KIWAMI R&D GROUP

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PROPOSAL

For the Design, Development, and Implementation
of the Expert System

Sports. Diamond Fund

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Executive Summary

Statistics shows that there were around 4,400 higher educational institutions in the U.S. in 2017, 1,750 of which were public institutions and 2,550 were private institutions. Each university has its own sports teams and clubs. Sports team budgets vary drastically. According to Forbes, the World's Most Valuable Team 2017 ranking was headed by the Dallas Cowboys American football team worth at $4.2 billion and earning $300 million of operating profit. The number two was the New York Yankees baseball team worth at $3.7 billion and earning $39 million of operating profit. The World's Highest-Paid Soccer Player 2017 was led by Cristiano Ronaldo with playing wages of $58 million and $35 million USD made from advertising.

The Diamond Fund expert system allows unifying the training process even in the smallest clubs in faraway locations using the Sports. The First Steps family of mobile apps. As training process quantitative evaluation techniques gradually improve, the expert system allows to correct typical mistakes made by athletes at initial stages of training. Top-tier coaches will be able to keep an eye on promising players from the first steps and make adjustments to the training process wherever a future champion is located.

The Diamond Fund expert system is a logical extension and complement of the Sports. The First Steps family of mobile apps. Initial data are captured using the computer vision technology, and then processed using an unparalleled expert system developed by Kiwami Group. Large arrays of data are systemized and analyzed using special analytical methods developed by Kiwami Group for each stage of athlete training.

An ideal human anatomical and physiological model and optimum behavior patterns studied by Kiwami Group form the basis for adapting methods to unique capabilities of a beginner athlete, developing an individual motor profile and personal training trajectory, and modifying training methods based on the given parameters.

We offer to federations, clubs, and sports centers our services on design, development, and implementation of comprehensive solutions that will help unify the training process by separate athletic disciplines. The Diamond Fund expert system will allow its owner to expand the sphere of his influence, and improve the quality of athletic training and selection base.

Competition

There are a variety of professional player ratings and rankings developed for various purposes, for example, for calculating player efficiency or player performance for bookmaking offices. These ratings may be very extensive and cover hundreds of measures. However, they are separate, and their analysis methods are nontransparent and biased. Furthermore, initial data are collected and analyzed at the level of higher sports skills, when the player is already enrolled in the system of federations and clubs.

In fact, all existing ratings or databases are merely statistics. There are no full-fledged expert systems that allow analyzing mental and physical potential an athlete from the first steps. The marketplace of expert systems designed to analyze player's potential behavior in the short, medium, and long run based on a group of different determinants is not occupied.

The marketplace of full-fledged expert systems for healthcare, sports, and education is not occupied. This is due to both objective and subjective factors that could be easily overcome through the use of cutting-edge technology solutions and special approaches developed by Kiwami R&D Group.

Functionality

The Diamond Fund expert system harnesses data collected by the Sports. The First Steps family of mobile apps using the computer vision technology. Initial data are first anonymized by a special module developed by Kiwami R&D Group that runs on the user's device, and then go to the expert system.

The expert system functionality allows to analyze dynamics of development of an individual athlete and the whole team in various configurations. Based on dynamics of development one can predict behavior of an individual athlete and the whole team in different situations. The expert system functionality also covers processes in the following areas:

1. Proprietary training methods
2. Tracking and analysis of results over different time periods
3. Local rankings at varying degree of scalability (team-wise, city-wise, region-wise, etc.)
4. Analytics and statistics based on the customer's criteria
5. Sports anamnesis of players
6. Libraries of methodological recommendations (to be used in apps and analytical solutions)
7. Libraries of models of elements, exercises, and techniques optimized using mathematical methods applicable to problems solved
8. Libraries of proprietary training approaches
9. Ranking statistics and analytics
10. Adaptation of optimized models of elements, exercises, and techniques to individual characteristics of each athlete
11. Recommendations on the development of individual training plans and trajectories
12. Modification of basic approaches based on federation's criteria
13. Adaptation of ideal models to federation's needs.

With additional equipment, the system allows the user to take advice remotely, conduct qualification tests, conduct biomedical examinations, and evaluate mental strength, etc.

Additional services offered to the users of the family of mobile apps:

- Integration into global databases
- Subscription to special libraries
- Subscription to analytical reports
- Subscription to statistical reports
- Optimization of training programs based on the given criteria
- Modification of an ideal human anatomical and physiological model based on the given characteristics;
- and other.

The extended version can also include comprehensive analysis of biomedical parameters recorded by additional equipment such as a blood pressure meter, myograph, HRV tracking device, and other medical devices.

Company

On contract signing, Kiwami R&D Group proposes to establish a new legal entity in the country of project implementation.

Project History

An idea to create a platform for self-evaluation of motor skills and mental strength came up in 1998 as a result of collaboration between the System Architect Olga Panchenko and the Strategic Planning Advisor Aleksey Polomskikh. The idea was to give a chance to beginners to match their characteristics and skills against science-based models applicable to specific fields of expertise.

The main challenge was indicating a mistake at the moment it was made so that the beginner could immediately correct it. Such approach would allow reducing time needed to develop the desired skills. Another critical but not less challenging aspect in terms of implementation was building an ideal human anatomical and physiological mathematical model. The existence of such model would allow adapting it to the user potential or modifying it to fit specific tasks and hence improve the training process.

The idea began to take shape twenty years ago with the creation of technology to develop universal and special skills followed by numerous experiments for measuring the efficiency of different training methods. Then, a special training course came along. It was designed to develop qualities and skills that would help people doing high risk jobs such as traders, air-traffic controllers, nuclear power plant operators, etc. cope with stress.

The following step towards the development of an automated system was a joint research effort carried out by the mastermind behind the project Olga Panchenko and he Doctor of Biological Sciences, neurophysiologist Victoria Gorbunova. The research focused on quantitative evaluation of the level of focus, and hence quantitative evaluation of mental determination, and social intelligence.

The spring of 2013 became the starting point of a new phase in the project development. The development of an integrated technology to evaluate motor skills, mental strength using cutting-edge wireless meters and devices started. At that time our research efforts on mathematical formulation of an ideal human anatomical and physiological model began.

Our WAmetr platform was developed as a result of close collaboration with seasoned professionals in healthcare, sports, education, neurophysiology, physiology, mathematics, engineering, and information technologies. After full-blown implementation, the WAmetr platform will give a real chance to all users to fulfill their potential in an optimal way, given that, in today's world, proper skills give competitive advantage and help push the boundaries.

Inspired in 1998, in twenty years our idea is translated into reality in a number of innovative solutions that can radically change the existing approaches to healthcare, sports, and education.

Research

The unification of developed skills is provided through creation of a database containing patterns of basic static and dynamic poses. These patterns are calculated based on an ideal human anatomical and physiological model using an unparalleled expert system developed by Kiwami Group. The ideal model is modified to customer needs.

Proposal and Schedule

The development time of the system is 36 months; payback period is 24 months with superprofit generation in 30 months. Project activities are divided into phases to ensure maximum profit margin for the customer, its confidentiality and information security.

Phase I: Analysis of customer requirements and setting a strategic goal for the expert system; development of terms of reference based on obtained data; development and coordination of design documentation; legal support throughout the phase; budgeting and financial audit during the phase I; development of a list of expert reports.

Phase II: Adaptation of the Sports. The First Steps family of mobile apps to the strategic goal of the system; study on adapting and modifying an ideal model in line with customer requirements; development of methodological recommendations and digital standards; development of a marketing program; budgeting, financial and legal audit; preparation for placement of company stock on stock markets.

Phase III: Testing, trial and adjustment of the system; development of instructions and teaching suggestions; development of standards for the Technical Support; placement of company stock on stock markets.

Phase IV: Implementation and improvement of the system; enhancement of the system by adding a module that analyzes biomedical data collected using wireless medical devices; development of a plan of updates and advanced development; creation of libraries and databases on different directions.

Benefits and Finance

Profits from the Diamond Fund expert system are generated by four key sources: private users of mobile apps and expert services, small clubs and teams, corporate clients (for conducting marketing and scientific research based on data gathered by the system), and stock markets.

The size and capacity of the market can be estimated through the example of basketball. According to the Sports & Fitness Industry Association (SFIA), over 26 million Americans play basketball, about 13 million of which are aged from 10 to 14. In the U.S., there are about 4,406 universities that have their own sports teams.

So, at the phase of app test version sales to private clients at basic license price of $100 one can generate at least $100M during the first week of sales, i.e. in a year after the beginning of financing. Add to this figure at least 10,000 of annual club licenses (a database for 20 users) at minimum price of $10K, and you will get another $100M; plus 4,500 annual corporate licenses at minimal price of $300K coming up to $1.35B, and profits from a complete range of additional services. Profits from playing in the stock markets can be estimated after the development of a marketing program.

Let us consider estimated financing and gains from the design, development, and implementation of the Diamond Fund expert system.

In order to shorten the system preparation time for market launch and minimize costs for test and trial, we need to engage high-class specialists for the design and development of the first version of the system. Minimum amount of financing for the design, development, and coordination of documentation for the development of the expert system, and its actual development, implementation, and debugging is about $250M excluding tax over the period of 36 months.

A key component of successful project implementation is legal support in the course of the project development and implementation, as well as participation in the marketing program. The amount of financing for leading legal counsels may come to $100M excluding tax over 36 months. The use of the Diamond Fund expert system focuses on meeting two basic unconditioned reflexes such as defensive and feeding reflexes as realization of an ability to quickly adapt to civilized society. Such approach will allow to significantly reduce the amount of financing for the marketing program to $50M excluding tax over 18 months.

Minimum amount of financing for the development, standardization, implementation, debugging of service and technical support of the system is about $50M excluding tax over 18 months. Development costs, representation costs, and purchase of a minimum set of equipment is about $50M excluding tax over 12 months of the project implementation.

So, by investing about $500M you can get about $1.55B from sales of the test version. And this is not including profits on the group's entry into the stock market and provision of additional services.

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