Business Plan

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# Executive Summary

## Opportunity

Nowadays the 3d technologies are becoming available in more and more products. For example in the automotive industry, the data used to be visualized through hardware components (hardware gauges, speedometers, sensors, lights, etc.). Now the industry requires more advanced interfaces that cannot be represented with hardware components but are possible with a 3d graphical interface instead. Unfortunately the automotive industry is very new to the concept of GPU programming (quite different than the common CPU programming) and is currently struggling to achieve high performing applications on the limited embedded hardware. This turns out to be a common factor in multiple other areas of programming – web development, mobile applications development and even sometimes in the desktop applications (3d games, 3d design software, etc.).

We are a well-coordinated team of specialists in the field of 3d graphic applications development with a deep knowledge of the specifics of the GPU architecture.

We offer a flexible work environment by providing multiple services related to 3d application development.

Our business is focused on working with the following customers:

* Automotive companies
* Game developers
* Universities
* 3d design studios
* Companies, struggling with the performance of their 3d applications or needing additional staff in order to meet a deadline

This is an exciting prospect because this is innovative technology in many areas at the moment and the 3d graphic interfaces are a highly desired feature in many projects. The knowledge base in this area is not at the level it needs to be in order to meet the needed functional and non-functional requirements of the business.

## Our team

Our team consists of two full time developers and one person who is part time developer and part time manager/marketing director.

The full time developers are:

* Team member 1 – Computer Science graduate. His past experience includes C++ development of 3d rendering engine and 3d game development. He has a strong background in mathematics and computer graphics theory.
* Team member 2 – Computer Science graduate. His past experience includes 3d design with 3ds max and other tools, C++ development of 3d games and embedded systems development.

The manager/developer is:

* Team member 3 – Computer Science graduate with a Master’s degree in Marketing. His past experience includes C/C++ development on embedded hardware, development of multi-platform software and leading a small sized team.

In addition to the permanent team members we are also going to need a few part-time team members:

* Accountant
* Lawyer

With the growth of our company we will need to hire additional staff:

* HR
* Full time accountant
* Full time lawyer
* 3d designers and 3d developers
* Office maintenance staff

# Market analysis

## Industry

In our past experience with the automotive industry, we always saw the need of a knowledgeable 3d graphics expert and especially at the later stages of the projects, when the topic of optimization comes to light, we always lacked an experienced person who could provide us with the proper solutions to our problems. That is why we see the need of more dedicated teams that understand the common issues with the 3d applications on the modern hardware and also know the specific solutions to these issues. GPU programming in general requires a whole new mindset when writing 3d applications in comparison to the generic CPU programming. That is the reason why 3d developers are hard to find, especially in the automotive business where the need of such developers is just beginning to show up.

There are already several other companies who provide similar services to ours, such as:

* Mobica – automotive focused, has a graphics team that can handle optimization/development tasks for external projects. Has offices in UK, Poland and Mexico.
* Simplygon Team – focused on developing tools for automatic game optimization. Primary focus on game development. Located in Sweden.
* Rightware – automotive focused, provide middleware 3d engine with support for developing and optimizing of solutions, created with their engine. Located in Finland.

Most of the industries and companies that are extensively using imaging are shifting towards 3D imaging technology and its solutions to meet the requirements of today's business and customer needs.

The introduction of enhanced technologies such as 3D image sensors and 3D displays, providing high resolution visuals, is seen to give a boost to the adoption of 3D imaging across various verticals such as defense and security via its usage in simulation, facial identification and target (object, weapons or explosives) detection.

The current game development market is already large and relatively slowly growing but as mentioned before, there are several other markets that are just now entering the area of 3d graphics (automotive, web, government and infrastructure, museums, sciences and biotechnology).

Our solutions are required usually near the end of a project’s development phase since that’s where optimization and deadlines are the most important topics.

## Customers and Market

A conducted research predicted that as advances in 3D scanning and other visualization technologies continue, the market will experience yearly growth of 26.7 percent to be worth $9.82 billion by 2018. The 3D imaging market's current net worth is $3.01 billion.

## Competition

The companies competing with us (Mobica, Rightware, Simplygon, etc.) have already established relations with big customers but unfortunately there is no market share information available.

## Regulations

There are no government regulations that are affecting our company’s development process.

## Next five years

In the following years we aim to establish a solid portfolio of the work with different companies while expanding our team of technology experts. We look forward to incorporate any new technologies in the 3d graphics area in order to provide the best possible solutions. We aim to create specialized teams for our most successful kinds of projects (for example if we are needed mostly for optimization, we will create an only optimization team; if we are performing mostly trainings, we will create a team that does only trainings and so on).

## SWOT Analysis

* Strengths – dedicated team, flexible customer relationships, possibility for on location work, relatively rare skills in the industry
* Weaknesses – small team, not all of the necessary roles are filled right now, no current marketing exposure
* Opportunities – supports fast growth, involves work from several markets (game development, science, automotive, etc.)
* Threats – the right staff is critical for the company’s success, if there is no real client we need to develop demos for a portfolio, lack of proper marketing

# Products and services

## Product description

We will offer the following services:

* development of 3d graphic interfaces – using 3d design tools and engines we can develop whole 3d interfaces
* optimization of already existing 3d applications – we can join ongoing projects in order to support organizations in their development processes so they can meet their requirements
* creation and optimization of 3d models (although creation is not our main focus) – we can create specific 3d models with 3ds max, Maya and other tools; additionally we can optimize already existing models in order to increase the performance of a 3d application
* creation of animations, physics (interaction between objects in a scene) –
* interaction between the user and the graphic interface – we have experience with animations and physics engines and we can provide the necessary functionality if required
* option for joining/supporting an already ongoing projects – we can join external projects at their location in order to provide fast and reliable feedback to the customer and reduce the number of iterations that is required, thus reducing the time for completing a task and meeting the tasks deadline.
* providing trainings for 3d design, optimization and other related skills – we also offer trainings for various levels of 3d programmers and various areas – 3d design, 3d optimization, basic 3d programming, OpenGL/DirectX trainings, engines training, etc.
* multiplatform solutions – our background of working with different operating systems allows us to create and support multiplatform software and fine-tune the code for a specific or generic hardware - desktop or embedded.

## Technology

In our team we use a multitude of tools and programming languages and we aim to expand our knowledge in order to support as many of the customer’s requirements as possible. We have experience in 3ds max, Maya, Blender, Photoshop and Kanzi. From programming point of view, we are comfortable with writing code in C/C++, C#, JavaScript, Java.

The 3d application development has been around for about 20 years already and with the gaining popularity in new areas nowadays we can only imagine it as an even more stable industry for the following decades.

## Value proposition