

## BUSINESS PLAN

# SKYLIFER IG



## TABLE OF CONTENTS

EXECUTIVE SUMMARY

THE PROBLEM

THE SOLUTION

THE PRODUCT

DISPLAY SYSTEMS

PROJECTION SYSTEMS

THE BUSINESS MODEL

TRACTION

KEY MARKET FEATURES

TEAM

FINANCIAL SUMMARY

THE PROBLEM / NEED

MISSION STATEMENT

THE COMPANY

THE BUSINESS

PRODUCT OR SERVICE

UNIQUE FEATURES

RESEARCH AND DEVELOPMENT

UNIQUENESS

THE MARKET

MARKET DEFINITION

MARKET SEGMENTS

MARKETING

POSITION

COMPETITION

ADVANTAGE

PRICING

MANAGEMENT TEAM

CAPITAL REQUIREMENTS

FINANCIAL PLAN



## EXECUTIVE SUMMARY

World is constantly and dramatically changing. All aspects of our live are affected by those changes. And every new day bring us new challenges and also new opportunities to accept the call. Simulation and Training Market has a long history, created culture of consumption and market leaders. And the "BIG IDEA" of our project is to grab MASH of delivering to the market new Image Generation Systems that bring unprecedented fidelity level of synthetic environment to Visual Systems of Simulation and Training solutions.

### THE PROBLEM

- The existing simulators are based on old Open-GL technology which doesn't satisfy simulator users needs
- There were a lot of attempts to improve the image graphics quality, however they were unsuccessful due to old technology's restrictions

### THE SOLUTION

- Our product is the latest COTS PC technology based on version of image generator
- It delivers a new core for simulator visual system, utilized for training applications
- Combining groundbreaking realism and performance that meets the most challenging training needs both for civil and military customers
- We offer to the customers possibility to maintain or reuse existing data bases ensuring backward compatibility with these data

### THE PRODUCT

- 100% open hardware architecture – standard HW details and assemblies
- Fully scalable and supported on site – local maintenance
- Geometry distortion correction and image blending software included
- Compatible with all types of projectors and screens
- Real-Time Physics Controlled – Particle Based Environmental Effects
- Different configurations are available: FTD (Full Training Device), FMS (Full Mission Simulator) and all others.
- Entire world Geo-connected graphical database + 10 most popular airport hubs (Europe, Asia, Middle East – most growing markets)
- Dev. Kit for adopting existing Presages CDB for instance, into SkyLifer CDB
- Multi-GPU support (innovation)
- Night-vision, IR-vision, FLIR-vision implementation will be accomplished
- Weather graphical effects will be implemented according to customer needs: dust, sea-dust etc.
- Few simulators communication through net campaigns

### THE BUSINESS MODEL

Our business model is simple and based on a One-Time-Charge license average fee of \$261,000 + average of \$8,000 for a monthly charge services. See the appendix



## THUS, TWO CASES:

### FIRST OF ALL

Business of educational training centers is very specific. Despite the fact that the need for pilots is increasing, the high cost of an educational center does not allow to open a lot of them at once. At the same time, the cost of educating shall be available for airline companies. As a result, the profitability of educational centers is often a task that is often difficult to achieve. Therefore, there is a competition between educational centers concerning the best level of service and the best price. Lufthansa Flight Training Center and Turkish Airlines Flight Training Center are successful examples in such a competition, which equip their educational centers with the best training simulators. Our SkyLifer IG will be easily system can easily become a valuable investment that will attract more customers and become a calling card of the center. The cost of the image generation system is not that high in the cost of a training simulator, the main preference is given to the fact what the customer will receive, obtaining a new system.

- **IMAGE.**

The quality of the virtual airport models that provides SkyLifer IG is unprecedented and can be a calling card of any educational center.

- **UNIVERSALITY.**

The visualization level of virtual airport models is equally suitable for simulators of airplanes, simulators of helicopters, simulators of control towers and simulators of aerodrome engineering - which completely satisfy the need of the educational center.

- **UNIQUENESS.**

The SkyLifer image generation system provides visualization of atmospheric phenomena such as: fogs, three-dimensional clouds, dust and snow storms, snowdrift, thunderstorms and rains at the level, not available to our competitors' systems.

- **PERFORMANCE.**

All airport models provide the switching of the seasons of the year without exiting the scenario.

- **RELIABILITY, ECONOMY AND COMPACTNESS.**

In case of introduction of SkyLifer Multi GPU IG - the cost of the hardware part of the image generator shall make up approximately 12 000 -15 000 USD. At the same time, its reliability, energy consumption and cost of ownership will decrease.



## DISPLAY SYSTEMS



### OVERVIEW

SDT offers hard-shell hemispherical dome displays, hard-shell full dome displays for flight simulation, training, visualization and presentation objectives.

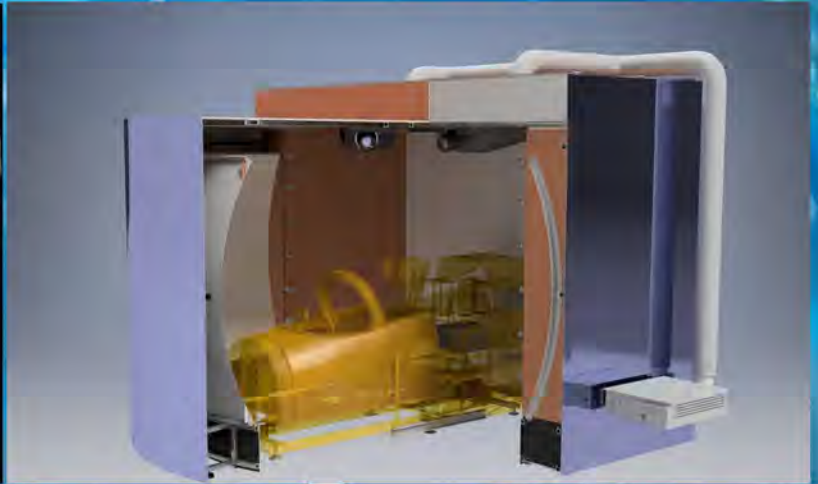
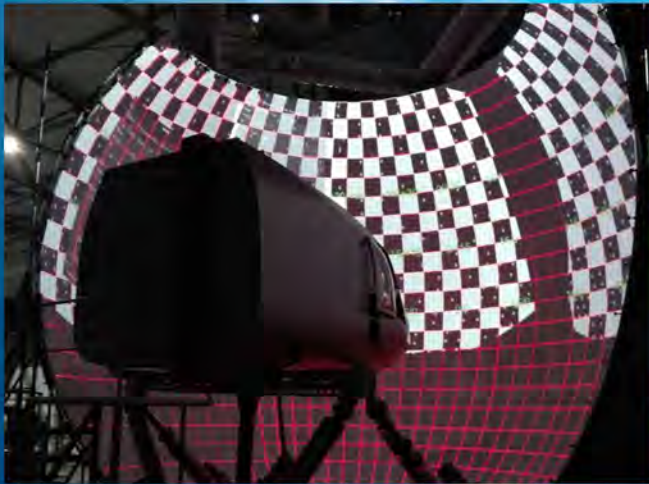
SDT designs and integrates affordable customer-specified custom cylindrical, panoramic and spherical projected display solutions for commercial and government customers in the visualization, and simulation and training markets. Our company can deliver displays up to 10-meters in diameter or design customized solution to our customers.

These display solutions are ideal environments for the simulation of highly immersive experiences including flight, driving, ground combat, marine, situational awareness, or any other civilian, government or military operations that benefit from either a panoramic or completely immersed presentation of the activity.

SDT also offers either individual display components as well as complete solutions for permanent or deployable, single and multi-channel display solutions that are grounded in our clients' unique requirements.



## DISPLAY SYSTEMS



### HARD SHELL DISPLAYS

Simulation Design Team offers a full range of hard shell domes in a variety of standard sizes for applications that require a permanent installation. Hemispherical domes and cylindrical displays are fabricated primarily of ABS-plastic or fiberglass reinforced polyester (FRP). Each display is fabricated with a smooth, solid color gel-coat finish for optimal image quality.

All domes are inspected and pre-assembled in our QC facility prior to shipping to ensure ease of on-site installation. All assembly hardware and materials are included with each dome. SDT specialists provide installation assistance and installation supervision for all hard shell domes.

On-site display “finishing” services are available for all displays, and includes assembly of the display, precision alignment, seam filling, seam sanding, priming all surfaces, and multiple coats of final finish coat. Finish coating can be custom formulated to provide a wide range of screen gains to meet the requirements of different applications and projector brightness settings.

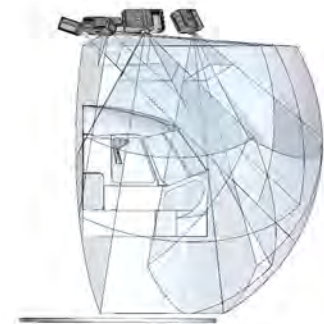
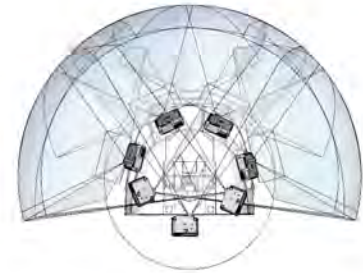
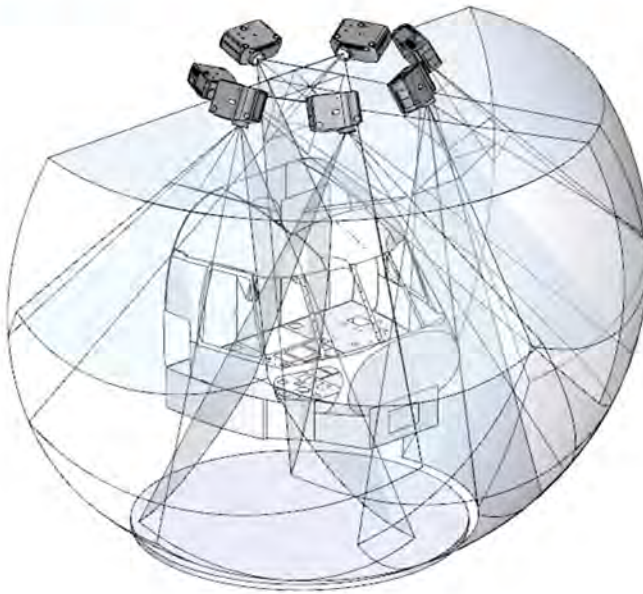
#### BENEFITS:

- Ideal for permanent or semi-permanent installations
- Provides a seamless display surface for optimal image quality
- Constructed from a range of materials including hard plastic (ABS), fiberglass reinforced polyester (FRP), and gypsum reinforced polyester (GRP)
- Carbon fiber domes are also available for high kinetic energy motion platform applications
- Larger sized domes are supplied in flanged sections for precise and easy assembly on-site

Standard sizes include the 2-m, 3-m, 4-m, and 6-meter (diameter) hemispherical domes and SDT can also produce custom sizes and shapes where the shape, diameter and field-of-view of the dome is modified per your specific needs.



## PROJECTION SYSTEMS



### OVERVIEW

SDT has both the expertise and flexibility to provide the optimal projection system for any simulator or project. Typically offered in combination with our projector layout design services, SDT supplies a complete range of consumer grade and professional grade LCD, LCoS and DLP projectors for multi channel edge-blended and geometry-corrected solutions when ultra high resolution across the display screen is critical to your application.

In addition, single channel OmniFocus™ and HemiStar™ projection systems are offered where ultra-wide angle optics, ease of use and system portability are key requirements.

### PROJECTION SYSTEMS

Multiple-projector visual display systems very often used for different training and simulation systems to provide the image fidelity and brightness required by high-end applications. In these special cases, SDT employs an integrated approach with key industry partners to provide design, engineering, integration and support of the overall visual system.

A Hard Shell hemispherical dome or Full Dom displays integrated with multiple high resolution projectors and auto-calibration edge blending software provides an amazing visual experience. SDT's overall experience, creativity and cost effective approach toward defining the best overall solution in display and projection systems, when combined with the expertise of our partners, provides the customer with a total visual display solution that will exceed all expectations.



## PROJECTION SYSTEMS



Multiple projector solutions offer a number of practical benefits, including:

- Creates an affordable ultra-high resolution display
- Uses low-cost, commercial, off-the-shelf projectors and equipment
- Provides geometry correction for SDT domes and panoramic displays
- Automatically calibrates edge-blending to dramatically reduce set-up time
- Provides best-in-class products from industry leading suppliers

### SINGLE OPTIC SYSTEMS

SDT also design and deliver various solutions with single-lens ultra-wide field-of-view projection optics and systems. Such approach provides an affordable solution for single- or multi-user immersive projection environments, enabling rapid deployment of simple, single-channel systems with stunning image quality.

Using a single lens optic solution significantly increases the overall simplicity and flexibility of immersive environment design, decrease cost of ownership and simplifies the maintenance.

**Single optic systems provide a number of practical benefits, including:**

- No edge blending or color balancing required
- Simple alignment procedures
- Requires only one image generator
- Single projector ensures low maintenance costs
- Ideal for portable and deployable environments
- Wide range of projector options are available for resolution and brightness
- Full hemisphere, partial hemisphere and panoramic options are available

All these are critical important for solutions where low operational overhead and simplified technology deployment play a significant role within the project requirement.



# SKYLIFER

Image Generation system provides unprecedented true to live fidelity of virtual environment, simulates different weather conditions, atmospheric effects, restricted visibility conditions and creates best environment for training process



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January, 2018

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## FINANCES

### KEY MARKET FEATURES:

- Virtual Training and Simulation Market to Reach \$329 Billion Globally, by 2022 <sup>(1)(2)\*</sup>
- The Military Simulation and Virtual Training Market, valued at US\$13.3 billion in 2016, is projected to grow at CAGR of 2.90% over the 2016-2026 period, to US\$17.7 billion by 2026 <sup>(3)</sup>
- The market consists of three simulation categories: flight, combat, and maritime. Flight simulators are expected to account for 59% of the global military simulation market, followed by maritime simulators and combat simulators with shares of 21% and 20%, respectively. <sup>(3)</sup>
- Civil Aviation Flight Simulation & Simulation Training market will generate revenues of \$6,361m in 2016 <sup>(4)</sup>
- The global flight simulator market is expected to grow from USD 6.18 billion in 2016 to USD 7.54 billion by 2021, at a CAGR of 4.1% from 2016 to 2021. The market is mainly driven by factors such as the need for more pilot training given the rise in air traffic, the adoption of virtual training for pilots, and the need for cost-effective pilot training. <sup>(5)</sup>

### FINANCIAL SUMMARY

PROJECTED PROFIT / (LOSS) & CASH FLOW			
	1 <sup>ST</sup> YEAR	2 <sup>ST</sup> YEAR	3 <sup>RD</sup> YEAR
GROSS REVENUE	3,437,370	4,920,930	5,614,290
TOTAL OPERATING EXPENSES	2,394,420	2,456,800	2,236,000
OPERATING PROFIT / (LOSS)	1,042,950	2,464,130	3,378,290
INVESTMENT	2,000,000	0	0
GRANTS	0	0	0
ACCUMULATED CASH FLOW	2,671,436	4,513,159	7,040,501
TOTAL INVESTMENT NEEDS:	\$2,000,000		



# THE TRACTION



## KAZAKHSTAN AIRCRAFT INDUSTRY

### MI17-V5: BUILT 1 FULLY INTEGRATED 8-CHANNEL SIMULATOR

11

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# THE TRACTION



## KAZAKHSTAN AIRCRAFT INDUSTRY

**MI171: BUILT 2 FULLY INTEGRATED  
FNPT (FLIGHT NAVIGATION PROCEDURE TRAINING)  
2-CHANNEL SIMULATORS**

12



# THE TRACTION



## STATE ENTERPRISE ANTONOV(UKRAINE):

**BUILT 2 FULLY INTEGRATED SIMULATORS**  
AN148 FFS-LEVEL 7, FFS-LEVEL 4ICAO CERTIFICATED

13



# THE TRACTION



## NAVAL ACADEMY OF NACHIMOV(RUSSIA):

**BUILT 2 FULLY INTEGRATED BRIDGE SIMULATORS,  
THAT MEET IMO REQUIREMENTS**

14

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Januar, 2018

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# THE TRACTION



## EXPERIENCE IN MILITARY PROJECTS:

- SKYLIFER IG (UNITY AND OTHER ENGINES)
- SUBSONIC JET FULL FLIGHT SIMULATOR
- MI-8 COMBAT HELICOPTER

15

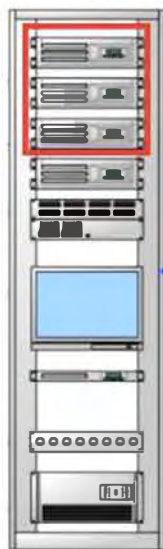


## THE PROBLEM / NEED

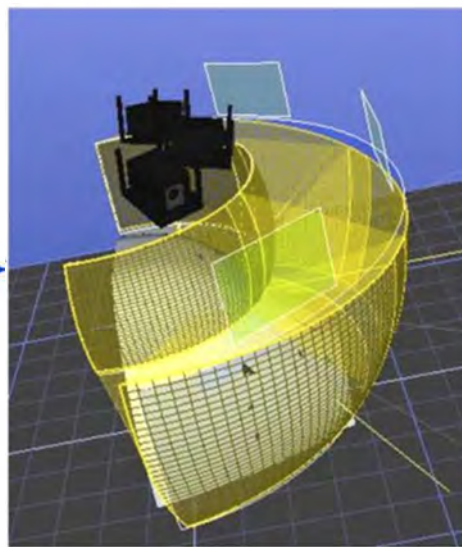
Visual System is a **KEY ELEMENT** of any training solution. In 2015 248 new certified Flight Simulators were registered in the world and all of them have Out-Of-The Window Visualization System. Out-of-the window visual simulation system provides high-fidelity visualization of the out-of-cockpit space and recreates training environment required by visual flight rules (VFR). Cadets enabled for visual observation of ground and air targets, smokes, and fires, also target detection and reconnaissance, target aiming and shooting simulation in different weather conditions and different distances.

### THE CORE OF ANY VISUALIZATION SYSTEM IS AN IMAGE GENERATOR SYSTEM.

IMAGE GENERATOR (IG)  
SYSTEM



OTW VIZUALIZATION SYSTEM



Directly controlled by the simulator HOST, Image Generators process the synthetic environments and drive the visual system to ensure fully-correlated visual, motion, radar, instrument and real-time responses to every trainee action or instructor command.

However, image quality provided by commonly used a brand named IGs – is hard to be defined as good as if this judgment is based on modern understanding of computer graphics capabilities and performance. There were a lot of attempts to improve this situation – but most of them either failed or bring only few successes. The core of this problem – the commonly used IG Software platform. Our company offers to the market solution that allows overcoming these obstacles and significantly increase the fidelity of simulation environment enhancing training process. Also, our solution offers the customers, the possibility to maintain or reuse existing customer databases ensuring backward compatibility with these data.

Besides, we expect that cost of ownership our IG (SkyLifer) for our customers will also decrease.



## SKYLIFER IG

SkyLifer - is the latest COTS PC technology based version of image generator developed by SDT and deliver a new core for simulator visual system utilized for training applications, combining groundbreaking realism and performance that meets the most challenging training needs both for civil and military customers.



## SKYLIFER IG FEATURES:

- 100% open hardware architecture;
- Meets requirements for "Level D" FMS visual systems;
- Fully scalable and supported on the site;
- Geometry distortion correction and image blending software included;
- Compatible with all types of projectors and screens;
- Real-Time Physics Controlled – Particle Based Environmental Effects;
- Different configurations are available: FTD, FMS and others.

This unique image generator delivers to the customer the highest image quality and the power and capabilities of the latest commercial-off-the-shelf workstation graphics.



## THE COMPANY

### MISSION STATEMENT

Our mission is to bring to the market a new competitive product which is capable of meeting the latest Simulation and Virtual Training Market challenges. To become a recognized market player with in next 3 years as IG and Visual Systems provider for Flight Simulators, high fidelity visual graphic customer databases developer, simulator software developer.

We aspire to carry a reputation in the marketplace for developing and delivering the best IG system and high-quality graphic databases for Flight Simulation market. We can achieve this by bringing an innovative product to customers, a close understanding of market trends and needs, excellent product support.

SDT Industrial Technology was founded in January 2018 and is engaged in the area of complex and comprehensive simulation projects. Our competencies and expertise mainly focused in simulation and training areas and could be described as:

- Design and equipment of training centers (civil aviation training centers and pilot schools, marine training centers);
- Image generation system integration and development for training and simulation needs for aviation, marine, and land simulation applications;
- Design and development of a visual system for external environment simulation for flight, marine, and land simulation applications;
- Design and manufacture of Full-Flight Simulators (FFS), Flight Training Devices (FTD), Flight and Navigation Procedure Trainer (FNPT) for rotary and fixed wing aircraft;
- Development and manufacture of marine simulators and trainers;
- Development and integration of industrial simulators (cranes, large-scale machinery, complex utilities);

Also, SDT provides maintenance, repair and service and technical support including upgrade and modernization of simulators and training devices.

Our principal office is located in Alte Landstraße 23, D-85521 Ottobrunn, Germany. We have approximately 200 square meters of office space. Our current capacity is 4-5 projects per year. If we reach 6-8 projects per year, we will need additional space. We expect this facility to be adequate for the company's needs for a year, after funding.

### THE BUSINESS

SDT is a Simulation solutions developer, SI, and provider of innovative visual solutions to aviation and training centers and flight simulation solution provider.

Our company is at the start-up stage of business, having developed few projects for last years and designed our innovative IG system.



## THE PRODUCT

### PRODUCT OR SERVICE

Image Generator (IG) System drives flight simulation visual systems and delivers to the customer high fidelity synthetic environment for the training process. IG is of our own architecture and driven by modified COTS software.

With this innovative IG product, Flight Simulators' manufacturers and aviation training centers are our target customers group. Our IG system adds value for Full-Flight Simulators (FFS) and enhances training process especially in the niche of rotary simulation.

SDT delivers the following services:

- Design and equipment of training centers (civil aviation training centers and pilot schools, marine training centers);
- Image generation system integration and development for training and simulation needs for aviation, marine and land simulation applications;
- Design and development of a visual system for external environment simulation for flight, marine and land simulation applications;
- Design and manufacture of Full-Flight Simulators (FFS), Flight Training Devices (FTD), Flight and Navigation Procedure Trainer (FNPT) for rotary and fixed wing aircraft;
- Development and manufacture of marine simulators and trainers;
- Development and integration of industrial simulators (cranes, large-scale machinery, complex utilities);
- Also, SDT provides maintenance, repair and service and technical support including upgrade and modernization of simulators and training devices.

### UNIQUE FEATURES OR PROPRIETARY ASPECTS OF PRODUCT

Our products are unique because our proprietary image generator technology platform, delivers to the customer the highest image quality and the power and capabilities of the latest commercial-off-the-shelf workstation graphics.

### UNIQUENESS

Our SkyLifer IG is unique because it is first ever solution that solves the problem of using high-quality computer graphics for multichannel synchronized Flight Simulator Visual systems and this fact gives us an advantage on the market.



## THE MARKET

### SHORT FLIGHT SIMULATION MARKET OVERVIEW

The increase in the rate of air transportation and technological advancements are expected to drive flight simulator market growth over the nearest 10 years. Need for effective pilot training has led to the development of advanced flight simulator. This has helped in better evaluation of pilots and improved aerospace management, which is further expected to drive flight simulator market growth.

**Advantages of a flight simulator in ensuring aircraft safety, ability to reduce fuel costs and efficient simulation are expected to serve as key driving factors for market growth.** However, a high degree of complexity in manufacturing and lack of interoperability may restrain flight simulator market growth. Development of privately-owned or independent training centers and commercialization of Unmanned Aerial Vehicles (UAVs) are expected to offer significant growth opportunities for the flight simulator market.

Flight simulators find application in the military as well as commercial sectors. Military applications are expected to witness substantial growth due to increased terrorist activity and rise in government expenditure in order to strengthen national security. Demand for high-level flight skills such as flight handling, flight skill competency, and situational awareness for safety are expected to drive demand for flight simulators in the sector.

North America is expected to dominate the market owing to the presence of a large number of flight simulator providers in the region, especially in Canada. CAE Inc., a Canadian flight simulator provider generated revenue of USD 1.76 billion in 2013. The flight simulator market in the Middle East is also expected to witness strong growth due to the booming tourism industry in the region.

The market is highly concentrated and characterized by frequent mergers and acquisitions activity. For instance, L-3 Communications acquired the fixed-wing civil flight simulation business of Hales Training Simulation Ltd. in August 2012, for USD 130 million. Also, Rockwell Collins announced a definitive agreement for the acquisition of ARINC Inc., an information and communication processing solution provider in August 2013, for a cash consideration of USD 1.39 billion. The key players in the flight simulator market include ... Inc., Lockheed Martin, L-3 Communications, Augusta Westland, Rockwell Collins, Thales Training & Simulation Ltd., NGRain Corporation, Pacific Simulations Ltd., and Diamond Visionics LLC.



## THE MARKET

**The global military simulation and virtual training market are expected to be worth US\$10.4 billion in 2015, and is expected increase to US\$15.8 billion by 2025, representing a CAGR of 4.20% during the forecast period.** The market is anticipated to be dominated by North America followed by Asia-Pacific and Europe.

Within sub-sectors, the market size of flight simulators is expected to grow at a CAGR of 4.85% over the forecast period. Maritime simulation market is consistently growing at the global level while combat simulators market is to experience a marginal increase. On the defense budget spending and modernization review, this research says North American defense expenditure projected to decline marginally during the forecast period whereas Asian defense budgets expected to increase at a robust pace. Modernization programs are likely to drive defense expenditure in South American countries while military/defense budgets of African and Middle Eastern countries are expected to increase till 2025.

### MARKET DEFINITION

We are competing in the niche of the visual system providers for Simulation and Virtual Training Market. Global Simulation and Virtual Training Market was evaluated as \$ 30 billion in 2015 and it is expected to reach \$ 40 billion to 2025. We believe, the major future trend in the industry will be positive for product sales growth in the nearest 10 years.

### MARKET SEGMENTS

We expect to penetrate the all segment of the simulators market:

- Military Flight
- Jet Flight
- Rotary Flight
- Transport Flight
- Naval
- Vehicle
- Combat
- Command

We define our market segment as civil and military, fix wing and rotary aircraft. All these segments are showing growth last year despite the fact growth drivers are quite different.

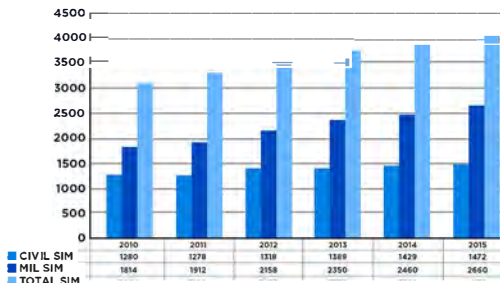
A typical customer is an aviation training center for civil or military pilots or manufacturers of Flight Simulators. They are motivated to buy our product because it delivers a higher level of fidelity level, superior performance, easier maintenance and technical support required, it brings added value for their FFS or enhances training process.

Our product, does, however, have the following weaknesses: development is not finished and some R&D still required weak brand awareness.

## MARKETING

Our marketing plan is based on the WIN-WIN strategy; We expect to penetrate all segment of the Flight Simulators market and achieve this by using basically FFS manufactures channels. In time, we plan to capture 5% share of the market in the nearest 5 years (similar to RSI Visuals).

**FLIGHT SIMULATORS PARK GROWTH**

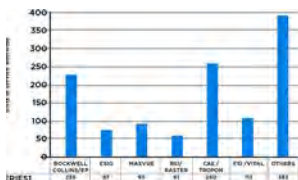


## POSITION

We will position our product as the top quality for a reasonable price (medium plus), such as a position not presently being addressed by the competition and have to support fast product penetration into the market.

We define our market as the **IG INSTALLATIONS** in military and civil aviation simulators market.

**IG INSTALLATIONS IN CIVIL AVIATION SIMULATOR MARKET**



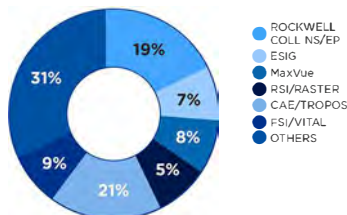
**IG INSTALLATIONS IN CIVIL AVIATION SIMULATOR MARKET**



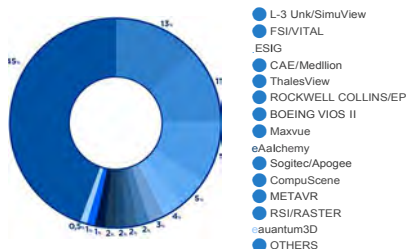


## COMPETITION

### IG MANUFACTURES MASHs IN CIVIL AVIATION SIMULATOR MARKET



### IG MANUFACTURES MASHs IN MILITARY AVIATION SIMULATOR MARKET



#### IG Market leaders

- CAE: Tropes IG
- CAE: Medallion IG
- Presagis: Vega
- Rockwell Collins: EP Series IG
- L-3 Link: SimuView
- FSI: Vital
- Thales: ThalesView
- RSI: Raster XT4

#### ADVANTAGE

- Our product is the latest COTS PC technology based on version of image generator
- It delivers a new core for simulator visual system, utilized for training applications.
- Combining groundbreaking realism and performance that meets the most challenging training needs both for civil and military customers.
- Maintain or reuse existing data bases ensuring backward compatibility with these data.

## COMPETITIVE TABLE

KEY FEATURES	SDT SKYLIFER	PRESAGIS VEGA PRIME	CAE TROPOS	CAE MEDALION	THALES THALESVIE W	RSI RASTER XT4	L-3 LINK SIMUVIE W	FSI VITALX	SOGITEC APOGÉE 6
Certified projects (ICAO, JAA, FAA)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Support of big data bases (more than 100 x 100 km)	Yes (300 x 300 km tested)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Multiple visual channels support (max. Qty. of visual channels in current version)	Yes (not less than 8) running up to 16 channels	Yes (not less than 6)	Yes (not less than 3)	Yes (not less than 6)	Yes (not less than 6)	Yes (not less than 6)	Yes (not less than 6)	Yes (not less than 6)	Yes (not less than 6)
Graphical API	OpenGL/ Direct X	OpenGL		OpenGL		OpenGL			
Atmospheric effects interaction with static objects in the scene	Wind/Rotor-effect/Snow/Dust/Sand/Rain/Splashes/Water waves	Limited	Limited	Limited	Limited	Limited	Limited	Limited	Limited
Dynamic light	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Particle based effects support (explosion, smoke, destruction of objects, wind effects, particles, video sequence mapping, Sun glare, aerial and terrestrial flares, etc.)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Support of animated objects	Yes	Yes	Yes	Yes	Yes				
Animation of 3D human characters and AI plug-in	Yes		Yes	Yes	Yes				
Light point capacity	700,000 light points / system at 60Hz		700,000 light points / system at 60Hz	250,000 at 60 Hz		Up to 75,000 light points (60Hz) per channel			Up to 15,000 light points (60 Hz) per channel
Polygons	20 000, 000 visible polygons / system at 60Hz		3,000,000 visible polygons / system at 60Hz	400,000		>100,000		150,000	3,000,000
3D volumetric clouds and meteorological effects	Yes			Yes					
Shadows	Yes	Yes	Yes	Yes	Yes	Yes			Yes



## COMPETITIVE TABLE

KEY FEATURES	SDT SKYLIFER	PRESAGIS VEGA PRIME	CAE TROPOS
Certified projects (ICAO, JAA, FAA)	Yes	Yes	Yes
Support of big data bases (more than 100 x 100 km)	Yes (300 x 300 km tested)	Yes	Yes
Multiple visual channels support (max. Qty. of visual channels in current version)	Yes (not less than 8) running up to 16 channels	Yes (not less than 6)	Yes (not less than 3)
Graphical API	OpenGL/ Direct X	OpenGL	
Atmospheric effects interaction with static objects in the scene	Wind/Rotor-effect/Snow/Dust/Sand/Rain/Splashes/Water waves	Limited	Limited
Dynamic light	Yes	Yes	Yes
Particle based effects support (explosion, smoke, destruction of objects, wind effects, particles, video sequence mapping, Sun glare, aerial and terrestrial flares, etc.)	Yes	Yes	Yes
Support of animated objects	Yes	Yes	Yes
Animation of 3D human characters and AI plug-in	Yes		Yes
Light point capacity	700,000 light points / system at 60Hz		700,000 light points / system at 60Hz
Polygons	20,000,000 visible polygons / system at 60Hz		3,000,000 visible polygons / system at 60Hz
3D volumetric clouds and meteorological effects	Yes		
Shadows	Yes	Yes	Yes

KEY FEATURES	SDT SKYLIFER	PRESAGIS VEGA PRIME	CAE TROPOS
WGS 84 support	Yes	Yes	Yes
Support of IR/NVG vision simulation	Yes	Yes	Yes
IG protocols	UDP TCP	-HLA -DIS -UDP -CIGI 3.0	
CBD format		openflight; metaflight	
Simulation of weather and atmospheric phenomena's	Snow Rain Fog Haze Clouds Pachy fog Lightings	Snow Rain Fog Haze Clouds Pachy fog Lightings	Snow Rain Fog Haze Clouds Pachy fog Lightings
Available plug-ins (shaders, physx, speedtree etc.)	Yes		
Levels of detail(LOD)			

## THE STRATEGY

### PRICING

As said, although our product is providing the highest quality visualization, modularity and flexibility for the customers, our prices are positioned as Medium Plus for penetration reasons.

Average system One-Time-Charge price is ~\$261,000.

Average yearly service price is ~ \$100,000.

### ADVERTISING, PROMOTION, TRADE SHOWS

SDT has developed a comprehensive advertising and promotion strategy, which will be implemented when funded is completed.

We plan to promote our product through a variety of on-site demonstrations and trade shows and other high-leverage events.

The objective of all our promotions is to expand the audience, strengthen product awareness, and building relationships with potential customers.

### BUSINESS RISKS

Most of the Risks related to technology and system capability already checked on at this stage. However, still, there is a chance that another company could develop a similar product and bring it to the market.

Although our business today has its share of risk, we feel we can overcome these risks because of our big experience in this specific niche area requiring big baggage of special knowledge on the one hand and the simple fact that we already have a developed prototype. We will address compatibility risk by developing special software tool connecting old databases with new IG system. We feel we can address pricing risk by focusing on most required features and utilizing existing content.



# THE TEAM & OFFICERS & KEY EMPLOYEES



**DR. BORIS  
LINSCHITZ**

OWNER & CFO  
27 YEARS INDUSTRIAL  
SOLUTIONS IN H/W & S/W  
5 YEARS IN FFS SIMULATION  
INDUSTRY  
27 YEAR AS TOP MANAGER  
IN INDUSTRY



**ALEXANDER  
KLYMENKO**

OWNER & CEO  
18 YEARS IN R&D  
ENGINEERING OF VA  
SOLUTIONS  
10 YEARS CHIEF ENGINEERING  
OFFICER IN PROJECT  
DEVELOPMENT  
8 YEARS SENIOR PROJECT  
MANAGER IN SIMULATION  
MARKET  
PMI CERTIFIED  
PROJECT MANAGER



**ROMAN  
VELBOVETS**

GM, CCO  
16 YEARS IN MANAGEMENT,  
SALES AND MARKETING  
10 YEARS IN BUSINESS  
DEVELOPMENT

**YEVGENY  
KASYAN**

TECHNICAL DIRECTOR  
R&D, CTO  
9 YEARS IN SIMULATORS  
BUILDING (AIRPLANES,  
HELICOPTERS, MARINE)  
12 YEARS IN 3D MODELING  
7 YEARS IN THE GAMEDEV  
INDUSTRY  
2 YEARS ON AAA  
LEVEL PROJECTS



**VADIM  
CHIZHOV**

SENIOR DESIGNER  
TEAM LEAD  
12 YEARS  
IN 3D MODELING  
2 YEARS  
IN CONSTRUCTING  
IMAGE GENERATORS  
(IG) IN THE AIRCRAFT  
INDUSTRY  
2 YEARS ON AAA  
LEVEL PROJECTS



**MAXIM  
BEZUS**

SENIOR SOFTWARE  
TEAM LEAD  
10 YEARS SOFTWARE  
DEVELOPMENT  
6 YEARS IN SIMULATORS  
BUILDING  
2 YEARS SYSTEM  
ARCHITECT

## EVALUATION

1. During the last year our company signed a contracts for ~\$4M
2. After next 6 month of R&D we upgrade our product to the next level, which will increase profitability of a company.
3. The worst case scenario – we stay at last year sales level with upgraded product ~\$5M annually.
4. That means after 3 years of sales and support our company gains ~\$14M of a profit.
5. According to 3-years P&L table, we find that during 3 years our expenses evaluated at ~\$7M
6. Therefore Value of the Company is calculated as follows:  $(14-7) \times 2.5$  (constant coefficient) = ~\$17.5M

KEY FEATURES	SDT SKYLIFER	CAE TROPOS
Multiple visual channels support (max. Qty. of visual channels in current version)	Not less than 8 running test for 16 channels	Not less than 3
Graphical API	Direct X	Open GL (old technology)
Particle based effects support (explosion, smoke, destruction etc.)	Yes	No
Available plug-ins (shaders, physx, speed tree etc.)	Yes	No
Graphical API	14, 000, 000 visible polygons / system at 60Hz	3,000,000 visible polygons / system at 60Hz
3D volumetric clouds and meteorological effects	Yes	No

## ANOTHER WAY OF EVALUATION

1. One of the world leaders in Image Generation is CAE<sup>(6)</sup> Corporation.
2. The latest product of CAE is Tropo<sup>TM</sup> 6000XR<sup>(7)</sup> IG system.
3. While comparing the latest product of CAE to our SkyLifer, we find that our product much more attractive as qualitative visualization core for all-kind of simulators.
4. Therefore our product, having a great demand, will be sold not less than 1 unit every month (which can be seen in contracts for the last year).
5. The adequate price for 1 unit (minimum 3 channels) offered by the young company is ~\$80K, and the support is evaluated ~\$1.2K
6. After our product is upgraded to the next level of a quality its price raises to ~\$100K, and ~\$1.5K for support
7. Considering all above – Profit vs. Loss summary, as derived from Financial Plan is shown as follows:
  - o With total investment of \$2M
  - o Worst case – we are not entitled to any Government Grants



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## FINANCIAL PLAN

### PROJECTED PROFIT \ (LOSS) & CASH FLOW (\$)

	1ST YEAR	2ST YEAR	3RD YEAR
ACCUMULATED UNIT SALES	2	8	12
OTC REVENUE	1,062,000	4,248,000	6,372,000
SERVICE	103,545	406,215	621,270
TOTAL REVENUE	1,165,545	4,654,215	6,993,270

### PROFIT \ (LOSS)

GROSS REVENUE	1,165,545	4,654,215	6,993,270
DIRECT EXPENSES	-	-	-
GROSS PROFIT \ (LOSS)	1,165,545	4,654,215	6,993,270
R&D	623,200	714,400	549,400
S&M	381,600	601,200	680,400
OPERATION	144,000	218,400	218,400
G&A	1,351,700	1,028,880	893,880
TOTAL OPERATION EXPENSES	2,500,500	2,562,880	2,342,080
OPERATING PROFIT \ (LOSS)	1,334,955	2,091,335	4,651,190

### CASH FLOW

INVESTMENT	2,500,000	0	0
GRANTS	1,000,000	0	0
OPERATING PROFIT \ (LOSS)	1,334,955	2,091,335	4,651,190
NET OPERATING CASH FLOW	165,045	2,091,335	4,651,190
ACCUMULATED CASH FLOW	2,278,454	2,710,319	2,824,953



## APPENDIX

- <sup>(1)</sup> -  
<http://www.marketpressrelease.com/Virtual-Training-and-Simulation-Market-to-Reach-329-Billion-Globally-by-2022-1477565754.html>
- <sup>(2)</sup> -  
<http://www.slideshare.net/alliedmarketresearch/virtual-training-and-simulation-market-to-reach-329-billion-globally-by-2022>
- <sup>(3)</sup> -  
<http://www.prnewswire.com/news-releases/the-global-military-simulation-and-virtual-training-market-2016-2026-300317871.html>
- <sup>(4)</sup> -  
<http://www.prnewswire.com/news-releases/civil-aviation-flight-simulation--simulation-training-market-report-2016-2026-300301008.html>
- <sup>(5)</sup> -  
<http://www.researchandmarkets.com/reports/3843302/flight-simulator-market-by-application-military#relb2>
- <sup>(6)</sup> -  
<http://www.businesswire.com/news/home/20160310005828/en/Global-Civil-Aviation-Military-Simulation-Training-Market>
- <sup>(7)</sup> -  
<http://www.cae.com/civil-aviation/simulation-products/-cae-7000XR-series-full-flight-simulator>

o Detailed financial plan is attached as Excel file.