



"CYBERBALL"
Rough Order of Magnitude

STUDY OF THE ENTERPRISE VIABILITY

The study of the enterprise viability which the Consortium of Advanced Simulation – CSA - has planned for the next 36 months will be accomplished starting from this moment, detailing just the necessary expenses to the creation of the mechanical module of Cyberball and a demonstrative basic software that totalize the amount of US\$ 7.2 million. The project contemplates investments in permanent assets and, mainly, research and development.

The infrastructure of a professional software for pilots training, necessary to make the project viable, contemplates investments of approximately US\$ 10 million, which return can be obtained through the commercialization of projects and customization of needs for government and/ or great corporations, as well as thematic parks and, in the future, by the use in mass of the applications through internet making use of the Massive Multi Player Games technology.

Below follows the description of the Consortium of Advanced Simulation - CSA investments plan for the project of the mechanical module of Cyberball and demonstrative basic software.

INITIAL INVESTMENT

The consortium expansion process demands investments on new equipments and in the new collaborators' recruiting for making the consortium operational. The investment project takes into consideration the following items:

- Immobilized: Equipments (electro – mechanics equipments);
- New Collaborators: the several professionals' cooperation for the development area is essential for the consortium project materialization.

The largest portion of the project of investments is led to the research and the development of the new product, which is responsible for 85% of the global value. The remainder is destined to the acquisition of equipments.

It is estimated a period of 36 months for the prototype to be totally developed at a total cost of US\$ 7.2 million.

ANALYSIS OF THE RISKS

The consortium possesses all of the necessary requirements for the accomplishment of the project. We look for to form partnerships with companies that guarantee the quality in terms of human resources, operational and commercial infrastructure and innovative technology which will be able to allow us to overcome the barriers of the entrance into that segment.

The largest risk is related to the marketing aspect of the professional Flight Simulators. The product has a quite restricted market and needs to have an extreme quality level to conquer its space. Since positioned at the international market as the alternative product for pilots' training in order to be able to present the best relationship cost / benefit without loss of the reality sensations, the mark Cyberball will gain fame in the segment of the simulators.

For being a product with an innovative technology, we intended to assume a leadership position and to invest constantly in process quality and product, creating a reasonable entrance barrier for new incoming. Therefore, when developing this tool at this time, the consortium has great possibilities of success in terms of marketing.

CONCLUSIONS ABOUT THE TECHNICAL - ECONOMICAL VIABILITY OF THE INNOVATION PROPOSED ON THE SIMULATION AREA FOR PILOTS' TRAINING

The project of the consortium comes quite viable on the technical, economical and commercial aspects. The consortium possesses all of the requirements, intellectual capital and the necessary infrastructure for the development of the proposed products. Therefore, the viability of the project is practically guaranteed.

The development of a product led to the industry of flight simulators presents a great potential in view of its magnitude. A demand exists for the Cyberball product and the consortium possesses the requirements and necessary knowledge to conquer a representative portion of this market.

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THE GAMES MARKET

It is one of the segments that the consortium has as an aim.

The development of products on the simulation area for professional pilots' training using the virtual reality system and communication through UDP net will open opportunity also to new products with tendency to the innovation in the on line games market, which is considered a niche of a market avid for innovations.

The access to the wide band is an important prerequisite for the growth of the on-line games, because without it the capability of playing becomes reduced. The medium charge collected by a monthly subscription of an on-line game is about US\$ 12.50.

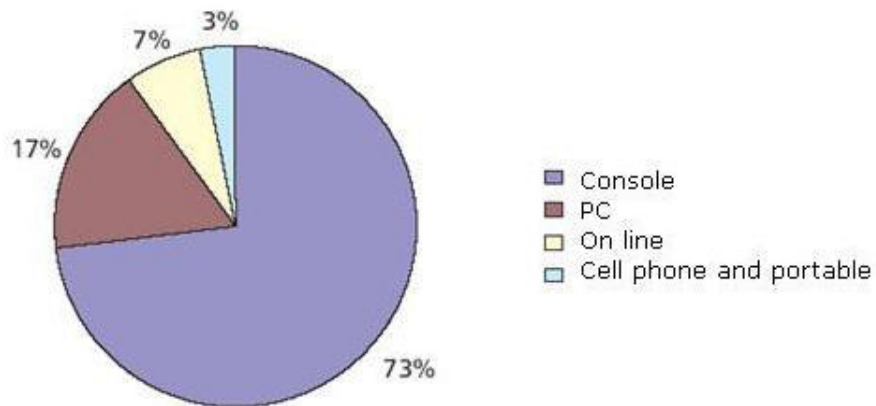
The on line games market is concentrated mainly in Asia / Pacific, regions that have cheaper (US\$ 8.75) medium subscription charges and the most diffused access to the wide band. This area accounts for 42% of the expense (US\$ 630 million) and it has 37.6 million of wide band users, of which 23 million are in South Korea and Japan. China should increase in 71 million their wide band subscribers until 2008. Korea, in spite of having the largest penetration, also foresees to elevate the users in 73 million (PWC, 2004b, p. 337).

The USA account for 28% of the expense or US\$ 420 million. There are 2.8 million subscribers of on-line games in a total of 21.6 million wide band users, what results in a percentile of 13% of the subscribers. As well as in Asia / Pacific, it is expected that this percentile comes to be close to 50% until 2008 (PWC, 2004b, p. 327).

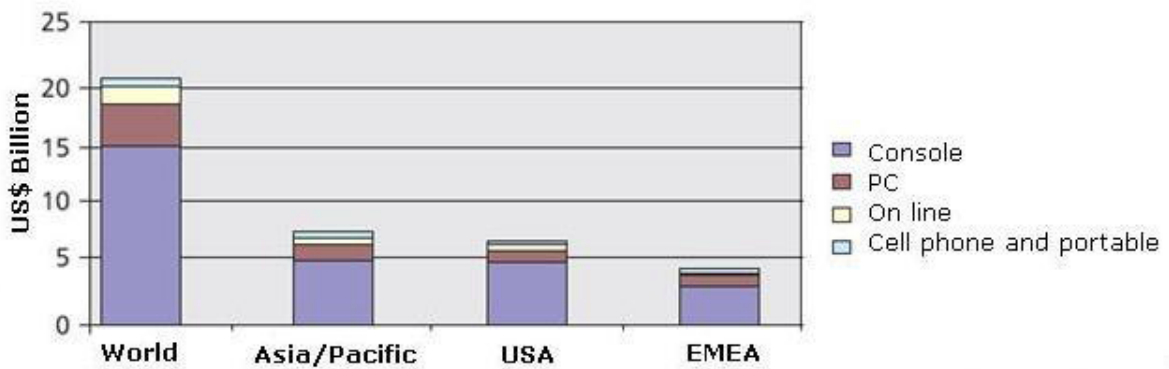
EMEA (Europe and Middle East) have a part of 20% of the total expense or US\$ 302 million. The number of wide band users has been growing largely in the last years (the increase was of 71% in 2003) and it reached 18.3 million people. The on-line games subscribers are 2 million (10.9% of the wide band users) and it has been accounting to the growth of the wide band. In 2003, the number of subscribers doubled. It is expected that in 2008 the on-line games subscribers reach the number of 30 million or 37% of the wide band users in that time (PWC, 2004b, p. 333).

Canada, because of its larger percentile of wide band users, if compared to the USA, is a relatively more important market for on-line games than for the consoles market. The country accounts for 10% of the world (US\$ 146 million) expense and it has 1 million subscribers of on-line games (25.6% of the wide band users, the largest percentile among the 4 groups of countries). The on-line games are 19% of the games market of Canada and it is expected that it will reach 45% of the wide band users in 2008 or 4.2 million subscribers (PWC, 2004b, p. 333).

GAMES INTERNATIONAL MARKET



World Games Market by Segment - 2003 (Total Expense: US\$ 22,3 Billion)
Source: PWC (2004b)



World Games Market by Segment - 2003 (Total Expense: US\$ 22,3 Billion)
Source: PWC (2004b)

CONCLUSIONS ABOUT THE TECHNICAL - ECONOMICAL VIABILITY OF THE INNOVATION PROPOSED IN THE AREA OF GAMES.

The games development is one of the most promising segments of the international software market; the sector is born already globalized.

The games development with the use of virtual reality may become an alternative for the consortium, but it is necessary to select with a refined criterion the growth strategies and to define the models of the most viable businesses.

As for the service to the mass market - MMPG (Massive Multi Player Games) in which thousands of people play and they interact with the on-line game amongst themselves simultaneously, it constitutes a market with a high potential demand.