 2004

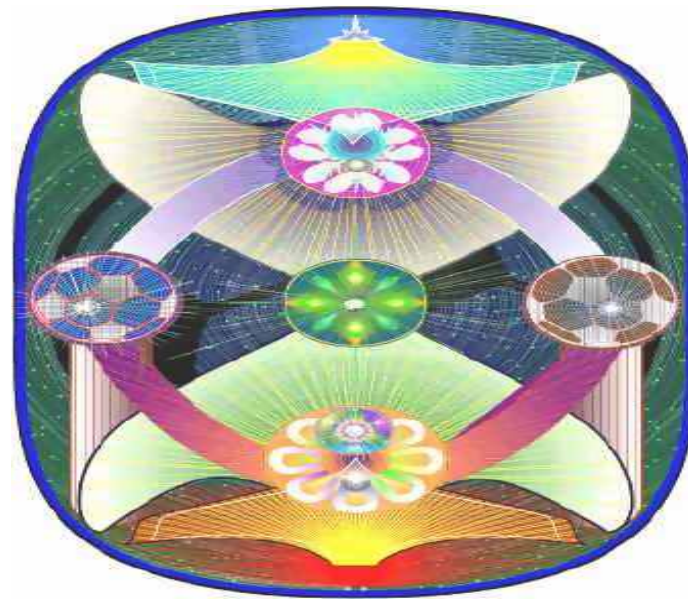
Instructor: Charles Weber, Ph.D.

Authors:

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- Chris Cheng-Yuu Chen
- Irfan Khawaja
- Basel Jaffal

Abstract: HolographiX Corp aims at revolutionizing the way people see the world. Imagine having a 3D conference or playing 3D games or watching 3DTV; HolographiX Corp is working towards a new generation of 3D living. Currently, we are in the process of developing a unique 3 Dimensional viewing device called “Mirage-3D” which will be able to project a moving image in three-dimensional space using the x, y and the z planes. Our technology as explained in the business description and the appendix is unique and is currently in the process of filing for a patent. We plan to package our technology as a unique 2d to 3d hardware and software solution that will be compatible with the current desktop computers. The first prototype will be ready by the last quarter of 2005 after which we will immediately setup our own manufacturing facility and expect the first commercial batch to leave the assembly line by the third quarter of 2006.

HOLOGRAPHIX CORPORATION



Adding a whole new dimension to your life.....

AGENDA

- COMPANY
- MARKET ANALYSIS
- TECHNOLOGY DESCRIPTION
- OPERATIONS
- RISKS & STRATEGY
- FUNDING REQUIREMENTS

BUSINESS DESCRIPTION

- **the NEED**

- Superior quality of image display and advanced graphical ability is in demand
- To remove “virtual” from “virtual reality” and provide true 3d representation of images
- Advanced gaming requires advanced graphical representation of images.
- 3D market virtually untapped
- Be the first to catch the 3D wave which is inevitably going to be the display medium of the future

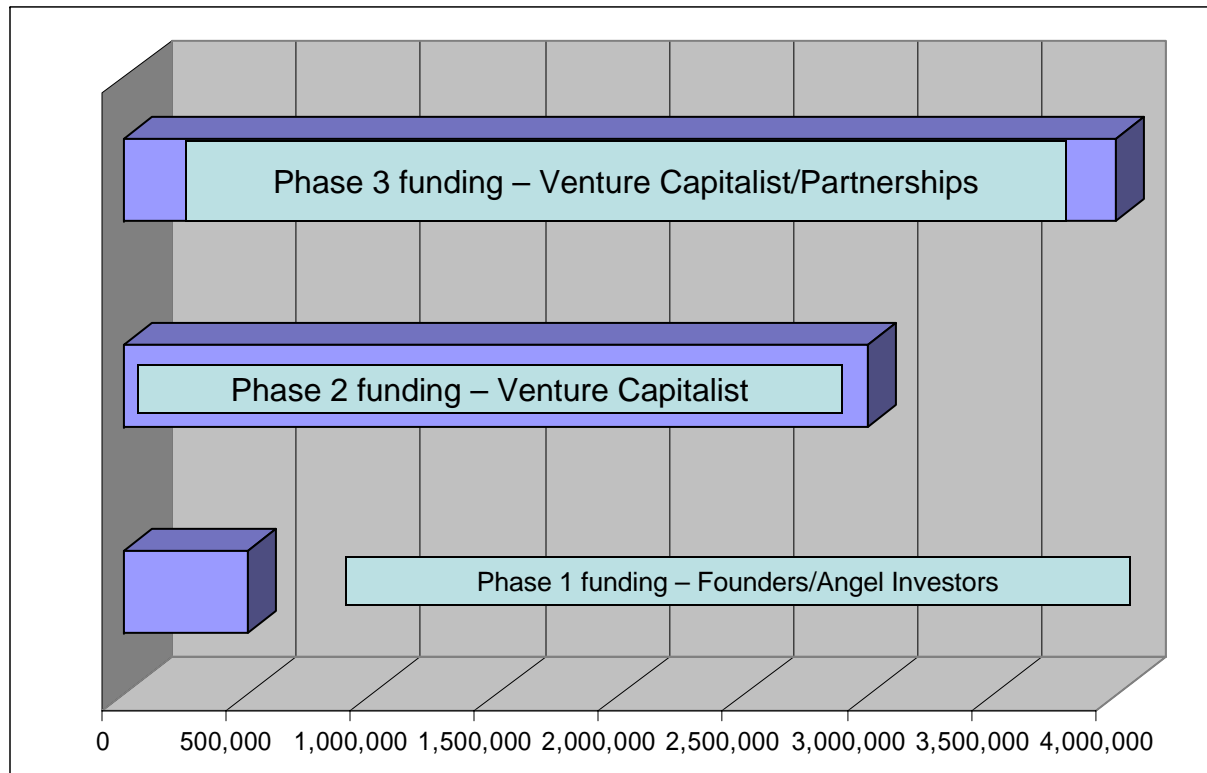
- **the Product – “MIRAGE-3D”**

- unique 3 Dimensional display device
- Ability to project a moving image in three-dimensional space using the x, y and the z planes
- Connects to a personal computer to fully optimize the data resources to be displayed
- Critical in any situation where depth perception is vital

- **the Market**

- Gaming industry : over 20 billion dollars annual revenue
- Medical industry : over 7 billion dollars of advanced computing devices purchased annually
- CAD software industry : over 2 billion dollars in hi-tech equipments purchased annually
- And finally a global market space to expand our business and provide rapid growth potential

FUNDING REQUIREMENTS



MANAGEMENT TEAM

Chris Chen
Chief Finance Officer
Co-founder

Vikas Singhal
Chief Technology Officer
Co-founder

Prashant Iyer
Chief Executive Officer
Co-founder

Irfan Khawaja
Chief Operations Officer
Co-founder

Basel Jaffal
VP Risks and Strategy
Co-founder

Board of Advisors

Dr. Charles Weber, Portland State University

Dr. Cynthia Brown, CS Department Chair, Portland State University

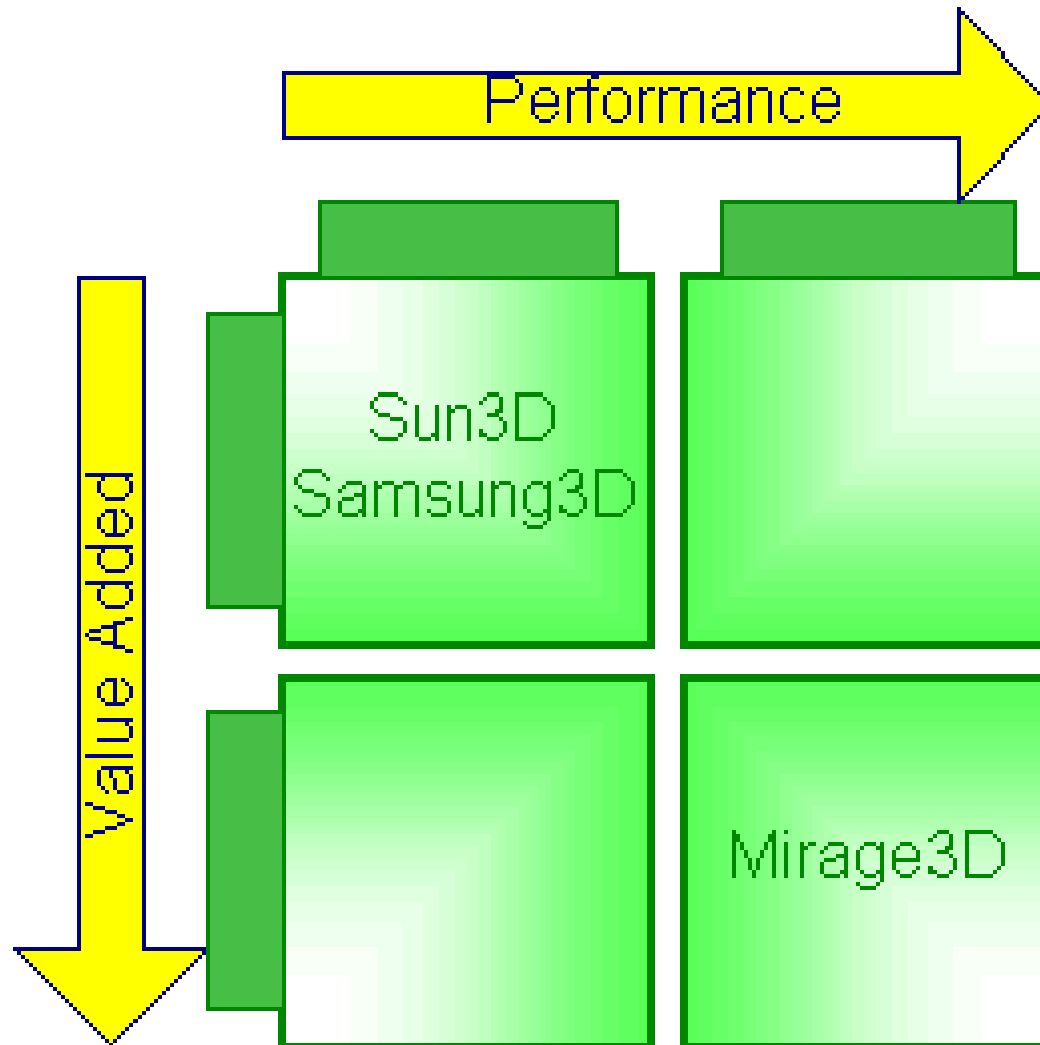
CURRENT MARKET

- Current Computer Monitor is 2 dimensional
- CRT and LCD Technology are years old
- CRT/LCD Technology life cycle is in its end, however they still sell
- Lack depth perception and unable to display 3 Dimensional
- Current 3D displays are only simulation of a third dimension on a two dimension monitor
- Market capital of 2D display devices is over 20 billion dollars worldwide

CURRENT VS FUTURE

CRT/LCD Displays	Mirage3D
<ul style="list-style-type: none">•2D•Technology is years old•In the End of Technology Life Cycle•Lack depth perception•The past	<ul style="list-style-type: none">•3D•New Breakthrough technology•Start of a new Technology curve•Contains depth perception•The future

COMPETITION



MARKET STRATEGY

- Our objective is to increase sales each year with an aggressive promotional campaign. Our focus is on:
 - 3D Gaming (Total gaming industry is \$20billion)
 - 3D Medical surgery (Accuracy and precision is a must)
 - 3D CAD Software (Better Accuracy and precision in 3D Imaging)
- We will advertise our product from the beginning of 2005 through
 - Online website www.holographix.com
 - Industry Expos for computer display devices

BUSINESS STRATEGY

- Partnership with a reputable PC manufacturer such as Dell, HP
- Partnership with a reputable Operating Systems company such as Microsoft
- Partnership with a reputable Gaming software company such as Electronic Arts
- All partnerships allow companies to develop 3D solutions using Mirage3D

FEATURES AND BENEFITS

Features	Benefit
3D Gaming	More realistic gaming experience
3D Medical Monitors	3D imaging helps doctors better view and diagnose problems
3D Robotic Controls	Better accuracy and control of robotic arms from 3D imaging
3D Simulators for cars, airplanes, and anything requiring man control	Simulate 3D in environments where it is crucial

SALES AND DISTRIBUTION

- E-Commerce via website www.holographix.com
- Toll Free number for ordering
- Retailers (Best Buy, Fry's Circuit City)

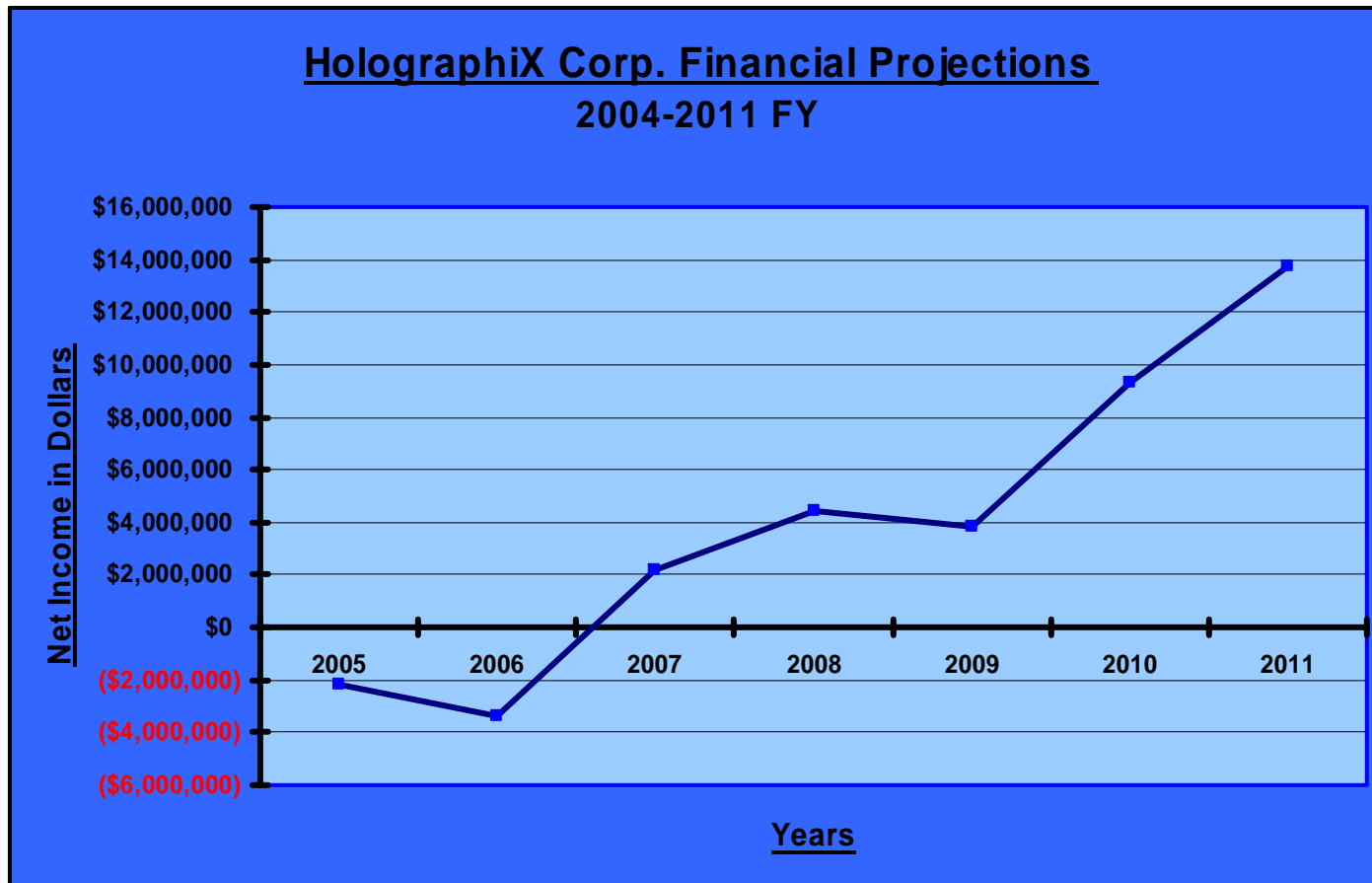
FINANCIALS SUMMARY

- Positive Cash Flow in 2007
- Break Even in fourth Quarter of 2008
- Full ROI within 6 years
- Return on Sales of 28% in 2008

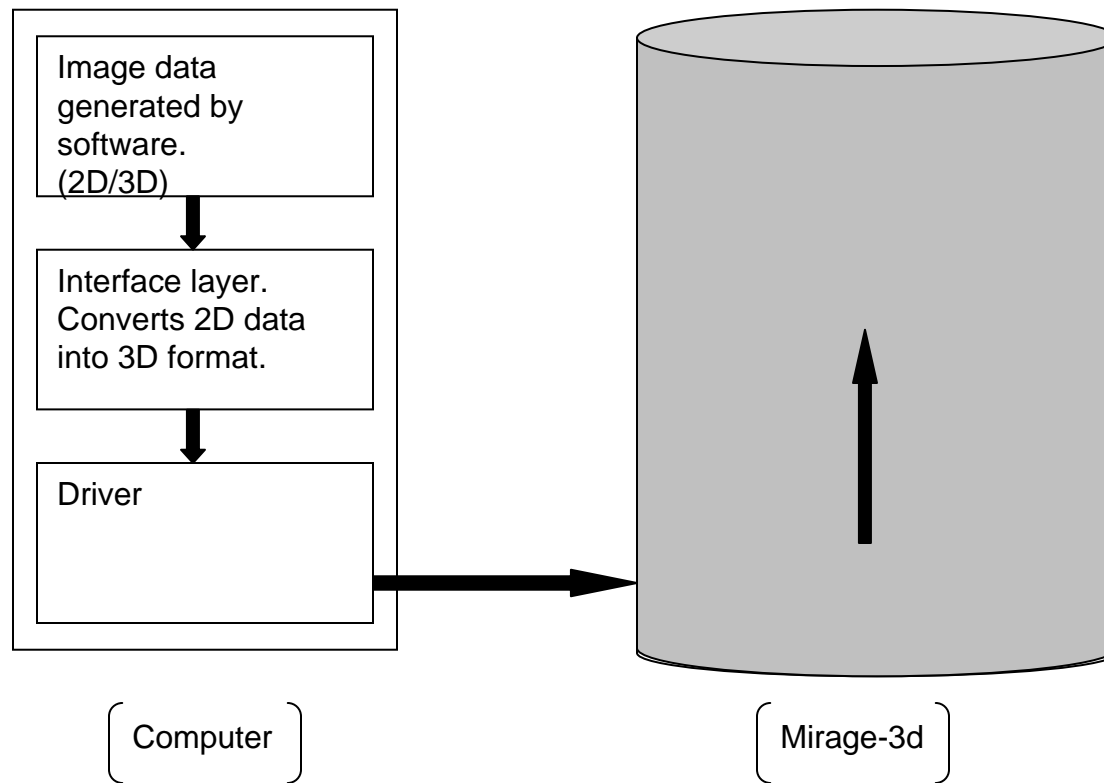
PROFIT & LOSS

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Total US Market for 3D Monitors	10,000,000	10,500,000	11,100,000	11,800,000	12,500,000	13,300,000	15,000,000
Market Share	0.00%	0.00%	0.03%	0.07%	0.10%	0.21%	0.30%
Units Sold	0	500	3800	8000	13000	28000	45000
Unit Price	0	5000	4500	3500	3000	1900	1350
Total Revenue	\$0	\$2,500,000	\$17,100,000	\$28,000,000	\$39,000,000	\$53,200,000	\$60,750,000
R&D	\$1,500,000	\$600,000	\$1,200,000	\$2,500,000	\$3,500,000	\$4,000,000	\$4,000,000
COGS	\$0	\$1,250,000	\$7,600,000	\$12,000,000	\$18,200,000	\$22,400,000	\$22,500,000
Marketing	\$100,000	\$500,000	\$1,000,000	\$1,250,000	\$1,500,000	\$2,000,000	\$2,500,000
Operations	\$600,000	\$3,000,000	\$4,800,000	\$7,800,000	\$12,000,000	\$15,500,000	\$18,000,000
EBITDA	(\$2,200,000)	(\$2,850,000)	\$2,500,000	\$4,450,000	\$3,800,000	\$9,300,000	\$13,750,000

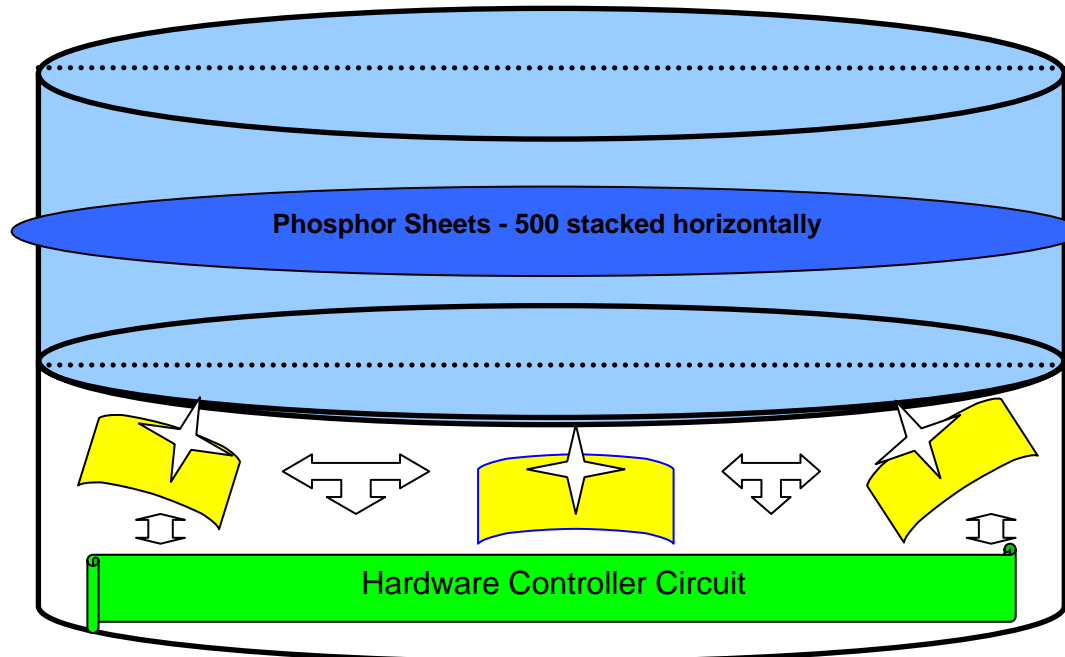
NET INCOME



Data Flow Diagram



Mirage-3D



The Mirage-3D

A 3D Hologram Generating Device

{Base of the Mirage-3D containing the hardware circuitry and the three electron guns}

Components of the Mirage-3D

- ***Hardware components***

- 600 phosphor sheets stacked in horizontal order
- 3 electron guns to excite the phosphor particles on the sheets.
- A protective transparent material covering the outer framework of the cylinder.
- A digital to analog signal converter together with a controller circuit control the electron guns.

- ***Software Components***

- driver
- A RS-232 communications protocol stack
- 2D to 3D data conversion layer for backward compatibility.

Intellectual Property

- **Technological Patents**

- Transparent circular phosphor sheets which are highly polarizable and illuminate only when hit by electron beams of a particular frequency and intensity
- Hardware Controller Circuit
- Horizontally stacking of the phosphor sheets in the display device
- Complete design of the Mirage-3D
- Manufacturing processes to develop the Mirage-3D

- **Software Copyrights**

- develop software drivers for 2d -3d conversion on Mirage-3D.
- other 3D software's including 3D games with strategic alliances.

- **Trade Secrets**

- Follow coke's model.
- Release the architecture and the interface.

OPERATIONS

- Registration: “C” Corporation*
- Founding Share holders:
 - Prashant Iyer, CEO (20% share)
 - Vikas Singhal, CTO (20% share)
 - Chris Chen, CFO (20% share)
 - Irfan Khawaja, COO (20% share)
 - Bassel Jaffal, President HR (20% share)
- Federal Tax Id
- Bank Account: Bank of America
- Law Firm: Jordan Schrader Attorney at Law

COMPANY LOCATIONS AND FACILITIES

- Corporate Office, R&D facilities: Portland, Oregon*
- Manufacturing Facility: Puerto Rico

START-UP PLAN

- Focus for the year 2006:
 - Establishing an organization and office presence within the USA and overseas.
 - Completing the development of patents and other intellectual property for the proposed product
 - Completion of prototype in European facility
- Hiring:
 - **R&D:** 12 Engineers, 2 Supervisors, 1 Manager reporting to CTO
 - **Marketing:** 4 marketing associates, 1 Manager reporting to CFO
 - **HR:** 3 HR associates, 1 Manager reporting to President HR
 - **Accounts & Operations:** 6 associates, 1 Manager reporting to COO

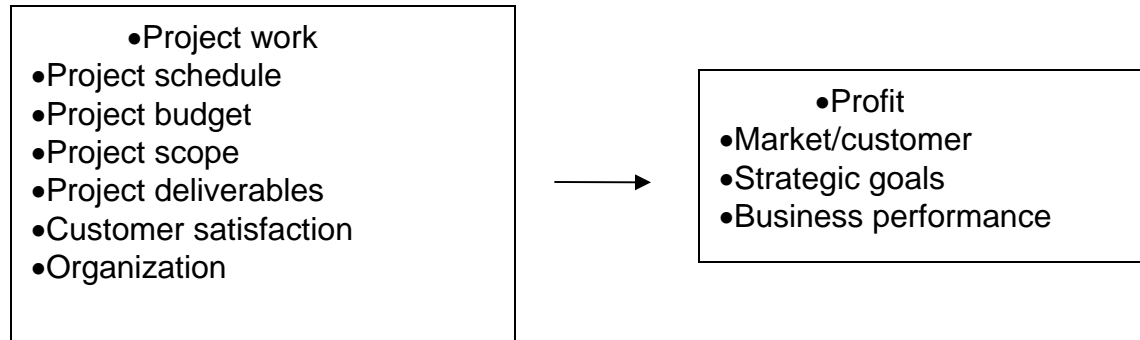
OPERATIONAL EXPENSES (2007)

Legal fee for filing of patents	\$50000
Lease of Portland and Puerto Rico facilities	\$678000
Office furniture, Equipments and Insurance	\$700000
Hiring cost, Salaries and benefits	\$3100000
Travel and Shipping costs	\$50000
Administrative, Other	\$25000
Sub-total	\$4603000

Critical Risks

- **Operational Risks:**
 - Project Work, Implementation and Integrity
 - Project Schedule, especially delays
 - Project Budget, especially overruns
 - Project Scope, including technical performance
 - Project Deliverables
 - Customer Satisfaction, especially unsatisfactory product performance and cost of the product
 - Organization, especially key people

Risk impact on Company



<u>Risks Identification</u>	<u>Mitigation plan</u>
What if Competing Products enters the Market, new technologies being developed?	<ul style="list-style-type: none"> • Try to be on the cutting edge of technology. • Stay focused on constantly improving operations
What about the delays of having a software to support the hardware?	<ul style="list-style-type: none"> •Work with the software companies. •Support open source.
Alliances with OEMs do not work out.	<ul style="list-style-type: none"> •Release the product in the market ourselves.
Unforeseen risks	<ul style="list-style-type: none"> •Our risk mitigation strategy will include roles and responsibilities for developing, implementing and monitoring the strategy plus timelines and process to solve any incoming risk.

Exit strategy

- IPO (Initial Public Offering)
- Selling the business.

COMPETITIVE ADVANTAGE

- We aim to form strategic alliances with various companies as mentioned earlier during our incubation period.
- Reasons why companies will want to form an alliance with HolographiX Corp
 - Risk of missing out on the next technological wave
 - If we are, what we say we are then they risk losing our business to their competitors
 - Increase in sales, first to hit the market, more profits for them
 - If we capture the market without any alliance, then an alliance would prove very costly for them to establish
 - Since there is no other product even close to the Mirage-3D, they don't have much of a choice to choose from.
 - Low risk high return strategic investment for OEM's

FUTURE GROWTH AND EXPANSION PLAN

HolographiX Corporation will venture into the US markets with a single product called Mirage-3D. Some of the future growth opportunities that we will be looking at are listed below.

- Three dimensional pointing devices (3D Mouse) and keyboards.
- Three Dimensional Software Solutions targeting select industries like medicine, Computer Aided Design and manufacturing.
- Developing Mirage-3D in a variety of sizes catering to different economical classes of consumers.
- Developing an alternate version of the Mirage-3D specifically suited for 3D Televisions.
- Using the concept of 3D holographic projections combined with nanotechnology to store and retrieve data.
- A global expansion plan to enter and compete in foreign markets after 2010.

FUNDING REQUIREMENTS

The company will require funding from a venture capitalist in the amount of \$7 million in total. This amount of funding will be used for the purposes of

- Setup company by creating office facilities, web presence, and contracting a manufacturing site
- Research and Development of Mirage-3D and create a working prototype along with a finished product within 1 year of company startup
- Marketing Mirage-3D expenses

The funding will be required in two stages

- **Stage 1 Funding**
 - \$3,000,000 in Q1 2005 for the purpose of initial setup and research costs
- **Stage 2 Funding**
 - \$4,000,000 in Q2 2006 for the purpose of starting mass production and marketing

SUMMARY

- Innovational and revolutionary product – “**Mirage-3D**”
- Conservative sales target for first 5 years
 - Revenue Generated = **\$60,500,000**
 - Net Profit = **\$12,500,000**
- Intellectual Property
- Dynamic Leadership Team
- Competitive Advantage
- First to Market
- Tremendous Growth Potential

Other Requirements

- Job Opening for a savvy VP of Marketing

Q & A